Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania

RESEARCH BULLETIN

Volume 17   **December 2018**

2018 Journal Articles, Conference Proceedings, Book Reports, Thesis and Dissertations
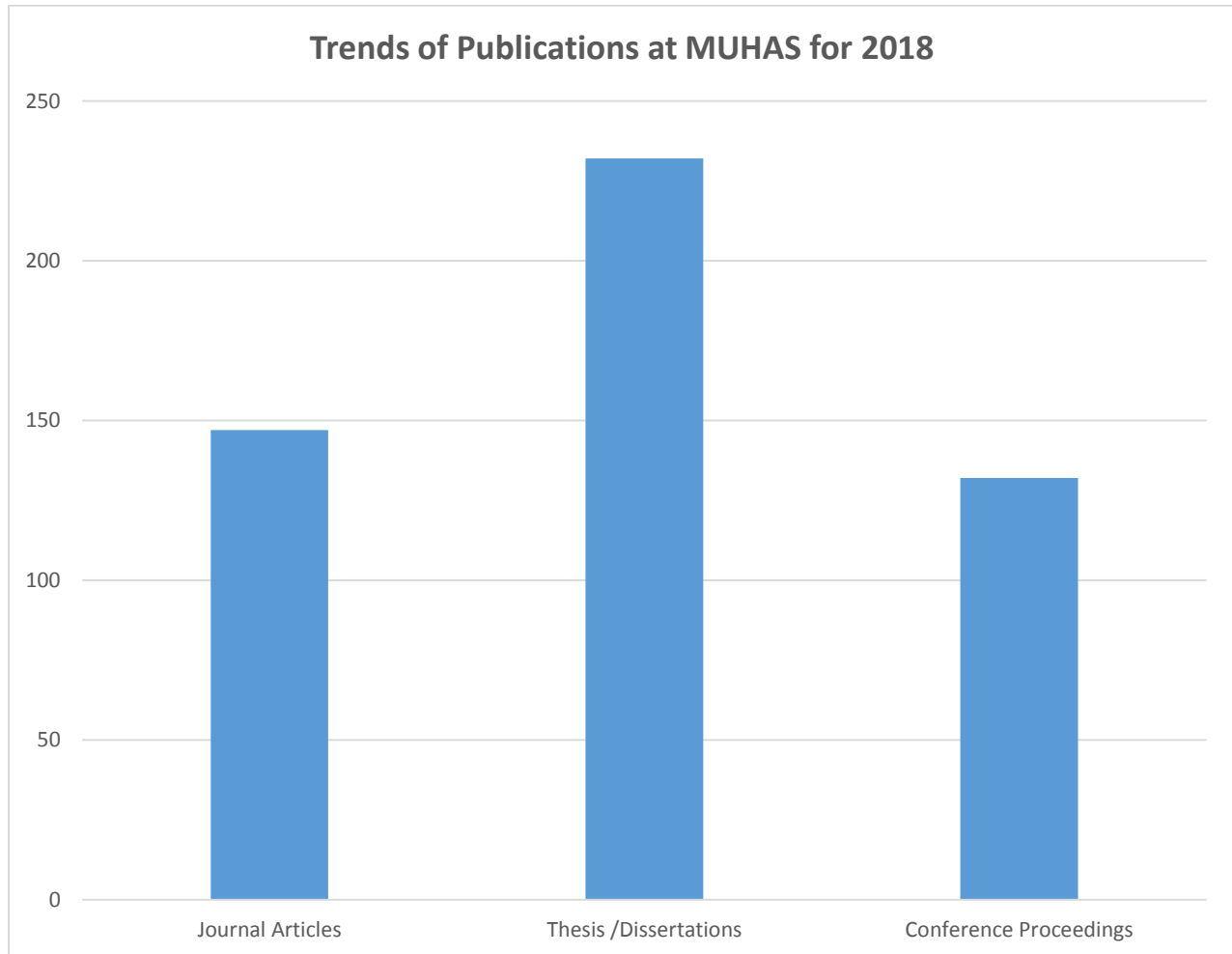
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Information to readers

This bulletin is intended to provide information on research by members of Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania. It provides summaries of publications during the proceeding calendar year, including dissertations, thesis, journal articles and conference proceedings. Members are requested to provide the Editor with summaries of their publications and ongoing research in electronic form for inclusion in the Bulletin. Abstract should be limited to 200 words.

Editorial

The current volume (Volume 21 No.1) contains total of 511 abstracts (147 Journal articles, 132 Conference proceedings and 232 Dissertation) in 2018.

Trends of Publications at MUHAS for 2018

Dr. Mboni A. Ruzegea

Editor

P.O Box 65001

Dar es Salaam, Tanzania

Tel: Tel: +255-22 2151462

Fax: +255-22 2151462

E-mail: mboniruzegea@gmail.com

Website: http://library.muhas.ac.tz

CHAPTER ONE: JOURNAL ARTICLES

1.Aaron, T. C., Dayeon, S., Sarah, S. C, SuJin, S., and Won, O. S. (2018). Compliance to Prenatal Iron and Folic Acid Supplement Use in Relation to Low Birth Weight in Lilongwe, Malawi.

Abstract

Prenatal iron and folic acid (IFA) supplements are offered free to all pregnant women in Malawi to reduce maternal anemia and improve birth outcomes. We investigated the association betweenself-reportedcompliancetoIFAintakeandriskoflowbirthweight(LBW). Pregnant women who attended Bwaila Maternity Wing of Lilongwe District Hospital for delivery were recruited (n = 220). We used a questionnaire to collect self-reported information on IFA use and maternal sociodemographic data. Before delivery, blood samples for maternal hemoglobin (Hb) and folate status, and upon delivery, birth weight, and other newborn anthropometrics were measured. We used multivariable logistic regression to determine risk of LBW by prenatal IFA intake. The self-reported number of IFA pills taken during pregnancy was positively associated with Hb, but not serum and RBC folate concentration: <45, 45−89 and≥90 pills taken corresponded with mean (SD) Hb 10.7 (1.6), 11.3 (1.8), and 11.7 (1.6) g/dL, respectively (p = 0.006). The prevalence of LBW was 20.1%, 13.5% and 5.6% for those who reported taking IFA pills <45, 45−89, and≥90 pills, respectively (p = 0.027). Taking >60 IFA pills reduced risk of LBW delivery (OR (95% CI) = 0.15 (0.03−0.70), p = 0.033) than taking ≤30 pills. Self-reported compliance to IFA use is valid for assessing prenatal supplement program in Malawi, especially Hb status, and can reduce the rate of LBW. Keywords: prenatal iron and folic acid(IFA) supplements; low birth weight; maternal anemia; Malawi.

2. Abdallah, Z., Anne, H. O., Billy, N., Rob, V. D. (2018). Pathogenic Parasites in Raw and Treated Wastewater in Africa: A Review.

Abstract

Wastewater is reused for irrigation in agriculture in many African cities. However, the use of partially/untreated wastewater may result in the transmission of infectious organisms such as parasites. This article reviews the prevalence and concentrations of parasites in raw and treated wastewater in African countries and the efficiency of the wastewater treatment systems used. This will highlight the burden of parasitic infections in African communities and suitability of reusing wastewater in these communities. The following databases: PUBMED, HINARI and Google Scholar were searched for any article presenting information on the occurrence and concentration of parasites in wastewater in any African country. No restrictions were set on date of publication, study design or language. Thirty publications were identified. These publications presented works related to parasites in wastewater in 12 African countries. A total of 23 parasite species were identified throughout the 5 African regions. Eggs of Ascaris lumbricoides predominated followed by Hymenolepis species, Trichiuris trichiura, Hookworm, Taenia species, Enterobius species, Toxocara species and Schistosoma species. Cysts of Giardia species, Entamoeba histolytica and Entamoeba coli were the most commonly identified protozoa. Waste stabilization ponds and activated sludge systems are the common wastewater treatment systems used in Africa with the former being more efficient for parasites removal than the later. The review results show that wastewater in Africa contains a variety of pathogenic parasites with protozoa predominating helminth and putting public health at risk. Despite the fact that wastewater treatment systems removed helminths, some of them did not meet the WHO standard. Moreover, these systems do not clear protozoa and there is no standard concentration established for safe reuse of wastewater. Therefore, there is a need for improving treatment systems design and management. Moreover, standards for protozoa should be set.: Keywords: Wastewater, Africa, Parasites, Helminth, Protozoa should be set.

3. Abdul, I., Nkinda, M., Phillipo, L. C., and Japhet, M. G. (2018). Aetiological spectrum, injury characteristics and treatment outcome of multiple injuries at a tertiary care hospital in Tanzania.
Doi: http://dx.doi.org/10.4314/thrb.v20i4.3

Abstract

Background: Multiple injuries constitute a public health problem and contribute significantly to high morbidity, mortality and long-term disabilities worldwide. This study describes the etiological spectrum, injury characteristics and treatment outcome of multiple injuries at a tertiary care hospital in Tanzania. **Methods:** This was a descriptive prospective study involving multiple injury patients admitted to Bugando Medical Centre (BMC) from March 2013 to June 2013 inclusive. **Results:** Out of 712 trauma patients who were admitted to BMC during the study period, 150 (21.1%) had multiple injuries. Their male to female ratio was of 2.3:1. The majority of patients were in the second decade of life. Road traffic accidents (RTAs) were the most common (93.3%) cause of injury. The majority of patients, 142 (94.7%) sustained blunt injuries. Twelve (8.0%) patients had pre-hospital care. The limbs (89.2%) and the head (78.7%) were the most common body regions injured. The majority of patients (85.3%) sustained severe injuries (ISS $\geq$ 16). Out of 150 patients, 46 (30.7%) had 65 missed injuries. A total of 142 (94.7%) patients were treated surgically. Wound debridement (87.3%) was the most common surgical procedure performed. The complication and mortality rates were 54.7% and 38.7%, respectively. The overall median length of hospital stay (LOS) was 23 days. Co-morbid illness, HIV positivity, CD4 count ($\leq$ 200 cells/µl), severe trauma (ISS $\geq$ 16), admission Systolic Blood Pressure < 90 mmHg, missed injuries and surgical site infection significantly influenced mortality (P < 0.001). Patients who developed complications and those who had long bone fractures stayed longer in the hospital (p < 0.001). **Conclusion:** Road traffic accidents remain a major cause of multiple injuries at BMC and contribute significantly to unacceptably high morbidity and mortality. Urgent preventive measures targeting at reducing the occurrence of road traffic accidents is necessary to reduce the incidence of multiple injuries in our center. **Keywords:** multiple injuries, etiological spectrum, injury characteristics, treatment outcome, Tanzania.

4. Abdul, N.H., Sunil, K. P., Nazer, Z.A. (2018). Community pharmacists' attitude towards professional practice - a comparative study among two different geographical zones in Malaysia.

Abstract

Objective: To compare the differences of the community pharmacists' attitude towards their professional practice among different zones (regions). **Method:** This was a comparative study of cross-sectional study of two different regions, using a pre-validated self-administered questionnaire containing three constructs and 37 items. Each question/statement assessed respondent's attitude towards professional practice using five point Likert scale from for very low (1) to very high (5). Descriptive statistics was done using frequency, percentage, median and IQR whereas, for inferential statistics, Mann-Whitney test was used for comparing two different set of data's. **Results:** Among the 300 respondents, the response rate was 85% and 87% for the two study zones. The attitude score was estimated for the three domains testing the professional practice of the respondents, and the total attitude score was arrived by summing up the three domain scores. The respondents of zone 1 showed 51%, positive attitude score, 45%, neutral attitude score and 4%, negative attitude score. On the other hand, correspondents from zone 2 showed 56%, positive attitude score, 38%, neutral attitude score and 6%, negative attitude score. It was also found that there is no significant relationship between the attitude scores and demographic variables. However, the Mann Whitney test showed a significant correlation among the total attitude score and the attitude score of the three professional practice domains with TIPM followed by TPCA and TMDA with $r(300) = 0.880$, $p < 0.001$, $r(300) = 0.864$, $p < .001$ and $r(300) = .811$, $p < .001$ respectively. **Conclusion:** Majority of the respondents showed a mixed attitude score for the three constructs. Continuing education and training programs on professional practice can be an important approach in equipping community pharmacists with the knowledge, skills and behavior change needed to expand their scope of practice in providing public with better quality of therapy and also improving public health outcomes. **Keywords:** community pharmacist, attitude, professional practic

5. Abdullah, A.R., Eishah, M.S., Hassan, A.S., Ahmed, M.H., Hadeel, M.T., Haitham, A.K., and Samera, M., Nasser, D. (2018). Uterine Rupture and Associated Factors During Labor Amongst Women Delivered in Saudi Hajjah Hospital in Hajjah City North West Yemen.

Abstract

Background: Uterine rupture lead to elevated maternal and neonatal mortality in a lot of rural places in the world, while in Yemen in both rural and urban places. This study was conducted aiming to determine the prevalence and risk factors of uterine rupture in women who delivered in Saudi Hospital in Hajjah city, Yemen. **Material and Methods:** Service based cross sectional study was done. The data were obtained by filling standard questionnaire from 111 uterine rupture cases and 111 non-uterine rupture comparative controls. **Results:** The 2-year period of record review in the obstetrics ward shows 3,457 deliveries were conducted 111 of them had uterine rupture (incidence: 1:31). The mean maternal age of females had uterine rupture was 26 years with SD 7.4 years. For risk factors of uterine rupture, there was a highly significant association between uterine rupture occurrence and parity (>5) (OR=3.4, pv< 0.001), illiteracy of females (OR=14.2, pv<0.001), residence far from hospitals (OR= 2.6 times, pv< 0.001), poverty (OR= 29.2, pv< 0.001), attending ANC for less than 2 visits during pregnancy (OR=29.2, pv< 0.001), using uterotonic drugs to induce or augment labor (OR=4.3, pv = 0.01), home as initial place of deliveries (OR=6.8, pv< 0.001). **Conclusion:** Uterine rupture is one of the major causes of maternal morbidity and mortality in our Hospital in Hajjah. The hospital should develop strong collaborative and integration methods with catchment of healthy facility and educative campaign to decrease prevalence of uterine rupture and its impact in the surrounding Hajjah governorate. **Keywords:** Uterine rupture, Risk factors, Hajjah, Yemen.

6. Abraham, Z.S., Kahinga, A.A., Swai, H., Massawe, E.R. (2018). Clinico-Histocytopathological Profile of Pediatric Head and Neck Malignant Neoplasms: A Mini-Review.

Abstract:

Head and neck malignant neoplasms are reported to be the tenth most common cancer globally. They are associated with potential morbidity and mortality because of their tendency to interfere with vital functions of life such as breathing, swallowing, speech, hearing, vision, taste and smelling. Contrary to what was seen in the past where infectious diseases were the leading causes of pediatric morbidity and mortality, non-infectious diseases for example head and neck cancers are now spearheading the morbidity and mortality observed in pediatric population in

Africa. This review aims at discussing the clinico-histocy to pathological profile of various pediatric head and neck malignant neoplasms in different countries across the World.

7. Adalgot, K., Tiina, K., Colman, M. (2018). Development Studies in Tanzania: Historical Trajectory and Future Visions.

Abstract

The chapter discusses the history, dilemmas and future visions of Development Studies in Tanzania, especially from the perspective of Institute of Development Studies in the University of Dar es Salaam. It shows how in the 1970s Development Studies played a significant role in the consolidation of state ideology of African socialism among university students, and since then, has gradually evolved into a recognized discipline with MA and PhD programmes. Over the years, the discipline has dealt with dilemmas related to its multidisciplinary nature, state ideologies, international donor agendas and the changing demands concerning academic publications. Recently, Development Studies in Tanzania has started to address these dilemmas and search for a new identity, for example, through establishing a Tanzanian Development Studies Association.

8. Agricola, J., Sabrina, J. M., Lillian, N., Mtebe, M., Sima, R., Elizabeth, G. M.,1 Elia, J. M., Naboth, M., Said, A., and Eligius, F. L. (2018). Nasal Carriage of Methicillin-Resistant Staphylococcus aureus among Health Care Workers in Tertiary and Regional Hospitals in Dar es Salam, Tanzania.
https://doi.org/10.1155/2018/5058390

Abstract

Methicillin-resistant Staphylococcus aureus (MRSA) among health care workers (HCWs) increases the risk of spreading the organism in hospital settings. Across-sectional study was conducted betweenJuneandOctober2016amongHCWsintertiaryand regional hospitals in Dar es Salaam, Tanzania, to determine the MRSA nasal carriage rate. Nasals wabs were collected from HCWs and cultured on mannitol salt agar. S. aureus was identified based on colonial morphology, Gram staining, catalase, coagulase, and DN asetest results. MRSA was detected

using the cefoxitindisk. Among379HCWsenrolled,157/379(41.4%)were colonized with S. aureus, of whom 59(37.6%) were MRSA carriers giving an overall prevalence of 59/379(15.6%). MRSA carriage was high among HCWs in Temeke (56.9%) and Amana (37.5%) regional hospitals. A high proportion of MRSA carriage was detected among nurses (35,45.5%). MRSA isolates showed high resistance to ward kanamycin (83.7%), gentamicin (83.1%), ciprofloxacin (71.2%), and trime thoprim-sulphamethoxazole (46.8%) compared to methicillin-sensitive S. Aureus isolates (p≤0.001). In conclusion, we found a high nasal carriage of MRSA and resistance to commonly prescribed antimicrobial agents among HCWs. Implementation of infection control measures including contact precautions, urgent reporting of MRSA laboratory results, and routine MRSA screening of HCWs is highly needed to reduce MRSA spreading.

9. Ajee, K.L. (2018). A study to assess knowledge regarding hypertension among hypertensive clients in a selected urban slum of Kolkata.

Abstract

Introduction: Hypertension, the most prevalent non-communicable disease is a major risk factor for cardio and cerebrovascular complications. Obtaining information from hypertensive patients about their knowledge on hypertension is important for effective management of the disease. Aim: To assess knowledge about hypertension and its association with demographic characteristics of hypertensive people of an urban slum of Kolkata. **Methods:** This was a descriptive study involving 100 hypertensive patients in the selected urban slum of Kolkata, West Bengal. A self- structured validated questionnaire was used to obtain information from hypertensive people. Knowledge regarding hypertension was assessed using a 25-item questionnaire and was scored as inadequate (<8), average (9-17) and adequate (>19). SPSS 16 was used for statistical analysis. **Results:** Mean age of participants was 49.1yrs and most were male (52%), married (38%) and had a high school education (57%). The mean knowledge score was 10.3 (SD+ 2.43) and 56%, 38% and 6% of study participants had inadequate, average and adequate knowledge respectively. All demographic characteristics except marital status and religion had a significant association with knowledge score (p<0.05). **Conclusion:** The participants had low knowledge score, and demographic characteristics were significantly associated with knowledge score. Health care providers should ensure in imparting knowledge

regarding health maintenance and management. **Keywords:** Hypertension, Knowledge, Demographic characteristics, Association.

10. Aklilu, E., Eshetu, H. E., Daniale, T. E., Getaneh, M. B., and Mekuriaw, A. T. (2018). Low birth weight and its associated factors in Ethiopia: a systematic review and meta-analysis.
https://doi.org/10.1186/s13052-018-0586-6

Abstract

Background: Different primary studies in Ethiopia showed the burden of low birth weight. However, variation among those studies was seen. This study was aimed to estimate the national prevalence and associated factors of low birth weight in Ethiopia. Methods: PubMed, Web of Science, Cochrane library, and Google Scholar were searched. A funnel plot and Egger's regression test were used to see publication bias. I-squared statistic was applied to check heterogeneity of studies. A weighted inverse variance random-effects model was applied to estimate the national prevalence and the effect size of associated factors. The subgroup analysis was conducted by region, study design, and year of publication. Result: A total of 30 studies with 55,085 participants were used for prevalence estimation. The pooled prevalence of LBW was 17.3% (95% CI: 14.1–20.4). Maternal age < 20 years (AOR = 1.7; 95% CI:1.5–2.0), pregnancy interval < 24 months (AOR = 2.8; 95%CI: 1.4–4.2), BMI < 18.5 kg/m2 (AOR = 5.6; 95% CI: 1.7–9.4), and gestational age < 37 weeks at birth (AOR = 6.4; 95% CI: 2.5–10.3) were identified factors of LBW. Conclusions: The prevalence of low birth weight in Ethiopia remains high. This review may help policy-makers and program officers to design low birth weight preventive interventions.

11. Albert, M., Todd, M., Josephine, K., Zohra, L., Kristy, H., John, K., Nyasule, M. N., Susan, T., Ruth, C., Richard, W., Isaac, M., Mecky, M., Kisali, P., Muhammad, B. C., Fordham, V.R. (2018). Pre- and post-natal macronutrient supplementation for HIV–positive women in Tanzania: Effects on infant birth weight and HIV transmission.
https://doi.org/10.1371/journal.pone.0201038

Abstract

Objective: To determine if a protein-calorie supplement (PCS) plus a micronutrient supplement (MNS) improves outcomes for HIV-infected lactating women and their infants. **Design:** Randomized, controlled trial. **Setting:** Dar es Salaam, Tanzania. **Subjects, participants:** Pregnant HIV-infected women enrolled in PMTCT programs who intended to breastfeed for 6 months. Intervention: Randomization 1:1 to administration of a PCS plus MNS versus MNS alone among 96 eligible women beginning in the third trimester and continuing for 6 months of breast-feeding. Main outcome measure(s): Primary: infant weight at 3 months. Secondary: maternal BMI at 6 months. **Results:** PCS resulted in significant increases in daily energy intake compared to MNS at all-time points (range of differences: +388–719 Kcal); and increases in daily protein intake (range of differences: +22–33 gm). Infant birth weight (excluding twins) was higher in the PCS than MNS groups: 3.30 kg vs 3.04 kg (p = 0.04). Infant weight at 3 months did not differ between PCS and MNS groups: 5.63 kg vs 5.99 kg (p = 0.07). Maternal BMI at 6 months did not differ between PCS and MNS groups: 24.3 vs 23.8 kg/m2 (p = 0.68). HIV transmission occurred in 0 infants in the PCS group vs 4 in the MNS group (p = 0.03). **Conclusions:** In comparison to MNS the PCS + MNS intervention was well tolerated, increased maternal energy and protein intake, and increased infant birth weight, but not weight at 3 months or maternal BMI at 6 months. Reduced infant HIV transmission in the PCS + MNS group was observed.

12. Alfa, J.M., David, P.U., Rose, N M.M., Germana, H L., Bruno, F S., Deodatus, K., Anna, T.K., and Marina, A.N. (2018). Effect of training community health workers and their interventions on cardiovascular disease risk factors among adults in Morogoro, Tanzania: study protocol for a cluster randomized controlled trial.
https://doi.org/10.1186/s13063-018-2924-9

Abstract

Background: Cardiovascular diseases (CVDs) increasingly contribute to morbidity and mortality in Tanzania. Public knowledge about CVD risk factors is important for the primary prevention of CVDs and can be improved through community-based interventions delivered by community health workers (CHWs). However, evidence of the utility of CHWs in improving knowledge and CVD risk factors profile is lacking in Tanzania. This study aims at assessing the

effect of training CHWs and their CVD-specific interventions for reduction of hypertension and other CVD risk factors among adults in Morogoro, Tanzania. **Methods:** This study will use a mixed-methods design with both quantitative and qualitative approaches. A baseline quantitative survey will be conducted to assess knowledge, prevalence, and determinants of CVD risk factors in a random sample of 2950 adults aged 25–64 years. A cluster randomized controlled design with pre-test will be used to assess the effects of CVD-specific interventions delivered by CHWs on reduction of blood pressure and proportion of other CVD risk factors among 516 adults with raised blood pressure from 12 randomly selected villages in Morogoro, Tanzania. Focus group discussion (FGDs) will be conducted at the end of the intervention to assess perceived quality and acceptability of CVD-specific interventions delivered by CHWs. The intervention will consist of a five-day CVD-specific training to CHWs from villages randomized to the intervention. Trained CHWs will then provide home health education and healthy lifestyle promotion for prevention of CVD risk factors, counseling about hypertension screening for early identification, and referral and linkage of individuals with elevated blood pressure to health facilities. Since intensity of the intervention is key to reinforce behavior change, CHWs will visit the participants every month for the first six months, then bi-monthly thereafter up to 12 months. Except for referral of participants with raised blood pressure identified during the baseline survey, control villages will not receive any interventions delivered by CHWs. At the end of the intervention period, an end-line survey will be conducted in both intervention and control villages to evaluate changes in knowledge, blood pressure, and proportion of other CVD risk factors. **Discussion:** The results of this study are likely to have positive policy implications for the prevention of CVD risk factors through the use of CHWs in the provision of CVD-specific interventions, especially now that the Tanzanian government is considering implementing and scaling up a nation-wide multitask CHW cadre.

13. Alphonce, I. M., Dennis, P. M., Wigilya, P. M., Manase, K., Hamu, J. M., and Ritah, F. M. (2018). A decade since sulfonamide-based anti-malarial medicines were limited for intermittent preventive treatment of malaria among pregnant women in Tanzania.
https://doi.org/10.1186/s12936-018-2565-1

Abstract

Background: Despite the development of resistance to Plasmodium falciparum malaria, sulfadoxine–pyrimethamine is still effective for intermittent preventive treatment of malaria in pregnancy (IPTp). In Tanzania, more than 10 years have passed since sulfadoxine–pyrimethamine and sulfamethopyrazine–pyrimethamine (SPs) were reserved for IPTp only. However, the retail pharmaceutical outlet dispensers' knowledge and their compliance with the policies have not been recently explored. Therefore, this study was designed to investigate dispensers' knowledge about these medications together with their actual dispensing practices, a decade since they were limited for IPTp use only. **Methods:** This descriptive cross-sectional study was conducted between February and July 2017 in all municipalities of Dar-es-Salaam city. Data were collected by direct interviews using a structured questionnaire to assess knowledge and a simulated client approach was used to assess the actual practice of medicine dispensers. Data analysis was done by using SPSS version 20 and Chi square test was used to test significant differences in proportions between different categorical variables. A p-value of less than 0.05 was considered to be statistically significant. **Results:** A random sample of 422 medicine dispensers participated in this study whereby 185 (43.8%) were from community pharmacies and 237 (56.2%) from accredited drug dispensing outlets. The study revealed that SPs were available in 76% of the community pharmaceutical outlets in Dar es Salaam. In general majority of the dispensers (64%) had moderate to high knowledge about SPs and their indication. About 80% of the dispensers were aware that SP is reserved for IPTp. However, irrespective of the level of knowledge, almost all dispensers (92%) were willing to dispense the medicines for the purpose of treating malaria, contrary to the current Tanzania malaria treatment guideline. **Conclusion:** Majority of the medicine dispensers in the community pharmaceutical outlets were knowledgeable about SPs and their indications. Disappointingly, almost all dispensers irrespective of their levels of knowledge were willing to dispense SPs for treatment of malaria contrary to the available treatment guidelines.

14. Amy, K. H., Yimao, H., Ann, V. H. and David, A.B. (2018). Adipose oxidative stress and protein carbonylation.

Abstract

Increased oxidative stress and abundance of reactive oxygen species (ROS) are positively correlated with a variety of pathophysiology's, including cardiovascular disease, type 2 diabetes, Alzheimer's disease, and neuroinflammation. In adipose biology, diabetic obesity is correlated with increased ROS in an age- and depot-specific manner and is mechanistically linked to mitochondrial dysfunction, endoplasmic reticulum (ER) stress, potentiated lipolysis, and insulin resistance. The cellular quality control systems that homeostatically regulate oxidative stress in the lean state are down regulated in obesity as a consequence of inflammatory cytokine pressure leading to the accumulation of oxidized biomolecules. New findings have linked protein, DNA, and lipid oxidation at the biochemical level and the structures and potential functions of protein adducts such as carbonylation that accumulate in stressed cells have been characterized. The sum total of such regulation and biochemical changes results in alteration of cellular metabolism and function in the obese state relative to the lean state and underlies metabolic disease progression. In this review, we discuss the molecular mechanisms and events underlying these processes and their implications for human health and disease.

15. Andrea, F., Theda, G., Antony, A., and Matin, Q. (2018). How well do different dietary and nutrition assessment tools match? Insights from rural Kenya. https://doi.org/10.1017/S1368980018002756

Abstract

Objective: Various indicators and assessment tools exist to measure diets and nutrition. Most studies eventually rely on one approach. Relatively little is known about how closely results match when different tools are used in the same context. The present study compares and correlates different indicators for the same households and individuals to better understand which indicators can be used as proxies for others. **Design:** A survey of households and individuals was carried out in Kenya in 2015. Seven-day food consumption and 24 h dietary recalls were administered at household and individual level, respectively. Individual height and weight measures were taken. Different indicators of food access (energy consumption, household dietary diversity scores), dietary quality (individual dietary diversity scores, micronutrient intakes) and nutrition (anthropometric indicators) were calculated and correlated to evaluate associations. Setting: Rural farm households in western Kenya. Participants: Data collected from

809 households and 1556 individuals living in these households (782 female adults, 479 male adults, 295 children aged 6–59 months). **Results:** All measures of food access and dietary quality were positively correlated at individual level. Household-level and individual-level dietary indicators were also positively correlated. Correlations between dietary indicators and anthropometric measures were small and mostly statistically insignificant. **Conclusions:** Dietary indicators from 7d food consumption recalls at the household level can be used as proxies of individual dietary quality of children and male and female adults. Individual dietary diversity scores are good proxies of micronutrient intakes. However, neither household-level nor individual-level dietary indicators are good proxies of individual nutritional status in this setting.

16. Andrew, H. M., Hussein, L. K., Lennarth, N., Birgitta, E. (2018). Use of a criteria-based audit to optimize uptake of cesarean delivery in a low-resource setting. https://doi.org/10.1002/ijgo.12726

Abstract

at a tertiary referral hospital in Tanzania. Data were collected before and after CBA (January 2013–November 2013 and July 2015–June 2016). Outcomes of fetal distress (baseline CBA, n=248; re-audit, n=251) and obstructed labor (baseline CBA, n=260; re-audit n=250) were assessed using a checklist. Additionally, 27 960 parturient were assessed using the Robson classification. **Results:** Perinatal morbidity and mortality decreased from 42 of 260 (16.2%) to 22 of 250 (8.8%). **Objective:** To evaluate the impact of criteria-based audit (CBA) of obstructed labor and fetal distress on cesarean delivery and perinatal outcomes. **Methods:** A cross-sectional study was performed among patients with obstructed labor after CBA (P=0.012). Cesarean delivery rate decreased for referred term multiparas with induced labor or prelabor cesarean delivery (odds ratio [OR] 0.28, 95% confidence interval [CI] 0.09–0.82). Cesarean delivery rate for preterm pregnancies increased among both referred (OR 1.28, 95% CI 1.02–1.63) and non-referred (OR 2.78, 95% CI 1.98–3.90) groups. Neonatal distress rate decreased for referred term multiparas (OR 0.72, 95% CI 0.56–0.92), referred preterm pregnancies (OR 0.32, 95% CI 0.25–0.39), and non-referred preterm pregnancies (OR 0.26, 95% CI 0.18–0.36). **Conclusion:** Use of CBA reduced poor perinatal outcomes of obstructed labor and increased uptake of cesarean delivery.

17. Ann, J. N., Paul, B., Noeline, N., Margaret, S.C., Andrew, S. S., Chandy, C. J., and Richard, I. (2018). "I feel so bad but have nothing to do." Exploring Ugandan caregivers' experiences of parenting a child with severe malaria and subsequent repeated uncomplicated malaria. https://doi.org/10.1186/s12936-018-2514-z

Abstract

Background: Severe malaria in children is often associated with long-term behavioral and cognitive problems. A sizeable minority of children go on to experience repeated malaria due to the high transmission and infection rates in the region. The purpose of this study was to explore caregivers' experiences of parenting a child with a history of severe malaria followed by repeated episodes of uncomplicated malaria in comparison to healthy community children. **Methods:** Thirty-one caregivers were enrolled in the study. These included caregivers of children previously exposed to severe malaria and who had experienced repeated uncomplicated malaria attacks (SM with RMA, n = 15), caregivers of children exposed to severe malaria who did not experience repeated episodes (SM, n = 10), and caregivers of healthy community children (CC, n = 6) were purposively selected. **Results:** Thematic-content analysis generated eight areas of concern, six of which were noted only by caregivers of children with SM or SM with RMA: (1) a sense of helplessness; (2) challenges with changes in behaviour; (3) responses to a child's behaviour; (4) family life disruptions, including breakdown of relationships and inadequate male-spouse involvement in child care; (5) disagreements in seeking healthcare; (6) societal burden; and two by caregivers of children with SM, SM with RMA and also CC; (7) concern about academic achievement; and, (8) balancing work and family life. **Conclusions:** The study findings suggest that severe malaria, especially when followed by repeated malaria episodes, affects not only children who have the illness but also their caregivers. The effects on caregivers can decrease their social functioning and isolate them from other parents and may disrupt families. Interventions to support caregivers by counselling the ongoing problems that might be expected in children who have had severe malaria and repeated episodes of malaria, and how to manage these problems, may provide a way to improve behavioral and mental health outcomes for those children and their caregivers.

18. Ao, L., Jeffrey, W. S., and Xin, Y. (2018). Molecular conformation affects the interaction of the Pseudomonas quinolone signal with the bacterial outer membrane.

Abstract

Gram-negative bacteria produce outer membrane vesicles (OMVs) that package genetic elements, virulence factors, and cell-to-cell communication signaling compounds. Despite their importance in many disease-related processes, how these versatile structures are formed is incompletely understood. A self-produced secreted small molecule, the Pseudomonas quinolone signal (PQS), has been shown to initiate OMV formation in Pseudomonas aeruginosa by interacting with the outer membrane and inducing its curvature. Other bacterial species have also been shown to respond to PQS, supporting a common biophysical mechanism. Here, we conducted molecular dynamics simulations to elucidate the specific interactions between PQS and a model P. aeruginosa outer membrane at the atomistic scale. We discovered two characteristic states of PQS interacting with the biologically relevant membrane, namely attachment to the membrane surface and insertion into the lipid A leaflet. The hydrogen bonds between PQS and the lipid A phosphates drove the PQS–membrane association. An analysis of PQS trajectory and molecular conformation revealed sequential events critical for spontaneous insertion, including probing, docking, folding, and insertion. Remarkably, PQS bent its hydrophobic side chain into a closed conformation to lower the energy barrier for penetration through the hydrophilic head-group zone of the lipid A leaflet, which was confirmed by the potential of mean force (PMF) measurements. Attachment and insertion were simultaneously observed in the simulation with multiple PQS molecules. Our findings uncover a sequence of molecular interactions that drive PQS insertion into the bacterial outer membrane and provide important insight into the biophysical mechanism of small molecule–induced OMV biogenesis.

19. Arvind, K.M., Attarde, N., Vivek, P., Talat, A., Akhil, K.G., Mamta, S. (2018). Clinical Study of Acid-Peptic Disease in a Semi-Urban Setup in Western Uttar-Pradesh.
DOI: 10.21276/aimdr.2018.4.6.SG1

Abstract

Background: Acid peptic disease is a common morbidity is India. We aim to find the present dynamics of age, sex and causative factors in our semi urban setup in western Uttar-Pradesh. **Methods:** a prospective study was done to include patients with acid peptic like symptoms presenting between January 2016 to December 2017. Upper GI endoscopy was done in patients

with severe and recurrent symptoms. **Results:** In our study, out of 488 patients, 24 presented with perforated ulcers while 255 patients underwent upper GI endoscopy. 42 patients had normal mucosa on endoscopy. Highest incidence was seen in the age group of 31-40 years.68.86% of the patients had some sort of tobacco or alcohol intake. **Conclusion:** Peptic ulcer disease is still associated with considerable morbidity even in this era of proton pump inhibitors and H2 receptor blockers available as OTC products. The highest incidence was in the age group of 31-40 years. Lifestyle factors like smoking, alcohol intake, spicy, oily and salty food intake and tobacco chewing are present in majority of patients. Incidence of the disease in females is seen to be increasing.

20. Asteria, K., Dianna, N. (2018). Validation of the GeneXpert Breast Cancer STRAT4 Assay for Rapid Analysis of Breast Cancer Biomarker Status from Fine-Needle Aspiration Biopsies in Tanzania (GX-BCB): Preliminary Results.
https://doi.org/10.1093/ajcp/aqy104.330

Abstract
Objectives: Breast cancer hormone receptor status, including estrogen receptor (ER), progesterone receptor (PR), and human epidermal growth factor receptor 2 (HER2), is critical in determining patient prognosis and treatment. Reagent shortages, lack of trained staff, and long processing time limit their assessment in Tanzania. We aim to compare GeneXpert Breast Cancer STRAT4 (Research Use Only) assay using fine-needle aspiration (FNA) specimens to immunohistochemistry (IHC) on corresponding mastectomy specimens. STRAT4 measures the mRNA of biomarkers on an automated qPCR diagnostic platform. **Methods:** Adult patients presenting to the FNA Clinic at Muhimbili National Hospital (MNH) with a malignant breast mass based on rapid on-site evaluation (ROSE) were recruited prospectively. Patients with a history of breast cancer, those with bilateral breast tumors, and women who were pregnant or lactating were excluded. STRAT4 was performed on air-dried FNA specimens at MUHAS and compared with ER, PR, and HER2 IHC results on corresponding surgical specimens. **Results:** Twenty patients have been recruited to date (age range, 25–75; mean age, 48.8 years). All cases determined to be adenocarcinoma by ROSE were confirmed to be adenocarcinoma on final report. STRAT4 assay showed four triple negative, six ER+PR+HER2+, two ER+PR+HER2–,

five ER+PR–HER2+, two ER+PR–HER2–, and one ER–PR–HER2+. Four cases have IHC results from MNH; rates of misclassification were 0% for ER, 50% for PR, and 50% for HER2. Average biomarker turnaround time with FNA and STRAT4 was 4.7 days (range, 1–14 days), compared to 37 days (range, 32–43 days) with IHC on surgical specimens from date of procedure. **Conclusion:** STRAT4 assay can be implemented with fewer resources and accelerated timeline as compared to IHC at MNH. ER has a low rate of misclassification. Implementation of STRAT4 technology has the potential to transform breast cancer diagnosis and treatment in low-resource settings.

21. Beatrice, M., Kana, S., Miyuki, O., Sebalda, L., Yoko, S., Shigeko, H. (2018). A Feasibility Study of an Educational Program on Obstetric Danger Signs among Pregnant Adolescents in Tanzania: A mixed-methods Study.
https://doi.org/10.1016/j.ijans.2018.02.004

Abstract

Background: In Tanzania, adolescents have a high lifetime risk of dying from pregnancy and childbirth complications. Objective: To determine the feasibility of an education program in improving knowledge of obstetric danger signs and promoting appropriate healthcare-seeking behavior, as well as encouraging the development of a peer network support group. Methods: An embedded mixed-methods design was used. This research was a pilot study conducted in a health facility in rural Tanzania. Quantitative data was collected and after the education program using questionnaires. Focus group discussion was used to collect qualitative data. Results: 15 pregnant adolescents between 15 to 19 years of age participated. Their median age was 18.0 years (SD ± 1.19), and 66.7% were ≤ 18 years. There was a significant increase in the scores of knowledge of danger signs during pregnancy between the pre-test (M = 7.20, SD = 2.83) and the post-test (M = 9.07, SD = 1.67); t = 2.168, p = 0.048. There was a significant strong positive correlation between the healthcare-seeking behavior score and social support score variables [r = .654, p = 0.008]. The education program was feasible in terms of implementation, acceptability, and demand as indicated by its > 84% score. Four categories were identified from the qualitative data: "supportive family", "rejection and abortion", "support from peers", and "potential barriers to seek care". Conclusion: The development of an education program particularly on obstetric

dangersigns was feasible and helpful for pregnant adolescents in Tanzania. Keywords: pregnancy, adolescent, obstetric danger signs, social support, healthcare-seeking behavior, antenatal care.

22. Benjamin, A.K., Hege, L.E., Ingvild, D., Muzdalifat, S.A., Matilda, M.N., Jeffrey, M. P., Hussein, L.K. (2018). Implementation of a novel continuous fetal Doppler (Moyo) improves quality of intrapartum fetal heart rate monitoring in a resource-limited tertiary hospital in Tanzania: An observational study.

Abstract
Background: Intrapartum Fetal Heart Rate (FHR) monitoring is crucial for the early detection of abnormal FHR, facilitating timely obstetric interventions and thus the potential reduction of adverse perinatal outcomes. We explored midwifery practices of intrapartum FHR monitoring pre and post implementation of a novel continuous automatic Doppler device (the Moyo). **Methodology:** A pre/post observational study among low-risk pregnancies at a tertiary hospital was conducted from March to December 2016. In the pre-implementation period, intermittent monitoring was conducted with a Pinard stethoscope (March to June 2016, n = 1640 women). In the post-implementation period, Moyo was used for continuous FHR monitoring (July-December 2016, n = 2442 women). The primary outcome was detection of abnormal FHR defined as absent, FHR<120or FHR>160bpm. The secondary outcomes were rates of assessment/documentation of FHR, obstetric time intervals and intrauterine resuscitations. Chi-square test, Fishers exact test, t-test and Mann-Whitney U test were used in bivariate analysis whereas binary and multinomial logistic regression were used for multivariate. **Results:** Moyo use was associated with greater detection of abnormal FHR (8.0%) compared with Pinard (1.6%) (p<0.001). There were higher rates of non-assessment/documentation of FHR pre- (45.7%) compared to post-implementation (2.2%) (p<0.001). At pre-implementation, 8% of deliveries had FHR documented as often as $\leq$ 60 minutes, compared to 51% post-implementation (p<0.001). Implementation of continuous FHR monitoring was associated with a shorter time interval from the last FHR assessment to delivery i.e. median (IQR) of 60 (30,100) to 45 (21,85) minutes (p<0.001); and shorter time interval between each FHR assessment i.e. from 150

(86,299) minutes to 60 (41,86) minutes (p<0.001). Caesarean section rates increased from 2.6 to 5.4%, and vacuum deliveries from 2.2 to 5.8% (both p<0.001). Perinatal outcomes i.e. fresh stillbirths and early neonatal deaths were similar between time periods. The study was limited by both lack of randomization and involvement of low-risk pregnant women with fewer adverse perinatal outcomes than would be expected in a high-risk population. **Conclusion:** Implementation of the Moyo device, which continuously measures FHR, was associated with improved quality in FHR monitoring practices and the detection of abnormal FHR. These improvements led to more frequent and timely obstetric responses. Follow-up studies in a high-risk population focused on a more targeted description of the FHR abnormalities and the impact of intrauterine resuscitation is a critical next step in determining the effect on reducing perinatal mortality.

23. Christiaan, S., Mercedes, C., Waheba, S., Lawrence, O., Ross, P., Ronald, M.L., María, M.K., Francis, F., James, C., Gail, F., Gecilmara, P., Claudia, S.M., Carine, W., Helen, E.F., Raju, K., Nicolino, R., Ricardo, R. (2018). Juvenile arthritis management in less resourced countries (JAMLess): consensus recommendations from the Cradle of Humankind.
DOI 10.1007/s10067-018-4304-y

Abstract

Juvenile idiopathic arthritis (JIA) is the mostprevalentchronic rheumatic disease in children and young people (CYP) and major cause of pain and disability. The vast majority of the world'schildren and their families live in less resourced countries (LRCs) and face significant socioeconomic and healthcare challenges. Current recommendations for standards of care and treatment for children with JIA do not consider children living in less resourced countries. In order to develop appropriate recommendations for the care of CYP with JIA in less resourced countries a meeting of experienced pediatric rheumatologists from less resourced countries were convened with additional input from a steering group of international pediatric rheumatologists with experience developingrecommendationsand standards ofcareforJIA.Followinganeedsassessmentsurveyofhealthcareworkerscaringfor CYPwithJIA inLRC, aliteraturereviewwascarriedout andmanagement recommendationsformulated using

Delphitechnique

andafinalconsensusconference.Responsesfromtheneedsassessmentwerereceivedfrom121/483(25 %)practitionersfrom25/ 49 (51%) less resourced countries. From these responses, the initial 84 recommendations were refined and expanded through a seriesof3onlineDelphirounds.A finalist of90recommendationswasproposedforevaluation.Evidenceforeachstatementwas reviewed, graded, and presented to the consensus group. The degree of consensus, level of agreement, and level of evidence for these recommendations are reported. Recommendations arrived at by consensus for CYP with JIA in less resourced countries cover5themes:(1) diagnosis, (2) referralandmonitoring,(3)educationandtraining,(4)advocacyandnetworks,and(5)research. Thirty-five statements were drafted. All butone statementachieved100%consensus. Thebody of published evidence wassmall and the quality of evidence available for critical appraisal was low. Our recommendations offer novel insights and present consensus-based strategies for the management of JIA in less resourced countries. The emphasis on communicable and endemic.

24. Christine, P.C., Philip, R. (2018). An evaluation of rational prescribing in hospital outpatient practice in Sierra Leone and assessment of affordability of a prescription as an outcome.

Abstract

Introduction: medicines are the most frequently used intervention in healthcare. Rational and cost-effective prescribing is especially important in countries where access to effective medicines may be challenged by affordability issues. This study describes the prescribing patterns of doctors in government hospitals in Freetown, Sierra Leone, considering the scope for rationalizing prescribing and reducing cost to the patient. **Methods:** a descriptive, retrospective, cross-sectional study was conducted at four hospitals, using selected World Health Organization (WHO) indicators applied to 600 prescriptions, after systematic random sampling. The data was analyses using SPSS.16 and the Index of Rational Drug Prescribing (IRDP) calculated. The Spearman's rank coefficient was used to examine possible associations between the number of medicines prescribed as generics and from the National Essential Medicines List (NEML) and cost of the prescription respectively. Affordability was determined from the average number of days of work required to purchase a prescription, based on the minimum wage of the lowest paid

government worker in Sierra Leone. **Results:** the mean number of medicines per prescription from the four hospitals was 4.37(range 4.18-4.56) with 57% prescribed generically and 64% from the NEML. An antibiotic and injection were found on 72% and 26% of prescriptions respectively. The overall IRDP was 2.65/5. The aver-age cost per prescription was Le. 29,376.30 ($6.78), equivalent to 43 days of work of the lowest paid government worker. **Conclusion:** in this study, opportunities were identified for significant rationalization and improvement in cost-effective prescribing.

25. Christopher, R.S., Ashley, L.B., Nzovu, U., Donna, S., Expeditho, M., Ellen, H., Aisa, N.M., David, S., Ester, M., Mucho, M., and Wafaie, W.F. (2018). Effectiveness of a multivitamin supplementation program among HIV-infected adults in Tanzania.

Abstract

Objective: The objective of this study was to assess the effectiveness of a routine multivitamin supplementation program for adults living with HIV in Tanzania. Design: We conducted a retrospective cohort study of 67,707 adults enrolled in the Dar es Salaam HIV care and treatment program during 2004-2012. **Methods:** The Dar es Salaam HIV care and treatment program intended to provide all adult patients with multivitamin supplements (vitamins B-complex, C, and E) free of charge; however, intermittent stock outs and other implementation issues did not afford universal coverage. We use Cox proportional hazard models to assess the time-varying association of multivitamin supplementation with mortality and clinical outcomes. **Results:** The study cohort contributed 41,540 and 129,315 person-years of follow-up time to the ART-naïve and ART-experienced analyses, respectively. Among 48,207 ART-naïve adults, provision of multivitamins reduced the risk of mortality (adjusted hazard ratio (aHR): 0.69; 95% CI: 0.59-0.81), incident tuberculosis (TB) (aHR: 0.83; 0.76-0.91), and meeting ART eligibility criteria (aHR: 0.78; 95% CI: 0.73-0.83) after adjustment for time-varying confounding. Among 46,977 ART-experienced patients, multivitamins reduced mortality (HR: 0.86; 95% CI: 0.800.92), incident TB (aHR: 0.78; 95% CI: 0.73-0.84), and immunologic failure (aHR: 0.70; 95% CI: 0.67-0.73). The survival benefits associated with provision multivitamins appeared to be greatest during the first year of ART and declined over time (p-value <0.001). **Conclusion:** Multivitamin supplementation appears to be a simple, effective, safe, and scalable program to

improve survival, reduce incidence of TB, and improve treatment outcomes for adult HIV patients in Tanzania. Keywords: HIV, Tuberculosis, micronutrient, nutrition, supplement, cohort study, implementation science.

26. Clarer, J., Billy, N., Yahya, A. D., Donath, T., Lisa, R., Moses, B., and Mwelecele, N. M. (2018). Lymphatic filariasis transmission in Rufiji District, southeastern Tanzania: infection status of the human population and mosquito vectors after twelve rounds of mass drug administration.

Abstract

Background: Control of lymphatic filariasis (LF) in most of the sub-Saharan African countries is based on annual mass drug administration (MDA) using a combination of ivermectin and albendazole. Monitoring the impact of this intervention is crucial for measuring the success of the LF elimination programmes. This study assessed the status of LF infection in Rufiji district, southeastern Tanzania after twelve rounds of MDA.Methods: Community members aged between 10 and 79 years were examined for Wuchereria bancrofti circulating filarial antigens (CFA) using immune chromatographic test cards (ICTs) and antigen-positive individuals were screened for microfilaraemia. All study participants were examined for clinical manifestation of LF and interviewed for drug uptake during MDA rounds. Filarial mosquito vectors were collected indoor and outdoor and examined for infection with W. bancrofti using a microscope and quantitative real-time polymerase chain reaction (qPCR) techniques. Results: Out of 854 participants tested, nine (1.1%) were positive for CFA and one (0.1%) was found to be microfilaraemic. The prevalence of hydrocele and elephantiasis was 4.8% and 2.9%, respectively. Surveyed drug uptake rates were high, with 70.5% of the respondents reporting having swallowed the drugs in the 2014 MDA round (about seven months before this study). Further, 82.7% of the respondents reported having swallowed the drugs at least once since the inception of MDA programme in 2000. Of the 1054 filarial vectors caught indoors and dissected to detect W. bancrofti infection none was found to be infected. Moreover, analysis by qPCR of 1092 pools of gravid Culex quinquefasciatus collected outdoors resulted in an estimated infection rate of 0.1%. None of the filarial vectors tested with qPCR were found to be infective.

Conclusion: Analysis of indices of LF infection in the human population and filarial mosquito vectors indicated a substantial decline in the prevalence of LF and other transmission indices, suggesting that local transmission was extremely low if occurring at all in the study areas. We, therefore, recommend a formal transmission assessment survey (TAS) to be conducted in the study areas to make an informed decision on whether Rufiji District satisfied WHO criteria for stopping MDA.

27. Claris, M.J., Simon, K., Rahma, U.Y. (2018). Factors influencing low birth weight (lbw) among mother-neonate pairs and associated health outcomes at coast general hospital Mombasa county Kenya.

Abstract

Purpose: Low birth weight (LBW) is weight at birth of less than 2500gms regardless of the gestational age. Low birth weight is the leading cause of infants and child mortality. Most neonates / infants spend most of their weeks/ months in hospitals. Globally 20 million LBW babies are born every year throughout the world. Reports indicate that an estimated 14 % of neonates are born with LBW while the burden is estimated to be 16% in Kenya. The **Objective** of this study was to determine factors influencing low birth weight (LBW) and associated health outcomes associated among Mother-Neonate pairs at Coast General Hospital Mombasa County. **Methods:** A descriptive cross-sectional study was used to collect data on socio-demographic/socioeconomic characteristics, birth weight, and mothers' knowledge as a predictor of health outcomes among neonates. A total of 525 mothers who had delivered at Coast general hospital Mombasa County during the study period of 8months from August 2015 to March 2016 were recruited. Systematic simple random sampling was used to select study participants and a semi-structured questionnaire used to collect data. Data analysis was done by STATA 13·1 (College Station, TX, USA). **Results:** The prevalence of low birth weight was 29%, the prevalence was much higher than the estimated prevalence in developing countries of 16% and global prevalence; 15.5% (WHO 2012). There was significant association between low birth weight (LBW) and the following factors; caesarean section birth (adjusted relative risk (ARR) 2.33 (95% CI 1.22 - 4.44), twin birth (ARR 2.85 (95% CI 1.11 - 7.33) and previous low birth weight (ARR 2.42 (95% CI 1.04 - 5.59). Having college education level (ARR 0.41 (95% CI

0.18 - 0.92) and normal hemoglobin concentration (ARR 0.67 (95% CI 0.58 - 0.78) had protective effect on the risk of LBW. Attending ANC during pregnancy for less than 4 times as recommended by WHO was associated with ~3-fold increase in risk of LBW (CRR 2.60 (95% CI 1.69 - 4.02). The prevalence of LBW of 29% is higher than the national burden.

28. Cyrille, B., Landry, E.M., Stéphane, M.B. Apollinaire, E., Jean, E.M., Jean-Charles, E.M., Kévin, M., Arnaud, M.D., Bertrand, M., Bolni, M.N. (2018). Trends of blood-borne infectious diseases in a rural blood donation center of southeast Gabon (Koula-Moutou).

Abstract

Introduction: blood-borne pathogens such as human immunodeficiency virus (HIV), hepatitis B and C (HBV and HCV) viruses and Treponema pallidum remain a major public health problem in sub-Saharan Africa. The purpose of this study was to assess the frequency and clinical implications of HIV, HBV, HCV and Treponema pallidum markers in blood donors in a rural area of Southeast Gabon (Koula-Moutou) from 2012 to 2017. **Methods:** hepatitis B surface antigen (HBsAg), anti-HIV, anti-HCV and anti-Treponema pallidum antibodies were screened using rapid diagnostic tests. **Results:** of a total of 5,706 blood donors, 1,054 (18.5%) were seropositive for at least one infectious marker and 59 (5.6%) had serologic evidence of multiple infections. The overall seroprevalence of HIV, HBsAg, HCV, and syphilis was 3.1%; 5.9%; 6.2% and 3.3%, respectively. HIV, syphilis and HCV distributions were associated with neither the sex nor the age of the donors. Only HBsAg seroprevalence was significantly higher in donors of the age group 26-35 years old compared to donors of the age group 36-45 years (OR = 1.43 (95% CI: 1.01-2.04), P = 0.045). There was a significant increase in the frequencies of HIV and syphilis and a regression of HBsAg and HCV among blood donors. **Conclusion:** this study presents the epidemiology of the main pathogens detected in blood donors in a rural area in Gabon. We found that the overall distribution of transfusion transmitted infectious diseases were lower than those observed in the general population but could be underestimated due to the use of rapid diagnostic tests (RDTs) in the screening process of the blood donations.

29. Joseph, K., Kevin, O.L., and Nicephorus, R. (2018). Overcoming barriers to neurosurgical training in Tanzania: international exchange, curriculum development, and novel methods of resource utilization and subspecialty development.

Abstract

Tanzania sits on the Indian Ocean in East Africa and has a population of over 53 million people. While the gross domestic product has been increasing in recent years, distribution of wealth remains a problem, and challenges in the distribution of health services abound. Neurosurgery is a unique case study of this problem. The challenges facing the development of neurosurgery in Tanzania are many and varied, built largely out of the special needs of modern neurosurgery. Task shifting (training no physician surgical providers) and 2-tiered systems (fast-track certification of general surgeons to perform basic neurosurgical procedures) may serve some of the immediate need, but these options will not sustain the development of a comprehensive neurosurgical footprint. Ultimately, long-term solutions to the need for neurosurgical care in Tanzania can only be fulfilled by local government investment in capacity building (infrastructure and neurosurgical training), and the commitment of Tanzanians trained in neurosurgery. With this task in mind, Tanzania developed an independent neurosurgery training program in Dar es Salaam. While significant progress has been made, a number of training deficiencies remain. To address these deficiencies, the Muhimbili Orthopedic Institute (MOI) Division of Neurosurgery and the University of Colorado School of Medicine Department of Neurosurgery set up a Memorandum of Understanding in 2016. This relationship was developed with the perspective of a "collaboration of equals." Through this collaboration, faculty members and trainees from both institutions have the opportunity to participate in international exchange, join in collaborative research, experience the culture and friendship of a new country, and share scholarship through presentations and teaching. Ultimately, through this international partnership, mutual improvement in the care of the neurosurgical patient will develop, bringing programs like MOI out of isolation and obscurity. From Dar es Salaam, a center of excellence is developing to train neurosurgeons who can go well equipped throughout Tanzania to improve the care of the neurosurgical patient everywhere. The authors encourage further such exchanges

to be developed between partnership training programs throughout the world, improving the scholarship, sub specialization, and teaching expertise of partner programs throughout the world.

30. Daniel, Z.M., Olipa, D.N., Francis, M., and   (2018). Screening of Plants Used as Traditional Anticancer Remedies in Mkuranga and Same Districts, Tanzania, Using Brine Shrimp Toxicity Bioassay.

Background: Inadequate specialized cancer hospitals and high costs are contributing factors that delay cancer patients from accessing health care services in Tanzania. Consequently, majority of patients are first seen by Traditional Health Practitioners (THPs) before they access specialized services. This study presents ethno medical information and preliminary evaluation of 25 plant species claimed by THPs in Mkuranga and Same districts of Tanzania on use for treatment of cancer. Literature search and laboratory investigation results are presented to support evaluation. **Methods:** This study was a single disease ethno medical enquiry focusing on plantsbeingused for cancertreatment. Face-to-faceinterviewsand questionnaires wereadministeredtoeight (8) THPs in Mkuranga and Same districts on the claimed plants and their use for management of cancer. Plants were selected basedonbeing frequently mentionedandemphasis given byTHPs.Literaturesearchandbrines hrimptoxicity(BST)of methanol: dichloromethane (1:1) extracts was used assurrogates to evaluate strength of the claims. **Results:** This study reports 25 plant species usedby the THPs in twodistricts of Tanzania. Eightplants (32%)havebeenreportedin the literature to have activity against cancer cells. BST results revealed,14 (56%) plants exhibited high toxicity against brineshrimps. Themost active plants included CrotonpseudopulchellusPax (LC50 4.2 μg/ml), Dalbergia melanoxylon Guill. & Perr. (LC506.8μg/ml), Loranthus micranthus Linn (LC50 4.0μg/ml), OchnamossambicensisKlotzs3.3μg/ml) and Spirostachys africana Sond. (LC504.4μg/ml); theirtoxicitywas comparable to that of Catharanthusroseus (L) G. Don. (LC50 6.7μg/ml), an established source of anti-cancer compounds. Nineother plants had LC50 values between (19.8 and 71.6) μg/ml, indicating also potentialto yield anticancer. **Conclusion:** Literature search andBSTresultsprovideastrongsupportofthepotentialoftheclaimedplantsto yieldactiveanti-cancercompounds.

31. Dawud, M. A., Tesfaye, S. M., and Aemiro, G. E. (2018). Incidence and factors associated with outcomes of uterine rupture among women delivered at Felegehiwot referral hospital, Bahir Dar, Ethiopia: cross sectional study.

Abstract

Background: Maternal mortality is a major public health challenge in Ethiopia. Uterine rupture is an obstetrical emergency with serious undesired complications for laboring mothers resulting in fatal maternal and neonatal outcomes. Uterine rupture has been contributing to high maternal morbidity and mortality. However, there is limited research on the factors and management outcomes of women with uterine rupture. Understanding the factors and management outcomes might delineate strategies to support survivors. Therefore, the aim of this study is to assess the incidence and factors associated with outcomes of uterine rupture among laboring mothers at Felegehiwot Referral Hospital in Bahir Dar City, Northwest Ethiopia. **Methods:** This is a cross sectional study with retrospective facility based data collection technique. All pregnant women who were managed for ruptured uterus at Felegehiwot referral hospital from September 11 2012 to August 30 2017 were included. The chart numbers of the women collected from operation theatre registers. Their case folders retrieved from the medical records room for analysis. Using structured check list, information on their sociodemographic, booking status, clinical features at presentation and the place of attempted vaginal delivery was extracted. Data on the intraoperative findings, treatment, and associated complications and outcomes also collected. The collected data cleaned, coded and entered into EPI- Info version (7.1.2.0) and then exported in to SPSS Version 20.0 for analysis. Statistical comparison was done using chi square (X2). Strength of association between the explanatory variables and outcome variables described using odds ratio at 95% CI and P value less than 0.05. The results presented in tables. **Results:** We studied 239 cases of uterine rupture in the 5 years' period. Mothers without previous cesarean delivery including eight prim gravidas took 87% of the cases. From all study participants, 54 of mothers (22.6%) developed undesired outcomes whereas 185(77.4%) discharged without major sequel. More than half (56.9%) arrived in hypovolemic shock. Total abdominal hysterectomy was the commonest procedure accounting for 61.5%. Duration of surgery was less than 2 h in 67.8% of the procedures. Anemia is the commonest complication (80.3%) followed by wound

infection and VVF (11.7% each). There were 5 maternal deaths (2.1%). Mothers who had prolonged operation time (> 2 h) (AOR: 2.2, 95% CI: 1.10, 4.63) were significantly associated with undesired maternal outcomes after management of uterine rupture. **Conclusion:** Incidence of ruptured uterus and its complications were high in the study area. It reflects the need for improvement in obstetric care and strong collaboration with referring health facilities to ensure prompt referral and management. Keywords: Ruptured uterus, Felegehiwot referral hospital, Undesired outcomes.

32. Debora, N., Deogratius, M., Rose, M., Debora, C., Saul, E., Khadija, M., Akum, A., Tricia, A., Elizabeth, H., Yvonne, T., Rebecca, H. (2018). Explaining progress towards Millennium Development Goal 4 for child survival in Tanzania.
doi: 10.7189/jogh.08.021201

Abstract

Background: During the Millennium Development Goal (MDG) era (1990-2015) the government in Mainland Tanzania and partners launched numerous initiatives to advance child survival including the comprehensive One Plan for Maternal Newborn and Child Health in 2008-2015 and a "sharpened" One Plan strategy in early 2014. Moving into the Sustainable Development Goal era, the government needs to learn from successes and challenges of striving towards MDG 4. **Methods:** We expand previous work by presenting data for the full MDG period and sub-national results. We used data from six nationally-representative household surveys conducted between 1999 and 2015 to examine trends in coverage of 22 lifesavings maternal, newborn, child health and nutrition (MNCH&N) interventions, nutritional status (stunting; wasting) and breastfeeding practice across Mainland Tanzania and sub-nationally in seven standardized geographic zones. We used the Lives Saved Tool (List) to model the relative contribution of included interventions which saved under 5 lives during the period from 2000-2015 compared to 1999 on a national level and within the seven zones. **Findings:** Child survival and nutritional status improved across Mainland Tanzania and in each of the seven zones across the 15-year period. MNCH&N intervention coverage varied widely and across zones with several key interventions declining across Mainland Tanzania or in specific geographical zones during all or part the period. According to our national List model, scale-up of 22 MNCH&N

interventions – together with improvements in breastfeeding practice, stunting and wasting – saved 838 460 child lives nationally between 2000 and 2015. **Conclusions:** Mainland Tanzania has made significant progress in child survival and nutritional outcomes but progress cannot be completely explained by changes in intervention coverage alone. Further examination of the implementation and contextual factors shaping these trends is important to accelerate progress in the SDG era.

33. Dianna, L.N., Edda, V., Li, Z., Emily, G.W., Kristie, L.W., Beatrice, P.M., Msiba, S. N., Godfrey, S.P., Elia, J.M., Sujay, S., Katherine, V.L., Amie, Y.L., Ronald, B. (2018). Efficacy of an Intensive, Ultrasound Guided Fine-Needle Aspiration Biopsy Training Workshop in Tanzania.

Abstract

Background: Fine-needle aspiration biopsy (FNAB) is a minimally invasive, cost-effective diagnostic tool that can be used in low-resource settings. However, adequacy and accuracy of FNAB is highly dependent on the skills of the operator and requires specialized training. Poor technique can preclude definitive diagnoses because of insufficient quality or quantity of FNAB samples. We evaluated the efficacy of an intensive training experience in Tanzania on improving ultrasound- guided FNAB techniques. Methods: A 2-day workshop offered didactic lectures, demonstrations, and hands-on practicum on fundamentals of ultrasound imaging and FNAB technique. A prospective interventional study design was used with pre- and post-intervention surveys and assessments to measure the effect of the workshop on specific skills related to slide smearing and ultrasound-guidance among participants. Results: Twenty-six pathologists and radiologists, including trainees in each specialty, participated in the workshop. Pre- and post-workshop assessments demonstrated that most participants improved significantly in nearly all technical skills for slide smearing and ultrasound-guided FNAB. After the workshop, most participants demonstrated substantial improvements in ability to prepare the ultrasound equipment, measure the lesion in three dimensions by ultrasound, target lesions in one pass using both parallel and perpendicular approaches, and prepare high-quality aspirate smears. Conclusion: An in-country 2-day workshop in Tanzania was efficacious in transferring basic skills in FNAB smear preparation and ultrasound-guided FNAB, resulting in skills enhancement

among participating pathologists and radiologists. Although mastery of skills was not the goal of this short workshop, participants demonstrated proficiency in most technical elements after workshop completion, and the workshop generated interest among select participants to pursue additional intensive training in cytopathology.

34. Ebele, N. A, Awka, A. U., Nwabueze, E., Ebikabowei, E. B. (2018). Digital preservation practices in university libraries: An investigation of institutional repositories in Africa.

Abstract:

Purpose: The purpose of the study is to investigate the digital preservation practices in institutional repositories (IRs) in Africa. **Design/methodology/approach:** Data were collected from the IRs developed in university libraries in Africa, and it was done in two phases. The phases are website investigation to identify the university libraries in Africa that have developed IR and online questionnaire. **Findings:** Results from the study showed that the majority of IRs in Africa used DSpace software to manage their digital contents, and more than half of the IRs engage in information migration. The study also revealed that the majority of the responding institutions provide long-term digital preservation in their IR. Interestingly, the majority of the IRs has developed digital preservation policy to guide the implementation of digital preservation for IR contents. Finally, the majority of the respondents indicated that they do not have long-term funding and lack the necessary technical staff with required skills to handle and manage the IR. Researchlimitations/implications: Because of language barriers, data were collected from only universities in English speaking countries in Africa. **Practical implications**: The findings of this study will make librarians in universities in Africa and other developing countries understand the key issues relating to digital preservation and longevity. **Originality/value:** The findings of this study will inform information professionals, librarians in developing countries that are planning to create IRs and provide long-term digital preservation of electronic resources in their institution.

35. Edward, K.A. (2018). Prevalence and correlates of unintended pregnancy in Ghana: Analysis of 2014 Ghana Demographic and Health Survey.

Abstract

Background: Unintended pregnancies increase levels of stress, adoption of risky behaviours and impact on women's general quality of life. In Ghana, in spite of the paucity of literature on unintended pregnancies, the phenomenon is high especially among women in the early years of their reproductive health. This study therefore sought to investigate the prevalence and correlates of unintended pregnancies in Ghana. **Methods:** This study made use of data from the 2014 Ghana Demographic and Health Survey. Descriptive statistics were conducted whereby prevalence of unintended pregnancy was presented in proportions. This was followed by binary logistic regression to investigate correlates associated with unintended pregnancy. **Results:** Descriptively, unintended pregnancies were high among women aged 15–19 years (69.4%), unmarried women (45.1%) and non-working women (40.0%). Factors found to be associated with the phenomenon were age, parity and level of education. The binary logistic regression revealed that women in middle wealth category were 1.42 times more probable of having unintended pregnancy than poor women whilst rich women were less likely to experience unintended pregnancy [OR = 0.89, CI = 0.35–0.79] as compared to poor women. Again, urban women were more likely to experience unintended pregnancies as compared rural women [OR = 1.39, CI = 0.86–1.95]. **Conclusion:** The study has indicated that specific interventions must be targeted at different categories of women. The Reproductive and Child Health unit of the Ghana Health Service ought to collaborate with non-governmental organisations to intensify access to well-tailored family planning services among adolescents and young women, women out of marriage and the non-working category.

36. EkbalAbd, E.E., Nahed, M.S. (2018). Effect of Nursing Program on Improving Nurses' Knowledge and Skills Regarding Care of Eclamptic Women.
DOI:10.12691/ajnr-6-6-10

Abstract

Eclampsia proceeds to be a major problem, particularly in developing countries that, adding significantly to high maternal mortality and mobility rate. Maternity nurses can play a major role in prevention of maternal death related to eclampsia. **Aim:** The aim of the study was to evaluate the effect of nursing program on improving nurses' knowledge and skills regarding care of eclamptic women. Subjects and methods: A quasi-experimental (pre-post) design was adopted to reach the stated aim and conducted at inpatient units in obstetrics & gynecology and child Minia University. A total sample of 60 nurses participated in the study. A Structured Interview Questionnaire form used for data collection including personal characteristics, knowledge and practice about eclamptic women. **Results:** the finding of this study revealed that, more than quarter of nurses had poor knowledge (30.0%), but after program (75.0%) of nurses had good knowledge. There was statistically significant difference before / after program (p=< 0.05) related to total knowledge regarding care of eclampsia women. Practice regarding care of eclampsia women, less than quarter of nurses of pre-program (23.3%) had poor practice and post-program (83.3%) had good practice. **Conclusion:** There were gaps between before/after program related to nurses' knowledge and practice in the area of managing eclamptic women. Recommendations: Regular training programs for performance to encourage nursing updated and improve their practice. Keywords: eclampsia, knowledge, practice, nurses, program.

37. Elichilia, R. S., Innocent, B. M., Daniel, W.G., Flora, G.R., Elizabeth, M.T., Mercy, L.N., Jeremia, J.P., Kajiru, G.K., Furaha, S.L., and Venance, P.M. (2018). Seroprevalence of hepatitis B virus infection and associated factors among healthcare workers in northern Tanzania.
https://doi.org/10.1186/s12879-018-3376-2

Abstract

Background: Hepatitis B virus infection is a global health problem with the highest prevalence in East Asia and Sub-Saharan Africa. The majority of infected people, including healthcare workers are unaware of their status. This study is aimed to determining seroprevalence of hepatitis B virus infection and associated factors among healthcare workers in northern Tanzania.**Methods:** This cross-sectional study included 442 healthcare workers (HCWs) from a tertiary and teaching hospital in Tanzania before the nationwide hepatitis B vaccination campaign in 2004. Questionnaire- based interviews were used to obtain detailed histories of the following: demographic characteristics; occupation risks such splash and needle stick injuries or other invasive procedure such as intravenous, intramuscular or subcutaneous injections; history of blood transfusion and surgeries, as well as HCWs'knowledge of HBV. Serological markers of HBV were done using Laborex HBsAg rapid test. Serologywas done at zero months and repeated after six months (bioscienceinternational.co.ke/rapid-test-laborex.html HBsAg Piazzale-milano-2, Italy [Accessed on November 2017]). Chi-square ($\chi 2$) tests were used to compare proportion of HBV infection by different HCWs characteristics. Multivariable logistic regression was used to determine factors associated with HBV infection. **Results:** A total of 450 surveys were sent out, with a 98.2% response rate. Among the 442 HCWs who answered the questionnaire, the prevalence of chronic hepatitis B virus infection was 5.7% (25/442). Only 50 (11.3%) of HCWs were aware of the HBV status. During the second HBsAg testing which was done after six months one participant sero-converted hence was excluded. Adjusted for other factors, history of blood transfusion significantly increased the odds of HBV infection (OR = 21.44, 95%CI 6.05, 76.01, p < 0.001) while HBV vaccine uptake was protective against HBV infection (OR = 0.06, 95%CI 0.02, 0.26, p < 0.001). The majority of HCWs with chronic HBV infection had poor to fare knowledge about HBV infection but this was not statistically significant when controlled for confounding. **Conclusions:** Prevalence of HBV among health care workers was 5.7% which is similar to national prevalence. Although the response rate to take part in the study was good but knowledge on HBV infection among HCWs was unsatisfactory. History of blood transfusion increased risks while vaccine uptake decreased the risk of HBV infection. This study recommends continues vaccinating HCWs together with continues medical education all over the country. We also recommend documentation of vaccination evidence should be asked before employment of HCWs in order to sensitize more

uptakes of vaccinations. Although we didn't assess the use of personal protective equipment but we encourage HCWs to abide strictly on universal protections against nosocomial infections.

38. Eliford, N.K., Omary, M.M., Sabina, M., Philip, S., Mohamed, J., Ferdinand, M., Leif, B., Jürgen, B., and Eleni, A. (2018). Long-term efavirenz pharmacokinetics is comparable between Tanzanian HIV and HIV/Tuberculosis patients with the same CYP2B6*6 genotype.

Abstract

The impact of anti-tuberculosis co-treatment on efavirenz (EFV) exposure is still uncertain as contradictory reports exist, and the relevance of CYP2B6*6 genetic polymorphism on efavirenz clearance while on-and-off anti-tuberculosis co-treatment is not well investigated. We investigated the determinants of long-term efavirenz pharmacokinetics by enrolling HIV (n = 20) and HIV/Tuberculosis (n = 36) subjects undergoing efavirenz and efavirenz/rifampicin co-treatment respectively. Pharmacokinetic samplings were done 16 weeks after initiation of efavirenz-based anti-retroviral therapy and eight weeks after completion of rifampicin-based anti-tuberculosis treatment. Population pharmacokinetic modeling was used to characterize variabilities and covariates of efavirenz pharmacokinetic parameters. CYP2B6*6 genetic polymorphism but not rifampicin co-treatment was the statistically significant covariate. The estimated typical efavirenz clearance in the HIV only subjects with the CYP2B6*1/*1 genotype was 23.6 L/h/70 kg, while it was 38% and 69% lower in subjects with the CYP2B6*1/*6 and *6/*6 genotypes, respectively. Among subjects with the same CYP2B6 genotypes, efavirenz clearances were comparable between HIV and HIV/Tuberculosis subjects. Typical efavirenz clearances before and after completion of anti-tuberculosis therapy were comparable. In conclusion, after 16 weeks of treatment, efavirenz clearance is comparable between HIV and HIV/Tuberculosis patients with the same CYP2B6 genotype. CYP2B6 genotyping but not anti-tuberculosis co-treatment should guide efavirenz dosing to optimize treatment outcomes.

39. Emmanuel, E., (2018). Prevention, Early Detection, and Treatment of Cervical Cancer in Sub-Saharan Africa (SSA): A Mobile Social Media Approach.

Abstract

The cancer epidemic causes more deaths in developing countries than the more hyped HIV, malaria, and TB combined. Sub-Saharan Africa has the highest prevalence of cancer in developing countries, and the most prevalent type of cancer is the cancer of the cervix, with 57,381 deaths yearly. Many medical scholars agree that the high death rate from the cervical cancer scourge is preventable with effective cervical cancer control strategies such as appropriate prevention strategies in the form of awareness campaigns, effective screening for early diagnosis, and treatment programs. There have been numerous calls for measures that can improve prevention, early detection, and treatment of cervical cancer among women in Sub-Saharan Africa, and numerous approaches have so far been piloted. This paper presents an analysis of the potential of social media technologies to effectively support prevention, early detection, and treatment of cervical cancer in Sub-Saharan Africa.

40. Emmanuel, O.I., Adewale, A.A., Temitope, O.O., Aaron, O.A. (2018). A systematic review of healthcare-associated infections in Africa: An antimicrobial resistance perspective.

Abstract

Background: Healthcare-associated infection (HCAI) is a global health challenge, not only as an issue of patient safety but also as a major driver of antimicrobial resistance (AMR). It is a major cause of morbidity and mortality with economic consequences. Objective: This review provides an update on the occurrence of HCAI, as well as the contribution of emerging AMR on healthcare delivery in Africa. **Methods:** We searched PubMed, Cochrane database, African Journals Online and Google Scholar for relevant articles on HCAI in Africa between 2010 and 2017. Preferred reporting items of systematic reviews and meta-analyses guidelines were followed for selection. Thirty-five eligible articles were considered for the qualitative synthesis. **Results:** Of the 35 eligible articles, more than half (n = 21, 60%) were from East Africa.

Klebsiella spp., Staphylococcus aureus, Escherichia coli and Pseudomonas spp. were the common pathogens reported in bloodstream infection, (catheter-associated) urinary tract infection, surgical site infection and healthcare-associated pneumonia. Among these various subtypes of HCAI, methicillin-resistant S. aureus (3.9% − 56.8%) and extended-spectrum beta-lactamase producing Gram-negative bacilli (1.9% − 53.0%) were the most reported antimicrobial resistant pathogens. **Conclusion:** This review shows a paucity of HCAI surveillance in Africa and an emergence of AMR priority pathogens. Hence, there is a need for a coordinated national and regional surveillance of both HCAI and AMR in Africa.

41. Faheem, S., and Hamisi, K.S. (2018). Neurocritical Care in Tanzania: An Interview with Dr. Hamisi K Shabani.

Abstract

The Muhimbili National Hospital is the largest referral hospital in Tanzania, handling a broad spectrum of pathology, including critically ill neurologic and neurosurgical cases of the highest complexity. It is affiliated with the Muhimbili Orthopedic Institute (MOI), which is the only tertiary center for neurosurgery and orthopedics in Tanzania. The World Health Organization recommends that all countries have one neurosurgeon for each 100,000 residents. In Tanzania, the ratio is 1 to 13 million.[1] In addition, Tanzania has only seven practicing neurologists (serving a population of 53 million), with a small number of trainee neurologists in various stages of their training at home or abroad.[2] Lack of expertise is compounded by a high incidence of emergent neurologic conditions ranging from TBI to ischemic and hemorrhagic stroke requiring expert neurocritical and neurosurgical care. As an example, the incidence of ischemic stroke in Dar es Salaam (largest city in Tanzania) was 315.9 per 100,000 (281.6-352.3) compared with urban United States - 93 per 100,000 in whites and 223 per 100,000 for blacks in the Northern Manhattan Stroke study.[3] There is high in-hospital mortality among these patients (33.3 percent in first 30 days) according to a recent study,[4] with sepsis and aspiration pneumonia being major contributors. Even if patients survive the acute period, there is significant socioeconomic burden and long term mortality (82.3 percent in seven years) primarily driven by severity of disability.

42. Faini, D., Kalinjuma, A.V., Katende, A., Mbwaji, G., Mnzava, D., Nyuri, A., Glass, T., Furrer, H., Hatz, C., Boulware, D., Letang, E. (2018). Laboratory-reflex cryptococcal antigen screening is associated with a survival benefit in Tanzania.
doi: 10.1097/QAI.0000000000001899

Abstract

Background: Cryptococcal antigen (CrAg) screening in persons with advanced HIV/AIDS is recommended to prevent death. Implementing CrAg screening only in outpatients may underestimate the true CrAg prevalence and decrease its potential impact. Our previous 12-month survival/retention in CrAg-positive persons not treated with fluconazole was 0%. Methods: HIV testing was offered to all ART-naive outpatients and hospitalized patients in Ifakara, Tanzania, followed by laboratory-reflex CrAg screening for CD4<150 cells/µL. CrAg-positive individuals were offered lumbar punctures, and antifungals were tailored to the presence/absence of meningitis. We assessed the impact on survival and retention-in-care using multivariate Cox regression models. Results: We screened 560 individuals for CrAg. The median CD4 count was 61 cells/µL (IQR 26-103). CrAg prevalence was 6.1% (34/560) among individuals with CD4 ≤150 and 7.5% among ≤100 cells/µL. CrAg prevalence was 2.3-fold higher among hospitalized participants than in outpatients (12% vs. 5.3%, p=0.02). We performed lumbar punctures in 94% (32/34), and 31% (10/34) had cryptococcal meningitis. Mortality did not differ significantly between treated CrAg-positive without meningitis and CrAg-negative individuals (7.3 vs 5.4 deaths per 100 persons-year, respectively, p=0.25). Independent predictors of 6-month death/lost to follow-up were low CD4, cryptococcal meningitis (adjusted hazard ratio (aHR) 2.76, 95% CI 1.31-5.82)), and no ART initiation (aHR 3.12, 95%CI 2.16-4.50). Conclusions: Implementing laboratory-reflex CrAg screening among outpatients and hospitalized-individuals resulted in a rapid detection of Cryptococcus's and a survival benefit. These results provide a model of a feasible, effective and scalable CrAg screening and treatment strategy integrated into routine care in sub-Saharan Africa. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial License 4.0 (CCBY-NC), where it is permissible todownload, share, remix, transform, and buildup the work provided it is properly cited. The work cannot be used commercially without permission from the journal.

43. Fanuel, L., Cecilia, M.N., John, M., Lackson, T., Carol, C. (2018). A preliminary investigation of the effects of labour inducing plant, Cissampelos mucronata, on the outcomes of pregnancy using rat models.

Abstract

Background: The use of traditional remedies in pregnancy has been associated with bad obstetric outcomes including uterine rupture and foetal distress. These outcomes may ultimately lead to maternal and child mortality or morbidity. Few studies have been done to measure the effects of various herbs in pregnant women or a developing fetus. This study investigated the effects of the commonly used labour inducing plant, Cissampelos mucronata, on pregnancy outcomes using a rat model. **Methods:** Pregnant female rats were divided into three groups of ten each. The first group was the control. The second group was treated with the aqueous extract of Cissampelos mucronata at mid-pregnancy. The third group was treated with Cissampelos mucronata close to full term. All the groups were left to give birth and outcomes were recorded. **Results:** Rats treated at mid-term had significantly low number of pups when compared to the control group as well as the close to term treated group (4.1 ± 0.54 vs. 6.4 ± 0.60; 6.2 ± 0.56). The mid-term treated rats had pups with significantly lower body weight when compared to the control and the close to term treated groups (3.73 ± 0.36g vs. 5.37 ± 0.16g; 4.27 ± 0.1g). The average gestation period was significantly short in the mid-term treated group when compared to the control and the close to term treated groups (18.16 ± 0.50 days vs. 20.40 ± 0.44 days; 20.12 ± 0.37 days). There were no uterus ruptures observed in all study groups 3 days after delivery. **Conclusion:** Administration of Cissampelos mucronata during pregnancy leads to early induction of labour. Keywords: herbal medicine; pregnancy; labour; maternal mortality.

44. Federico, N., Zefferino, R., Ismail, Z., Angelos, G.K., Maurizio, F., and Franco, S. (2018). Income countries: beyond the frontiers of traditional education.

Abstract

Objective: Neurosurgical training is usually based on traditional sources of education, such as papers, books, direct surgical experience, and cadaveric hands-on courses. In low-middle income

countries, standard education programs are often unavailable, mainly owing to the lack of human and economic resources. Introducing digital platforms in these settings could be an alternative solution for bridging the gap between Western and poor countries in neurosurgical knowledge. **Methods:** The authors identified from the Internet the main digital platforms that could easily be adopted in low-middle income countries. They selected free/low-cost mobile content with high educational impact. **Results:** The platforms that were identified as fulfilling the characteristics described above are WFNS Young Neurosurgeons Forum Stream, Brain book, NeuroMind, Upsurge On, The Neurosurgical Atlas, Touch surgery, The 100 UCLA Subjects in Neurosurgery, Neurosurgery Survival Guide, EANS (European Association of Neurosurgical Societies) Academy, Neurosurgical.TV, 3D Neuroanatomy, The Rhoton Collection, and Hinari. These platforms consist of webinars, 3D interactive neuroanatomy and neurosurgery content, videos, and e-learning programs supported by neurosurgical associations or journals. **Conclusions:** Digital education is an emerging tool for contributing to the spread of information in the neurosurgical community. The continuous improvement in the quality of content will rapidly increase the scientific validity of digital programs. In conclusion, the fast and easy access to digital resources could contribute to promote neurosurgical education in countries with limited facilities.

45. Francesca, L.C., Andrea, B.P., Oona, C., Claudia, H., Vandana, T., Kerry, L.M.W., Emma, R., Lenka, B. (2018). Caesarean section provision and readiness in Tanzania: analysis of cross-sectional surveys of women and health facilities over time.
http://dx.doi.org/10.1136/bmjopen-2018-024216

Abstract

Objectives: To describe trends in caesarean sections and facilities performing caesareans over time in Tanzania and examine the readiness of such facilities in terms of infrastructure, equipment and staffing**. Design:** Nationally representative, repeated cross-sectional surveys of women and health facilities. Setting: Tanzania. Participants: Women of reproductive age and health facility staff. Main outcome measures: Population-based caesarean rate, absolute annual number of caesareans, percentage of facilities reporting to perform caesareans and three readiness indicators for safe caesarean care: availability of consistent electricity, 24-hour

schedule for caesarean and anaesthesia providers, and availability of all general anaesthesia equipment. **Results:** The caesarean rate in Tanzania increased threefold from 2% in 1996 to 6% in 2015–16, while the total number of births increased by 60%. As a result, the absolute number of caesareans increased almost fivefold to 120 000 caesareans per year. The main mechanism sustaining the increase in caesareans was the doubling of median caesarean volume among public hospitals, from 17 caesareans per month in 2006 to 35 in 2014–15. The number of facilities performing caesareans increased only modestly over the same period. Less than half (43%) of caesareans in Tanzania in 2014–15 were performed in facilities meeting the three readiness indicators. Consistent electricity was widely available, and 24 hour schedules for caesarean and (less systematically) anaesthesia providers were observed in most facilities; however, the availability of all general anaesthesia equipment was the least commonly reported indicator, present in only 44% of all facilities (34% of public hospitals). **Conclusions:** Given the rising trend in numbers of caesareans, urgent improvements in the availability of general anaesthesia equipment and trained anaesthesia staff should be made to ensure the safety of caesareans. Initial efforts should focus on improving anaesthesia provision in public and faith-based organisation hospitals, which together perform more than 90% of all caesareans in Tanzania. This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial.

46. Fredirick, L.M., Kaushik, R., Janet, L., Marina, N., Filbert, F., Juleen, Z., and Anna, K. (2018). Adiposity Is a Key Correlate of Circulating Fibroblast Growth Factor-21 Levels in African Males with or without Type 2 Diabetes Mellitus.

Abstract

Background: Fibroblast growth factor-21 is an endocrine regulator with therapeutic and diagnostic potential. The levels and pattern of circulating FGF-21 have been described mainly in European and Asian populations. Given its strong association with adiposity, and the reported

ethnic variabilities in body composition, examining FGF-21 in an African population is crucial. **Methods:** We measured levels of circulating FGF21 in 207 over weight and obese Tanzanian males with or without type 2 diabetes mellitus (T2DM), and using statistical approaches, we explored their relationship with anthropometric and biochemical parameters. **Results:** Consistent with previous reports from European and Asian populations, we found higher levels of FGF-21 in people with T2DM compared to those without the disease. Based on statistical models, measures of adiposity explained up to59% of the variability in FGF-21 levels in the circulation. **Conclusion:** Levels of circulating FGF-21 in overweight and obese African males are higher in T2DM and strongly correlate with measures of adiposity.

47. George, D.D., Hendry, R.S., Irene, B.K., Juma, A.M., Nanyori, J.L., Elly, M.M., and Ellen, J.W. (2018). Pain assessment and management of trauma patients in an emergency department of a tertiary hospital in Tanzania.

Abstract

Background: Proper pain assessment is a core component in management of trauma patients but prior literature has suggested that pain management is inadequate in emergency settings. With the development of emergency medicine in low-income countries (LIC), the procedures for pain assessment and management of trauma patients have not been well studied and protocols have not been established. We aimed to describe practices of pain assessment and management in an emergency department in Tanzania. **Methods:** This was a prospective cohort study of consecutive adult trauma patients presenting to the Emergency Medicine Department of Muhimbili National Hospital (EMD-MNH) in Dar es Salaam, Tanzania, from July 2017 to December 2017. A case report form (CRF) was used to record demographics and clinical characteristics of participants, whether or not pain was assessed at either triage or in the treatment area, and the administration of pain medications. The assistant also assessed pain independently with the numeric rating scale (NRS) of (0–10). Outcomes were proportions of patients who received pain assessment, patients who received pain medication, and types of medications administered. Descriptive data is summarised using frequency, percentage, and median with interquartile ranges as appropriate. Chi-square tests were used to determine

association between pain assessments, receipt of pain medication, and types of medications. **Results:** We enrolled 311 (10.9%) trauma patients during the period of study. The median age was 32 years (IQR 25–43 years), and 228 (73.3%) were male. The most common mechanism of injury was motor vehicle crash 185 (59.4%), and of these, 87 (47%) involved motorcycles. Three hundred ten (99.6%) patients had pain assessment documented arrival, and 285 (91.6%) had a second assessment. Pain scores obtained by the research assistant were as follows: mild pain score (NRS 1–3) 154 (49.5%) patients, moderate pain (NRS 4–6) 68 (21.8%), and severe pain (NRS 7–10) 89 (28.7%). Pain medications were given to 144 (46.3%) patients, 29 (20.1%) of those with mild pain, 41 (28.7%) of those with moderate pain score, and 74 (51.4%) of those with severe pain. The use of opiates increased with increased pain severity. **Conclusions:** In this ED in LIC, the assessment of pain was well documented; however, less than half of patients with documented pain received pain medication while at the ED. Future studies should focus on identification of factors affecting the provision of pain medications to trauma patients in the ED.

48. Getachew, M.K., and Alemayehu, W.Y. (2018). Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and Meta-analysis.
https://doi.org/10.1186/s12978-018-0640-2

Abstract

Background: Adolescence is the period between 10 and 19 years with peculiar physical, social, psychological and reproductive health characteristics. Rates of adolescent pregnancy are increasing in developing countries, with higher occurrences of adverse maternal and perinatal outcomes. The few studies conducted on adolescent pregnancy in Africa present inconsistent and inconclusive findings on the distribution of the problems. Also, there was no meta-analysis study conducted in this area in Africa. Therefore, this systematic review and meta-analysis were conducted to estimate the prevalence and sociodemographic determinant factors of adolescent pregnancy using the available published and unpublished studies carried out in African countries. Also, subgroup analysis was conducted by different demographic, geopolitical and administrative regions. **Methods:** This study used a systematic review and meta-analysis of published and unpublished studies in Africa. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline was strictly followed. All studies in MEDLINE,

PubMed, Cochrane Library, EMBASE, Google Scholar, CINAHL, and African Journals Online databases were searched using relevant search terms. Data were extracted using the Joanna Briggs Institute tool for prevalence studies. STATA 14 software was used to perform the meta-analysis. The heterogeneity and publication bias was assessed using the I2 statistics and Egger's test, respectively. Forest plots were used to present the pooled prevalence and odds ratio (OR) with 95% confidence interval (CI) of meta-analysis using the random effect model. **Results:** This review included 52 studies, 254,350 study participants. A total of 24 countries from East, West, Central, North and Southern African sub-regions were included. The overall pooled prevalence of adolescent pregnancy in Africa was 18.8% (95%CI: 16.7, 20.9) and 19.3% (95%CI, 16.9, 21.6) in the Sub-Saharan African region. The prevalence was highest in East Africa (21.5%) and lowest in Northern Africa (9.2%). Factors associated with adolescent pregnancy include rural residence (OR: 2.04), ever married (OR: 20.67), not attending school (OR: 2.49), no maternal education (OR: 1.88), no father's education (OR: 1.65), and lack of parent to adolescent communication on sexual and reproductive health (SRH) issues (OR: 2.88). **Conclusions:** Overall, nearly one-fifth of adolescents become pregnant in Africa. Several sociodemographic factors like residence, marital status, educational status of adolescents, their mother's and father's, and parent to adolescent SRH communication were associated with adolescent pregnancy. Interventions that target these factors are important in reducing adolescent pregnancy.

49. Getnet, G., Yetnayet, S., Animut, A., and Yihalem, A.B. (2018). Level of job satisfaction and associated factors among health care professionals working at University of Gondar Referral Hospital, Northwest Ethiopia: a cross-sectional study.

Abstract

Objectives: The main aim of this study was to assess the level of job satisfaction and associated factors among healthcare professionals working at University of Gondar Referral Hospital, Northwest Ethiopia. An institution based cross-sectional study was conducted among 416 healthcare professionals from March 27, 2017 to April 25, 2017. Simple random sampling technique was employed and data were collected with a pre-tested interviewer administered

questionnaire. Data were entered into Epi-Info version 7, and analyzed using SPSS 20 softwares. Binary logistic regression analysis was employed. Results: A total of 383 participants were involved in the study. The overall level of job satisfaction among health care professionals was 54% [95% CI (49.3–58.8)]. Marital status [AOR = 1.79 (1.140, 2.797)], salary [AOR = 2.75 (1.269, 5.958)], leadership style [AOR = 2.19 (1.31–3.65)], and supportive supervision [AOR = 2.05 (1.27–3.32)] were found significant determinants of job satisfaction. The overall level of job satisfaction among health care professionals at the University of Gondar Referral Hospital was low. Therefore, health service managers should focus their leadership style and provide supportive supervision in the hospital to improve the level of job satisfaction of health care professionals.

50. Gift, G.L., Menti, L.N., Anne, H.O., Dickson, A.M., Mojgan, P., Britt, I.S., and Susann, B.E. (2018). Provision of post-crash first aid by traffic police in Dar es Salaam, Tanzania: a cross-sectional survey.

Abstract

Background: The availability of prehospital trauma care is an important means of reducing serious injuries and fatalities associated with road traffic injuries (RTIs). Lay responders such as traffic police play an important role in the provision of prehospital trauma care to RTI victims, especially where there is no established prehospital care system. Therefore, the objective of the present study was to investigate knowledge, self-reported practice, and attitudes toward post-crash first aid among traffic police officers in Tanzania. **Method:** A cross-sectional survey was conducted in Dar es Salaam, Tanzania between July–September 2017 to investigate knowledge, self-reported practice and attitude among traffic police officers during provision of post-crash care. We used simple random technique to recruit 340 traffic police officers, self -administered questionnaires were used to collect data. The researchers used descriptive statistics and Pearson's chi-square tests to analyze the data. **Results:** A total of 340 traffic police officers were surveyed. Nearly two thirds (65.3%) reported having had post-crash first aid on-the job training; a slightly larger proportion (70.9%) reported that they had cared for RTI victims in the previous year. The survey responses showed that, generally, traffic police officers' level of knowledge about post-crash first aid to RTI victims was low—about 3% of the surveyed officers possessed knowledge

at a level considered good. Also, there was a statistically significant correlation between higher educational attainment and greater knowledgeability (p = 0.015). Almost all of the officers (96%) had a positive attitude toward providing post-crash first aid to RTI victims. **Conclusions:** Improved training of Tanzania traffic police officers, by means of an updated post-crash first aid curriculum and updated resources is recommended. Also, user-friendly post-crash first aid leaflets should be provided to traffic police for their reference.

51. Glen, D.L.M., Holger, W.U. (2018). Strategies to reduce and maintain low perinatal mortality in resource-poor settings – Findings from a four-decade observational study of birth records from a large public maternity hospital in Papua New Guinea.

Abstract

Background: In many low- to middle-income countries (LMIC) assisted vaginal birth rates have fallen, while caesarean section (CS) rates have increased, with potentially deleterious consequences for maternal and perinatal mortality. **Aims:** To review birth mode and perinatal mortality in a large LMIC hospital with strict labour management protocols and expertise in vacuum extraction. **Materials and Methods:** We conducted a retrospective observational study at Port Moresby General Hospital in Papua New Guinea. Birth registers from 1977 to 2015 (39 years) were reviewed. Overall and modified (fresh stillbirths and early neonatal deaths $\geq$500 g) perinatal mortality rates (PMRs) were calculated by birthweight/birth mode. **Results:** There were 365 056 births (5215 in 1977; 14 927 in 2015), of which 14 179 (3.9%) were vacuum extractions, 609 (0.2%) forceps births and 14 747 (4.4%) CS (increase from 2% to 5%). The failure rate of vacuum extraction was 2.5% (range 0.5–5.4%). Symphysiotomy was employed for 184 births. From 1989 to 2015, the modified mean PMR for babies $\geq$2500 g was 8.1/1000 births (range 5.6–12.1; 6.9 in 2015), 9.1/1000 for babies $\geq$1500 g (7.3–14.8; 9.1 in 2015) and 7.5/1000 (0–21.7; 9.0 in 2015) for vacuum extractions (98% were $\geq$2500 g). The overall PMR for these years was 29.7/1000 births. **Conclusions:** In an LMIC with rapidly increasing birth numbers a comparatively low PMR can be achieved while maintaining low CS rates. This may be in part accomplished through strict use of second-stage protocols, perinatal audit, and supportive training that promotes judicious and proficient use of vacuum extraction and CS.

52. Godwin, P., Judith, S., and   (2018). Non-medical facilitators and barriers towards accessing haemodialysis services: an exploration of ethical challenges.
https://doi.org/10.1186/s12882-018-1140-x

Abstract

Background: Like most of the sub-Saharan countries, Tanzania faces significant increase in the number of patients diagnosed with an end-stage renal disease (ESRD) among which only a few manage to receive chronic haemodialysis services (CHD). Yet little is known about the non-medical facilitators and barriers towards accessing these services and the associated ethical challenges. **Methods:** A phenomenological study design which employed a qualitative approach was used. The study was conducted at the dialysis unit harbored within Muhimbili National Hospital. Data were collected from purposively sampled health care providers and ESRD patients by using in-depth interviews. Text data obtained were analysed based on inductive and deductive content analysis methods to formulate major themes. **Results:** Fourteen key informants were interviewed including nephrologists, renal nurses, social workers, nutritionists and ESRD patients. Three major themes were formulated: a) non-medical facilitators towards accessing CHD services which enshrines two sub-themes (membership to health insurance scheme and family support), (b) non-medical barriers towards accessing CHD services which enshrines four sub-themes (affordability of treatment costs, geographical accessibility, availability of CHD resources and acceptability of treatment procedures) and lastly (c) ethical challenges associated with accessing CHD services which also enshrines three sub-themes (dual role of health care providers, patients autonomy in decision making, and treatment disparity). **Conclusion:** Non-medical facilitators to access CHD benefits few patients whereas non-medical barriers leave many ESRD patients untreated or partially treated. On the other hand, ethical challenges like treatment inequality are quickly gaining momentum. There is a need for guideline highlighting importance, position, andlimitation of non-medical factors in the delivery of CHD services in Tanzania and other developing countries.

53. Goodluck, W.L. Helga, N., Roseline, U., Shally, Z.M., Sarah, M., Rehema, P., Happiness, K., Yusuph, C., Martha, T., Aisa, M., Helen, S., Irene, A.L., Eric, A., Aisa, N. M., Maria, R.G., Gunnel, B., Charles, K., Anna, M.E. (2018). Engaging community leaders

to improve male partner participation in the prevention of mother-to-child transmission of HIV in Dar es Salaam, Tanzania.

Abstract

Background: Male partner participation improves uptake, retention and outcomes of prevention of mother-to-child transmission of HIV (PMTCT) services. However, in patriarchal settings few men accompany their partners to antenatal care (ANC) and PMTCT services. We explored whether community leaders can improve male partner participation in ANC and PMTCT. **Methods:** We integrated initiatives to increase male partner participation in routine ANC care in six health facilities (attending about 4,500 new pregnant women per quarter) in Dar es Salaam, Tanzania in 2015/16. These initiatives were adapted from a best performing health facility, on male partner participation in ANC and PMTCT, referred to as the "best practice site". At the six purposively selected intervention sites, we sensitized and garnered commitment from healthcare providers to provide couple friendly services. We then worked with the providers to sensitize and engage community leaders to integrate and promote male partner participation initiatives in their routine community activities. We assessed change in male partner participation in ANC and PMTCT using the proportion of women testing for HIV together with their partners (i.e. couple HIV testing) by quarter. We used 203 ANC facilities (attending about 31,000 new pregnant women per quarter) in the same area as control sites**. Results:** After one year, couple HIV testing in the six intervention sites had tripled from 11.9% at baseline to 36.0% (p<0.001) while there was very little change (from 17.7% to 18.3%) in the 203 control sites (p = 0.07). Statistically significant improvements in couple testing were observed in four of the six intervention sites (6.7% to 19.1%; 9.3% to 74.6%; 46.2% to 95.2%; and 4.7% to 15.1% respectively. p<0.001 for all sites). Two of these four sites, located in the same administrative district as the best practice site, achieved remarkably high couple HIV testing (95.2% and 74.6%). This may be attributable to the greater engagement and active participation of the community leaders in these two sites compared to the other four. **Conclusion:** Effective engagement and functional partnerships between healthcare providers and community leaders can contribute to improve male partner participation in ANC and PMTCT services. PMTCT programs should capitalize on community leaders, in addressing low male partner participation in ANC and PMTCT, in order to improve

effective uptake, retention and outcomes of HIV prevention and treatment services among pregnant and breastfeeding women, their partners, infants and families.

54. Grant, R.M., Kyle, C.M., Gavin, G.M., and Christopher, J.C. (2018). Reply to Hanich et al.: Alternate explanations for the blue paradox do not withstand statistical scrutiny.
https://doi.org/10.1073/pnas.1818687115

Abstract

A primary goal of McDermott et al. (1) was to stimulate discussion of the "blue paradox" among proponents of marine reserves. We welcome the chance to engage with conservation experts and are grateful for the commentary provided by Hanich et al. (2). However, we are unconvinced by their arguments. Hanich et al. (2) do not offer a substantive critique of our methods or provide data that overturn our findings. Hanich et al.'s (2) chief criticism relates to the El Niño Southern Oscillation (ENSO), which they claim drove the preclosure surge in fishing activity within the Phoenix Islands Protected Area (PIPA). There are two problems with this argument as it pertains to the findings in McDermott et al. (1). The first is that we already control for the confounding effects of ENSO in our original analysis. For example, model M1 shows that our results are unaffected by the inclusion of region-specific sea-surface temperatures. The same is true if we directly control for a standard ENSO index, as shown in Fig. 1. The second problem is that the 2015/16 El Niño event occurred after PIPA's closure and thus well after the observed period of anticipatory fishing.

55. Martin, H., Kimiywe, J., Petrucka, P., Kamanga, L. (2018). Improving Nutritional Management of Cancer Patients in Tanzania.

Abstract

Background: Cancer is one of the leading causes of death worldwide and was reported to cause 8.8 million deaths in 2015. It was long predicted that about 70% of the new cancer cases will be in low-income countries (LIC). In Tanzania, like in many LICs, the need for improved cancer care is critical because cancer rates are rising dramatically. Most cancers are detected late and hence high mortality and poor palliative care for patients. Tanzania lacks trained clinical

nutritionists and dieticians to manage different conditions including cancer. Aim: The aim of this project is to build the capacity of nutritionists and other health personnel to provide nutrition care to cancer patients in hospitals**. Methods:** One nutritionist from Tanzania will be attached to the Kenyatta National Hospital in Kenya for one month to obtain practical experience on the nutritional management of cancer patients. The acquired knowledge will be disseminated among health care professionals in Tanzania, specifically, nutritionist and nurses in selected health care facilities. About six nutrition officers and six nurses who work in Ocean Road Cancer Institute, Bugando Hospital, KCMC hospital and Muhimbili National Hospital will be trained by the incumbent on nutrition care for cancer patients once the fellowship visit has been completed. In addition, a study to identify differences in nutritional care for cancer patients between Tanzania and Kenya will be conducted. Cancer patients visiting hospitals in Tanzania and Kenya will be asked to complete a questionnaire that will assess their nutritional care in detail. Responses from cancer patients from each country will be compared to identify differences. **Results:** Expected results from this project includes, the transfer of knowledge in nutritional management of cancer patients between Tanzania and Kenya, and the subsequent dissemination of this knowledge to other nutrition specialists based in the home country, Tanzania. Further results will include data obtained from a survey that will be performed on cancer patients from both countries regarding their nutritional care. This study is also expected to open up collaborative research opportunities between the universities and health facilities on best practices for nutrition care and support for cancer patients. **Conclusion:** This study will not only improve palliative care among cancer patients but will also create more awareness on preventive measures against cancers with emphasis on dietary habits.

56. Habiba, S.M., Irene, K.M. (2018). Root canal morphology of native Tanzanian permanent mandibular molar teeth.
doi:10.11604/pamj.2018.31.24.14416

Abstract

Introduction: research has shown variations in morphology of root canals to differ amongst ethnic groups. We aimed to investigate the root morphology and canal configuration of permanent mandibular molars in a native Tanzanian population**. Methods:** 146 first and 85

second mandibular molars were collected from Tanzanian patients. After removal of the pulp tissues and staining using Methylene blue ink from the canal system, the teeth were decalcified and rendered clear using 98% methyl salicylate. The teeth were then examined under magnification of 10X for: number of roots, tooth length, number of canals, location of apical foramen, presence of an apical delta and canal configuration using Vertucci's classification. **Results:** all mandibular molars had two separate roots. The mean tooth length for mandibular 1st and 2nd molars were 21.7 mm and 20.5mm, respectively, with no statistically significant difference in mean tooth length between males and females. All the mesial roots 1st and 2nd mandibular molars possessed two root canals, while 40.4% and 54.1% of the distal roots of 1st and 2nd molars, respectively, had two canals. The majority of the examined teeth had their apical foramen located centrally, with an apical delta present in the distal root of one-second molar. Root canal configuration types commonly reported were Type II in the mesial and Type I in the distal roots of the mandibular 1st molar; while the 2nd molar had, respectively, root types II / IV and type I. **Conclusion:** there were observed variations in the morphology of root canals in a Tanzanian population. Caution is advised to clinicians when performing root canal treatment.

57. Hackett, K., Lafleur, C., Nyella, P., Ginsburg, O., Lou, W., (2018). Impact of smartphone-assisted prenatal home visits on women's use of facility delivery: Results from a cluster-randomized trial in rural Tanzania.

Abstract
Background: About half of births in rural Tanzania are assisted by skilled providers. Point-of-care mobile phone applications hold promise in boosting job support for community health workers aiming to ensure safe motherhood through increased facility delivery awareness, access and uptake. We conducted a controlled comparison to evaluate a smartphone-based application designed to assist community health workers with data collection, education delivery, gestational danger sign identification, and referrals. **Methods:** Community health workers in 32 randomly selected villages were cluster-randomized to training on either smartphone (intervention) or paper-based (control) protocols for use during household visits with pregnant women. The primary outcome measure was postnatal report of delivery location by 572 women randomly

selected to participate in a survey conducted by home visit. A mixed-effects model was used to account for clustering of subjects and other measured factors influencing facility delivery. **Findings:** The smartphone intervention was associated with significantly higher facility delivery: 74% of mothers in intervention areas delivered at or in transit to a health facility, versus 63% in control areas. The odds of facility delivery among women counseled by smartphone-assisted health workers were double the odds among women living in control villages (OR, 1.96; CI, 1.21–3.19; adjusted analyses). Women in intervention areas were more likely to receive two or more visits from a community health worker during pregnancy than women in the control group (72% vs. 60%; chi-square = 6.9; p < 0.01). Previous facility delivery, uptake of antenatal care, and distance to the nearest facility were also strong independent predictors of facility delivery. Interpretation: Community health worker use of smartphones increased facility delivery, likely through increased frequency of prenatal home visits. Smartphone-based job aids may enhance community health worker support and effectiveness as one component of intervention packages targeting safe motherhood. address the intersecting challenges of substance use, GBV, and HIV among FSWs in Tanzania and similar settings. Keywords: Sub-Saharan Africa Female sex workers Gender-based violence Substance use HIV.

58. Hendry, R.S., Teri, A.R., Juma, A.M., Michael, S.R., Brittany, L.M., Lee, A.W., and Julie, M. (2018). The clinical presentation, utilization, and outcome of individuals with sickle cell anaemia presenting to urban emergency department of a tertiary hospital in Tanzania.

Abstract

Background: Sickle cell anaemia (SCA) is prevalent in sub-Saharan Africa, with high risk of complications requiring emergency care. There is limited information about presentation of patients with SCA to hospitals for emergency care. We describe the clinical presentation, resource utilization, and outcomes of SCA patients presenting to the emergency department (ED) at Muhimbili National Hospital (MNH) in Dar es Salaam, Tanzania. **Methods:** This was a prospective cohort study of consecutive patients with SCA presenting to ED between December 2014 and July 2015. Informed consent was obtained from all patients or patients' proxies prior to

being enrolled in the study. A standardized case report form was used to record study information, including demographics, relevant clinical characteristics and overall patients' outcomes. Categorical variables were compared with chi-square test or Fisher's exact test; continuous variables were compared with two-sample t-test or Mann-Whitney U-test. **Results:** We enrolled 752 (2.7%) people with SCA from 28,322 patients who presented to the MNH-ED. The median age was 14 years (Interquartile range [IQR]: 6–23 years), and 395 (52.8%) were female. Pain 614 (81.6%), fever 289 (38.4%) were the most frequent presenting complaint. Patients with fever, hypoxia, altered mental status and bradycardia had statistically significant relative risk of mortality of 10.4, 153, 50 and 12.1 ($p < 0.0001$) respectively, compared to patients with normal vitals. Overall, 656 (87.2%) patients received Complete Blood Cell counts test, of these 342 (52.1%) had severe anaemia (haemoglobin < 7 g/dl), and a 30.3 ($p = 0.02$) relative risk of relative risk of mortality compare to patients with higher haemoglobin. Patients who had malaria, elevated renal function test and hypoglycemia, had relative risk of mortality of 22.9, 10.4 and 45.2 ($p < 0.0001$) respectively, compared to patient with normal values. Most 534 (71.0%) patients were hospitalized for in patient's care, and the overall mortality rate was 16 (2.1%). **Conclusions:** We described the clinical presentation, management, and outcomes of patients with SCA presenting to the largest public ED in Tanzania, as well as information on resource utilization. This information can inform development of treatment guidelines, clinical staff education, and clinical research aimed at optimizing care for SCA patients.

59. Heshmatollah, A., Mohammad, N., Ali, G., Mojtaba, H., Abdollah, A.K., Behzad, H., and Fatemeh, S. (2018). HIV Positive Patients' Experience of Receiving Health Care Services: A Phenomenology Study in Iran.
DOI: 10.2174/1874613601812010150, 2018, 12, 150-161

Abstract:
Introduction: Most of the studies on HIV/AIDS health care status are usually conducted in big cities while small towns and rural areas are faced with specific challenges. This study aimed to identify the barriers and problems encountered by HIV-positive patients when receiving health services in the small cities and rural areas of Iran. **Methodology:** This is a qualitative study that was conducted using an interpretive phenomenology method in 2016. This study was conducted

through a semi-structured interview for which a purposeful sampling method was used. In the present study, data saturation was observed after 15 interviews, but more than 17 interviews were conducted to ensure the reliability of the interview. Data were analyzed by Colaizzi's method using MAXQDA10 software. **Findings:** Barriers and problems encountered by patients when receiving health care services consisted of 10 categories, 32 main themes and 67 sub-themes. The categories were as follows: fear of revealing the disease, fear of confronting providers, seeking support, not visiting health care providers, inappropriate behavior of health care staff, concealing the disease, hardship endurance, financial concerns, psychological stress and pressure, and disclosure of patient information. **Conclusion:** Recognizing the problems of HIV-positive patients in using health care services and resolving them can help to reassure the patients about the health system. Introduction of supporting policies and regulations, appropriate public education, training health sector personnel, and provision of medical equipment and facilities would positively affect the process of solving the problems of HIVPatients (treating HIV patients). Keywords: HIV positive, patients' problems, Health care services, phenomenology, Iran, Colaizzi's methods.

60. Hsueh-Chia, C. (2018). Editorial: Farewell from the Founding and Chief Editor of Bio microfluidics.

Abstract

It has been my privilege to serve the microfluidics community, in my capacity as founding and chief editor of Bio microfluidics, from 2006 to 2018. This period saw enormous growth in the field of microfluidics. When we first started, the microfluidics community was confined to academic and national research laboratories, although our vision was that microfluidics would lead to a new industrial revolution, like integrated semi-conductor circuits. We have yet to realize this vision but microfluidic technologies are now used in many commercial products, mostly for researchers in the biomedical industry. For example, the driving technologies behind digital PCR, single-cell assay, circulating tumor cell isolation, pretreatment units for rapid sequencing, etc., are all microfluidics in origin. Most prominent among them is droplet

microfluidics—with monodispersed emulsion generated by shear, surfactant stabilization of bulk foam, bar-coded bead encapsulation and actuation by fluidics and electro kinetics. There are also commercial research products for sorting and screening cells based on electro kinetics, inertia, and micro-vortices. Molecular and vesicle quantification has been advanced by solid-state nanopore products. Cell media circulation, molecular biomarker sensing, and other modules used in the fledgling field of tissue engineering are all based on microfluidic technologies. There is a basic reason why microfluidics is used in these products. It allows precise manipulation and analyses of single cells/molecules for high-throughput screening and sorting of many samples without cross-contamination. This combination of precision and throughput is the major advantage of microfluidic technologies, and it will surely lead to more products in the near future. With the advent of rapid sequencing, gene editing, immunotherapy, 3-D tissue printing, directed evolution etc., new opportunities for microfluidic technologies abound. Biomarker discovery and the companion liquid biopsy technologies they inspire, particularly those related to irregular expressions of microRNA, require precise quantification in small blood samples. They will certainly rely on microfluidics technologies. I envision a massively multiplexed and multi-sample medical diagnostic device in the near future that relies on microfluidics for molecular partitioning, fractionation, reaction, and detection of all biomarkers. More specific products for diagnostics and therapeutics, like wearable/implantable diagnostics/drug delivery devices, microenvironment studies of disease (cancer) proliferation, targeted drug delivery through barriers etc., also cry out for microfluidics. In parallel, the material and fabrication know-how of microfluidics has advanced considerably to meet the new challenges— conducting and transistor polymers, 3-D printing, ionic circuits, etc., are some of the most recent additions to our repertoire. However, at such small scales, manufacturing costs and robust operation with heterogeneous samples are important issues we have yet to resolve. Droplet microfluidics, for example, still requires a $50 000 micro pump and extensive pretreatment of the samples. Few microfluidic products have been FDA approved because of the robustness issue—the false positive and negative rates remain unacceptably high. Polymer chips with integrated electrical and fluidic circuits that can be injection molded in large volume seem to be one solution to the cost issue. A modular design may defray the cost. It is my opinion that the "killer apps" for microfluidics will only be realized if these remaining issues with cost and robustness are resolved. They will enable democratized microfluidic consumer products and launch the

industrial revolution we envisioned 12 years ago. Bio microfluidics has contributed to the realization of the first microfluidic products by attracting pioneer contributions that address the salient physics. The various tumor cell sorting mechanisms, for example, were first analyzed by several landmark papers and reviews in the journal,1–4 which delineated the key electrical polarization and particle-fluid interaction issues. In fact, the journal has become the most popular venue for electrophoretic sorting because of these key contributions. The challenges of sample extraction and analyte partition in wearable sweat biomarker monitoring, because of the high-ionic strength of the sample, were also first reported here.5Another good example is the rheological and mechanical study of diseased cells, for both diagnostics and metastatic pathway studies. This field requires in-depth understanding of fluid and elastic mechanics in cellular microfluidics and Bio microfluidics published one of the first fundamental papers on the subject.6 Most of the focus of the original research articles and critical reviews focus was more scientific than clinical. They explore the basic scientific issues of a certain application rather than validate mature technologies with sample testing. At the micro-nanoscales, physics effects dominate due to interfacial, viscous, Debye, and even confinement. The aforementioned robustness issue of microfluidic products is mostly due to this myriad of complex physics and is best tackled with a basic scientific approach. I believe this emphasis on fundamental physics in microfluidics has created an identity for Bio microfluidics and will continue to serve us well in the future.

61. Hussen, M., Nega, A., Bezatu, M. (2018). Prevalence of extra pulmonary tuberculosis among people living with HIV/AIDS in sub-Saharan Africa: a systemic review and meta-analysis.

Abstract

Background: The double burden of infectious diseases such as tuberculosis (TB) and HIV disproportionately affects Africa. Our objective was to summarize the prevalence of extra pulmonary TB (EPTB) among people living with HIV/AIDS (PLWHA) in sub-Saharan Africa (SSA). **Methods:** We searched PubMed and Google Scholar for studies done on the prevalence of EPTB among PLWHA which published in English from 1990 to 2017. We also searched bibliographic indices and browsed through reference lists of articles and journals. We critically

appraised the quality of articles and abstracted the data with Joanna Briggs Institute (JBI) checklists. We used Review Manager Software (version 5.3) and Compressive Meta-Analysis Software (version 2.2) for analysis. Finally, we summarized the effect estimate by using random-effects model and explored potential sources of heterogeneity by subgroup and sensitivity analyses. We assessed publication bias by funnel plot and statistical test. Finally, we used PRISMA format for reporting. **Results:** We included, in this review, 31 studies that fulfilled our inclusion criteria, with a total population of 28,659. The prevalence estimate of EPTB among PLWHA ranged from 6.4% (95% CI: 3.8, 9.0) to 36.8% (95% CI: 28.6, 45); random-effects pooled prevalence of EPTB among PLWHA was found to be 20% (95% CI: 17, 22; heterogeneity: $t2=0$; $c2=509.09$, degrees of freedom [df]=30, P<0.00001; I2=94%). No evidence of publication bias was observed (P=0.44 for Egger's regression analysis and P=0.11 for Begg's rank correlation analysis). **Conclusion:** We can conclude from our analyses that the prevalence of EPTB among PLWHA was high. It is necessary to give emphasis for EPTB, especially when screening TB among PLWHA, widening the spectrum of screening to include all EPTB sites in the countries with high EPTB and/or HIV prevalence in the general population. Keywords: extra pulmonary tuberculosis, HIV, sub-Saharan Africa, systemic review, met analysis, co-infection.

62. Hüseyin, T., Ayes', A., Nermin, T., Vildan, A., Sülünay, P. (2018). Photodynamic antimicrobial activity of new porphyrin derivatives against methicillin resistant Staphylococcus aureus.

Abstract

Methicillin resistant Staphylococcus aureus (MRSA) with multiple drug resistance patterns is frequently isolated from skin and soft tissue infections that are involved in chronic wounds. Today, difficulties in the treatment of MRSA associated infections have led to the development of alternative approaches such as antimicrobial photodynamic therapy. This study aimed to investigate photo inactivation with cationic porphyrin derivative compounds against MRSA in in-vitro conditions. In the study, MRSA clinical isolates with different antibiotic resistance profiles were used. The newly synthesized cationic porphyrin derivatives (PM, PE, PPN, and PPL) were used as photosensitizer, and 655 nm diode laser was used as light source. Photo inactivation experiments were performed by optimizing energy doses and photosensitizer

concentrations. In photo inactivation experiments with different energy densities and photosensitizer concentrations, more than 99% reduction was achieved in bacterial cell viability. No decrease in bacterial survival was observed in control groups. It was determined that there was an increase in photo inactivation efficiency by increasing the energy dose. At the energy dose of 150 J/cm2 a survival reduction of over 6.33 log10 was observed in each photosensitizer type. While 200 μM PM concentration was required for this photo inactivation, 12.50 μM was sufficient for PE, PPN, and PPL. In our study, antimicrobial photodynamic therapy performed with cationic porphyrin derivatives was found to have potent antimicrobial efficacy against multidrug resistant S. aureus which is frequently isolated from wound infections. Keyword: antimicrobial photodynamic therapy cationic porphyrins multidrug resistant Staphylococcus aureus MRSA wound infections.

63. Ibrahim, J., Liu, M., Yusi, K., Haonga, B., Eliezer, E., Shearer, D.W., Morshed, S. (2018). Conducting a Randomized Controlled Trial in Tanzania.
doi: 10.1097/BOT.0000000000001294

Abstract

Introduction: Low- and middle-income countries (LMICs) experience a large volume of orthopedic trauma, but limited research exists to evaluate effective treatments using locally available means. Academic partners can help design and implement research studies through collaborative efforts with local investigators. We will describe the study design and lessons learned from a randomized controlled trial in Tanzania comparing outcomes of 2 operative treatments for open tibia fractures. Study Design: The Institute for Global Orthopedics and Traumatology at the University of California, San Francisco, and the Muhimbili Orthopedic Institute in Dar es Salaam, Tanzania, partnered to design a prospective, randomized controlled trial. Adult patients with open tibia fractures were randomized to receive either intramedullary nailing or external fixation as definitive fixation. Our primary outcome was the rate of reoperation, and secondary outcomes included EQ-5D, pain, function, radiographic union, and return to work. Results: We enrolled 40 patients in a pilot study that informed improvements in the study design and standard operating procedures. These modifications included development of a specific outline of the technical standards for each surgical intervention and held training

workshops to disseminate this knowledge among operative surgeons. This resulted in the successful enrollment and standardized treatment of our target sample of 240 patients. Discussion: There are several challenges in conducting high-quality, international research. Keys for success include maintaining a strong relationship between partners, having local research coordinators, simplifying data collection and storage, and incentivizing patients to attend follow-up visits.

64. Imbi, D., Sharon, C., Pittsburgh, P., Lisa, H., Loma, L., Israel, B., Jeronimo, A., Johnny, Y.U., Salome, W., Ferealem, A., Jonathan, P., Loma, L., Scott, G., Jarrett, J., Toyin, T. (2018). Cultural Sensitivity and Global Pharmacy Engagement in Africa.

Abstract

Global engagement between schools and colleges of pharmacy in the United States (US) and Africa is increasing. For a balanced and fruitful engagement, sensitivity towards the cultural and clinical needs of the people and professionals of the African region is critical. In this paper, we have divided the discussion into Southern, East, Central, and West Africa. General information about Africa, with unique aspects for individual sub-regions and countries, will be introduced. Stereotypes and misconceptions about the region and the people will also be discussed, along with recommendations for culturally sensitive engagement for pharmacy and other healthcare practitioners when hosting members from, or visiting this region. The paper is a resource for Schools and Colleges of Pharmacy who are currently engaged or considering future outreach opportunities in Africa. Keywords: Africa, global pharmacy education, World Health Organization, pharmacist, pharmacy technician.

65. Jaqueline, M.N., Ondimu, T.O., Asito, S.A., and Charles, O.O. (2018). Diagnosis and Management of Early-Onset Neonatal Sepsis (Eos) Among High-Risk Neonates in Kisii Teaching and Referral Hospital and Homabay County Referral Hospital, Western Kenya.

Abstract

Neonatal sepsis (NS) is the third most common contributor to neonatal deaths worldwide, the majority of which occur within the first 72 hours of life (Early-onset sepsis [(EOS)]). Diagnosis

of EOS is challenging due to limitations with blood volume, poor sensitivity of culture, delay in culture results, and most importantly, lack of bacterial blood culture capacity in high burden settings. Current syndromic algorithms for diagnosis of EOS lack validations and are needed to enable clinical decision making for management. To evaluate the diagnostic performance of a severe illness syndromic algorithm in distinguishing culture-proven or probable EOS from unlikely sepsis. Neonates with their mothers with suspected neonatal sepsis that gave a written consent and made the enrollment criteria that fulfilled the WHO case definition of septicemia within the first 72 hours of life were enrolled from maternity and newborn units at Kisii and Homa Bay District hospitals in Kenya. Blood samples (1-2 mLs) for culture were collected and cultured for bacteria. Between April 2015 to Jan 2016, Out of the 256 newborns infants were enrolled. Fourteen (5.7%) infants had a bacterial pathogen identified on culture, 3 were, 1 Escherichia coli, 1 Klebsiella, 1 Staphylococcus 1 Aureus and 3 Enterobacter spp. number at risk, 14 had sepsis giving an early onset sepsis prevalence of 5.7%, (81.6%) had a negative culture but had probable sepsis and (13.29%) Of the confirmed sepsis the majority the neonates had more than one neonatal and maternal factor of which premature rapture of membranes (PROM) was the most common maternal risk factor and refusal to feed and chest in drawing were the most common clinical featured. Out of the 223, which were followed up to day 7, we had 18(7.03%) death of probable sepsis and 0(0.00) of confirmed sepsis.

66. Jean, J.N., Valirie, N.A., Aude, L.N., Jan, R.N., Arnaud, K., Ulrich, F.N., Mpiko, N. (2018). Epidemiology of pericardial diseases in Africa: a systematic scoping review.
http://dx.doi.org/10.1136/heartjnl-2018-313922

Abstract

Objectives: This scoping review sought to summarise available data on the prevalence, aetiology, diagnosis, treatment and outcome of pericardial disease in Africa. **Methods:** We searched PubMed, Scopus and African Journals Online from 1 January 1967 to 30 July 2017 to identify all studies published on the prevalence, aetiologies, diagnosis, treatment and outcomes of pericardial diseases in adults residing in Africa. **Results:** 36 studies were included. The prevalence of pericardial diseases varies widely according to the population of interest: about 1.1% among people with cardiac complaints, between 3.3% and 6.8% among two large cohorts

of patients with heart failure and up to 46.5% in an HIV-infected population with cardiac symptoms. Tuberculosis is the most frequent cause of pericardial diseases in both HIV-uninfected and HIV-infected populations. Patients with tuberculous pericarditis present mostly with effusive pericarditis (79.5%), effusive constrictive pericarditis (15.1%) and my pericarditis (13%); a large proportion of them (up to 20%) present in cardiac tamponade. The aetiological diagnosis of pericardial diseases is challenging in African resource-limited settings, especially for tuberculous pericarditis for which the diagnosis is not definite in many cases. The outcome of these diseases remains poor, with mortality rates between 18% and 25% despite seemingly appropriate treatment approaches. Mortality is highest among patients with tuberculous pericarditis especially those confected with HIV. **Conclusion:** Pericardial diseases are a significant cause of morbidity and mortality in Africa, especially in HIV-infected individuals. Tuberculosis is the most frequent cause of pericardial diseases, and it is associated with poor outcomes.

67. John, M.N., Lorna, C.C., and Msafiri, N.K. (2018). Knowledge and Practices on Periodontal Health among Adults, Misungwi, Tanzania.

Abstract

The level of knowledge and practices on periodontal health of 388 adults in Misungwi District, Tanzania, was assessed. Analysis included frequency distributions and the chisquaretestatap value of 0.05. Many more participants were males (n197;50.8%)andofyoungeragegroup (n215;55.4%)andhavings even years of education (n257;66. 2%).Highernumberofparticipants reported owning a mobile phone (n 289; 74.5%) and a radio (n298; 76.8%), while few (n45; 11.6%) had their houses connected to electricity. Study participants who were males (n 101; 51.3%), had more than seven years of schooling (n67; 72.3%), who owned a mobile phone (n 143; 49%), owned a radio (n 144; 48.3%), a resided houses having electricity (n37;82.2%)werestatisticallysignificantlymoreknowledgeableonperiodontalhealthwhencomparedt otheircounterparts. A statistical significant difference was seen in oral health practices conducive to periodontal health among those who were males (n 133; 67.0%), having more than seven years of education (n78; 83.0%), owning a mobile phone (n 189; 65.4%), owning a radio

(n195;65.4%), andresiding in house having electricity (n 35;77.8%).Thisstudy observed that participants who were males, ownedamobilephone,ownedaradio, resided inhouseshaving electricity, and havingmore than evenyearsofeducation were more knowledgeable and had more conducive oral health practices on periodontal health.

68. John, M.I., Max, L., Hao, H.W., Kushal, R.P., Amber, M.C., Ralph, R.C., Saam, M., David W.S. (2018). The extent of pediatric orthopaedic research in low- and middle-income countries and the impact of academic collaboration on research quality: a scoping review.

Abstract

Introduction: This review aims to (1) assess the breadth of pediatric orthopaedic research in low- and middle-income countries (LMICs) and (2) determine the impact of academic collaboration (an LMIC and a non-LMIC investigator) in published LMIC research. Methods: Pediatric orthopaedic clinical studies conducted in LMICs from 2004 to 2014 were extracted from Embase, Cochrane, and PubMed databases. Of 22,714 searched studies, 129 met inclusion criteria. Results: 85% generated low-quality evidence (level IV or lower). 21% were collaborative, and these were more likely than non-collaborative papers to generate level III evidence or higher (25% vs 13%, $p = 0.141$). Discussion: Pediatric orthopaedic research produced by LMICs rarely achieves level I–III evidence, but collaborative studies are associated with higher levels of evidence. Level of evidence: N/A. Keywords: Pediatrics Global surgery Orthopaedics Low- and middle-income countries Academic Collaboration Scoping review.

69. John, O.O., Olakunle, A.T., Gboyega, A.O., Evelyn, M.K. (2018). Computed tomographic findings of the brain in adult HIV-infected patients at Doctor George Mukhari Academic Hospital, Ga-Rankuwa, Pretoria, South Africa.
DOI: 10.4103/wajr.wajr_48_17

Abstract

Background/Aim: The aim of this study is to determine the pattern of computed tomographic (CT) findings in HIV-infected patients referred for CT brain at Doctor George Mukhari Academic Hospital (DGMAH) and to correlate the CD4 counts with CT brain findings of the

patients on antiretroviral (ARV) drugs, and those that are ARV naïve. **Methods:** A descriptive, retrospective review of CT brains obtained from 128 slices Philips and GE, CT scanners, medical records, and laboratory results of 364 adult HIV-infected patients over a 6-month period (October 1, 2016–March 31, 2017) was conducted at Radiology Department of DGMAH. Statistical analyses were made using a Statistical Program for Social Sciences software (SPSS version 19.0). **Results:** From the 364 CT brain findings of HIV-infected patients reviewed, 46.2% were male and 53.8% were female. The findings were as follows: brain atrophy (168; 46.2%); infarcts (55; 15.1%); hydrocephalus (24; 6.6%); white matter disease (18; 4.9%); mass lesions (13; 3.6%); rim enhancing lesions (12; 3.3%); intracranial bleed (11; 3.0%); tuberculous granuloma (32; 8.8%); tuberculous meningitis (15; 4.1%); and Cryptococci meningitis (2; 0.5%). Opportunistic infections and mass lesions still predominate at CD4 count <200 cells/mm3 although the reduction in the prevalence of opportunistic infections was observed. Brain infarct was seen at CD4 count <200 cells/mm3, and brain atrophy was seen at all CD4 count levels (median= 84 cells/mm3). **Conclusion:** This study was conducted in the post-highly active ARV therapy era, and the most common CT scan brain finding was brain atrophy, followed by brain infarct. Keywords: Brain, computed tomography, HIV-infected adult patients.

70. Joseph, M.B., Elizabeth, B., Eva, M.B. (2018). Public Health Ethics and Rights in Healthcare Programmes.

Abstract

The chapter explains the nature of public health in Africa and discusses the development of public health ethics as an academic discipline. Also, it introduces the reader to basic theoretical frameworks for public health interventions, including the most important ethical principles of public health (e.g. necessity, proportionality, reciprocity, beneficence, consideration, community engagement, common good, common sense, solidarity). Lastly, it describes the context of public health ethics in Africa and discusses the challenges of ethics in the implementation of research and health programed that affect the public – like quarantine for infectious diseases and the public health concerns of mass immunisation. It is critically important to apply the mentioned principles and to balance between personal rights and choices, and public safety and well-being while only choosing necessary, effective, appropriate and proportional means. Keywords:

International health regulations Ebola Proportionality Syracuse principles Community Engagement Disease control.

71. Josephine, N., Richard, M., Lilian, T.M., Peter, W., Joyce, N., and Patience, M. (2018). Childbirth experiences and their derived meaning: a qualitative study among postnatal mothers in Mbale regional referral hospital, Uganda.

Abstract

Background: Evidence shows that negative childbirth experiences may lead to undesirable effects including failure to breastfeed, reduced love for the baby, emotional upsets, post-traumatic disorders and depression among mothers. Understanding childbirth experiences and their meaning could be important in planning individualized care for mothers. The purpose of this study was to explore childbirth experiences and their meaning among postnatal mothers. **Methods:** A phenomenological qualitative study was conducted at Mbale Regional Referral Hospital among 25 postnatal mothers within two months after birth using semi-structured interviews and focus group discussions and data was thematically analyzed. **Results:** The severity, duration and patterns of labour pains were a major concern by almost all women. Women had divergent feelings of yes and no need of biomedical pain relief administration during childbirth. Mothers were socially orientated to regard labour pains as a normal phenomenon regardless of their nature. The health providers'attitudes, care and support gave positive and negative birth experiences. The Physical and psychosocial support provided comfort, consolation and encouragement to the mothers while inappropriate care, poor communication and compromised privacy contributed to the mothers' negative childbirth experiences. The type of birth affected the interpretations of the birth experiences. Women who gave birth vaginally, thought they were strong and brave, determined and self-confident; and were respected by members of their communities. On the contrary, the women who gave birth by operation were culturally considered bewitched, weak and failures. **Conclusion:** Childbirth experiences were unique; elicited unique feelings, responses and challenges to individual mothers. The findings may be useful in designing interventions that focus on individualized care to meet individual needs and expectations of mothers during childbirth.

72. Julie, M., Furahini, T., Abel, M., Deogratius, S., Siana, N., Raphael, S., Josephine, M., Stella, R., Fenella, J.K., Christina, K., Elisha, O., Elineema, M., Robert, W.S., Charles, R.N., David, R., Muhsin, A., Swee, L.T., Sharon, E.C., Lucio, L., and Bruno, P.M. (2018). A ten-year review of the sickle cell program in Muhimbili National Hospital, Tanzania.
https://doi.org/10.1186/s12878-018-0125-0

Abstract

Background: Africa has the highest burden of Sickle cell disease (SCD) but there are few large, systematic studies providing reliable descriptions of the disease spectrum. Tanzania, with 11,000 SCD births annually, established the Muhimbili Sickle Cell program aiming to improve understanding of SCD in Africa. We report the profile of SCD seen in the first 10 years at Muhimbili National Hospital (MNH). Methods: Individuals seen at MNH known or suspected to have SCD were enrolled at clinic and laboratory testing for SCD, hematological and biochemical analyses done. Ethnicity was self-reported. Clinical and laboratory features of SCD were documented. Comparison was made with non-SCD population as well as within 3 different age groups (< 5, 5–17 and ≥ 18 years) within the SCD population. Results: From 2004 to 2013, 6397 individuals, 3751 (58.6%) SCD patients, were enrolled, the majority (47.4%) in age group 5–17 years. There was variation in the geographical distribution of SCD. Individuals with SCD compared to non-SCD, had significantly lower blood pressure and peripheral oxygen saturation (SpO2). SCD patients had higher prevalence of severe anemia, jaundice and desaturation (SpO2 $< 95\%$) as well as higher levels of reticulocytes, white blood cells, platelets and fetal hemoglobin. The main causes of hospitalization for SCD within a 12-month period preceding enrolment were pain (adults), and fever and severe anemia (children). When clinical and laboratory features were compared in SCD within 3 age groups, there was a progressive decrease in the prevalence of splenic enlargement and an increase in prevalence of jaundice. Furthermore, there were significant differences with monotonic trends across age groups in SpO2, hematological and biochemical parameters. Conclusion: This report confirms that the wide spectrum of clinical expression of SCD observed elsewhere is also present in Tanzania, with non-uniform geographical distribution across the country. Age-specific analysis is consistent with different disease-patterns across the lifespan.

73. Julius, T.K., Lena, K.K., Gunilla, M.E., Susanne, G.E. G. (2018). The impact of stroke on people living in central Uganda: A descriptive study.

Abstract

Background: Knowledge about perceived impact of stroke on everyday life as well as rehabilitation needs after stroke in Uganda is necessary to identify and develop rehabilitation interventions. Objectives: To explore and describe clinical characteristics and functioning during the acute or subacute phase and chronic phase, as well as the impact of stroke on everyday life during the chronic phase in stroke survivors in central Uganda. **Method:** A cross-sectional observational study was conducted on a consecutively included acute or subacute (n = 58) sample and a chronic (n = 62) sample. Face-to-face interviews were conducted to collect demographic information and clinical characteristics. The Scandinavian Stroke Scale (SSS) was used to collect clinical characteristics, assess neurological impairment and define stroke severity. The Barthel Index was used to assess the level of dependence in activities of daily living. In addition, the Stroke Impact Scale (SIS) 3.0 Uganda version was used to assess the impact of stroke in everyday life as perceived by the individuals in the chronic sample receiving rehabilitation. **Results:** The mean age of the acute/subacute sample was 49 years and 81% had moderate or severe stroke. The mean age of the chronic rehabilitation group was 53 years and 58% had mild stroke. Time since onset in the acute sample was between 2 days and 3 weeks, and time since onset for the chronic sample varied between 3 months and 3 years. Strength, hand function and participation were the most impacted SIS domains in the chronic sample. **Conclusion:** People with severe and moderate stroke were more likely to be admitted to Mulago Hospital. The mean age in the study sample was lower than that in high-income countries. Further knowledge is needed regarding the impact of stroke to develop guidelines for stroke rehabilitation interventions feasible in the Ugandan healthcare context in both rural and urban areas. Keywords: Rehabilitation; Stroke Impact Scale; Patient reported outcome; non-communicable diseases; Africa.

74. Karline, W.M., Lucia, E., Jamie, R., Aloisia, S. and Stephano, S. (2018). Overview of literature on RMC and applications to Tanzania.

Abstract

Respectful maternity care research in Tanzania continues to increase. This is an overview of the literature summarizing research based on the domains which comprise this quality of care indicator, ranging from exploratory and descriptive to quantitative measurements of birth perinatal outcomes when respectful interventions are made. The domains of respectful care are reflected in the seven Universal Rights of Childbearing Women but go further to implicate facility administrators and policy makers to provide supportive infrastructure to allay disrespect and abuse. The research methodologies continue to be problematic and several ethical cautions restrict how much control is possible. Similarly, the barriers to collecting accurate accounts in qualitative studies of disrespect require astute interviewing and observation techniques. The participatory community-based and the critical sociology and human rights frameworks appear to provide a good basis for both researcher and participants to identify problems and determine possible solutions to the multiple factors that contribute to disrespect and abuse. The work-life conditions of midwives in the Global South are plagued with poor infrastructure and significantly low resources which deters respectful care while decreasing retention of workers. Researchers and policy-makers have addressed disrespectful care by building human resource capacity, by strengthening professional organizations and by educating midwives in low-resource countries. Furthermore, researchers encourage midwives not only to acquire attitudinal change and to adopt respectful maternity care skills, but also to emerge as leaders and change agents. Safe methods for conducting care while addressing low resources, skilled management of conflict and creative innovations to engage the community are all interventions that are being considered for quality improvement research. Tanzania is poised to evaluate the outcomes of education workshops that address all seven domains of respectful care.

75. Kate, H., Stella-Maria, P., Jane, R., Richard, W. (2018). Conceptualization of depression amongst older adults in rural Tanzania: a qualitative study.
https://doi.org/10.1017/S1041610218002016

Abstract

Background: Depression in older people is likely to become a growing global health problem with aging populations. Significant cultural variation exists in beliefs about depression (terminology, symptomatology, and treatments) but data from sub-Saharan Africa are minimal. Low-resource interventions for depression have been effective in low-income settings but cannot be utilized without accurate diagnosis. This study aimed to achieve a shared understanding of depression in Tanzania in older people. **Methods:** Using a qualitative design, focus groups were conducted with participants aged 60 and over. Participants from rural villages of Kilimanjaro, Tanzania, were selected via randomized sampling using census data. Topic guides were developed including locally developed case vignettes. Transcripts were translated into English from Swahili and thematic analysis conducted. **Findings:** Ten focus groups were held with 81 participants. Three main themes were developed: a) conceptualization of depression by older people and differentiation from other related conditions ("too many thoughts," cognitive symptoms, affective and biological symptoms, wish to die, somatic symptoms, and its difference to other concepts); b) the causes of depression (inability to work, loss of physical strength and independence, lack of resources, family difficulties, chronic disease); c) management of depression (love and comfort, advice, spiritual support, providing help, medical help). **Conclusions:** This research expands our understanding of how depression presents in older Tanzanians and provides information about lay beliefs regarding causes and management options. This may allow development of culturally specific screening tools for depression that, in turn, increase diagnosis rates, support accurate diagnosis, improve service use, and reduce stigma.

76. Katharine, D.S., Gasto, F., Rose, M., Asha, S.G., Elizabeth, A.S., Japhet, K., Abdullah, H.B., David, H.P. (2018). Can volunteer community health workers manage multiple roles? An interrupted time-series analysis of combined HIV and maternal and child health promotion in Iringa, Tanzania.
https://doi.org/10.1093/heapol/czy104

Abstract

Community health workers (CHWs) play a critical role in health promotion, but their workload is often oriented around a single disease. Renewed interest in expansion of multipurpose CHWs to cover an integrated package of services must contend with the debate over how effectively CHWs can perform an increased range of tasks. In this study, we examine whether an existing cadre of HIV-focused paid volunteer CHWs in Iringa, Tanzania, can take on new maternal, newborn and child health (MNCH) promotion tasks without adversely affecting their HIV role. HIV household visits conducted per month were extracted from CHW summary forms covering up to 14 months pre-intervention and 12 months of intervention data. A comparative interrupted time series using a generalized estimating equation assessed population-averaged longitudinal trends in monthly HIV visit count in the intervention ('dual-role' CHWs) vs comparison group ('single-role' CHWs). Analyses were stratified by district, accounting for secular trends, seasonality and covariates. The time series consisted of 4022 observations for HIV visit count from 187 CHWs (41% dual role). Prior to MNCH training, dual-role CHWs averaged 25–30% more HIV visits per month compared with single-role CHWs, with no other significant pre-intervention differences between groups. CHWs began conducting MNCH visits shortly after receiving training, but in the initial month of intervention, there was a 6–9% drop in the mean number of HIV visits per month among dual-role CHWs. Otherwise, there was no significant difference between single- and dual-role CHWs in the trajectories of monthly HIV visits before and after adding MNCH tasks. Dual-role CHWs appeared able to maintain their HIV client workload after adding MNCH tasks to their routines, albeit with an initial slight decline in HIV workload. This dual-role CHW model suggests potential spare capacity in vertically oriented programmers, with productivity gains possible through integration.

77. Kemala, I., Tejo, S., Yuliani, S., and S. (2018). Acclimatization, Water Intake Adequacy Rate, Individual Characteristics and Heat Strain: A Cross-Sectional Study on Heat Exposed Workers.

Abstract:

Someone will have a greater risk of experiencing heat strains if working at a workplace exposed to heat. In addition to the heat from the body's metabolic results and the result of heat exposure

from the work environment, heat strain on workers also influenced by individual factors. The extent to which an individual's body can tolerate heat exposure is determined by the condition of his body. Physiological changes will occur in the body of workers who exposed to heat. The objective of this study was to analyse factors related to heat strain such as acclimatization, water intake adequacy rate, and individual characteristics. The research was an observational analytic study and study design that used was cross-sectional. The population chosen as the research subject was workers who were exposed to heat. Purposively 57 construction workers were selected as subjects. To prove the relationship between acclimatization, water intake adequacy rate, and individual characteristics with heat strain, it used chi square statistical test. Physiological Strain Index (PSI) used to assess heat strain event on workers. The results of outdoor WBGT measurements at the study site showed that the average of WBGT outdoor was 31.11oC. Heat strain with high index experienced by the majority of workers as much as 82.5%. Result of statistical analysis showed the significance of each variable was acclimatization ($p<0.05$), water intake adequacy rate ($p<0.05$), alcohol and drug consumption ($p>0.05$), health status ($p>0.05$), body mass index ($p<0.05$), age ($p>0.05$), and work period ($p>0.05$). This study showed that there was a significant relationship between heat strain with acclimatization, water intake adequacy rate and body mass index. The relationship is evidenced by the results of bivariate analysis. However, there was no association between consumption of alcohol or drugs, health status, work period, and age with heat strain.

78. Khalid, R., Hakeem., Mohammed, A., Mohd, M., Hussain, S., Shoeb, I.R. (2018). Clinical Evidence of Dental Treatment by Using Herbal Formulations.

Abstract

The use of herbal formulations has gained momentum in recent past with many people using natural product-based substances to stay away from dental health issues. In the present study, the patient is treated by using herbal mouthwash containing Baccharis dracunculifolia. Figure 7.1 displays the result of treatment accompanied by herbal mouthwash. This study was carried out under the NTR Health University.

79. Lauren, M.H., Lusajo, J.K., Suzanne, M. (2018). Correlates of Anxiety and Depression among Young Men Living in Dar Es Salaam, Tanzania.

Abstract

Depression and anxiety are important sources of morbidity globally, but we have little knowledge of risk groups and risk factors for both classes of disorders in Tanzania and other low-resource settings. We aimed to identify sociodemographic markers and risk and protective factors associated with symptoms of anxiety and depression among 1249 young men belonging to social groups known as "camps" in Dar es Salaam. Anxiety and depression were measured using the HSCL-25. Twenty-two percent of men reported clinically significant symptoms of depression and 20% reported clinically significant symptoms of anxiety. Men living apart from family reported greater symptoms of anxiety and depression than men living with family, and employment was associated with a greater likelihood of clinically significant symptoms of both anxiety and depression. Childhood experience of violence was strongly associated with both anxiety and depression. Social support was associated with lower levels of anxiety and depression, and with a lower likelihood of clinically significant levels of anxiety and depression. Youth not living with family and the working poor may be important populations for future investigation. Interventions targeting survivors of childhood violence and social support-based interventions should be tested to address the burden of anxiety and depression in this setting.

80. Ledd, A.M. Underwood, C., Decker, M.R., Mbwambo, J., Likindikoki, S., Galai, N., Kerrigan, D. (2018). Adapting the risk environment framework to understand substance use, gender-based violence, and HIV risk behaviors among female sex workers in Tanzania.

Abstract

Background: Female sex workers (FSWs) in sub-Saharan Africa are disproportionately affected by HIV and gender-based violence (GBV). Substance use overlaps with these co-occurring epidemics to further increase FSWs' risk for negative health outcomes. We explored the relationship between substance use, GBV, and consistent condom use utilizing baseline data

from a cohort of 496 FSWs in Tanzania. Results: demonstrate high levels of alcohol use and GBV, and low levels of consistent condom use. Frequent intoxication during sex work was associated with increased odds of recent GBV (aOR 1.64, 95% CI 1.07, 2.49; p value 0.02) and reduced odds of consistent condom use with clients (aOR 0.58, 95% CI 0.37, 0.92; p-value 0.02). We adapt the risk environment framework to contextualize our findings in the social and structural context and to gain insight into intervention approaches to.

81. Lewis, H., Obiageli, E.N., Biobele, J.B., Furahini, T., Shonda, K., Livingstone, G. D., Crystal, P., Sergey, S.S., Guillaume, L., Richard, S.C., Victor, R.G., and Bamidele, O.T. (2018). White Paper: Pathways to Progress in Newborn Screening for Sickle Cell Disease in Sub-Saharan Africa.

Abstract

Sickle Cell Disease (SCD) is among the most common single-gene diseases in the world but evidence-based comprehensive health care has not been implemented where the highest prevalence of SCD occurs, in sub-Saharan Africa (SSA). It represents an urgent health burden, both in terms of mortality and morbidity with an estimated mortality of 8-16% in children under 5 years in SSA. Addressing the high mortality of SCD in SSA and for effective management of SCD, newborn screening (NBS) should be incorporated with prevention of infections (including pneumococcal septicaemia and malaria), parental education and support at all levels of healthcare provision to enable timely recognition. The NBS working group of the AfroSickleNet collaboration surveyed current projects in NBS in SSA, and current conditions that hinder more widespread implementation of NBS for SCD. Solutions based on new point-of-care testing technology to disseminate education, and implementation science approaches that leverage existing resources are proposed. Keywords: Sickle cell disease; Newborn screening; Hemoglobin.

82. Lutango, D.S., Anne, N.Å., Anders, J., Irene, K.M., and Ann, K.J. (2018). Oral diseases and socio-demographic factors in adolescents living in Maasai population areas of Tanzania: a cross-sectional study.

Abstract

Background: Oral diseases may cause serious health problems, especially in socially disadvantaged populations and in low-income countries. In populations living in the rural areas of Tanzania there is paucity of reports on oral health. The study aim was to estimate the prevalence, severity and socio-demographic distribution of oral diseases/conditions in adolescents living in Maasai population areas of Tanzania and to compare oral diseases/conditions between Maasai and non-Maasai ethnic groups. **Methods:** A total of 23 schools were randomly selected from 66 rural public primary schools in Monduli and Longido districts, Tanzania. All pupils in the selected classes, 6th grade, were invited to participate in the study. A total of 989 were invited and 906 (91.6%) accepted the invitation and completed an interview and a clinical oral examination. **Results:** Out of 906 study participants (age range 12–17 years), 721(79.6%) were from Maasai and 185 (20.4%) from non-Maasai ethnic groups. Prevalence of poor oral hygiene, gingival bleeding, dental caries experience (DMFT> 0), dental fluorosis TF grade 5–9, dental erosion (into dentin), tooth wear (into dentin) and TMD was 65.6, 40.9, 8.8, 48.6, 1.9, 16.5 and 11.8%, respectively. Multiple variable logistic regression analysis revealed that, girls (OR = 2.0) and participants from Longido (OR = 2.6) were more likely to present with good oral hygiene (p < 0.05). Adolescents from Monduli (OR = 1.7), males (OR = 2.1), being born within Arusha region (OR = 1.9) and Maasai (OR = 1.7) were more likely to present with gingival bleeding (p < 0.05). DMFT> 0 increased by age (OR = 2.0) and was associated with non-Maasai ethnic group (OR = 2.2), (p < 0.05). Adolescents from Monduli district (OR = 10.0) and those born in Arusha region (OR = 3.2) were more likely to present with dental fluorosis (p < 0.05). Dental erosion was more common among non-Maasais (OR = 2.0) as well as having mother with high education (OR = 2.3), (p < 0.05). **Conclusions:** Oral diseases like dental caries and dental erosion were less common, but gingival bleeding, dental fluorosis, tooth wear and TMD were common findings in adolescents attending primary schools in the

Maasai population areas of Tanzania. Notable differences between Maasai and non-Maasai ethnic groups and certain correlations to sociodemographic factors were detected. Our findings can be utilized by policy makers in the planning of oral health programs in public primary schools of Maasai population areas of Tanzania.

83. Mahundi, M.H., Chaula, H.B., Igira, F., (2018). Appreciating local variations in standardizing health care data collection processes and tools: A case of health management information system in Tanzania.
https://doi.org/10.1002/isd2.12031

Abstract

Background: The need for integration of health information systems as realised in the 90s by the developing countries resulted into deliberate standardization initiatives. Software systems, human resources, procedures, and data collection tools were all subjected to standardisation. This standardisation, however, has been so absolute that the local and permanent variations were not taken into consideration. This study sought to find out how the local variations within the health care provision units can be taken into consideration in the design of health care data collection processes and tools. It employed qualitative, case study design and had 3 data collection techniques: observations, semi-structured interviews, and documents review. The study found out that success in standardising data collection tools and processes in health care settings can be achieved if standards are put into clusters as it is unrealistic to subject the different health facility types into the same standards. The study proposes 3 clusters of standards. The dispensary cluster which accounts for the majority of all health facilities and the hospital cluster which accounts for all advanced diagnosis and treatment facilities and the third, specialised hospital cluster which accounts for specialised services.

84. Mamuya, S. Mwakitwanga, S. (2018). Mining Occupational Safety and Health: 1057 Mercury exposure and related health problems among artisanal and small scale gold mining community in chunya district Tanzania.
http://dx.doi.org/10.1136/oemed-2018-ICOHabstracts.683

Abstract

Background: Human exposure to elemental mercury occurs mainly through inhalation of vapours, contact and ingestion through consumption of contaminated sea food. Objective: To assess the magnitude of health problems related to mercury exposure among artisanal and small scale gold mining community in Chunya District. Methodology: Analytical cross section study was conducted in gold mine community in Chunya District. A multistage random sampling method was used to recruit study participants from Saza and Makongorosi mining area recruited as exposed and individuals from two wards surrounding the mining area as unexposed group. Data was collected by a pre-tested interview schedule administered face to face to the interviewee with both open and closed ended questions followed by urine sample collection which was then analysed by CVAAS technique to determine the level of mercury. Data analysis was done by using Chi-square and incase numbers were too small for Fisher's exact test was employed. Measure of association is significant where $p < 0.05$ Statistical analysis was done by SPSS version 21. Results: A total of 150 participants with the age between 15 and 67 (mean age 33.77 (SD=12.12) and 33.26 (SD=12.83) years old for exposed and unexposed groups respectively) were recruited and ascertained for exposure. Urinary mercury concentrations for exposed group were higher than the referent group (mean 81.18 (SD=46) mcgHg/g-creatinine and 5.14(SD=2.73) mcgHg/g-creatinine respectively) ($p < 0.05$). Symptoms such as cough, chest tightness, tremor of hands, tremor of tongue, tremor of eyelid and trouble of walking were significantly more prevalent in exposed ($p < 0.05$) than non-exposed. Discussion: Body burden caused by mercury affects not only miner but also the community surrounding the mining area. Exposure to even lower amount of mercury may bring about significant health effects. Therefore, there is a need for stakeholders to raise the community awareness on mercury effects and its preventive measures.

85. Mathieu, M., Richard, O., Vincent I., Tarcissus, K., and Dieudonné, O. (2018). Labial lesions by human bite.
https://doi.org/10.1051/mbcb/2018017

Abstract

Introduction: A bite from another human is an unusual cause of maxillo-facial traumatology. Our objective was to describe the epidemiologic and clinical characteristics of labial lesions caused by this kind of bite. Patients and methods: A descriptive prospective study was carried out at the University hospitals of Yalgado OUEDRAOGO and Blaise COMPAORE in Ouagadougou in Burkina Faso between June 2012 and May 2017. **Results:** We collected a sample of 28 patients with an average age of 32.5 years. The sex ratio was about 0.3. All the bites had been inflicted by women. The victims generally came from an underprivileged social professional background. The bite had occurred during a brawl in 26 patients (92.9% cases) and in some context of aggression among 2 patients. The lesions were located on the lower lip among 21 patients, the upper lip among 4 patients, and along the commissure among 3 patients and resulted in a loss of tissue among 23 patients (82.1%). The treatment was surgical in nature, using trimming and labialization with satisfactory results in all cases. **Conclusion:** The circumstances surrounding the bites are not always clear and the lesions are almost always serious and require delicate treatment.

86. May, T., Nu, N., Yu, M.S., Pa, P.S., Moe, K., Thu, N.S., Nobuyuki, H., Hla, H.W. (2018). Barriers between mothers and their adolescent daughters with regards to sexual and reproductive health communication in Taunggyi Township, Myanmar: What factors play important roles?

https://doi.org/10.1371/journal.pone.0208849

Abstract

Background: Parents play critical roles in adolescents' sexual and reproductive health (SRH) and discussions between parents and adolescents on this topic are fundamental in reducing adolescents' risky sexual behaviors. However, SRH communication is a challenging issue in Myanmar due to socio-cultural taboos. This study assessed the communication barriers towards SRH issues among mothers and their adolescent girls. **Methods:** A community-based, cross-sectional study was conducted from January to December 2017 in Taunggyi Township, Southern Shan State, Myanmar. In total, 112 pairs of mothers and adolescent daughters were recruited using a face-to-face interview method with semi-structured questionnaires. Logistic regression

analysis was applied to examine communication barriers on SRH issues between mothers and their adolescent girls. **Results:** More than half of both mother and adolescent girls had negative perceptions of communication on SRH issues. Only 2.7% of girls discussed SRH issues with their mothers more than four times in the last six months. The factors found to create SRH communication barriers were higher family incomes (adjusted odd ration [AOR] 2.5, 95% confidence interval [CI] 1.0, 6.2), good knowledge of puberty (AOR 4.5, 95% CI 1.6, 12.5), good knowledge of sexual and reproductive health issues (AOR 4.5, 95% CI 1.8, 11.5), and positive perception of communication (AOR 6.7, 95% CI 2.5, 17.9) among mothers, and good knowledge of contraception (AOR 5.7, 95% CI 1.5, 21.4) and good knowledge of sexually transmitted infections (AOR 2.5, 95% CI 1.0, 6.4) among adolescent girls. **Conclusion:** Mothers and adolescent girls communicated on SRHs was narrow, occurring infrequently and late, with only limited topics discussed. Having higher levels of SRH knowledge were more likely to create communication barriers among mother and adolescent girls. Policy makers need to consider targeted sexual and reproductive health education programs that can be implemented at the school and community levels to increase parent-adolescent communication.

87. Mboka, J., Dawn, E.S., Jamie, M.K., Balowa, M., Russell, M., Winok, L., Furahini, T., Ramadhan, R.K., Siana, N., Magda, A., Edward, K., Lulu, F., Frank, K., Angela, D., Hilda, T., Karin, S., Christopher, A.C., Julie, M. and Fenella, J.K. (2018). Neuroimaging in patients with sickle cell anemia: capacity building in Africa.
doi: https://doi.org/10.1182/bloodadvances.2018GS112714

Abstract

Background: Sickle cell anemia neurologic complications: The collaboration aims at exploring the relationship between the cerebral vasculature and neurologic complications in Tanzanian children with sickle cell anemia (SCA). Cerebral vasculopathy in internal carotid, middle, anterior cerebral, and posterior cerebral arteries is diagnosed by transcranial Doppler (TCD) utasonography1 and magnetic resonance angiography (MRA). The neurologic complications include clinical stroke (ischemic and hemorrhagic) and silent brain infarction (SCI).2,3 Although clinical stroke (overt cerebral infarction) is a catastrophic complication in SCA, it is relatively rare. However, SCI, diagnosed by magnetic resonance imaging (MRI), is a very common

neurologic injury in these patients, with approximately 50% affected by middle age in the United States. SCI is an independent predictor of stroke and is associated with neurocognitive impairment.4Three-quarters of the SCA disease burden is in Africa, and Tanzania is ranked fourth globally.5 We have been screening for stroke risk using TCD ultrasonography at Muhimbili hospital since 2004. In a study of 200 patients undergoing TCD ultrasonography, of whom 60 with TCD abnormalities had MRI scans, the prevalence of stroke was 11.5% and the presence of SCI was 37% (verbal communication). However, the prevalence of SCI and other brain abnormalities6⇓-8 in unselected African patients with SCA is unknown. Despite the high prevalence of SCA with neurologic complications, there is a lack of expertise in early detection and diagnosis using neuroimaging. We have therefore investigated the use of MRI as well as TCD ultrasonography.

88. Mdoe, P.F., Ersdal, H.L, Mduma, E.R, Jeffrey.M. P., Robert, M., Wangwe, P.T., Hussen, K. (2018). Intermittent fetal heart rate monitoring using a fetoscope or hand held Doppler in rural Tanzania: a randomized controlled trial.

Abstract

Background: Neonatal mortality is a global challenge, with an estimated 1.3 million intrapartum stillbirths in 2015. The majority of these were found in low resource settings with limited options to intrapartum fetal heart monitoring devices. This trial compared frequency of abnormal fetal heart rate (FHR) detection and adverse perinatal outcomes (i.e. fresh stillbirths, 24-h neonatal deaths, admission to neonatal care unit) among women intermittently assessed by Doppler or fetoscope in a rural low-resource setting. **Methods:** This was an open-label randomized controlled trial conducted at Haydom Lutheran Hospital from March 2013 through August 2015. Inclusion criteria were; women in labor, singleton, cephalic presentation, normal FHR on admission (120–160 beats/minute), and cervical dilatation ≤7 cm. Verbal consent was obtained. Results: A total of 2684 women were recruited, 1309 in the Doppler and 1375 in the fetoscope arms, respectively. Abnormal FHR was detected in 55 (4.2%) vs 42 (3.1%). (RR = 1.38; 95%CI: 0.93, 2.04) in the Doppler and fetoscope arms, respectively. Bag mask ventilation was performed in 80 (6.1%) vs 82 (6.0%). (RR = 1.03; 95%CI: 0.76, 1.38) of neonates, and adverse perinatal

outcome was comparable 32(2.4%) vs 35(2.5%). (RR = 0.9; 95%CI: 0.59, 1.54), in the Doppler and fetoscope arms, respectively. **Conclusion:** This trial failed to demonstrate a statistically significant difference in the detection of abnormal FHR between intermittently used Doppler and fetoscope and adverse perinatal outcomes. However, FHR measurements were not performed as often as recommended by international guidelines. Conducting a randomized controlled study in rural settings with limited resources is associated with major challenges. Trial registration: This clinical trial was registered on April 2013 with registration number NCT01869582. Keywords: Intermittent fetal heart rate monitoring Pinard fetoscope Doppler.

89. Mercy, A.M., Febronia, K.K., and Hawa, S.M. (2018). Effectiveness of Supervised Tooth-Brushing and Use of Plaque Disclosing Agent on Children's Tooth-Brushing Skills and Oral Hygiene: A Cluster Randomized Trial.

Abstract

Background: Dental professionals recommend that parents should brush young children's teeth and supervise older ones to brush because young children are not cognitively developed nor do they have the manual dexterity required to brush their teeth effectively. Aim: To determine and compare the effect of using plaque disclosing agent while brushing teeth and that of supervised tooth brushing on oral hygiene status, gingival health and tooth brushing skills among 7 - 8 years old primary school pupils in Dar es Salaam. **Methods:** This was a cluster randomized controlled field trial with three intervention groups; supervised tooth brushing, use of plaque disclosing agent and a control group. The study was single blinded. Two stage cluster sampling technique was used. The outcomes of the study were improvement in tooth brushing skills, oral hygiene status and gingival health. Paired t-test was used to compare intervention outcomes from baseline to follow up while one-way analysis of variance (ANOVA) examined the influence of individual intervention on primary and secondary outcomes **Results:** 245 participants were recruited at baseline but 231 maintained participation to the end, of whom; 87 belonged to controls, 71 to supervised tooth brushing group and 73 to plaque disclosing agent group. At baseline participants' socio-demographics and mean scores of plaque and tooth brushing skills were evenly distributed in the three intervention groups. The mean score for plaque and gingival bleeding dropped and that of tooth brushing skills rose from baseline to follow up (p = 0.001).

The effect size for the use of plaque disclosing agent resulted into mean difference (95% CI) for plaque score 2.8 (0.8, 4.8) and supervised tooth brushing revealed an effect size for plaque score 2.2 (0.1, 4.1) and tooth brushing skills -1.0 (-1.2, -0.6). **Conclusion:** Supervised tooth brushing showed positive effect on pupil's tooth brushing skills and oral hygiene status while use of plaque disclosing agent positively influenced pupils' oral hygiene status and gingival healthy. Keywords: Supervised Tooth-Brushing; Plaque Disclosing Agent; Oral Hygiene Status; Oral Hygiene Practices; Tooth-Brushing Skills.

90. Miyuki, O., Shigeko, H., Yoko, S., Frida, M., Sebalda, L. (2018). Effects of a job aid-supported intervention during antenatal care visit in rural Tanzania.

Abstract

Background: In developing countries, nurses' counseling during antenatal care (ANC) visits remains insufficient. We examined the effects of a job aid-supported intervention on understanding the danger signs and improving the caring behaviors of nurses to women in rural Tanzania. Methods: This was a hospital-based research using a quasi-experimental pre-post study design. All nurses engaged in ANC counseling participated in a three-hour training covering counseling skills, pregnancy danger signs, use of a job aid, and quality of caring behaviors. The sample consisted of women who attended the ANC clinic and had no intrauterine fetal death. The primary outcome was perception of receiving information on the danger signs by women. The secondary outcome was impressions of women regarding the caring behaviors of nurses. Women answered questionnaires following ANC counseling (baseline) and two weeks post intervention (end line). Results: Of 318 women, 148 participated at baseline and 170 at end line. Regarding receiving information on danger signs, the mean baseline score of 4.92 (SD = 2.99) and the mean end line score of 6.66 (SD = 2.38) were significantly different (t = 5.646, p < .01). Regarding impressions of the nurses' caring behavior, the mean total baseline score of 26.17 (range, 6-30; SD = 11.19) and the mean total end line score of 27.63 (SD = 6.81) were significantly different (t = 4.299, p < .01). Conclusion: The job aid-supported intervention during ANC counseling found differences in the responses to receiving information on the danger signs of pregnancy and in identifying the caring behaviors of nurses to women.

91. Mlimbila, M.S., Ngowi, V., Moen, B.E. (2018). 1141 Risk of staphylococcus aureus exposure among workers in selected cattle and small ruminant's slaughterhouses in Tanzania.

Abstract

Introduction: The occupations involving working with animal production have for so long been known to bring significant health risks to workers, with distinctive attention to injuries. However, workers employed at slaughterhouses are at risk of pathogen exposure and especially zoonotic ones due to general working condition that exposes them directly to live animals, carcasses and viscera of possibly infected animals. The increased use and misuse of antimicrobials in animal treatments and feed to promote growth have increased the development of antimicrobial resistance, exposing workers to a more serious infection. This study aimed to determine the prevalence of nasal antibiotic resistant Staphylococcus aureus and associated risk factors. **Methods:** A cross-sectional study was conducted to collect data using questionnaire for information on occupational and personal history, checklist for working conditions and nasal swabs from 427 workers at slaughterhouses in Dar es Salaam, Dodoma and Arusha regions in Tanzania. Swabs were tested for S. aureus and later isolates were screened for antibiotic susceptibility. **Results:** Overall prevalence of S. aureus nasal carriage was about 30.0% where as 5% was resistant to antibiotic. The prevalence was higher in slaughter or carcass processing workers but also about 5 times higher in cleaning. Many slaughterhouses had poor infrastructure, less than 60% had a toilet and less than 20% had hand-washing facilities. Slaughtering of sick animals was observed in about 10% of slaughterhouses. Less than half of workers wore personal protective clothing **Conclusion:** Working conditions of majority of cattle slaughterhouses visited in Tanzania are not in line with the health and safety recommendations. Current facilities and practices may increase occupational exposure to biological hazards. Cattle slaughterhouse workers may have increased exposure to livestock-associated S. aureus, particularly MRSA. Therefore, further epidemiologic investigation on occupational exposure to livestock-associated S. aureus is required.

92. Mmbando, B.P., Suykerbuyk, P., Mnacho, M., Kakorozya, A., Matuja, W., Hendy, A., Greter, H., Makunde, W.H., Colebunders, R. (2018). High prevalence of epilepsy in two rural onchocerciasis endemic villages in the Mahenge area, Tanzania, after 20 years of community directed treatment with ivermectin.

Abstract

Background: Epilepsy is a neurological disorder with a multitude of underlying causes, which may include infection with Onchocerca volvulus, the parasitic worm that causes human onchocerciasis. A survey carried out in 1989 revealed a high prevalence of epilepsy (1.02% overall, ranging from 0.51 to 3.71% in ten villages) in the Mahenge area of Ulanga district, an onchocerciasis endemic region in south eastern Tanzania. This study aimed to determine the prevalence and incidence of epilepsy following 20 years of onchocerciasis control through annual community directed treatment with ivermectin (CDTI). **Methods:** The study was conducted in January 2017 in two suburban and two rural villages in the Mahenge area. Door-to-door household visits were carried out by trained community health workers and data assistants to screen for persons suspected of having epilepsy, using a standardized questionnaire. Persons with suspected epilepsy were then interviewed and examined by a neurologist for case verification. Onchocerciasis associated epilepsy was defined as epilepsy without an obvious cause, with an onset of seizures between the ages of 3–18 years in previously healthy children. In each village, fifty males aged ≥20 years were tested for onchocerciasis antibodies using an OV16 rapid test and were examined for presence of onchocerciasis nodules. Children aged 6–10 years were also tested using OV16 tests. **Results:** 5117 individuals (median age 18.5 years, 53.2% female) from 1168 households were screened. 244 (4.8%) were suspected of having epilepsy and invited for neurological assessment. Prevalence of epilepsy was 2.5%, with the rural villages having the highest rate (3.5% vs 1.5%), $P < 0.001$. Overall incidence of epilepsy was 111 cases (95% CI: 73–161) per 100 000 person-years, while that of onchocerciasis associated epilepsy was 131 (95% CI: 70–223). Prevalence of OV16 antibodies in adult males and among children 6–10 years old was higher in rural villages than in suburban villages (76.5% vs 50.6, and 42.6% vs 4.7% respectively), ($P < 0.001$), while overall prevalence of onchocerciasis nodules was 1.8%. **Conclusions:** This survey revealed a high prevalence and incidence of epilepsy in two rural

onchocerciasis endemic villages in the Mahenge area. Despite 20 years of CDTI, a high prevalence of OV16 antibodies in children aged 6–10 years suggests on-going O. volvulus transmission. Reasons for the persistence of on-going parasite transmission in the Mahenge area need to be investigated.

93. Miclau, T., Hoogervorst, P., Shearer, D.W., El Naga, A.N., Working, Z.M., Martin, C., Pesántez, R., Hüttl, T., Kojima, K.E., Schütz, M. (2018). Current Status of Musculoskeletal Trauma Care Systems Worldwide.
doi: 10.1097/BOT.0000000000001301

Abstract
Background and Rationale: Although general trauma care systems and their effects on mortality reduction have been studied, little is known of the current state of musculoskeletal trauma delivery globally, particularly in low-income (LI) and low middle-income (LMI) countries. The goal of this study is to assess and describe the development and availability of musculoskeletal trauma care delivery worldwide. **Materials & Methods:** A questionnaire was developed to evaluate different characteristics of general and musculoskeletal trauma care systems, including general aspects of systems, education, access to care and pre- and post-hospital care. Surgical leaders involved with musculoskeletal trauma care were contacted to participate in the survey. **Results:** Of the 170 surveys sent, 95 were returned for use for the study. Nearly 30 percent of surgeons reported a formalized and coordinated trauma system in their countries. Estimates for the number of surgeons providing musculoskeletal trauma per one million inhabitants varied from 2.6 in LI countries to 58.8 in high-income countries. Worldwide, 15% of those caring for musculoskeletal trauma are fellowship trained. The survey results indicate a lack of implemented musculoskeletal trauma care guidelines across countries, with even high-income countries reporting less than 50% availability in most categories. Seventy-nine percent of the populations from LI countries were estimated to have no form of health care insurance. Formalized emergency medical services were reportedly available in only 33% and 50% of LI and LMI countries, respectively. Surgeons from LI and LMI countries responded that improvements in the availability of equipment (100%), number and locations of trauma-designated hospitals (90%), and physician training programs (88%) were necessary in their

countries. The survey also revealed a general lack of resources for postoperative and rehabilitation care, irrespective of the country's income level. **Conclusion:** This study addresses the current state of musculoskeletal trauma care delivery worldwide. These results indicate a greater need for trauma system development and support, from prehospital through post hospital care. Optimization of these systems can lead to better outcomes for patients after trauma. This study represents a critical first step toward better understanding the state of musculoskeletal trauma care in countries with different levels of resources, developing strategies to address deficiencies, and forming regional and international collaborations to develop musculoskeletal trauma care guidelines.

94. Miriam, K., Maria, G.N.M., Constant, O.O. (2018). "Open access institutional repositories in universities in East Africa", Information and Learning Science.
https://doi.org/10.1108/ILS-07-2018-0066

Abstract:

Given that repositories were proposed as one of the routes to open access (OA), this study sought to establish the achievements universities in East Africa had attained in initiating institutional repositories (IRs), the challenges in providing OA and strategies for the way forward. **Design/methodology/approach:** Data were collected through literature searches, using the internet, journal databases and university websites in Kenya, Tanzania and Uganda for information about OA and IRs in East Africa. Some of the findings were based on the author's PhD "The management and accessibility of OA IRs in selected universities in East Africa", which used face-to-face interviews with six librarians and self-administered questionnaires responded to by 183 researchers at Kenyatta University, Muhimbili University of Health and Allied Sciences and Makerere University. Findings: Universities in East Africa were still in the intermediate stages of embracing OA, and only 40 libraries out of 145 universities had implemented IRs. However, most of the repositories had less than 1,000 items, with this challenge attributed to the absence of institutional and government/funder mandates that affected the collection/provision of OA, in addition to the lack of awareness of IRs among researchers. **Originality/value:** The value in this research was establishing the extent of IR initiatives in universities in East Africa and their contribution to OA, which is regarded as more visible and

accessible to scholars and government personnel who could leverage the information for further development in the region. Keywords: Open access, Kenya, East Africa, Universities, Tanzania, Uganda, Institutional repositories.

95. Mori, A.T., Meena, E., Kaale, E.A. (2018). Economic cost of substandard and falsified human medicines and cosmetics with banned ingredients in Tanzania from 2005 to 2015: a retrospective review of data from the regulatory authority.

Abstract

Objective: To estimate the economic cost of substandard and falsified human medicines and cosmetics with banned ingredients in Tanzania from 2005 to 2015. Design A retrospective review of data. Setting Tanzania Food and Drugs Authority and premises dealing with importations and distributions of pharmaceuticals. Eligibility criteria Confiscation reports of substandard human medicines, falsified human medicines and cosmetics with banned ingredients. Primary and secondary outcome measures Quantities and costs of pharmaceutical products, costs of transportation, storage, court cases and disposal of products. Results: The economic cost of substandard and falsified human medicines and cosmetics with banned ingredients was estimated at US$16.2 million, that is, value of substandard medicines US$13.7 million (84.4%), falsified medicines US$0.1 million (1%), cosmetics with banned ingredients US$1.3 million (8%) and other/operational costs US$1.1 million (6.6%). Some of the identified substandard and falsified human medicines include commonly used antibiotics such as phenoxymethylpenicillin, amoxicillin, cloxacillin and co-trimoxazole; antimalarial such quinine, sulfadoxine–pyrimethamine, sulfamethoxypyrazine–pyrimethamine and artemether–lumefantrine; antiretroviral drugs; antipyretics and vitamins among others. Conclusion: The economic cost of substandard and falsified human medicines and cosmetics with banned ingredients represent a relatively large loss of scarce resources for a poor country like Tanzania. We believe that the observed increase in the quantities and the economic cost of these products over time could partly be due to the improvement in the regulatory capacity in terms of human resources, infrastructure and frequency of inspections. This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0)

96. Mucheye, G., Moges, T., Feleke, M., Mulat, A., Zemene, T., and Belay, T. (2018). Newborn colonization and antibiotic susceptibility patterns of Streptococcus agalactiae at the University of Gondar Referral Hospital, Northwest Ethiopia.
https://doi.org/10.1186/s12887-018-1350-1

Abstract

Background: Group B Streptococcus (GBS) that asymptomatically colonizing the recto-vaginal area of women is the most important cause of neonatal colonization. There is paucity of evidence about newborn colonization with GBS in Ethiopia. Thus, this study was aimed to determine the prevalence of newborn colonization with GBS, antibiotic susceptibility patterns of the isolates and associated risk factors at the University of Gondar Referral Hospital in Northwest Ethiopia. **Methods:** A prospective cross sectional study was conducted from December 2016 to November 2017. A total of 1,155 swabs from nasal, ear and umbilical areas of the newborns were collected from the 385 newborns. Identifications of the isolates and antibiotic susceptibility testing were done by using conventional methods. **Results:** Sixty-two (16.1%, 95% CI: 12.2% - 20%) of the newborns were colonized by GBS. Seven percent of the total specimens were positive for GBS. The antibiotics susceptibility rates of GBS (average of the three body sites tested) were 95.1%, 89.6%, 88.9%, 85.7%, 85.3%, 81.3%, 76.9%, 76.1%, 73.8%, and 34.4% to ampicillin, penicillin, ciprofloxacin, chloramphenicol, vancomycin, azithromycin, erythromycin, clindamycin, ceftriaxone, and tetracycline, respectively. A multilogistic regression analyses were shown that the newborns that were from mothers whose education status was below tertiary level, and newborns from mothers who were: being employed, being nullipara and multigravida were at risk for colonization with GBS. **Conclusion:** Prevalence of neonatal colonization with GBS was higher than it was reported in three decades ago in Ethiopia. Ciprofloxacin, chloramphenicol, vancomycin and azithromycin were identified as the drug of choice next to ampicillin and penicillin.

97. Museveni, J., Anita, Y., Ingi, N., Domitila, A., Jean, G., Estomih, M., Scott, K. H., Sokoine, K., Sayoki, M., Charles, A. P., Theodore, Z., Gibson, S. K., Blandina, M., Eric, R. H., Tania, A. T. (2018). Pharmacokinetics of First-Line Drugs Among Children with Tuberculosis in Rural Tanzania.

Abstract

Background: Dosing recommendations for treating childhood tuberculosis (TB) were revised by the World Health Organization, yet so far, pharmacokinetic studies that have evaluated these changes are relatively limited. We evaluated plasma drug concentrations of rifampicin (RIF), isoniazid (INH), pyrazinamide (PZA), and ethambutol (EMB) among children undergoing TB treatment in Tanzania when these dosing recommendations were being implemented.Methods:At the end of intensive-phase TB therapy, blood was obtained 2 hours after witnessed medication administration to estimate the peak drug concentration (C2h), measured using high-performance liquid chromatography or liquid chromatography–tandem mass spectrometry methods. Differences in median drug concentrations were compared on the basis of the weight-based dosing strategy using the Mann–Whitney U test. Risk factors for low drug concentrations were analyzed using multivariate regression analysis. **Results:** We enrolled 51 human immunodeficiency virus–negative children (median age, 5.3 years [range, 0.75–14 years]). The median C2hs were below the target range for each TB drug studied. Compared with children who received the "old" dosages, those who received the "revised" WHO dosages had a higher median C2h for RIF (P = .049) and PZA (P = .015) but not for INH (P = .624) or EMB (P = .143); however, these revised dosages did not result in the target range for RIF, INH, and EMB being achieved. A low starting dose was associated with a low C2h for RIF (P = .005) and PZA (P = .005). Malnutrition was associated with a low C2h for RIF (P = .001) and INH (P = .001). **Conclusions:** Among this cohort of human immunodeficiency virus–negative Tanzanian children, use of the revised dosing strategy for treating childhood TB did not result in the target drug concentration for RIF, INH, or EMB being reached.

98. Muqadas, N., Farzana, B., Afsar, A., Tamseela, K. (2018). Knowledge of Nurses Regarding Pain Management at Public Tertiary Care Hospital Lahore.

Abstract

The main purpose of this study was, to assess the knowledge of nurses regarding pain management at Jinnah Hospital Lahore. A cross sectional descriptive survey was performed to assess the knowledge of pain management among nurses. A convenient sample of n=170 was used to collect the information. The main instrument for Information was a structured questionnaire. A structured questionnaire with demographic variables and causes variables was applied. The data was analyzed on SPSS version 21. The results showed that there is positive response of the respondent mean that nurses know about pain management. The result shows that if there is enough knowledge of the nurses about pain management they will increase patient comfort ability and decrease stress which is due to pain. And suggest that nurses' administration must be developing the different strategies to create good strategies to enhance nurses" knowledge about pain management. Keywords: pain management, demographic variables, stress.

99. Mwaka, A.K., Muhidin, K.M., Deus, S.I., Celine, I.M., Billy, N., Erasmus, K., Johannes, B. K., Renata, M., Sigsbert, M., Frank, C., Ritha, N., Zul, P., Martha, M. L., Marian, W., Didier, M., Abdunoor, M. K. (2018). Efficacy and safety of artemisinin-based combination therapy, and molecular markers for artemisinin and piperaquine resistance in Mainland Tanzania.

Abstract

Background: Artemisinin-based combination therapy (ACT) is the first-line anti-malarial treatment of uncomplicated malaria in most malaria endemic countries, including Tanzania. Unfortunately, there have been reports of artemisinin resistance and ACT failure from South East Asia highlighting the need to monitor therapeutic efficacy of ACT in these countries as recommended by World Health Organization. **Methods:** Open-label single arm studies in mainland Tanzania were conducted in nine sentinel sites in 2011, 2012 and 2015 to assess the efficacy and safety of artemether/lumefantrine (AL) and artesunate/amodiaquine (ASAQ) using 28 days' follow-up and dihydroartemisinin/piperaquine (DHAPQ) using 42 days follow-up. Mutations in the propeller domain of the Plasmodium falciparum kelch 13 (k13) gene and amplification of the P. falciparum plasmepsin 2 (pm2) gene, associated with artemisinin and piperaquine (PQ) resistance, were also investigated. Results: Of the 428 patients enrolled, 328

patients provided study endpoint. For AL, the PCR corrected per-protocol analysis showed adequate clinical and parasitological response (ACPR) of 90.3% (n = 28; 95% CI 74.2–98.0) in Kyela 2012, 95.7% (n = 22; 95% CI 78.1–99.0) in Chamwino, 100% in Muheza (n = 29; 95% CI 88.1–100), 100% in Nagaga (n = 39; 95% CI 91.0–100) and Kyela 2015 (n = 60; 95% CI 94.0–100). For ASAQ, PCR corrected ACPR of 98% (n = 49; 95% CI 89.4–99.9) and 100% (n = 25; 95% CI 86.3–100) were observed in 2011 in Ujiji and Kibaha, respectively. For DHAPQ, the ACPR was 100% (n = 71; 95% CI 94.9–100). Of the 235 samples with genetic interpretable results, only 7 (3%) had non-synonymous k13 mutations. None of these are candidate or validated markers of artemisinin resistance and all patients carrying these alleles cleared the parasites on day 3. Of the DHAPQ group, 10% (3/29) of the samples with interpretable results had pm2 multiple copies and none of them was associated with treatment failure. **Conclusion:** All the tested ACT in mainland Tanzania were highly efficacious and none of validated k13 mutants associated with artemisinin resistance was observed. However, three isolates with multiple copy numbers of pm2 gene associated with PQ resistance among the limited samples tested successfully calls for further investigation. Keywords: Artemisinin-based combination therapy Efficacy Safety Malaria Molecular markers Artemisinin Piperaquine Tanzania.

100. Mwanga, H.H., Baatjies, J.F. (2018). 646 Exposure to aldehydes among health care workers in a large tertiary hospital in Cape town, South Africa.

Abstract

Introduction: High-level disinfectants such as ortho-phthalaldehyde (OPA) have increasingly been linked to various adverse health outcomes including occupational asthma, contact dermatitis and anaphylaxis. However, environmental exposure characterization studies of aldehydes such as OPA, are limited. The aim of this study was to conduct a detailed exposure characterization study of health care workers (HCWs) exposed to aldehydes. Methods: A total of 269 full-shift passive personal samples were collected from HCWs randomly selected from 17 different clinical departments in a tertiary hospital. Passive sampling used Trace Air AT580 monitors (Assay Technology, Livermore, CA), which were analysed for OPA and formaldehyde. Result: OPA was detectable in 6 (2%) samples from gastrointestinal (GI) unit, with a median of

0.009 ppm (range: 0.005–0.027). HCWs with detectable OPA levels had a longer duration of OPA use (OR=1.28; 95% CI: 1.10 to 1.50). Formaldehyde was detectable in 103 (38%) samples with a median of 0.004 ppm (range: 0.003–0.027). Three (1%) samples had formaldehyde levels higher than the NIOSH recommended exposure limit (REL) of 0.016 ppm time-weighted average. Discussion: In this study, OPA levels were on average 10-fold higher than in similar settings elsewhere. Detectable OPA in the GI unit corroborates findings of workplace inspections conducted during the exposure measurements, which found high level of OPA usage among sterilising operators and registered nurses. Formaldehyde levels were on average 10-fold lower than studies in pathology and anatomical laboratories elsewhere but were comparable to average levels in US general buildings. The most likely source of exposure is probably related to exposure to formaldehyde (10%) solution used for specimen preparation in most departments, residue evaporation from formaldehyde contaminated surfaces and other general indoor sources. The study concluded that mean detectable exposures to OPA are higher and more isolated than more widespread low-level formaldehyde exposures.

101. Nanna, M., Camilla, B.A., Natasha, H., Tarek, M. (2018). Effect of locally tailored clinical guidelines on intrapartum management of severe hypertensive disorders at Zanzibar's tertiary hospital (the PartoMa study).

Abstract

Objective: To estimate the effect of locally tailored clinical guidelines on intrapartum care and perinatal outcomes among women with severe hypertensive disorders in pregnancy (sHDP).1
Methods: A pre–post study at Zanzibar's low-resource Mnazi Mmoja Hospital was conducted. All labouring women with sHDP were included at baseline (October 2014 to January 2015) and at 9–12 months after implementation of the ongoing intervention (October 2015 to January 2016). Background characteristics, clinical practice, and delivery outcomes were assessed by criterion-based case file reviews. **Results:** Overall, 188 of 2761 (6.8%) women had sHDP at baseline, and 196 of 2398 (8.2%) did so during the intervention months. The median time between last blood pressure recording and delivery decreased during the intervention compared with baseline (P=0.015). Among women with severe hypertension, antihypertensive treatment

increased during the intervention compared with baseline (relative risk [RR] 1.37, 95% confidence interval [CI] 1.14–1.66). Among the neonates delivered (birthweight ≥1000 g), stillbirths decreased (RR 0.56, 95% CI 0.35–0.90) and Apgar scores of seven or more increased during the intervention compared with baseline (RR 1.17, 95% CI 1.03–1.33). **Conclusion:** Although health system strengthening remains crucial, locally tailored clinical guidelines seemed to help work-overloaded birth attendants at a low-resource hospital to improve care for women with sHDP.

102. Naomi, J.S., Tracy, B., Clare, E.C., Amy, M.A., Megan, E.R. (2018). Health interventions of improving nutrients intake of pregnant women in low and lower-middle income countries: systematic review.

Abstract

Dietary intake during pregnancy plays a vital role in determining the health of both mother and baby. Maternal undernutrition affects a large proportion of women in low and lower-middle income countries (LLMIC) likely influencing high maternal, infant and child mortality in these countries. Mobile health (mHealth) interventions have been proposed as effective solutions to improve maternal and neonatal health. This paper reviews the literature to evaluate the effectiveness of mHealth interventions on improving dietary/nutrients intake of pregnant women in LLMIC. Eight electronic databases were searched from inception up to April 2018, including the MEDLINE, EMBASE, CINAHL, Cochrane, Web of Science, Scopus, Global Index Medicus and Maternity and Infant Care. Using Covidence, two reviewers assessed articles for inclusion, assessed study quality and extracted data. Only studies published in English language were included. Data were summarized narratively. In total 6778 were identified, of which four were included, with three RCTs and one pre-post experimental study. Studies were conducted in India (n=2), Indonesia (n=1) and Kenya (n=1). All articles evaluated the use of nutrient supplements; iron supplements (n=1), vitamin supplements (composition not mentioned) (n=1) or calcium supplements (n=1). This review suggests that mHealth interventions can be used to improve intake of micronutrient supplementation and nutritional status of pregnant women in LLMIC.

Further studies are needed to address the limited evidence base related to mHealth nutrition interventions targeting dietary intakes of pregnant women in LLMIC.

103. Narbada, U., Binod, R., Samendra, P.S., Mahesh, K.C., and Megha, R.B. (2018). Prevalence of methicillin resistant Staphylococcus aureus, multidrug resistant and extended spectrum β-lactamase producing gram negative bacilli causing wound infections at a tertiary care hospital of Nepal.

Abstract
Background: Treatment and prevention of wound infection continues to be a challenging issue in clinical settings of Nepal especially in the context of globally growing problem of antimicrobial resistance. Study on opportunistic pathogens and sensitivity to commonly prescribed local antimicrobial agents are cardinal to reduce the disease burden of wound infections. The aim of this study was to determine the prevalence and antimicrobial susceptibility pattern of methicillin resistant Staphylococcus aureus (MRSA) and extended spectrum β-lactamase (ESBL) producing bacteria from wound infections of patients at a tertiary care hospital in Nepal. Methods: Pus specimens were processed using standard microbiological procedures. Antimicrobialsusceptibility test was performed following the modified Kirby Bauer disc diffusion technique. Clinical information of patients was obtained from preformed questionnaire and hospital record. Results: One hundred eighty-two pus specimens from wounds of different body parts: leg, hand, backside, abdominal part, foot, breast and chest, head and neck region were collected and analyzed; 113 bacterial isolates were isolated showing the overall bacterial growth rate of 62%, where the highest rate was among patients of ≤10 years' age group (82.1%). A higher rate (68.5%) of bacterial isolates were from inpatients (p < 0.05). Among 116 bacterial isolates, Staphylococcus aureus was the most predominant bacteria (56.9%) followed by Escherichia coli (8.6%), coagulase negative staphylococci (7.8%), Acinetobacter spp. (5.2%), Klebsiella pneumoniae (5.2%), Pseudomonas aeruginosa (4.3%), Enterococcus spp. (4.3%), Citrobacter freundii (2.6%), Proteus vulgaris (1.6%) and P. mirabilis (0.9%). Both Gram positive (73.3%) and negative (78.8%) isolates showed high frequency of sensitive to gentamycin. Conclusion: Among S. aureus isolates, 60.6% were MRSA strains, whereas 40% of K.

pneumoniae and 33.3% of C. freundii were ESBL producing bacteria followed by E. coli (25%). It is thus paramount to address the burden of silently and speedily increasing infections caused by drug resistant strains of MRSA and ESBL in Nepal.

104. Nola, T.R. (2018). Inner Workings: Astronomers track dwarf galaxies to better understand the Milky Way's make-up and evolution.
https://doi.org/10.1073/pnas.1817136115

Abstract

At the turn of this century, astronomers were confident they understood the Milky Way's relationship with its galactic neighbors. Our home galaxy is the second-largest member of the Local Group, an assembly of more than 50 galaxies that spans roughly 10 million light-years. Many of the group's smaller galaxies are satellites of the Milky Way—two of the closest companions are the Large Magellanic Cloud (LMC) and Small Magellanic Cloud (SMC). Streams of gas and dust ripped from these dwarf galaxies seemed to show that they had made several trips around the Milky Way, bearing witness to the destruction wrought by our galaxy. But this neat picture was upended almost a decade ago when researchers used NASA's Hubble Space Telescope to precisely measure the clouds' motion. Suddenly, it became clear that the LMC and SMC are actually making their first orbit around the Milky Way. Since then, researchers have been trying to pin down the masses and movements of the clouds, details that could rewrite the story of our own galaxy's evolution. This year, the European Space Agency (ESA) space telescope Gaia has provided some vital clues in that quest. Gaia found that the LMC itself boasts several ultra-faint dwarf galaxies as satellites, observations that are helping constrain the masses of the cloud and the Milky Way. They also provide strong support for a leading theory suggesting that the universe's vast collection of galaxies emerged from a primordial fog of gas and dust.

105. Nyarubeli, I.P., Tungu, A.M., Bratveit, M., Sunde, E., Kayumba, A.V., Moen, B.E., (2018). 508 Variability in occupational noise exposure levels in metal industries in Tanzania.
http://dx.doi.org/10.1136/oemed-2018-ICOHabstracts.899

Abstract

Introduction: Machines and processes in the metal industry produce noise levels that are harmful to the human ear if not properly controlled. Empirical studies are lacking to document noise exposure which is one of the stepping stones towards development and enforcement of policies, and standards on noise control in developing countries, including Tanzania where this is lacking. **Methods:** The study was conducted from June 2016 to June 2017. Full-shift noise measurements (LAeq) were taken by personal dosimeters (Brüel and Kjaer type 4448) in four metal factories in Tanzania (Factory A; 47 measurements, B; 47, C; 34 and D; 40). Workers were randomly selected from payroll and shift list and assigned into job groups; Melters, moulders, firemen, tongsmen, roughing, cutters and pushers. **Results:** Personal noise exposure varied both within and between factories. The average noise exposure was 91.6 dB(A) in factory A, 96.7 dB(A) in factory B, 93.7 dB(A) in factory C and 89.9 dB(A) in factory D. The moulders had the lowest noise exposure (87.3 dB(A)), followed by melters (89.9 dB(A)), pushers (91.6 dB(A)), tongsmen (93.7 dB(A)), roughing (94.2 dB(A)), firemen (94.5 dB(A)) and cutters/bundlers (98.1 dB(A)). **Discussion:** To our knowledge this is the first study in East Africa to document personal noise exposure levels in metal industries. The noise exposure exceeded the occupational exposure limit used by OSHA, Tanzania. This study is expected to serve as an important input towards the development of the country's own regulations regarding noise exposure at the workplace.

106. Odhiambo, H.O., Patrick, C. (2018). CRYPTOCOCCAL meningitis in a HIV negative newly diagnosed diabetic patient: a CASE report.
https://doi.org/10.1186/s12879-018-3625-4

Abstract

Background: This case report emphasizes the need to recognize cryptococcus as a possible cause of meningitis in non-HIV patients in Sub-Saharan Africa and to highlight the possibility of grave outcomes due to the paradoxical immune response in diabetic patients with cryptococcus meningitis. It also highlights the need for widespread availability of Amphotericin-B and flucytosine in hospitals in Sub-Saharan Africa. Case presentation: A 27-year-old African lady was admitted with generalized tonic clonic seizures lasting 5 to 10 min. These seizures were

preceded by severe frontal headaches radiating to the occiput and neck and associated with chills, photophobia and loss of consciousness. She was tachycardia and had tongue bites on the lateral aspects of her tongue. Kernig's and Brudzinski's signs were positive. India ink was positive on two cerebrospinal fluid (CSF) samples. She had hyperglycemia and glucosuria as well. She was diagnosed with cryptococcal meningitis in diabetes and had a remarkable response to fluconazole monotherapy. She went home on maintenance dose of fluconazole having made full recovery. and is currently on prophylactic doses of fluconazole. Conclusions: With the rising prevalence of diabetes in Sub-Saharan Africa, coupledwith the low levels of adequate glucose control, cryptococcal meningitis should be considered in the differential diagnosis for diabetic patients presenting with chronic headache, fever and neurologic deficits.

107. Owibingire, S.S., Kalyanyama, B.M., Sohal, K.S. (2018). The pattern of dental injury, incidence of dental caries and dental treatment need among motorcycle crash victims in Tanzania.

Abstract

Background: In motor traffic crashes, traumatic dental injuries and status of dentition on is often overlooked. In most instances management of dental injuries require intact supporting dental tissues, however, in presence of dental caries the treatment may be complicated. This study aimed at determining the incidence of dental injury and dental caries, and the dental treatment needs among motorcycle crash victims in Tanzania. Methodology: This was a hospital based cross-sectional study that included a total of 115 patients who were either drivers or passengers during motorcycle crash. The patients were examined and investigated for maxillofacial injuries, dental trauma and dental caries and treated accordingly. The data was analyzed using Statistical Package for Social Sciences (SPSS) Version 19 and statistical significance was set at p-value of <0.05. Results: The incidence of dental trauma (DT) and positive caries experience (PCE) was 38.3% and 33.9% respectively, with males being exclusively affected. The mean number of teeth affected by dental trauma was 1.97± 3.9. The anterior dentition was frequently affected (88.6%). The commonest types of dental injuries were avulsion, subluxation and lateral luxation. The mean DMFTwas 1.66±0.48. Majority, 79.7% of the patients with DT and PCE needed dental treatment. The most common treatment modality

was provision of prosthesis. Conclusion: The findings of this study revealed that considerable number of motorcycle crash victims do suffer from dental injuries, and the caries experience among them is considerably high. Keywords: Dental trauma, Dental caries, Treatment need, Motorcycle crash.

108. Pamela, J.S., Mary, S.F., Ester, S. (2018). Insights to understand postpartum depression and child nutritional status.

Abstract

The article "Postpartum depression and child growth in Tanzania: A Cohort Study" (Holm-Larsen et al, BJOG xxxx) extends growing literature documenting a link between postpartum depression (PPD) in mothers and child nutritional indicators during first years of life in lower- and middle-income countries (LMICs) (Surkan et al Bull WHO 2011;287:607–615D).

109. Paschal, R., Sabine, L., Einar, S., Hans, P.M., and Bjørn, E.V. (2018). Low birth weight associates with glomerular area in young male IgA nephropathy patients.

Abstract

Background: In a recent study we demonstrated that low birth weight (LBW) was associated with increased risk of progressive IgA nephropathy (IgAN). In the present study we investigate whether this could be explained by differences in glomerular morphological parameters. **Methods:** The Medical Birth Registry of Norway has registered all births since 1967 and the Norwegian Kidney Biopsy Registry has registered all kidney biopsies since 1988. Patients diagnosed with IgAN, registered birth weight and estimated glomerular filtration rate above 60 ml/min/1.73m2 at time of diagnosis were eligible for inclusion. Patients were included in a case-control manner based on whether or not they had LBW or were small for gestational age (SGA). Glomerular area, volume and density were measured using high resolution digital images and differences were compared between groups. Results: We included 51 IgAN patients with a mean age of 23.6 years, 47.1% male. Compared to IgAN patients without LBW or SGA, IgAN patients

with LBW and/or SGA had larger glomerular area (16,235 ± 3744 vs 14,036 ± 3502 µm2, p-value 0.04). This was significant for total cohort and male but not female. On separate analysis by gender, glomerular area was significantly larger only in males (17,636 ± 3285 vs 13,346 ± 2835 µm2, p-value 0.004). Glomerular density was not different between groups. In adjusted linear regression analysis, glomerular area was negatively associated with birth weight.

Conclusion: Among young adult IgAN patients, low birth weight is associated with having larger glomerular area, especially in males. Larger glomeruli may be a sign of congenital nephron deficit that may explain the increased risk of progressive IgAN.

110. Patrick, D.M.C.K., Aime, M., Tony, K.K., Herve, L., Bertin, C.B., Jean, P.C., Eric, M., Freddy, B., Zacharie, K., Bruce, K., Sayoki, M., Kevin, M., Patrick, D.B., Tim, S.N., Jean, B.N., and Benoit, N. (2018). Household Air Pollution Is Associated with Chronic Cough but Not Hemoptysis after Completion of Pulmonary Tuberculosis Treatment in Adults, Rural Eastern Democratic Republic of Congo.
doi:10.3390/ijerph15112563

Abstract: Little is known about the respiratory health damage related to household air pollution (HAP) in survivors of pulmonary tuberculosis (PTB). In a population-based cross-sectional study, we determined the prevalence and associated predictors of chronic cough and hemoptysis in 441 randomly selected PTB survivors living in 13 remote health zones with high TB burden in the South Kivu province of the Democratic Republic of Congo (DRC). Trained community and health-care workers administered a validated questionnaire. In a multivariate logistic regression, chronic cough was independently associated with HAP (adjusted odds ratios (aOR) 2.10, 95% CI:1.10–4.00) and PTB treatment >6 months (aOR 3.80, 95% CI: 1.62–8.96). Among women, chronic coughwasassociatedwithcooking≥3hdaily(aOR2.74,95%CI:1.25–6.07) and with HAP (aOR3.93, 95% CI: 1.15–13.43). Independent predictors of hemoptysis were PTB retreatment (aOR 3.04, 95% CI: 1.04–5.09) and ignorance of treatment outcome (aOR 2.24, 95% CI: 1.09–4.58) but not HAP (aOR 1.86, 95% CI: 0.61–5.62). Exposure to HAP proved a major risk factor for chronic cough in PTB survivors, especially in women. This factor is amenable to intervention. Keywords: biomass fuel; kerosene; respiratory symptoms; post-pulmonary tuberculosis; South Kivu.

111. Paul, P., Isabel, M., Christopher, P.D., Donna, S., Karim, M., Rodrick, K., Roland, K., and Wafaie, W.F. (2018). Mid-arm muscle area and anthropometry predict low birth weight and poor pregnancy outcomes in Tanzanian women with HIV.

Abstract

Background: An observational study was conducted to examine the role of maternal anthropometry, including mid-arm muscle area (MAMA) and others, as risk factors for low birth weight (LBW), small for gestational age (SGA) and preterm births in human immunodeficiency virus (HIV) infected pregnant women. HIV-positive women (N = 2369), between 12 and 32 weeks' gestation were followed through delivery in Tanzania, from 2003 to 2008. Participants were women enrolled in a randomized, double-blind, placebo-controlled, clinical trial who delivered live births. **Methods:** Binomial regression analysis was used to evaluate the association of maternal nutritional indicators of MAMA, mid-upper arm circumference (MUAC), body mass index (BMI) and maternal weight with LBW, SGA and preterm in multivariate analysis. **Results:** Higher MAMA was associated with a 32% lower risk of LBW compared to lower measurements (RR = 0.68, 95% CI = 0.50–0.94). Similar protective associations were noted for higher BMI (RR = 0.58, 95% CI = 0.42–0.79); maternal weight (RR = 0.50, 95% CI = 0.36–0.69) and MUAC (RR = 0.62, 95% CI = 0.45–0.86). Higher MAMA was also associated with lower risk of SGA (RR = 0.78, 95% CI = 0.68–0.90) and marginally associated with preterm (RR = 0.85, 95% CI = 0.69–1.04). Beneficial associations of MUAC, BMI and maternal weight with SGA and preterm were also observed.

112. Pembe, A.B., Cavallaro, F.L., Campbell, O., Hanson, C., Tripathi, V., Wong, K.L.M., Radovich, E., Benˇová, L. (2018). Caesarean section provision and capacity in health facilities in Tanzania.

http://dspace.muhas.ac.tz:8080/xmlui/handle/123456789/2232

Abstract:

The national caesarean rate in Tanzania increased from 2% in 1996 to 6% in 2015-16 (3 x increases). Over the same period, the absolute number of caesareans performed increased from 26,000/year to 118,000/year (5x increase). • The majority of caesareans in Tanzania in 2014-15 were performed in public hospitals (65%) and faith- based organization (FBO) hospitals (26%). Private facilities and health centres of all sectors together perform fewer than 10% of caesareans (Figure 1). • The caesarean increase was primarily due to a doubling of the caesarean volume in public hospitals, from an average of 17 caesareans per month in 2006 to 35 in 2014-15. The estimated number of health facilities performing caesareans in Tanzania increased only slightly, from 278 in 2006 to 318 in 2014-15.

113. Philip, M.K., Hendry, R.S., Khalid, R.M., Said, S.K., Juma, A.M., Victor, G.M., Lee, A.W., and Teri, A.R. (2018). Disaster preparedness and response capacity of regional hospitals in Tanzania: a descriptive cross-sectional study.

Abstract

Background: Tanzania has witnessed several disasters in the past decade, which resulted in substantial mortality, long-term morbidity, and significant socio-economic losses. Health care facilities and personnel are critical to disaster response. We assessed the current state of disaster preparedness and response capacity among Tanzanian regional hospitals. **Methods:** This descriptive cross-sectional survey was conducted in all Tanzanian regional hospitals between May 2012 and December 2012. Data were prospectively collected using a structured questionnaire based on the World Health Organization National Health Sector Emergency Preparedness and Response Tool. Trained medical doctors conducted structured interviews and direct observations in each hospital. **Results:** We surveyed 25 regional hospitals (100% capture) in mainland Tanzania, in which interviews were conducted with 13-hospital doctors incharge, 9 matrons and 4 heads of casualty. All the hospitals were found to have inadequate numbers of all cadres of health care providers to support effective disaster response. 92% of hospitals reported experiencing a disaster in the past 5 years; with the top three being large motor vehicle accidents 22 (87%), floods 7 (26%) and infectious disease outbreaks 6 (22%). Fifteen hospitals (60%) had

a disaster committee, but only five (20%) had a disaster plan. No hospital had all components of surge capacity. Although all had electricity and back-up generators, only 3 (12%) had a back-up communication system. **Conclusion:** This nationwide survey found that hospital disaster preparedness is at an early stage of development in Tanzania, and important opportunities exist to better prepare regional hospitals to respond to disasters.

114. Phylis, M, Rebecca, W., Christopher, O., Raphael, L. (2018). Factors Affecting the Uptake of Cervical Cancer Screening in Mama Lucy Kibaki Hospital, Nairobi, Kenya. doi: 10.11648/j.crj.20180603.16

Abstract

Cervical malignancy afflicts women of all societies. In Kenya, 4,802 women are diagnosed with cervical malignancy and almost 2500 die annually with only 3.2% of cervical screening uptake. The Main goal of this study was to find out the factors that contribute to the uptake of cervical screening at Mama Lucy Kibaki Hospital. This was a descriptive and cross-sectional study that used a purposeful sampling method. An interview-administered questionnaire was used to collect data from women and hospital key informants. Multivariate regression was used to analyse associations between study variables. A total of 246 participants were recruited. Uptake of cervical screening was 23.1%, with 83.6% being aware of cervical cancer. Fear of results (69.5%), lack of information (69.8%) and fear of the screening procedure (65.2%) were major cervical screening barriers. Free cervical screening (93.5%) comprehensive cancer health education (90.2%), voluntary cervical screening centres (84.9%), mass media cervical cancer campaigns (83.3%) and cervical cancer screening mobile clinics (81.7%) to be the likely motivators to cervical screening uptake. Multivariate regression showed that older women participated more in uptake than young women (p = 0.001), those who had used contraceptives (p=0.001) and those with higher income (p = 0.03). In conclusion, there was a low uptake of screening for cervical cancer disease. A comprehensive and appropriate sensitization program is required, which eventually may increase uptake of cervical screening. Keywords: Cervical Cancer Screening, Uptake, Kenya.

115. Quentin, H., Randi, R., Transform, A., Megan, B., Brooke, C., Noella, G., Rebecca, G., John, H., Yoshitaka, O., Hannah, P., Chris, R.U., Rashid, S., and Wilf, S. (2018). Unraveling the blue paradox: Incomplete analysis yields incorrect conclusions about Phoenix Islands Protected Area closure.

Abstract

In PNAS, McDermott et al. (1) analyze a 2014–2016 central Pacific fishing surge, focusing on the Phoenix Islands Protected Area (PIPA) inside the Kiribati exclusive economic zone (EEZ). The authors incorrectly attribute the surge to the anticipated industrial fishing closure of PIPA and describe the phenomenon as a blue paradox (i.e., an unintended negative consequence of a conservation policy). However, a broader analysis demonstrates that this surge was unrelated to the closure of PIPA and was due to a strong El Niño event that created a fishing surge across multiple EEZs and high seas, not just PIPA (2). McDermott et al. (1) do not consider regional data that reveal confounding factors. Long-term catch data demonstrate that central Pacific fishing surges occur at irregular intervals, consistent with El Niño Southern Oscillation patterns (3). Data held by the Pacific Community (4) indicate that fishing surges also occurred in the central Pacific in 1994, 1997, 2002, and 2009, when El Niño conditions were prevalent (5). In 2014, 19.8% of purse seine effort occurred in the central Pacific, but then it increased to 31.4% in 2015, after PIPA was closed. This compares with an average of 9.3% for 1980–2017, providing further evidence that surges were caused by El Niño events and were unrelated to the PIPA closure. Furthermore, the study used two distant archipelagos as control sites, without considering regional reports and data that demonstrate that these control sites host significantly different fisheries, with highly variable ratios of fishing between PIPA and these control sites (6). A more appropriate control would be to examine fishing in the Phoenix Islands EEZ inside and outside of PIPA, where oceanographic and fisheries characteristics are more similar. McDermott et al. (1) appear to have missed these confounding factors because they limited their study to a recently developed database of vessel location data derived from the Automatic Identification System, which was not made compulsory for fishing vessels until after the period of the study (7). Consequently, vessel coverage is unknown, and significant limitations in the vessel data and satellite coverage during this time undermine its application without corroboration with other

data sources (8). Lastly, the study relies on behavioral assumptions that do not apply in a migratory fishery operated by foreign vessels in EEZs where the coastal state owns all fishing rights and catch history (9). While Kiribati is required to provide access to surplus catch, this is entirely at its discretion, and there is no obligation to provide rights or compensation to foreign vessels (10). Vessel operators, therefore, have no incentive to switch from more productive grounds in anticipation of a closure, as this will reduce profitability and there is little, or no, prospect of their obtaining benefits in the longer term. In our experience, vessels will fish as hard as they can in whichever area is most productive and accessible through licensing arrangements. We welcome studies of concepts such as the blue paradox but recommend that future studies consider all relevant databases and apply a multidisciplinary approach to best inform marine conservation policy.

116. Rachel, S., Deborah, B., Emmanuelle, H., Katrina, K., Sebalda, L., Feddy, M., Agnes, M., Anne, W., and Amelie, M. (2018). Stronger together: midwifery twinning between Tanzania and Canada.

Abstract

This article describes a twinning relationship between the Canadian Association of Midwives (CAM) and the Tanzania Midwives Association (TAMA). It argues that the twinning relationship strengthened both associations. The article briefly reviews the existing literature on professional associations and association strengthening to demonstrate that professional associations are a vital tool for improving the performance of healthcare workers and increasing their capacity to contribute to national and international policy-making. It then suggests that midwifery associations are particularly significant given the frequent professional marginalization of midwives. The article then describes in depth the relationship between CAM and TAMA, highlighting the accomplishments of the twinned partners, and analyzing the factors that contributed to the success of the relationship. The findings demonstrate that twinning can successfully strengthen associations, increasing their ability to support their membership, care for the public, and shape national policy-making. The article therefore proposes twinning as a successful and cost-effective model for encouraging the growth of the midwifery profession.

117. Reuben, S., Diarah, S.A., Oyetunji, C.O., Osuekea, A.O. (2018). Dataset on cellular and geo-spatial information of a 10 km distance along Akure-Ilesha road.

Abstract

This dataset contains cellular and geo-spatial information of a 10 km distance along Akure-Ilsha road in Ondo state, Nigeria. The data was acquired using a designed data acquisition system which was kept inside golf3 vehicle interfaced with Acer laptop, the data was acquired as the vehicle moves from the reference point (7.39919, 5.05944) to its destination point (7.32818, 5.10836), it harvests GSM signal Strengths from a base station in intervals with its time, latitude and longitude simultaneously as the vehicle moves along the travelled rout; the data acquired shows the variation of signal strength against distance along the road from one base station to another in the travelled path. The raw data of this work is hosted in the Mendeley repository DOI:10.17632/tmksc8mkt8.1.

118. Reynolds, T.A., Amato, S., Kulola, I., Chen, C.J., Mfinanga, J., Sawe, H.R., (2018). Impact of point-of-care ultrasound on clinical decision-making at an urban emergency department in Tanzania.

Abstract

Background: Point of care ultrasound (PoCUS) is an efficient, inexpensive, safe, and portable imaging modality that can be particularly useful in resource-limited settings. However, its impact on clinical decision making in such settings has not been well studied. The objective of this study is to describe the utilization and impact of PoCUS on clinical decision making at an urban emergency department in Dar es Salaam, Tanzania. **Methods:** This was a prospective descriptive cross-sectional study of patients receiving PoCUS at Muhimbili National Hospital's Emergency Medical Department (MNH EMD). Data on PoCUS studies during a period of 10 months at MNH EMD was collected on consecutive patients during periods when research assistants were available. Data collected included patient age and sex, indications for ultrasound, findings,

interpretations, and provider-reported diagnostic impression and disposition plan before and after PoCUS. Descriptive statistics, including medians and interquartile ranges, and counts and percentages, are reported. Pearson chi squared tests and p-values were used to evaluate categorical data for significant differences. **Results:** PoCUS data was collected for 986 studies performed on 784 patients. Median patient age was 32 years; 56% of patients were male. Top indications for PoCUS included trauma, respiratory presentations, and abdomino-pelvic pain. The most frequent study types performed were eFAST, cardiac, and obstetric or gynecologic studies. Overall, clinicians reported that the use of PoCUS changed either diagnostic impression or disposition plan in 29% of all cases. Rates of change in diagnostic impression or disposition plan increased to 45% in patients for whom more than one PoCUS study type was performed. **Conclusions:** In resource-limited emergency care settings, PoCUS can be utilized for a wide range of indications and has substantial impact on clinical decision making, especially when more than one study type is performed.

119. Robert, A.B. and Stephen, H.M. (2018). Proportional versus relative size as metrics in human brain evolution.

Abstract

In addressing the question of whether human prefrontal cortex (PFC) is "disproportionately larger in humans compared with nonhuman primates" in their article in PNAS, Donahue et al. (1) gloss over the distinction between proportional and relative size. Agreeing with previous work (2⇊–4), they show that PFC occupies a larger proportion of the cerebral cortex in humans than in chimpanzees and a larger proportion in chimpanzees than in macaques. Contrary to their presentation of the debate, this fact is uncontroversial. However, proportional size is often a misleading functional metric because of nonlinear, or allometric, scaling: A biological structure can differ across species as a proportion of overall size and yet be functionally equivalent (5) (Fig. 1). PFC volume proportion is predictable from overall brain size, even among nonhuman species (2⇊–4). This increase in volume proportions may be a scaling effect, with no consequences for functional influence exerted by PFC if there are different scaling constraints on different cortical regions (6). For example, disproportionate PFC white matter volume and cell

size increases may be necessary to maintain long-range neural connectivity and neural transmission speed in larger brains and bodies (4, 6, 7). Indeed, this is consistent with Donahue et al.'s observation that white matter largely explains the species differences they observe in PFC proportional volume.

120. Rusibamayila, M., Mamuya, S. (2018). 918 Respiratory impairments and personal respirable dust exposure levels among miners in a gold Mine-Tanzania.

Abstract

Introduction: Mining is one of the most hazardous sectors to work in because it is a sector that predisposes workers to various hazards including dust. Exposure to dust in the mines is inevitable because the whole process of extracting gold has to involve rock breaking. This dust can penetrate up to the alveoli of the pulmonary system and cause respiratory impairment. **Methods:** Cross-sectional study design was used employing use of questionnaires for data collection on respiratory symptoms. Lung functions were measured using spirometry. Personal respirable dust exposure was collected from similar exposure groups using air sampling pumps. A simple random sampling technique was used to select participants. 112 workers were included in the study. Data analysis was done using SPSS computer software version 16.0. **Results:** The overall Geometric Mean of respirable dust was 0.26 mg/m3 (GSD=0.32) over a mean sampling time of 8 hours (with a range between 7–11 hours). The GM for underground and open pit were 0.41 mg/m3 (GSD=0.28) and 0.17 mg/m3 (GSD=0.23) respectively. For underground, the GM was highest among bogger operators 0.53 mg/m3 (GSD=0.27) and the least among truck operators 0.29 (GSD=0.37). While for open pit, the highest GM was found among quality controllers 0.39 mg/m3 (GSD=0.18) and the least among in truck operators 0.13 mg/m3 (GSD=0.15). Respiratory symptoms were phlegm (49.1%), Breathlessness (42.9%), cough (37.5%), wheezing (18.8%) and chest tightness (10.7%). Prevalence of airflow obstruction (FEV1/FVC<0.75) was 7.7% among non-smoking miners. Discussion: Despite the fact that levels of respirable dust exposure were below recommended occupational exposure limits, prevalence of respiratory symptoms was still high among gold miners. There is a need to conduct further studies on quarts.

121. Saitore, L., Kajiru, K., Sarah, U., Venance, M., Richard, W., William. (2018). Neurological disorders in a consultant hospital in Northern Tanzania. A cohort study. https://doi.org/10.1016/j.ensci.2018.11.013

Abstract

Objectives: To determine the sociodemographic characteristics, clinical findings and outcome by HIV status in a series of adult patients presenting with neurological disorders (NDs) and admitted to a consultant hospital in Northern Tanzania**. Methods:** A cohort study took place over a 6-month period from Oct 2007 to March 2008 and included all adult patients with a neurological disorder admitted to the medical wards. Results: A total of 1790 patients were admitted during this period, of whom 337 (18.8%) were diagnosed with a neurological disorder and formed the study group. Of these 337, 69 (20.5%) were HIV-positive. Among the 69 HIV positives, 25% were previously known to be HIV seropositive of whom 82% were on antiretroviral (ARV) medication. Seropositive patients were more likely than seronegative patients to be younger, better educated, have a business occupation, present clinically with confusion, headache and aphasia and have meningitis/CNS infection or a space occupying lesion. Seropositive patients were more likely to present with a Glasgow Coma Score (GCS) of 9–12/15 (33.3% v 17.2%). Seropositive patients had a median CD4 T-lymphocyte count of 47cells/L and were more likely to be anaemic and have an elevated ESR. CT of the head was carried out on 132/337 (39%) patients. The overall findings were infarction 37%, hemorrhage 19%, tumors 15% and abscesses 9%. Brain abscess was more likely in seropositive patients and hemorrhage in seronegative. The outcome at discharge for all patients was: death 27.6%, disability 54% and no disability 18.4% with death (39.1%) being more likely in seropositive patients. Patients presenting with coma (GCS <9/15) were more likely to die whilst those with stroke, para/quadriplegia and space occupying lesions (SOLs) were more likely to be discharged with disability. Case fatality rate was highest for tetanus 71.4%, meningitis 57.1%, cerebral malaria 42.9% and CNS infections 37.1%. Seropositive patients presenting with meningitis and other CNS infections were more likely to die than seronegative. **Conclusion:** This study reports NDs occurring in one fifth of adult medical admissions with stroke and infections as the leading causes. The prevalence of HIV infection in NDs was 20%. The HIV positive cohort was

characterized by advanced immunosuppression, CNS infections and high mortality. Keywords: Neurological Disorders HIV Hospital Outcome Tanzania.

122. Sakwari, G., Mamuya, S. Ngowi, V. Baratvet, M., Moen, B. (2018). 974 Seasonal variation of lung function among coffee workers exposed to bio-aerosols in Tanzania.
http://dx.doi.org/10.1136/oemed-2018-ICOHabstracts.1313

Abstract

Introduction: Exposure to organic dust may lead to decrease in lung function among healthy subjects or development of respiratory symptoms. Studies done among coffee workers reported significant exposure to endotoxins with no evidence of decrease in lung function. The current study aimed at determining seasonal variation of lung function among coffee workers due to endotoxin exposure. **Methods:** The study was done in coffee factory where 30 workers were monitored for one season of coffee processing that is from June 2016 to February 2017. Lung function tests were performed once in the morning on any day before the season, then on Monday morning and Friday evening at mid-season and end of the season. A portable spirometer WinspiroLIGHT was used. ATS/ERS guidelines were followed. All measurements were taken in standing position. Data was analysed by paired-sample T-test. Smoking and age used to adjust lung function change in linear regression. **Results:** The mean age of participants was 38 (8.4) and mean time of working in coffee factories was 10 (6.8) years. There was a significant decrease of 24 and 20 mls for FEV1 and FVC, the change being high in the mid-season compared to end season. Improved in FEV1 (3.29 l/s – 3.65 l/s) at the beginning of season to mid-season was observed. **Discussion:** Lung function decrease is observed along the season with higher decrease at the end of season. The slight increase in FEV1 between beginning of season and mid-season could be due to cessation of exposure.

123. Sarah, G., Harran, M., Jessica, M.R., Mabula, K., Diana, L.M. (2018). Optimization of a rapid test for antibodies to the Chlamydia trachomatis antigen Pgp3.
https://doi.org/10.1016/j.diagmicrobio.2018.11.001

Abstract

Serological surveillance for trachoma could allow monitoring of transmission levels in areas that have achieved elimination targets. Platforms that allow testing in basic laboratories or testing of easy to manage samples such as dried blood spots would contribute to the feasibility of serologic testing. Blood from 506 1–12-year-olds in two villages in Kongwa district, Tanzania was tested for antibodies against the antigen Pgp3. Whole blood, plasma, and dried blood spots, (DBS) were tested in lab and field settings using a cassette-enclosed Pgp3 lateral flow assay (LFA-cassette) and a pared back "dipstick" assay (LFA-dipstick). DBS were also tested with a bead-based multiplex assay (MBA). There was no significant difference in antibody positivity between the MBA and either LFA format (ranging from 42.5% to 48.4%). Inter-rater agreement between an expert Rater and three different Raters in field and lab settings was uniformly good, with Cohen's kappa >0.81 in all cases. Keywords: TrachomaPgp3Lateral flow assayAntibodiesChlamydia trachomatis.

124. Sartaz, B., Stephen, S.N., Amelia, S.B., John, J.M., Joan, J.E. M., Sandra, D., Vicky, M.A., and Mate, E. (2018). Bioactivities of Extracts, Debromolaurinterol and Fucosterol from Macroalgae Species.

Abstract

Parasitic diseases including malaria, and other numerous microbial infections and physiological diseases are threatening the global population. Tanzanian coast shores are endowed with a variety of macroalgae (seaweeds), hitherto unsystematically explored to establish their biomedical potentials. Thus, antiplasmodial activity using malarial imaging assay, antimicrobial activity using microplate dilution technique, antioxidant activity using DPPH radical scavenging method and cytotoxicity using brine shrimp test were carried out on crude extracts from the selected species of algae (Acanthophora spicifera, Cystoseira myrica, Cystoseira trinodis, Laurencia filiformis, Padina boryana, Sargassum oligocystum, Turbinaria crateriformis, Ulva fasciata and Ulva reticulata) occurring along the coast of Tanzania. The extracts showed antimicrobial activities with MIC ranging from 0.3- 5.0 µg/mL against Staphylococcus aureus, Streptococcus pyogenes, Pseudomonas aeruginosa, Escherichia coli, Candida albicans and Cryptococcus neoformans; DPPH radical scavenging activity at EC50 1.0- 100 µg/mL and

cytotoxicity on brine shrimp larvae with LC50 value ranging from20 - 1000 µg/mL. The extracts from C. myrica and P. boryana inhibited growth of Plasmodium falciparum (3D7 strain) by 80 and 71%, respectively at 40 µg/mL while a sesquiterpene debromolaurinterol (1) which was chromatographically isolated from C. myrica exhibited antiplasmodial activity with IC50 20 µM whereas a sterol fucosterol (2) from P. boryana showed weak activity at 40 µM. Bioactivities portrayed by the investigated extracts indicate their ingredients as potential sources of bioactive agents that warrant further explorations. Keywords: Macrolgae, antiplasmodial, antimicrobial, antioxidant, cytotoxicity, DPPH radical scavenging, debromolaurinterol and fucosterol.

125. Selemani, S.S., Eliford, N., Nzovu, U., Philip, S., and Sabina, M. (2018).Variability of efavirenz plasma concentrations among pediatric HIV patients treated with efavirenz based combination antiretroviral therapy in Dar es Salaam, Tanzania.

Abstract

Background: Children are subject to varying drug pharmacokinetics which influence plasma drug levels, and hence treatment outcomes especially for drugs like efavirenz whose plasma concentrations are directly related to treatment outcomes. This study is aimed at determining plasma efavirenz concentrations among Tanzanian pediatric HIV-1 patients on efavirenz-based combination antiretroviral therapy (cART) and relating it to clinical, immunological and virologic treatment responses**. Methods:** A cross sectional study involving pediatric HIV patients aged 5–15 years on efavirenz-based cART for ≥ 6 months were recruited in Dar es Salaam. Data on demographics, cART regimens, efavirenz dose and time of the last dose were collected using structured questionnaires and checklists. Venous blood samples were drawn at 10–19 h post-dosing for efavirenz plasma analysis. **Results**: A total of 145 children with a mean $\pm$ SD age of 10.83 ± 2.75 years, on cART for a mean $\pm$ SD of 3.7 ± 2.56 years were recruited. Median [IQR] efavirenz concentration was 2.56 [IQR = 1.5–4.6] µg/mL with wide inter-patient variability (CV 111%). Poor virologic response was observed in 70.8%, 20.8% and 15.9% of patients with efavirenz levels < 1 µg/mL, 1–4 µg/mL and > 4 µg/mL respectively. Patients with efavirenz levels of < 1 µg/mL were 11 times more likely to have detectable viral loads. Immunologically, 31.8% of children who had low levels (< 1 µg/mL) of efavirenz had a

CD4 count of <350 cells/μL. **Conclusion:** Wide inter-individual variability in efavirenz plasma concentrations is seen among Tanzanian children in routine clinical practice with many being outside the recommended therapeutic range. Virologic failure is very high in children with sub-therapeutic levels. Concentrations outside the therapeutic window suggest the need for dose adjustment on the basis of therapeutic drug monitoring to optimize treatment.

126. Shaima, E.K., Walaa, A.A., Sara, Y.M., Hisham, E.A., Ashwag, A.M., Rabah, H.A., Mashaeir, J., Banan, M.O., Nada, A.I., Mohamed, H.A. (2018). Knowledge, attitude and practice of Sudanese individuals with type 2 diabetes about medication used in treatment of diabetes, hypertension and dyslipidaemia: a matter of debate or matter of concern? doi: 10.21037/jphe.2018.08.02

Abstract

Background: Diabetes is a chronic disease requires lifelong integrated treatment that includes lifestyle modifications and use of diabetes medication. The aim of this study was to establish knowledge, attitude and practice of Sudanese individuals with type 2 diabetes toward their medication**. Methods:** This was a cross-sectional study that recruited 383 individuals with type 2 diabetes attend Jabir Abu Eliz Diabetes Canter. They aged between 18–65 years old. Individuals with type 2 diabetes are selected randomly and invited to complete the questionnaire, while Individuals with type1 diabetes, gestational diabetes and those aged less than 18 years old were excluded from this study**. Results:** 76.5% of the interviewed patients had a valid health insurance, especially with 44% have diabetes for more than 10 years. Hypertension was one of the commonest co-morbidities (58%). Importantly 73% of the patients didn't purchase all their prescribed medications (medicine not available, no medical insurance and expensive medication). The common medication used in treatment of diabetes is metformin (46%). Glibenclamide accounted for (16%), glimepiride for (10%), glipizide for (0.3%) and pioglitazone for (1. 3%).The most common antihypertensive medication used are angiotensin converting enzyme inhibitor (27%), angiotensin receptor blocker (24%) and calcium channel blocker (24%). 17% of the study population were receiving statins and 84% in low dose aspirin. Almost one third (31.7%) of interviewed patients were on insulin. Approximately 72% of these patients were using mixed insulin, 21% using soluble insulin and 3% used more than one type of insulin at the

same time. Two-third of this population usually takes the insulin dose by themselves and (34%) of this group rotated injection site routinely in comparison with (66%) who stick to one site. In Sudan room temperature rarely drops to under 30 °C which necessitated refrigeration of insulin. Majority of the patients (81%) confirmed the storage of insulin vials in the refrigerator. **Conclusions:** More than two third of Sudanese individuals did not bought all medications used in treatment of diabetes and co-morbidities. Metformin and sulfonylureas were widely used in treatment of diabetes. Hypertension is well treated but lipid lowering medication was used by almost less than one fifth of the individual with type 2 diabetes. Intensive education is needed to increase knowledge of individuals about diabetes in order to enhance attitude and practice. This education can be achieved in part by both community and clinical pharmacists. Keywords: Diabetes; Sudan; knowledge; attitude; practice.

127. Sikha, W., Bhoj, R.K., and Birendra, R.T. (2018). High Susceptibility of Fosfomycin to Uropathogenic Escherichia coli Isolated at Tertiary Care Hospital of Nepal.
DOI: 10.9734/JAMB/2018/44514

Abstract

Background: Antibiotic resistance in uropathogens is a worldwide problem. Empirical therapy of urinary tract infection (UTI) is based on the susceptibility patterns of locally isolated bacteria in a given time period. Escherichia coli (E. coli), the most common pathogen causing UTI has developed resistance against most of the antibiotics for empirical use. Fosfomycin is one of the best antibiotics to treat UTI, however very little information is available about the susceptibility rate of E. coli to fosfomycin in Nepal. Aim: The aim of this study was to determine the fosfomycin susceptibility pattern against uropathogenic E. coli isolated from January to June 2016 in a tertiary care hospital of Nepal. **Methods:** A total of 242 E. coli urinary isolates were included in this study. The isolated organisms were identified by conventional methods. The antimicrobial susceptibility was performed by modified disc diffusion method. Minimum inhibitory concentration (MIC) of fosfomycin was performed by Etest. Extended spectrum β-lactamase (ESBL) and AmpC β-lactamase production was screened and confirmed by double disc synergy test. **Results:** E. coli were the most common pathogen isolated and were highly resistant to common antibiotics for oral use such as fluoroquinolones, cephalosporins and

cotrimoxazole. However, 98% of E. coli isolates were found susceptible to fosfomycin**.** **Conclusions:** E. coli urinary isolates revealed a high level of resistance to all the antibiotics tested with the exception of fosfomycin. Fosfomycin showed the highest efficacy against E. coli and is the best choice for empirical treatment in Nepal. This study revealed that quinolones, cephalosporins and cotrimoxazole cannot be used for empirical treatment of UTI in Nepal. Keywords: Urinary tract infection; Escherichia coli; fosfomycin susceptibility; MDR.

128. Sipra, M., Faisal M., Alauddin, C. (2018). Nurses' knowledge and practices related to pain assessment in critically ill patients in a selected private hospital in Bangladesh.
DOI:

Abstract
Background: Most of the time pain is difficult to assess and manage because of being inherently a subjective experience influenced by multiple factors. The perception and tolerance of pain may vary because of different psychological and social influences of the patient. Therefore, it is important for health care providers to assess the pain so that individualized management interventions can be provided. This study was aimed to assess the nurses' knowledge and practices related to pain assessment in critically ill patients. **Methods:** A descriptive cross-sectional study was carried out among 200 registered nurses working at different ICU in Square Hospital. The study was conducted within April to August 2017. A non-probability purposive sampling technique was used. The data was collected using pre-tested self-administered semi-structured questionnaire and it was analysed using SPSS 22.0 version**. Results:** About 81% of the respondents were in the age group 22-32 years and the mean age of the respondents was 27.74±12.06 years. About 79.0% of the respondents were female and 59.5% of the respondents had diploma in nursing. The mean monthly income of the respondents was 19450.5 taka. The majority (59.5%) of the respondents had less than 2 years' service experience. About 85.5% of the respondents said it is important to assess the pain and need for analgesia before, during, and after wound care. **Conclusions:** Our findings reported that the nurses were reasonably knowledgeable about the principles of pain assessment. More than four-fifths of the respondents had adequate knowledge about pain assessment. Keywords: Pain, Assessment, Knowledge, Practice, Nurses, Patients.

129. Sirili, N. (2018). Health workforce development post-1990s health sector reforms: the case of medical doctors in Tanzania.

0000-0001-5205-624x

Abstract

Background: Health systems in many low- and middle-income countries suffer from critical shortages and inequitable geographical distribution of the health workforce. Since the 1940s, many low- and middle-income countries have passed through different regimes of health sector reforms; the most recent one was in the 1990s. Tanzania is a good example of these countries. From the 1990s, Tanzania has been implementing the third generation of health sector reforms. This thesis analysed the health workforce development following the 1990s health sector reforms in Tanzania. **Methods:** An exploratory case study employing both quantitative and qualitative research approaches was used to analyse the training, deployment, and retention of medical doctors about two decades following the 1990s health sector reforms. The quantitative approach involved analysis of graduation books and records from the Medical Council of Tanganyika to document the number of doctors who graduated locally and abroad, a countrywide survey of available doctors as of July 2011, and analysis of staffing levels to document the number of doctors recommended for the health sector as of 2012. The gap between the number of available and required doctors was computed by subtracting available from required in that period. The qualitative approach involved key informant interviews, focus group discussions, and a documents review. Key informants were recruited from districts, regions, government ministries, national hospitals, medical training institutions in both the public and private sectors, Christian Social Services Commission and the Association of Private Health Facilities in Tanzania. Focused group discussion participants were members of Council Health Management Teams in three selected districts. Documents reviewed included country human resources for health profiles, health sector strategic plans, human resources for health strategic plans and published and grey literature on health sector reforms, health workforce training, and deployment and retention documentation. For the training, analysis of data was done thematically with the guide of policy analysis framework. For deployment and retention, qualitative content analysis was adopted. Results: Re-introduction of the private sector in the form of public-private partnerships

has boosted the number of doctors graduating annually sevenfold in 2010 compared to that in 1992. Despite the increase in the number of doctors graduating annually, their training faces some challenges, including the erosion of university autonomies prescribed by the law; coercive admission of many medical students greater than the capacity of the medical schools, thus threatening the quality of the graduates; and lack of coordination between trainers and employers. Tanzania requires a minimum of 3,326 doctors to attain the minimum threshold of 0.1 doctor per 1,000 populations, as recommended by the World Health Organization. However, a countrywide survey has revealed the existence of around 1,300 doctors working in the health sector—almost the same as the number before the reforms. Failure to offer employment to all graduating doctors, uncertainties around the first appointment, failure to respect doctors' preferences for first appointment workplaces, and the feelings of insecurity in going to districts are among the major challenges haunting the deployment of doctors in Tanzania. For those who went to the districts, the issues of unfavorable working conditions, unsupportive environment in the community, and resource scarcity have all challenged their retention. **Conclusions:** The development of human resources for health after the 1990s health sector reforms have to some extent been contradictory. On the one hand, Tanzania has succeeded in training more doctors than the minimum it requires, despite some challenges facing the training institutions. On the other hand, failure to deploy and retain an adequate number of doctors in its health system has left the country to continue suffering from a shortage and inequitable distribution of doctors in favour of urban areas. For health sector reforms to bring successes with minimal challenges in health workforce development, a holistic approach that targets doctors' training, deployment, and retention is recommended.

130. Sophia, H., Joseph, N., Kristina, E., Pham, T.L., Jean, P., Semasaka, S., Hussein, L.K., Matilda, N., Rhonda, S, Ingrid, M. (2018). Health professionals' experiences and views on obstetric ultrasound in Rwanda: A cross-sectional study.

Abstract
Objectives: Implementation of ultrasound in antenatal care (ANC) in low-income countries has been shown to increase pregnant women's compliance with ANC visits, and facilitate detection

of high-risk pregnancies. In Rwanda, as in other low-income countries, access to ultrasound has increased significantly, but lack of training is often a barrier to its use. The aim of this study was to investigate Rwandan health professionals' experiences and views of obstetric ultrasound in relation to clinical management, resources and skills. **Methods:** A cross-sectional questionnaire study was undertaken between November 2016 and March 2017, as part of the CROss Country Ultrasound Study (CROCUS). Data were collected at 108 health facilities located in both rural and urban areas of Rwanda, including provincial, referral, district and private hospitals as well as health centres. Participants were obstetricians (n = 29), other physicians (n = 222), midwives (n = 269) and nurses (n = 387). **Results:** Obstetricians/gynecologists/other physicians commonly performed ultrasound examinations but their self-rated skill levels implied insufficient training. Access to ultrasound when needed was reported as common in hospitals, but available to a very limited extent in health centres. The vast majority of participants, independent of health profession, agreed that maternity care would improve if midwives learned to perform basic ultrasound examinations. **Conclusions:** Barriers to provision of high quality ultrasound services include variable access to ultrasound depending on health facility level and insufficient skills of ultrasound operators. Physicians in general need more training to perform ultrasound examinations. Implementation of a general dating ultrasound examination seems to be a relevant goal as most health professionals agree that pregnant woman would benefit from this service. To further improve maternity care services, the possibility of educating midwives to perform ultrasound examinations should be further explored.

131. Sprague, S., McKay, P., Li, C.S., Ivers, R., Moroz, P.J., Jagnoor, J., Bhandari, M., Miclau, T. (2018). International Orthopaedic Multicenter Study in Fracture Care Coordinating a Large-Scale Multicenter Global Prospective Cohort Study.
doi: 10.1097/BOT.0000000000001287

Abstract

Traditionally, the orthopaedic trauma literature has been dominated by small studies that were largely single-center initiatives. More recently, there has been a paradigm shift toward larger, multicenter studies because the orthopaedic community embraced the concepts of evidence-based medicine and the need for high-quality research to guide clinical practice. The

International Orthopaedic Multicenter Study in Fracture Care is a large multicenter international cohort study in musculoskeletal trauma in Africa, Asia, and Latin America. This is the first study of this magnitude within the global orthopaedic trauma community. The International Orthopaedic Multicenter Study in Fracture Care study has provided an opportunity to form new international collaborative relationships and to develop new research capacity and global collaborative relationships that will provide the foundation for future studies in injury prevention and management.

132. Stella, N.A., Folasade, O.L., Abiola, P.O. (2018). Use of internet as health information resource by community pharmacists in Nigeria.

Abstract
Purpose: The internet has become one of the most commonly used sources for medical and health information. Research that explored the extent to which Nigerian community pharmacists use internet resources for patient care is limited. This study aims to examine the extent to which community pharmacists use the internet for professional practice. **Design/methodology/approach:** Data were collected using a questionnaire which was completed by 115 community pharmacists using convenience sampling technique. Descriptive and inferential statistics were used for data analysis. **Findings:** The results revealed that community pharmacists use a variety of online resources, although only about 25 per cent or less use each of the online resources. The critical challenges that hinder their use of the internet were inadequate power supply, lack of funds to procure personal internet facilities, among others. There is significant relative contribution of demographic variables (gender, age, educational qualification and number of years in professional practice) on frequency of internet use among community pharmacists. Practical implications: The Association of Community Pharmacists of Nigeria (ACPN), Lagos Chapter, should organize continuing professional education for their members to expose them to online resources and emerging trends in professional practice. The community pharmacist should also address the problem of inadequate communication with patients by stepping up communication with the patients about their drug therapy not only through the conventional media but also through internet facilities such as email, WhatsApp and

so on. **Originality/value:** This study examined the extent to which community pharmacists use the internet for professional activities. This study also empirically investigated the significant relative contribution of demographic variables (gender, age, educational qualification and number of years in professional practice) on the frequency of internet use among community pharmacists. Keywords: Internet use, Nigeria, Demographic variables, Community pharmacists, Health information resource, Internet resources.

133. Stephen, M., Dereck, C., Esther, D., Crecensia, M., Krishna, R., and Zubin, S. (2018). Contracting-out primary health care services in Tanzania towards UHC: how policy processes and context influence policy design and implementation.

Abstract

Background: Governments increasingly recognize the need to engage non-state providers (NSPs) in health systems in order to move successfully towards Universal Health Coverage (UHC). One common approach to engaging NSPs is to contract-out the delivery of primary health care services. Research on contracting arrangements has typically focused on their impact on health service delivery; less is known about the actual processes underlying the development and implementation of interventions and the contextual factors that influence these. This paper reports on the design and implementation of service agreements (SAs) between local governments and NSPs for the provision of primary health care services in Tanzania. It examines the actors, policy process, context and policy content that influenced how the SAs were designed and implemented. **Results:** The institutional frameworks shaping the engagement of the government with NSPs are rooted in Tanzania's long history of public-private partnerships in the health sector. Demand for contractual arrangements emerged from both the government and the faith-based organizations that manage NSP facilities. Development partners provided significant technical and financial support, signaling their approval of the approach. Although districts gained the mandate and power to make contractual agreements with NSPs, financing the contracts remained largely dependent on donor funds via central government budget support. Delays in reimbursements, limited financial and technical capacity of local government authorities and lack of trust between the government and private partners affected the

implementation of the contractual arrangements. **Conclusions:** Tanzania's central government needs to further develop the technical and financial capacity necessary to better support districts in establishing and financing contractual agreements with NSPs for primary health care services. Furthermore, forums for continuous dialogue between the government and contracted NSPs should be fostered in order to clarify the expectations of all parties and resolve any misunderstandings.

134. Susan, K.S., Stella, M., Wasima, R., Lusajo, J.K., Hussein, K., Jessie, K.M., Felix. K., Mucho, M.M., Megan, S.D., Isihaka, M., Hijja, W., Diana, P., Saiqa, M., Jennifer, E., Delivette, C. (2018). Cluster randomized trial of comprehensive gender-based violence programming delivered through the HIV/AIDS program platform in Mbeya Region, Tanzania: Tathmini GBV study.

https://doi.org/10.1371/journal.pone.0206074

Abstract

The Tathmini GBV study was a cluster randomized trial to assess the impact of a comprehensive health facility- and community-based program delivered through the HIV/AIDS program platform on reduction in gender-based violence and improved care for survivors. Twelve health facilities and surrounding communities in the Mbeya Region of Tanzania were randomly assigned to intervention or control arms. Population-level effects were measured through two cross-sectional household surveys of women ages 15–49, at baseline (n = 1,299) and at 28 months following program scale-out (n = 1,250). Delivery of gender-based violence services was assessed through routine recording in health facility registers. Generalized linear mixed effects models and analysis of variance were used to test intervention effects on population and facility outcomes, respectively. At baseline, 52 percent of women reported experience of recent intimate partner violence. The odds of reporting experience of this violence decreased by 29 percent from baseline to follow-up in the absence of the intervention (time effect OR = 0.71, 95% CI: 0.57–0.89). While the intervention contributed an additional 15 percent reduction, the effect was not statistically significant. The program, however, was found to contribute to positive, community-wide changes including less tolerance for certain forms of violence, more gender equitable norms, better knowledge about gender-based violence, and increased community actions to

address violence. The program also led to increased utilization of gender-based violence services at health facilities. Nearly three times as many client visits for gender-based violence were recorded at intervention (N = 1,427) compared to control (N = 489) facilities over a 16-month period. These visits were more likely to include provision of an HIV test (55.3% vs. 19.6%, p = .002). The study demonstrated the feasibility and impact of integrating gender-based violence and HIV programming to combat both of these major public health problems. Further opportunities to scale out GBV prevention and response strategies within HIV/AIDS service delivery platforms should be pursued.

135. Tausi, S.H., Evelyne, A., Judith, S. (2018). A qualitative study on the voluntariness of counselling and testing for HIV amongst antenatal clinic attendees: do women have a choice?

Background: Mother-to-child transmission (MTCT) of the Human Immunodeficiency –Virus (HIV) is a serious public health problem, contributing up to 90% of childhood HIV infections. In Tanzania, the prevention-of-mother-to-child-transmission (PMTCT) feature of the HIV programme was rolled out in 2000. The components of PMTCT include counselling and HIV testing directed at antenatal clinic attendees. It is through the process of Provider Initiated Counseling and Testing (PITC) that counselling is offered participant confidentiality and voluntariness are upheld and valid consent obtained. The objective of the study was to explore antenatal clinic attendees' experiences of the concept of voluntariness vis- a- vis the implementation of prior counseling and subsequent testing for HIV under the PITC as part of their antenatal care. **Methods:** In-depth interviews were conducted with17 antenatal clinic attendees and 6 nursing officers working at the Muhimbili National Hospital (MNH) antenatal clinic. The study data were analyzed using qualitative content analysis. **Results:** Antenatal clinic attendees' accounts suggested that counselling and testing for HIV during pregnancy was voluntary, and that knowledge of their HIV status led them to access appropriate treatment for both mother and her newborn baby. They reported feeling no pressure from nursing officers, and gave verbal consent to undergo the HIV test. However, some antenatal clinic attendees reported pressure from their partners to test for HIV. Healthcare providers were thus faced with a dilemma of disclosure/ nondisclosure when dealing with discordant couples. **Conclusion:**

Antenatal clinic attendees at MNH undertook the PITC for HIV voluntarily. This was enhanced by their prior knowledge of HIV, the need to prevent mother- to- child transmission of HIV, and the effectiveness of the voluntary policy implemented by nursing officers.

136. Tracy, B.O., Charles, A., Felix, C.R., Kwame, N., Agartha, N.O. (2018). Nutritional status of children with sickle cell disease: A study at the Komfo Anokye Teaching Hospital of Ghana.

Abstract:

Purpose: This study aims to assess the nutritional status of children with sickle cell diseases using anthropometric measurements, biochemic amardietary intakes. **Design/methodology/approach:** The study was conducted in 100 children of 3-12 years of age with sickle cell diseases (SCDs) at the Komfo Anokye Teaching Hospital in the Kumasi Metropolis of Ghana. Weight, height and age of participants were used to calculate body mass index-for-age. The mid-upper-arm-circumference-for-age, weight-for-age (percentiles) and height-for-age (percentiles) were compared with standards growth charts for children. Biochemical measures such as serum albumin and ferritin, as well as full blood count, were assessed. Dietary intake was assessed using 24-h dietary recall and food frequency questionnaire. **Findings:** From the study, 73 and 37 per cent of the children with SCD recorded inadequate intake of iron and vitamin E, respectively, when compared to the recommended daily allowance. Out of the 100 participants, 37 per cent were underweight and 22 per cent were stunted. There was significant difference ($p < 0.05$) in underweight (weight-for-age) prevalence by gender. A multiple variate regression showed a significant association between zinc ($r2 = 0.763$, $p < 0.05$) and haemoglobin levels. **Originality/value:** The evidence in this paper is relevant for treatment, health education and nutritional counselling of parents with children who have SCD.

137. Tungu, A.M., Nyarubeli, I.P., Bratveit, M., Sunde, E., Kayumba, A., Moen, B.E., (2018). 1191 Occupational noise induced hearing loss among Tanzanian metal industry workers.
http://dx.doi.org/10.1136/oemed-2018-ICOHabstracts.836

Abstract

Introduction: Noise induced hearing loss (NIHL) is a preventable disease. However, the global burden of NIHL is increasing; especially in developing countries. The prevalence of NIHL among metal industry workers in Sub Saharan countries including Tanzania is not well documented. **Methods:** This study was conducted among male metal industry workers (Exposed, n=226) and Public Primary School teachers (Controls, n=110) between June 2016 and June 2017, in Dar es Salaam. The exposed were from four metal industries (Factory A, n=65; B, n=45; C, n=53; D, n=63). Hearing thresholds at 0.5, 1, 2, 3, 4, 6 and 8 KHz were examined using Interacoustic AD 226 audiometer. NIHL was defined as hearing threshold levels>25 dB in either ear at 3, 4 and 6 KHz. The WHO classification of hearing loss was used. **Results:** The prevalence of NIHL among exposed was 50% and 47% in the right and left ear, respectively. The highest prevalence was found in factory B (71% and 62%), followed by D (48% and 54%), A (48% and 48%), and the lowest in factory C (37% and 25%) in the right and left ear, respectively. The proportion of mild, moderate and severe NIHL in the right and left ear was 80% and 79%, 20% and 18%, 0% and 2%, respectively. Among controls, the prevalence of NIHL was 31% and 28% in the right and left ear, respectively. The proportion of mild, moderate, severe NIHL in the right and left ear was 86% and 76, 11% and 15%, 3% and 0%, respectively. Nine percent of the controls had profound NIHL in the left ear and none among exposed. **Discussion:** We found high prevalence of NIHL among Tanzanian metal industry workers. Further studies on noise exposure and the determinants for reduced hearing are needed. Establishment of a hearing conservation program in the metal industries seems to be important.

138. Uwakwe, K., Iwu, A., Obionu, C., Duru, C., Obiajuru, I., Madubueze, U. (2018). Prevalence, Pattern and Predictors of Abnormal Vaginal Discharge among Women attending Health Care Institutions in Imo State, Nigeria.

Abstract

Background: Normal vaginal discharge is a normal physiological process that can become abnormal due mostly to sexually and non-sexually transmitted infections. This study determined the prevalence, pattern, sociodemographic and maternal predictors of abnormal vaginal discharge among women attending health care institutions in Imo State, Nigeria. **Methods:** This cross-

sectional descriptive design used stratified sampling technique to select 450 records of women of reproductive ages. Data was extracted using a proforma. Descriptive statistics was presented using frequencies and summary indices. Chi square statistics and binary logistic regression were done. P-value of < 0.05 was considered significant. **Results:** The overall prevalence rate of abnormal vaginal discharge was 55.6% and among those pregnant, was 73.3%. Majority of the women had whitish virginal discharge (76.3%) and 49.6% had experienced foul and fish smelling discharges. Candida albicans was the pathogen most isolated (63.3%) followed by Gardnerella vaginalis (13.9%). Majority of the women (76.2%) also had coexisting gynecological complaints, of which 41.3% and 38.8% experienced itching around the vulva and lower abdominal pain, respectively. The predictors of abnormal vaginal discharge were residing in an urban area, having a post-secondary level of education, having no child, currently pregnant, having no history of induced abortion, being sexually active and having other complaints associated with sexually transmitted infections, (p<0.05). **Conclusion:** The socio-demographic and maternal predictors of abnormal vaginal discharge in the study area should be taken into account in order to improve early detection and identify the women at risk of abnormal vaginal discharge.

139. Vestine, U., Marga, C. Ocké., Sherriff, Amer., Antonie, V. (2018). Predictors of stunting with particular focus on complementary feeding practices: A cross-sectional study in the Northern Province of Rwanda.

Abstract
Objective: This research was conducted to study the factors associated with stunting in the Northern Province of Rwanda by assessing anthropometric status, dietary intake, and overall complementary feeding practices. **Research Methods & Procedures:** A cross-sectional study with 138 children aged 5-30 months was conducted. A structured questionnaire was used to collect information on socio-demographics of mother and child, and breastfeeding and complementary feeding practices. Anthropometric status was assessed using height-for-age z-scores for children and body mass index for caregivers. Dietary intakes were estimated using a 24-hour recall. Multiple linear and logistic regression models were performed to study the

predictors of height-for-age z-scores and stunting. **Results:** The stunting prevalence was 42%. Prevalence of continued breastfeeding and exclusive breastfeeding were 92% and 50% respectively. Most children (62%) fell into the low dietary diversity score group. The nutrient intake from complementary foods was below recommendations. The odds of stunting were higher in children above 12 months old (OR= 1.18; 95% CI 1.08-1.29). Exclusive breastfeeding (OR= 0.22, 95% CI 0.10-0.48) and deworming tablet use in the past six months (OR= 0.25; 95% CI 0.07-0.80) decreased significantly the odds of stunting in children. Also, the BMI of caretaker (β=0.08 kg/m2; 95% CI 0.00-0.17) and dietary zinc intake (β= 1.89 mg/d; 95% CI 0.29-3.49) were positively associated with the height-for-age z-scores. **Conclusion:** Interventions focusing on optimal nutrition during the complementary feeding stage, exclusive breastfeeding and the use of deworming tablets have the potential to substantially reduce stunting in children in the Northern Province of Rwanda. Keywords: stunting dietary intake complementary feeding practices exclusive breast feeding deworming tablets   children Rwanda.

140. Viegas, E., Kroidl, A., Munseri, P., Missanga, M., Nilsson, C., Tembe, N., Bauer, A., Joachim, A., Joseph, S., Mann, P., Geldmacher, C., Fleck, S., Stöhr, W., Scarlatti G., Aboud, S., Bakari, M, Maboko, L., Hoelscher M., Wahren, B., Robb, M., Weber, J., Cormack, S., Biberfeld, G., Jani, I., Sandström, E., Lyamuya, E. (2018). Optimizing the immunogenicity of HIV prime-boost DNA-MVA-rgp140/GLA vaccines in a phase II randomized factorial trial design.

Abstract

Background: We evaluated the safety and immunogenicity of (i) an intradermal HIV-DNA regimen given with/without intradermal electroporation (EP) as prime and (ii) the impact of boosting with modified vaccinia virus Ankara (HIV-MVA) administered with or without subtype C CN54rgp140 envelope protein adjuvanted with Glucopyranosyl Lipid A (GLA-AF) in volunteers from Tanzania and Mozambique. **Methods:** Healthy HIV-uninfected adults (N = 191) were randomized twice; first to one of three HIV-DNA intradermal priming regimens by needle-free Zeta Jet device at weeks 0, 4 and 12 (Group I: 2x0.1mL [3mg/mL], Group II: 2x0.1mL [3mg/mL] plus EP, Group III: 1x0.1mL [6mg/mL] plus EP). Second the same volunteers

received 108 pfu HIV-MVA twice, alone or combined with CN54rgp140/GLA-AF, intramuscularly by syringe, 16 weeks apart. Additionally, 20 volunteers received saline placebo. **Results:** Vaccinations and electroporation did not raise safety concerns. After the last vaccination, the overall IFN-γ ELISpot response rate to either Gag or Env was 97%. Intradermal electroporation significantly increased ELISpot response rates to HIV-DNA-specific Gag (66% group I vs. 86% group II, p = 0.026), but not to the HIV-MVA vaccine-specific Gag or Env peptide pools nor the magnitude of responses. Co-administration of rgp140/GLA-AF with HIV-MVA did not impact the frequency of binding antibody responses against subtype B gp160, C gp140 or E gp120 antigens (95%, 99%, 79%, respectively), but significantly enhanced the magnitude against subtype B gp160 (2700 versus 300, p<0.001) and subtype C gp140 (24300 versus 2700, p<0.001) Env protein. At relatively low titers, neutralizing antibody responses using the TZM-bl assay were more frequent in vaccines given adjuvanted protein boost. **Conclusion:** Intradermal electroporation increased DNA-induced Gag response rates but did not show an impact on Env-specific responses nor on the magnitude of responses. Co-administration of HIV-MVA with rgp140/GLA-AF significantly enhanced antibody responses.

141. Winfrida, T.K., Hendry, R.S., Michael, S.R., and Brittany, L.M. (2018). Assessment of cardiopulmonary resuscitation knowledge and skills among healthcare providers at an urban tertiary referral hospital in Tanzania.
https://doi.org/10.1186/s12913-018-3725-2

Abstract
Background: Early and effective CPR increases both survival rate and post-arrest quality of life. In limited resource countries like Tanzania, there is scarce data describing the basic knowledge of CPR among Healthcare providers (HCP). This study aimed to determine the current level of knowledge on, and ability to perform, CPR among HCP at Muhimbili National Hospital (MNH). **Methods:** This was a descriptive cross sectional study of a random sample of 350 HCP from all cadres and departments at MNH from October 2015 to March 2016. Each participant completed a with 25 question multiple choice and fill-in-the-blank CPR test and a practical test using a CPR manikin where the participant was videotaped for 1–2 min. Two expert observers independently viewed the videos and rated participant performance on a structured data form. The primary

outcome of interest was staff member overall performance on the written and practical CPR testing. **Results:** We enrolled 350 HCPs from all 12 MNH clinical departments. The median participant age was 35 (IQR 29–43) years, 225 (64%) were female and 138 (39%) had clinical experience of less than 5 years. Only 57 (16%) and 88 (25%) scored above 50% in written and practical tests, respectively according to local minimum passing test score and 13(4%) and 30 (9%) scored above 75% in written and practical tests, respectively according to international minimum passing test score on CPR. The 233(67%) HCP who reported prior experience performing CPR on an adult patient scored higher on testing than those without; 40% (IQR 28–54) versus 26% (IQR 16–42) respectively, but both groups had median scores <50%. **Conclusion:** The level of CPR knowledge and skills displayed by all cadres and in all departments was poor despite the fact that most providers reported having performed CPR in the past. Since MNH is a tertiary referral hospital, it may reflect the performance of resuscitation status of other local health centers in Tanzania and other low-income countries to employ a formal system of training every HCP in CPR. Staff should be certified and assessed regularly to ensure retention of resuscitation knowledge and skills.

142. Witness, J., Gloria, S., Simon, H.M. (2018). Noise Exposure and Self-Reported Hearing Impairment among Gas-fired Electric Plant Workers in Tanzania.

Abstract

Background: Gas-fired electric plants are equipped with heavy machines, which produce hazards including noise pollution. Exposure to high level of noise of above 85dB(A) is known to bring about Noise-Induced Hearing Loss (NIHL). This study aimed to assess noise exposure level and reported prevalence of noise-induced hearing loss among workers in gas-fired electric plants. **Material and Methods:** This cross-sectional study was conducted in three gas-fired electric plants in Dar es Salaam (Plant A, Plant B and Plant C) from July to August 2017. A noise logging dosimeter was used to measure personal noise exposure level. A questionnaire was used to collect information on managerial factors, individual factors, socio-demographic factors and history of the participants. A short screening validated questionnaire was used to obtain noise exposure score. Frequency distribution, Chi-square test and Regression analyses were done using SPSS version 20. **Results:** One hundred and six participants were involved in the study.

Noise exposure level among gas-fired electric plant workers was above 85dB(A), n = 37. The equivalent sound level (LAeq) measured over 8 hours was (98.6 ± 9.7) dB(A). The mean noise peak level was (139.5 ± 9.4) dB(A). Plant C had higher mean noise exposure level (TWA) of (96.9 ± 5.1) dB(A) compared to plant B 96.4 ± 3.7dB(A) and plant A 78.7 ± 11.9dB(A). Participants in both operation and maintenance had higher equivalent sound level (LAeq) measured over eight hours of 101.980 ± 3.6dB(A) compared to maintenance alone 98.5 ± 12.4dB (A) or operation 97.7 ± 8.8dB (A). Proportion of participants with reported hearing loss was 57(53.8%) where 44(41.5%) participants reported difficulty hearing people during conversations. Hearing protective devices (HPDs) were reported to be used by a majority, 101(95. 3%). **Conclusion:** Workers in gas-fired plants are exposed to high noise levels that could damage their hearing. Hearing conservation programs should be established and maintained in this work environment.

143. Yalemzewod, A.G., Gail, W., Ricardo, J.M., Charles, F.G., Yibeltal, A. (2018). HIV Prevalence Among Tuberculosis Patients in Sub-Saharan Africa: A Systematic Review and Meta-analysis.
https://doi.org/10.1007/s10461-018-02386-4

Abstract

HIV associated tuberculosis (TB) morbidity and mortality is a major concern in sub-Saharan Africa. Understanding the level of HIV infection among TB patients is vital for adequate response. We conducted a systematic review and meta-analysis to estimate the prevalence of HIV in TB patients in sub-Saharan Africa. We searched PubMed, EMBASE, Web of Science and CINAHL databases. A meta-analysis with a random-effects model was performed. Potential sources of heterogeneity in the prevalence estimates were explored using meta-regression analysis. We identified 68 studies that collectively included 62,969 TB patients between 1990 and 2017. The overall estimate of HIV prevalence in TB patients was 31.8% (95% CI 27.8–36.1). There was substantial heterogeneity in the prevalence estimates in Southern, Central, Eastern, and Western sub-Saharan Africa regions (43.7, 41.3, 31.1 and 25.5%, respectively). We noted an apparent reduction in the estimate from 33.7% (95% CI 27.6–40.4) in the period before 2000 to 25.7% (95% CI 17.6–336.6) in the period after 2010. The Eastern and Southern sub-

Saharan Africa region had higher prevalence [34.4% (95% CI 29.3–34.4)] than the Western and Central region [27.3% (95% CI 21.6–33.8)]. The prevalence of HIV in TB patients has declined over time in sub-Saharan Africa. We argue that this is due to strengthened HIV prevention and control response and enhanced TB/HIV collaborative activities. Countries and regions with high burdens of HIV and TB should strengthen and sustain efforts in order to achieve the goal of ending both HIV and TB epidemics in line with the Sustainable Development Goals.

144. Yarmoshuk, A.N., Guantai, A.N., Mughwira, M., Donald, C.C., Christina, Z., (2018). What Makes International Global Health University Partnerships Higher-Value? An Examination of Partnership Types and Activities Favored at Four East African Universities.

Abstract

Background: There are many interuniversity global health partnerships with African universities. Representatives of these partnerships often claim partnership success in published works, yet critical, contextualized, and comparative assessments of international, cross-border partnerships are few. Objective: The objectives of this paper are to describe partnerships characterized as higher-value for building the capacity of four East African universities and identify why they are considered so by these universities. **Methods:** Forty-two senior representatives of four universities in East Africa described the value of their partnerships. A rating system was developed to classify the value of the 125 international partnerships they identified, as the perceived value of some partnerships varied significantly between representatives within the same university. An additional 88 respondents from the four universities and 59 respondents from 25 of the international partner universities provided further perspectives on the partnerships identified. All interviews were transcribed and analysed in relation to the classification and emergent themes. **Findings:** Thirty-one (25%) of the partnerships were perceived as higher-value, 41 (33%) medium-value, and 53 (42%) lower-value for building the capacity of the four focus universities. Thirteen (42%) of the higher-value partnerships were over 20 years old, while 8 (26%) were between 3 and 5 years old. New international partners were able to leapfrog some of the development phases of partnerships by

coordinating with existing international partners and/or by building on the activities of or filling gaps in older partnerships. Higher-valued partnerships supported PhD obtainment, the development of new programmes and pedagogies, international trainee learning experiences, and infrastructure development. The financial and prestige value of partnerships were important but did not supersede other factors such as fit with strategic needs, the development of enduring results, dependability and reciprocity. Support of research or service delivery were also considered valuable but, unless education components were also included, the results were deemed unlikely to last**. Conclusion:** International partnerships prioritizing the needs of the focus university, supporting it in increasing its long-term capacity and best ensuring that capacity benefits realized favour the focus university are valued most. How best to achieve this so all partners still benefit sufficiently requires further exploration.

145. Zelalem, T., Habtamu, M., and Fitsum, W. (2018). Seroprevalence and trends of transfusion transmitted infections at Harar blood bank in Harari regional state, Eastern Ethiopia: eight years' retrospective study.
https://doi.org/10.1186/s12878-018-0115-2

Abstract

Background: The use of unscreened blood exposes the patient to many transfusions transmitted infections including Hepatitis B Virus (HBV), Hepatitis C virus (HCV), Human Immunodeficiency Virus (HIV), and syphilis, among others. Thus, blood transfusion demands for meticulous pre-transfusion testing and screening. Trends of transfusion transmitted infections are important to take appropriate measures on blood bank services. Therefore, the aim of this study was to assess seroprevalence and trends of transfusion transmitted infections at Harar blood bank in Harari regional state, Eastern Ethiopia from 2008 to 2015.**Methods:** A retrospective cross-sectional study was employed to review blood donors' history and laboratory tests records from November 16–December 31, 2017. All records of blood donors having vividly documented history and laboratory tests were reviewed by data collectors. All data were entered into EPI data version 3.1. It was exported and analyzed with Statistical Package for the Social Sciences version 16 software. **Result:** A total of 11, 382 blood donors' history and laboratory tests records were reviewed. Majority of them were males (82.6%), 57.6 % were in the age group

of 17 to 25 years and 99.9% donors donated blood for the first time. The overall seroprevalence of transfusion transmitted infections (HBV, HIV, HCV and syphilis combined) was found to be 6.6%. The prevalence of HBV, HIV, HCV and syphilis were found to be 4.4%, 0.6%, 0.8% and 1.1%, respectively. The trend in prevalence of syphilis and HCV was statistical significant by year (p< 0.05). Those donors in the age group of 26–35 years (AOR: 2.1; 95% CI: 1.2,3.6), 36–45 years (AOR: 4.1; 95% CI: 2.4,7.1) and greater than 46 years (AOR:4.6; 95% CI: 2.3,9.1) were more likely to be infected with syphilis compared to the age group of 17–25 years. Male were more likely to be infected with HBV (AOR: 1.9; 95% CI: 1.4, 2.5) than females. **Conclusions:** The magnitude of transfusion transmitted infections was lower than the previous studies conducted in Ethiopia. However, the decline in trends of transfusion transmitted infections has not been significant for some pathogens. Therefore, strict adherence with the criteria of preliminary blood donor selection should be implemented to reduce the amount of blood being withdrawn from transfusion after collection and screening.

146. Zhiyao, C., Guoming, W., Xuelian, C., Shunming, L., Violin, W., Zhenjiang, Y., Chuan'an, W., Xiaohua, Y. (2018). Group B streptococcus colonization and associated risk factors among pregnant women: A hospital-based study and implications for primary care. https://doi.org/10.1111/ijcp.13276

Abstract

Background: Group B streptococcus (GBS), which asymptomatically colonises the vaginal and rectal areas of women, is a leading cause of neonatal mortality and morbidity. This study aimed to determine the prevalence and factors associated with GBS colonisation among pregnant women in Shenzhen, China. **Methods:** A hospital-based cross-sectional survey was conducted, using a multistage sampling method. Pregnant women at ≥28 weeks' gestation completed a questionnaire and vaginal swabs were obtained for GBS analysis. Data were analysed by chi-squared tests and logistic regression models. **Results:** The colonisation rate of GBS among pregnant women was 4.9%. The influencing factors associated with GBS colonisation included body mass index before pregnancy (odds ratio [OR] = 3.79, 95% CI 1.28-11.26), gestational age (OR = 5.81, 95% CI 1.20-28.15), induced abortion (OR = 0.63, 95% CI 0.40-0.98) and lotion use before pregnancy (OR = 1.59, 95% CI 1.04-2.44). **Conclusions:** Our findings suggest that

obesity, gestational age, induced abortion and lotion use were significantly associated with GBS colonisation. Further longitudinal research is needed to establish the causal relationship and its biological mechanisms.

147. Zoé, M.H., Anna, M L., Noya, G., Jessie, K M., Samuel, L., Deanna L Kerrigan. (2018). Work-related mobility and experiences of gender-based violence among female sex workers in Iringa, Tanzania: a cross-sectional analysis of baseline data from Project Shikamana.

Abstract

Objectives: to examine how work-related mobility among female sex workers (FSWs) is associated with gender-based violence (GBV) in Iringa, Tanzania. Design: Cross-sectional analyses were conducted on baseline data gathered between October 2015 and April 2016 from FSWs participating in Project Shikamana, a community empowerment-based combination HIV prevention intervention. Setting: Participants were recruited for the baseline study using venue-based time-location sampling in two communities in Iringa, Tanzania. Participants: FSWs were eligible for participation if they were 18 years or older and had exchanged sex for money within the past month. Four-hundred ninety-six FSWs participated in the baseline survey. Primary and secondary outcome measures: Any recent experience of GBV was examined by recent work-related mobility among FSWs. Any recent experience of GBV was also disaggregated by severity for analyses. All bivariate and multivariate binary and multinomial logistic regressions adjusted for intraclass correlations among women recruited from the same venues. Results: Forty per cent of participants experienced recent physical or sexual violence, and 30% recently experienced severe physical or sexual violence. Thirty-three per cent of participants recently exchanged sex for money outside of their district or region, and 12% were both intraregional and inter-regionally mobile for sex work. Intraregional and inter-regionally mobile FSWs had 1.9 times greater odds of reporting recent GBV (adjusted OR: 1.89; 95% CI: 1.06 to 3.38; p=0.031) compared with non-mobile FSWs and a 2.5 times higher relative risk for recent experience of severe GBV relative to no recent GBV (relative risk ratio: 2.51; 95% CI: 1.33 to 4.74; p=0.005). Conclusions: Mobility for sex work may increase FSWs' exposure to GBV, particularly more

severe GBV. The vulnerability of mobile FSWs to violence, particularly severe forms, demands inclusive services that are accessible to mobile FSWs.

CHAPTER TWO THESIS AND DISSERTATIONS

1. Abubakari, A.A. (2018). Assessment of Quality Assuarence Procedures to Ensure Maintanance of Cold Chain Medicine at Expanded Program On Immunization. Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Members of the pharmaceutical supply chain have various global regulatory requirements to meet while handling, storing and distributing cold chain products. The focus of the regulatory authorities is to provide cold chain management for temperature sensitive pharmaceuticals to ensure that the quality and efficacy of the product are not compromised along the supply chain. Many countries such as Canada, United Kingdom, South Africa, etc, have issued regulations and specific guidelines that address product integrity during the entire supply chain. It will therefore be of importance to identify how Tanzania has developed its cold chain supply systems and how it is able to maintain cold chain for temperature-sensitive medicines considering the challenges of; unreliable electricity supply, inadequate storage facilities, weak validation systems, perceived poor monitoring of cold chain supply management by regulatory authorities. **Objective:** The study was conducted to review the quality assurance procedures to ensure maintenance of cold chain in the supply chain management of cold chain medicines at EPI head quarter, Medical Stores Department, Municipal level and Health Facilities which offer immunization and vaccine in Temeke and Dodoma Municipal Council and their impact on product quality and public health and safety. Methodology: The methodology that was used in collecting the research data was descriptive survey where questionnaires were personally administered and visual observations made to corroborate practices, processes and procedures. Purposive sampling was used to identify cold storage facilities that stock cold chain medicines to meet the objectives of the research. Results: The results indicated absence of quality management system, poor contingency for power outages/break down, weak validation of cold storage facilities and qualification of cold chain vans and carriers for transport of cold chain medicines along the supply chain which obviously will impact negatively on product quality, efficacy and potency and finally putting public health and safety at risk. **Conclusion:** there is need of effective regulatory oversight responsibilities to ensure compliance to cold chain management standards as per WHO to protect public health.

2. Abdallah, J.A. (2018). Availability and Utilization of Basic Infection Prevention Control Measures in Public Maternity Units in Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Maternal and new-born sepsis is responsible for significant morbidity and mortality globally and in Tanzania. Currently maternal deaths stand at 556/100,000 live births in Tanzania. It is estimated that sepsis is responsible for about 11% of maternal deaths and 28% of neonatal deaths. Puerperal and neonatal sepsis can be controlled by implementing infection prevention and control measures in maternity settings but currently there is scanty documentation of infection prevention and control practices in public maternity units in Tanzania. **Objective:** To assess availability and utilization of basic infection prevention and control (IPC) measures in public maternity units in Dar es Salaam. **Methodology:** A descriptive cross sectional study was conducted whereby seven public hospitals that provide obstetric care services in Dar es Salaam were surveyed. Maternity Unit managers were interviewed about the presence and functioning of the basic IPC measures in the last three months and on the day of visit. The presence of the services was confirmed by observation. Then women who delivered vaginally were interviewed on discharge using a semi-structured questionnaire on utilization of the IPC services. The indicators for Basic IPC services were adopted from the core indicators developed by the WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation to monitor water, sanitation and hygiene (WASH) in health care facilities. Data were entered, cleaned and analysed by SPSS version 23.0. Categorical variables were analyzed and presented in frequency distribution and percentages. **Results:** All seven facilities had fully basic IPC measures in place. Three facilities (43%) confirmed to have all hand washing needs. Only two health facilities (28.6%) had toilets for clients with reduced mobility. Among 395 delivered women who were interviewed on the use of IPC services, 366(92.7%) had used piped water while in health facility. In total 378 (95.7%) had used a toilet but among them only 258 (68.3%) had washed hands with soap and water. 310 (82%) of the toilet users said the toilets were clean. Of all the 395 interviewed women, 363 (92%) had used the same bed from onset of labor to delivery but 31 (8.5%) shared the bed. Overall, only 298(75.4%) of the women had seen beddings being changed

or antiseptics applied before the next client was allowed on bed. **Conclusion:** Despite the availability of all basic IPC measures in public maternity units in Dar es Salaam, their utilization is inconsistent which makes these facilities to be potentially risky for cross-infection and sepsis.

3. Abraham, Z.S. (2018). Clinico-Pathological Profile Of Head And Neck Malignant Neoplasms Among Paediatric Patients At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Head and neck malignant neoplasms are reported to be the tenth most common cancer globally and are associated with potential morbidity and mortality. Epidemiologically, 2% of cancers are found in children and 85% of them occurs in developing countries including Tanzania where the burden of infectious diseases is also high (1). Establishing early diagnosis and characterization of the histocytopathological patterns of head and neck malignant neoplasms is of paramount importance to physicians because of varying response of neoplasms to the available treatment modalities. Despite paediatric head and neck cancers being common in this era unlike what was seen in the past, no published studies on clinico-pathological profile of head and neck malignant neoplasms among paediatric patients from Tanzania are available in the studied literatures though it's of significance because they are associated with high morbidity and mortality. Thus the aim of the study was to address these available gaps**. Objective:** To describe the clinico-pathological profile of head and neck malignant neoplasms among paediatric patients at Muhimbili National Hospital. Methodology: A cross-sectional, descriptive study was utilized. Structured questionnaires were used to collect data in the selected departments. Histocytopathologically confirmed head and neck malignant neoplasms was the basis for selection of 180 paediatric patients who were recruited into the study. Data was analyzed using SPSS software version 20. p values <0.05 were considered statistically significant. **Results:** A total of 180 paediatric patients were recruited in this study where 61.1% were males with male to female ratio being 1.57:1 and majority belonged to the age group 0-5 years (53.9%). The mean age at encounter was1.64±0.768. A total of ten primary anatomical sites were found in this study with the neck (cervical lymph node) (36.1%) predominating followed by the orbit/eye (34.4%) and the least anatomical sites were the oral cavity (1.1%) and parapharyngeal space (0.5%). The

neck (cervical lymph nodes) was more affected in patients aged 6-11 years (43.1%) whereas the orbit was affected predominantly in those aged 0-5 years (90.3%). The orbit and neck (cervical lymph nodes) were affected more in males (54.8% and 76.9% respectively). The neck (cervical lymph nodes) was affected more commonly by lymphomas (98.5%) whereas the orbit/eye was afflicted by retinoblastoma in 79% of cases. The predominant histocytopathological variants were lymphoma (52.8%), retinoblastoma (27.2%) and sarcomas (8.9%) and the least encountered variants were olfactory neuroblastoma (1.1%) and Langerhans cell histiocytosis (0.6%). Lymphomas and retinoblastoma occurred commonly in males (70.53% and 53.06% respectively) but sarcomas showed no predilection in this study. Lymphomas occurred predominantly in patients aged 6-11 years (44% in Hodgkin lymphoma and 37.8% in Non Hodgkin lymphoma) whereas retinoblastoma predominated in those aged 0-5 years (93.9%). Paediatric patients in this study had variable clinical presentation dictated by the type of head and neck malignant neoplasm. Majority of patients with sinonasal cancers had Rhinological (100%), facial swelling (100%) and ophthalmological (90%) features predominating and least reported features were otological (10%) and CNS manifestations (10%). Patients with nasopharyngeal cancer presented mostly with Rhinological (100%), otological (100%) and neck mass (100%) as the most predominant clinical features and the least reported ones were ophthalmological (20%) and CNS manifestations (20%). Leukocoria (93.9%), red eye (93.9%) and orbital cellulitis (77.6%) predominated in retinoblastoma but in patients with lymphomas, the commonly reported features were fevers (95.8%), night sweats (100%) and weight loss (100%). **Conclusion and recommendation:** Lymphomas, retinoblastomas and sarcomas predominated in paediatric patients at MNH and the clinico-pathological profile depicted in this study is similar to what has been reported in various literatures from different parts of the world. There is a need to make paediatric cancers notifiable so as to facilitate formation of a community based cancer registry bearing in mind that these neoplasms are deleterious through their ability to interfere with vital functions of life

4. Ahmed, K.A. (2018). Associated FactorsAnd Treatment Outcome Of Congenital Anorectal Malformation at Muhimbili National Hospital. Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Congenital ARM are wide spectrum of malformations ranging from minor defects to complex defects with the incidence ranging from 2 in 1000 to 1 in 5000 live births. The risk factors remain largely unknown but the roles of Genetic and environmental factors has been reported to play part by some different studies. The outcomes also vary greatly globally and locally have not been reported. **Objectives:** To describe the clinical features, risk factors and treatment outcome of congenital Anorectal Malformation among children at Muhimbili National Hospital 2017. **Methodology:** This was retrospective unmatched case control study with case to control ratio of 1:2, the study was carried at MNH for a period of 9 months from April 2017 to December 2017. Total of 264 participants were recruited. Exposure status, clinical description and treatment outcome was collected using a predesigned questionnaire. Data was analyzed using SPSS version 22.0 software and categorical variables were summarized as proportions and continuous variables as means. Chi square tests was used to test for strength of association with confidence level set at < 0.05. **Results**: Most of the children with ARM were term deliveries with normal birth weight. Male to female ratio was 1:1.5 with vestibular anus being the most common in female while male had no evidence of external opening. Associated anomaly was evident in 11% with cardiac defects being the most common. Fever during the first trimester of pregnancy carried a 3 fold increased risk for development of ARM. Post anoplasty complication rate was 88% and the common complications observed during the study period were anal stenosis 28 (77.5%) followed by constipation 5 (12.5%). **Conclusion**: This study has suggested a possible role of maternal fever in the causation of ARM but this need to be confirmed in a cohort study. The poor outcome documented here need to be addressed as there is evidence for good outcome in other centers globally. Studies to address outcome by identifying predictors is urgently needed.

5.Aloyce, S. (2018). Management Of Adhessive Small Bowel Obstruction AtMuhimbili National Hospital Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Adhesive small bowel obstruction (ASBO) is an important cause of hospital admission and its treatment is still controversial. Emergency surgery is mandatory when strangulation or complete obstruction occur. Non operative management is indicated in the case of partial obstruction. Any delay in intervention and the choice of intervention greatly impact on the morbidity and mortality. The aim of this study was to explore the management for patients with ASBO attended at MNH. **Material and methods:** A descriptive retrospective, cross-sectional study was conducted at Muhimbili National Hospital covering the period 2014 to 2016. Patients with ASBO were sought from all case notes of patients admitted with any diagnosis of bowel obstruction and their management and outcome as documented on the case notes were recorded on a structured questionnaire. **Results:** A total of 517 patients were admitted to general surgical wards with diagnosis of bowel obstruction during the study period 2014 -2016, out of which 127(24.56%) had ASBO. There were two treatment modalities in which majority of the patients 80 (63%) had operative management. All patients had previous abdominal surgery for various reasons with colorectal surgery being the leading 51 (40.2%) followed by obstetrics and gynecological reasons, and appendicectomy in 32.3% and 22% respectively. In the two treatment modalities NOM has shorter length of hospital stay and low mortality rate. The complications reported were post- surgical including ECF, SSI and bleeding. An overall mortality rate of 8.7% was observed in this cohort of patient. **Conclusion:** One in four of all bowel obstruction is due to ASBO in our hospital. While currently conservative management is the mainstay treatment modality, two-thirds had surgical intervention with high complication rates. Patients under NOM have reduced hospital stay and lower mortality rate as compared to those under surgical management who had prolonged hospital stay, post-operative complications and higher mortality rate. Recommendations: Need for prospective study to develop a scoring tool that can be used to decide on modality of management and CT scan of abdomen and pelvis should be considered in all patients with SBO because it can provide incremental information over plain films in differentiating grade, severity, and aetiology of SBO that may lead to changes in management also the feasibility of use of water soluble contrast study (WSCS) in patients with ASBO should be investigated.

6. Amosi, Z. (2018). Assessment Of Emergency Airway Intervention Preparedness Outside the Operating Theatre at Muhimbili National Hospital, Dar-Es-Salaam, Tanzania, 2017.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: For decades' anesthetists have been regarded as experts in airway management. Nevertheless, airway management is a core skill in other medical related disciplines such as emergency medicine and critical care. One fact has remained constant throughout many studies done before; that emergency airway management outside operating theater is associated with high morbidity and mortality compared to emergency airway managed in operating rooms. In many of our hospitals, the readiness of clinical settings outside operating room to handle emergency airway is questionable and needs serious attention. Broad **objective:** To assess both human and clinical setting factors affecting the management of airway emergencies outside operating room. **Methodology:** A hospital-based descriptive cross-sectional study was conducted at MNH from June to December 2017. A standard emergency intubation checklist formulated by American Society of Anesthesiologists and Difficult Airway Society of England was used to develop a structured questionnaire to be administered to health care providers working in Intensive care units and the Emergency Department regarding the daily practice of managing airway emergencies in their respective departments. Data entry and analysis was handled using the SPSS version 20. Categorical variables were presented in frequencies and percentages while continuous variables were presented as means and standard deviation. Association was tested using a chi-square test for categorical variables. A two-tailed P-value <0.05 was considered to be significant. **Results:** About 70.1% of study participants had attended formal training in emergency airway management. Only 20.5% of the ones who attended formal training felt confident to carry out emergency intubation. Out of 117 subjects who had formal training in emergency airway management, (15.4%) used a checklist to confirm available equipment and team members before starting emergency intubation. It was found that 45.5% of all study participants could access printed guidelines showing algorithm of managing airway emergencies in their area of clinical work. Use of capnography monitoring was uncommon outside OR with only 20.4% of all study participants reported to have used it. The most common available difficult airway adjuvant outside OR were stylets and boogie. Another adjuvantlike a surgical

trolley, LMAs, intubating LMAs, fiber optic devices and video laryngoscopes their accessibility varied depending on the location of the clinical site outside the OR. **Conclusion:** Airway emergencies outside OR, fall into the hands of the inexperienced personnel with less exposure to training on emergency airway intervention. Our hospital institutions should adopt the available standard guidelines by ensuring that the personnel clinical setting outside OR are prepared to handle the emergency airway intervention.

7. Arvinder, S. (2018). Risk FactorsAnd Outcomes Associated with Fetal Macrosomia in Iringa Municipality Unmatched Case Contro Study.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Increasing prevalence of diabetes and obesity in women of reproductive age in developing countries could be associated with a parallel increase in macrosomic births. There is a gap in antenatal care measurement of BMI, weight gain, serum glucose levels of all pregnant women and glycaemic control of diabetic parturient which could assist in detecting the major contributing factors of macrosomia and plan for appropriate antenatal care, hence help in overcoming the maternal and fetal complications. **Objective:** To determine risk factors and outcomes associated with fetal macrosomia in Iringa Municipality. **Methodology**: Unmatched hospital-based case-control study was conducted between September 2017 and December 2017 involving 61 cases and 122 controls who were women who delivered term babies with macrosomic and normal weight neonates at Iringa municipality. Data collection was through face to face interview using a questionnaire, supplemented by maternal data like maternal age, parity, gestational age, previous macrosomic birth and history of diabetes from the antenatal cards and case notes. Data analysis was done using SPSS version 23. Bivariate and multivariate logistic regression analysis was done to identify risk factors associated with fetal macrosomia. **Results:** Prevalenceof macrosomia was 3.26% in Iringa municipality. Gestation age of ≥40 weeks (AOR 3.56, 95% CI= 1.65-7.69), diabetes mellitus (AOR 16.98, 95% CI= 1.34-211.06), and weight ≥80kgs post-delivery (AOR 10.22 95% CI=2.74-38.12) were associated with delivery of macrosomia. Women with macrosomia had prolonged labour (AOR =3.01, 95% CI=1.437-6.32), 2nd degree perineal tear (AOR=8.87, 95% CI=2.76-28.47) and postpartum hemorrhage

(AOR=5.36, 95% CI=1.00-28.46), and their babies had hypoglycemia (AOR=8.65, 95%CI=3.23 − 23.17) compared to women with normal birth neonates. **Conclusions**: macrosomia is evident in our setting and it was associated with gestation age of ≥ 40 weeks, DM, weight ≥ 80kgs post-delivery and previous history of delivery macrosomic neonate. Macrosomia is found to be associated with maternal complications and newborns hypoglycemia as the immediate neonatal complication. Having discovered the risks and anticipated outcomes would foster early interventions and appropriate management of complications related to macrosomia.

8. Athman, H.B. (2018). Patella Fractures: Patterns, Treatment AndShort Term Outcome at Muhimbili Orthopaedic Institute, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Fractures of the patella are of common occurrence among knee injuries in our day to day life and they pose a challenge to most orthopedic surgeons in terms of treatmentprotocols and the short and long term outcome (results) on the patients. Fractures of the patella account for 1 (one) percent of all skeletal injuries. Objectives: To determine patella fracture patterns, treatment modalities and short term outcomes as seen at MOI. **Methodology:** It is a descriptive prospective study. None probability preferential sampling has been used to select patients with patella fracture who attended MOI for treatment & follow up. A sample size of 40 patients has been estimated as per the sample size estimation formula. The study was conducted for a period of twelve months from June 2016 to May 2017. The patients were evaluated, treatment noted and follow-ups done. Basic information/ data including age, gender, residence, occupation, and mechanism of injury, radiograph findings, mode of treatment and outcome of treatment were recorded in a questionnaire. Alexandre Pailo (2005) functional knee score was used to determine the outcomes. Data was managed in confidentiality and analyzed using SPSS version 20.0 statistical computer package, the results presented in form of tables and bar graphs for easy interpretations, and conclusions made as per the results of the study. **Results, conclusions & recommendations**: Results revealed that majority of patients were at 41- 60 years' age range (40%), followed by 21- 40 years' age range (30%), above 60 years age range (20%) and least 1-20 years age range (10%). On gender, majority of patients were male (90%), the rest were female

(10%). On mechanism of injury, majority of patients sustained RTA (60%), fall (20%) and least by industrial injuries (10%). On pattern of patella fractures, results showed the most common patella fracture pattern to be transverse (60%), followed by comminuted (30%) and least by vertical type (10%). With regard to treatment modalities, majority were fixed by tension band wiring (60%), partial patellectomy (30%) & least by cast immobilization (10%). On treatment outcome, majority of patients treated by tension band wiring (66.7%) were having excellent functional knee outcome, while majority of those treated by partial patellectomy (41.7%) had good oucome and majority of those treated by casting (50%) had fair outcome as per Alexander Pailo et al functional knee score. The study also found that majority of those treated by partial patellectomy (83.3%) had extensor mechanism weakness compared to none of those treated by other modalities. Therefore, this study recommends preservation of patella as a way to achieve & preserve good extensor mechanism with excellent functional knee outcome & irrespective of patella fracture pattern, generally tension band wiring osteosynthesis was associated with excellent functional outcome of the knee. Although TBW was mainly done for transverse patella fractures.

9. Athanas, R. (2018). Truth Telling by Healthcare Providers to Terminally Ill Cancer Patients at Ocean Road Hospital in Dar-Es-Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Truth telling by healthcare providers to terminally ill cancer patients is not only an important aspect of patient care but also a medical fundamental right of a patient. Despite available evidence of significance of truth telling, and the recommendation by the General Medical Council as the statutory regulatory for the medical profession in the United Kingdom (UK) since 2009 and currently Tanzania National Healthy Research Forum, recommend that healthcare providers should give patients information they want or need in a way they can understand, its implementation is still low especially in developing countries. In Tanzania, little is known regarding the factors influencing implementation of the ethical standard of truth telling to cancer patients.This study aimed at examining the factors influencing truth telling by healthcare providers to terminally ill cancer patients at Ocean Road Cancer Institute in Dar-es-

Salaam.The study employed exploratory case study research design using a qualitative approach of data collection to explore factors influencing the implementation of the bioethical standard of truth telling by healthcare providers to terminally ill cancer patients at Ocean Road Cancer Institute (ORCI) in Dar-es-Salaam. Cancer patients at a terminal stage and healthcare providers were purposively selected to participate in this study. Data was collected by using a well-structured set of interview guides to key informantswith open ended questions and audio-recorder; they were Tran-scripted and translated. Thematic analytical approach was applied to arrive at categories through the process of coding and forming key themes. Data was collected between; early April up to early May 2018.Twenty-one (21) study participants were involved; of these 13 were healthcare providers and terminally ill cancer patients were 8. The implementation of ethical principle of truth telling to terminally ill cancer patients by healthcare providers at ORCI was less implemented than what ought to be. This was reported to be influenced by a number of factors; those stemming from healthcare providers include: lack of a comprehensive understanding of Healthcare providers, sympathetic feeling, limited time, doctor-patient's relationship, telling as both good and bad thing, lack of guidelines, lack of adequate facilities, number of patients and multi-disciplinary team. Those factors stemming from patients include; level of understanding, freedom of choice to information, rights to information, lack of prior information, psychological condition and faith and beliefs. And those factors stemming from socio-cultural include; traditional beliefs and cultural communication style and family **Collusion.** There is a gap of truth telling to terminally ill cancer patients by healthcare providers at ORCI. Healthcare providers at ORCI should have ongoing trainings so as to be equipped with knowledge and communication skills about truth telling. The ORCI should have well stipulated guidelines on truth telling to terminally ill cancer patients as how, when, to whom and by whom. The guidelines should spell clearly the qualities of a multi-disciplinary team which by all means should include experts' personnel like oncologists, nurses, psychiatrists, medical ethicists, psychologists and spiritual leaders.

10. Athumani, M.M. (2018). Prevalence and Factors Associated with Schistosomiasis Among Primary School Children in Buhigwe District Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract:

Introduction: Schistosomiasis remains one of the most prevalent neglected tropical diseases among school children. School-based Mass Drug Administration with Praziquantel and Albendazole has been implemented annually in Buhigwe district Tanzania since 2012. However, there has been no survey conducted in this district to determine the current prevalence of this disease which has a high re-infection rate in endemic areas. This study was conducted to provide information on the prevalence and intensity of Schistosomiasis and factors associated with its transmission in the area after scale-up of school-based Mass Drug Administration. Method: A cross-sectional study was conducted among 421 school children from Buhigwe district in Kigoma region. School children were interviewed using a structured questionnaire. Fecal samples were examined for the presence of Schistosoma mansoni eggs using the Kato-Katz method while the urine samples were examined using the filtration technique for the presence of Schistosoma hematobium eggs. Multivariate logistic regression adjusted for age and sex was used to estimate the odds ratio for factors associated with transmission. **Results:** Out of 421 pupils enrolled, 406 pupils provided urine and stool specimens with a response rate of 96.4%. The prevalence of S. mansoni was 33.3% while S. hematobium infection was not detected in all urine samples examined. The prevalence of S. mansoni was significantly higher among children in the age group 6-10 years 40.10% (95% C.I 35.30% - 51.70%, $p<0.01$) compared to the prevalence of 26.79% (95% C.I 22.00-33.20) among those in the age group of 11-17 years. Children of standard one to three were having a higher prevalence of 39.41% (95% C.I 33.2-47.00, $p=0.02$) compared to the prevalence of 27.09% (95% C.I; 20.70-33.10) of those of standard four to seven. An intensity level status was created among those positive (n=135) following WHO guideline with 71.0%, 9.6% and 19.3% for light, moderate and heavy infections intensity respectively. Four variables were significantly independent risk factors for S. mansoni transmission among school children such as age (AOR=2.46; 95% C.I 1.62-3.74), crossing the river with bare feet (AOR = 1.98; 95% C.I; 1.26-3.12), swimming in rivers (AOR = 1.64; 95% CI; 1.02-2.81), and fishing (AOR 2.82 95% C.I. 1.59-4.97). **Conclusion:** Prevalence of S. mansoni is high among school children in Buhigwe district despite the school based MDA conducted one year before the study. This study recommends all schools to provide health education about Schistosomiasis. The parents should prohibit their children to contact with river water to reduce the transmission of this disease.

11. Bachuba, L.I. (2018). Campylobacter Infection: A Cross Sectional Comparative Study Among Children Aged 2 To 59 Months in Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Campylobacter species have been recognized as the leading cause of bacterial enteritis in both developed and developing countries, and the prevalence of Campylobacter infection in children under five years has been reported to be higher than in adults. The rate of Campylobacter infections worldwide has been increasing. Despite increasing prevalence of Campylobacter species as a cause of diarrhea, few studies have been conducted in Tanzania, thus the available information for human campylobacteriosis in the country is sparse. This study creates a clearer understanding of the epidemiology and control of campylobacteriosis in Tanzania. Objective: To determine the prevalence and risk factors for Campylobacter infection in children with diarrhea and those without diarrhea in Dar es Salaam Tanzania. **Methods:** A hospital based cross sectional comparative study was conducted from October 2016 to April 2017. A total of 617 children (312 with diarrhea and 305 without diarrhea) whose parents gave consent were enrolled at the main hospitals and their respective Reproductive and Child Health (RCH-1) clinics. Stool and blood samples were collected from all children enrolled. Stool samples were tested for Campylobacter antigen by ELISA test using Prospec T Campylobacter microplate assay kit. Blood samples were collected for malaria and HIV testing for co-morbidity pattern. Malaria was tested using malaria rapid test and HIV by HIV rapid tests (Bioline and Unigold). HIV DNA/PCR was done for children less than 18 months to confirm their HIV status. **Results:** A total of 617 children (312 children with diarrhea and 305 children without diarrhea) aged 2 to 59 months were recruited from October 2016 to April 2017. The mean age was 17.2 ($\pm$ 11.04) months among children with diarrhea and 16.0 ($\pm$ 12.5) months among children without diarrhea. The prevalence of Campylobacter infection was 16.7% among children with diarrhea and 16.4% among children without diarrhea with no significant difference (p-value = 0.927, OR = 1.020, 95%CI = 0.667-1.560). Drinking unboiled water was significantly associated with Campylobacter infection among children with diarrhea (p-value=0.045, OR=1.845, 95%CI=1.013-3.360). Among Campylobacter infected children without diarrhea, Chicken

keeping (p-value=0.025, OR=2.368, 95CI=1.116-5.027) and HIV infection (p-value= 0.001) were significantly associated with Campylobacter infection although the numbers of HIV infected children were small. There was no significant difference in the clinical presentation among Campylobacter positive and Campylobacter negative children with diarrhea. Conclusion: Campylobacter infection is prevalent in both children with and without diarrhea. Consumption of unboiled water increases the risk of developing diarrhea in children with Campylobacter infection. The clinical presentations of diarrhea are the same in both Campylobacter positive and Campylobacter negative testing children. **Recommendations:** Community education about drinking boiled water and its contribution to the prevention of Campylobacter infection. To put emphasis on personal and food hygiene especially in families practicing chicken keeping to avoid Campylobacter infection. Further cohort studies are needed to determine the synergism of Campylobacter with the other bacteria in the causation of diarrhea and to determine the risk factors which trigger the symptoms development in asymptomatic Campylobacter positive children.

12. Bakari, M. H. (2018). Prevalence of Hearing Loss Among Primary School Children in Mjini Magharibi /District Zanzibar.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Hearing impairment is the most frequent problem in the population, affecting more than 250 million people in the world. Consequences of hearing loss include inability to interpret conversation, often a reduced ability to communicate, delay in language acquisition, economic and educational disadvantage, social isolation and stigmatization (1). **Objective:** The study aims at determining the prevalence of hearing loss among primary school children inZanzibar, which is part of United Republic of Tanzania during the month of June to December 2017. Study design: Descriptive prospective cross sectional study. **Methodology:** This was a prospective cross sectional study which was conducted from selected five public primary schools. The primary sampling unit was primary schools in Mjini /Magharibi District which were selected as representatives of Zanzibar generally. Pupils from selected schoolswere enrolled in the study and screened for hearing impairment in order to detect those with   hearing loss by using diagnostic audiometer. Data was collected from screened children using pure tone

audiometry (PTA) and other information was collected clinically using specialized forms and checklist. A total of 500 primary school children were recruited in this study and the data was analyzed using the SPSSversion 20 program. **Results:** The study was conducted in five different primary schools in Mjini /Magharibi District Zanzibar. Among the pupils screened for hearing impairment there was representation of pupils from standard 3 through to standard 6. A total of 500 children were evaluated, there were 231(46.3%) boys and 269(53.8%) girls screened. Among those screened 464(92.8%) students passed, they were able to hear the arranged tones of screening audiometer. 32(6.4%) failed, they were unable to hear two or more frequencies during the screening test. 4(0.8%) students were excluded from the study due to loss of follow up, there were 28 children who underwent confirmatory audiometry test, among them 25 students were diagnosed to have hearing loss making the prevalence of HL of 5%, they were 2.4%(12) and 2.6%(13) male pupils and female pupils respectively. Among those with hearing loss 16(64.0%) had CHL and 8(32.0%) had SNHL, while MHL was 1(4.0%). 4(4 of 25) had unilateral hearing loss and 21(21 of 25) had bilateral hearing loss. Among those with unilateral HL 3(12.0%) was in the right ear and 1(4.0%) was found to be in the left ear. Most of children had moderate HL 11(44.0%) followed by mild HL 10(40.0%), those with severe HL were 2(8.0%) and 2(8.0%) had profound HL. **Conclusion:** The prevalence of hearing loss in the study participants was found to be 5%. Moderate bilateral CHLwas the most common type of HL, followed by moderate bilateral SNHL mostly from pupils aged 11-14 years old.

13. Banuba, D.G. (2018). Early Functional Outcome of Patients with Isolated Meniscal Injury Treated by Arthroscopic Partial Meniscectomy at Muhimbili Orthopedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Meniscus injury is the common problem occurring due to several causes, and its treatment has evolved from open meniscectomy, arthroscopic total meniscectomy and now arthroscopic partial meniscectomy (or repair) being commonly performed. Currently at MOI, there is increase in the number of patients operated by arthroscopic partial meniscectomy compared to previous time and its outcome is not yet established.**Objectives:** Early functional outcome of patients with isolated meniscal injury treated by arthroscopic partial meniscectomy at

Muhimbili orthopedic institute (MOI) were determined.Materials and **Methods:** A prospective hospital based descriptive study involving adult patients with meniscal injury treated by arthroscopic partial meniscectomy, was conducted at MOI for a period of twelvemonths from June 2016 to May 2017. 50 patients met inclusion criteria and were all enrolled for the study. The patients were assessed and scored using Lysholm knee functional score(LFKSS) before treatment, then 2nd, 6th and 12th weeks post treatment. Data was collected with the help of research assistant guided by structured questionnaire and tool like Goniometer was used to accomplish data collection. Outcome was assessed using Lysholm scores with eight domains at 2nd ,6th and 12th weeks. At 12th week the scores were compared with that before treatment. The data obtained were analyzed using SPSS version 20**. Results:** A total of 50 patients with isolated meniscal injury were enrolled at MOI from May 2016 to December 2016 and were all followed up for 12 weeks each. 5 patients lost to follow up, only 45patients were analyzed at 12th week. Among 45 patients, 28 (62.2%) were male and 17(37.8%) were female with male to female ratio of 2:1; more than half 29 (64.4%) were below 40years and 16 (35.6%) were above 40years. Majority 26(57.8%) were treated 3months and above, and 19(42.2%) less than 3monthsfrom injury. Activity of daily living accounted 18(40%), Sports 13(28.9%), Road traffic accidents10 (22.2%), Falling from height3 (6.7%) and others 1(2.2%). The median Lysholm score was 63±13.61SD before treatment and 100± 6.38SDat twelfth weekpost treatment (p value=0.0001), and mean flexion angle was 108.53±10.83° and 136.55±5.88° degrees at twelfth weeks preand post treatment respectively (p value =0.0001). Functional outcome at twelve weeks postoperatively assessed and graded by Lysholm functional knee score (LFKS) was Excellent for 39(86.7%) and 3(6.7%) attained good results and poor to fair results were seen only on 3(6.7%) patients. Outcome not affected by age (p=0.99), sex (p=0.235) or duration of symptoms (p=0.281) post injury at 12th week. Conclusion: Meniscal injury is more common in males, and majority due to activity of daily living. At our set up, Arthroscopic partial meniscectomy showed excellent to good results(outcome) as most of our patients attained their pre injury state at 12th weeks with full knee function. **Recommendation:** meniscal injury has excellent to good outcome despite of delay in treatment, so operation should alsobe considered even in delayed clinical presentation; and larger, prospective studies are needed to further explore these findings.

14. Babyebonela, L.W. (2018). Factors Associated with Non-Uptake of Measles Rubella Vaccine Second Dose Among Children Aged 18-36 Months in Kinondoni Municipal Council.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: In Tanzania, measles rubella vaccine second dose (MR2) was introduced into routine immunization program in May 2014 and as of 2016, official national coverage for MR2 vaccine was 71% which is low than recommended coverage in WHO- measles rubella elimination strategic plan (≥95%). This reveals that attaining high coverage of MR2 vaccine is still a challenge. There is significant proportion of eligible children not fully protected against measles and rubella disease and factors influencing non-uptake of MR2 have not been explored enough to develop specific interventions to improve vaccination coverage. Main Objective: To determine factors associated with non-uptake of measles rubella vaccine second dose among children aged 18-36 months in Kinondoni municipality. Method: A household based cross-sectional study employing quantitative method with a sample size of 527 children aged 18-36 months was undertaken in Kinondoni municipality, Dar es Salaam, Tanzania during the period of May to June 2018. Four stages cluster sampling technique was used to access the study participants. Face to face, interview using structured questions was used to collect data on factors influencing non-uptake and immunization card information to determine the vaccination status of the child. Interviewed responses were analyzed using Statistical Package for Social Scientist (SPSS) for windows version 22.0 (2013) Armonk, New York (NY), USA. Differences between proportions were examined using chi-square test. Bivariate and multivariate analyses were conducted to identify independent factors associated with non-uptake of MR2. Crudes Odds Ratios (COR) and Adjusted Odds Ratios (AOR) and 95% Confidence Intervals (CI) were calculated. Variables showing associations in bivariate logistic regression (p-value ≤ 0.2) were subjected to multiple logistic regression model using backward elimination, dropping the least significant independent variable until all the remaining predictor variables were significant (p-value ≤ 0.05 and 95% CI not including 1. Results: In this study, 528 children aged 18-36 monthswere recruited. The proportion of MR2 vaccine non-uptake was 17.0%. Health promotion talk (AOR=2.24, 95% CI= 1.52 − 5.31, P-value =0.02) and awareness on MR2 vaccine (AOR=4.90, 95% CI=1.24 − 19.3, p=0.002) showed statistical significant association with non-

uptake of MR2 vaccine. Conclusion: Seventeen percent of the eligible children were not vaccinated with MR2 vaccine. Inadequate health promotion talks and caretaker's awareness on MR2 vaccine contributed significantly to the non-uptake of MR2 vaccine. This study recommends for Immunization and Vaccine Development Program (IVD) to ensure that promotional talks on vaccine are conducted at both health facility and community levels focusing on the importance of vaccination and the need to abide to vaccination schedule. In addition, the Program need to strengthen identification of vaccine defaulters when they visit health facility for treatment or preventive services.

15. Beatus, B. (2018). Prevalence AndAssociated Factors of Ischemic Heart Disease Among Diabetes Mellitus Patients as Judged by Treadmill Stress Test: A Hospital Based Study.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Cardiovascular disease including Coronary Heart Disease (IHD) is currently responsible for 30% of all deaths worldwide. In Tanzania deaths due to IHD has reached 3.08%of the total deaths. Without proper knowledge on DM, these patients will be at increased risk for adverse cardiovascular outcomes and deaths. As the prevalence of DM in Tanzania is estimated at 7.8%, there is paucity of information regarding the prevalence of IHD and its associated factors among DM patients. **Objectives:** The main aim of this study was to determine the prevalence of IHD and the associated factors among DM patients attending DM clinic at Muhimbili National Hospital (MNH). Materials and methods: A hospital based cross sectional study, that involved quantitative methods was used to collect data from 201 systematically sampledpatients attending DM clinic at Muhimbili National Hospital (MNH) in Dar es Salaam. Data were collected over a period of four months from 12th July to 11thNovember 2017. The main outcome variable was ischemic heart disease (IHD), measured as a binary variable using treadmill stress ECG. Data were analyzed using stataversion 14and involved descriptive (univariate proportions), bivariate and multivariate analysis as per study objectives. The measure of association was odds ratios (OR) estimated using binary logistic regression methods. **Results:** The median (iqr) age was 58(12) years with almost one-third (33.3%) of patients beingof older age 60-75years and 60.7% females. The prevalence of IHD among DM patients at MNH was

19.0%. Factors significantly associated with increased risk of IHD were age, i.e. elderly patients compared to young adult (OR: 3.48, 95% CI: 1.16-10.46): alcohol, i.e. past alcohol users compared to those who never taken alcohol (OR: 3.16, 95% CI: 1.36-7.29): total cholesterol i.e. those with high total cholesterol compared to those with normal (OR: 3.15, 95% CI: 1.33-7.49) and those with TC/HDLof high risk ratio compared to those with ideal ratio, OR: 2.17, 95% CI:1.04-4.55). Factors significantly associated with decreased risk of IHD among DM patients were abdominal obesity: those without abdominal obesity compared to those with abdominal obesity (OR: 0.39, 95% CI: 0.18-0.88). Predictors of myocardial ischemia among DM patients were: sex- female compared to males (adjusted OR: 3.90, 95% CI: 1.24-12.23); chest pain: past history of chest pain compared to those who never had chest pain (adjusted OR 3.40, 95% CI: 0.98-11.87); past or current history of cigarette smoking compared to those who never smoked, (adj OR 1.04, 95% CI: 1.01-1.04); those with high blood urea compared to those with normal levels (adjusted OR: 5.86, 95% CI: 1.95-17.56). Other predictors were duration of DM treatment, time since diagnosis of DM, Blood pressure, high triglycerides and very high TR/HDL ratio. **Conclusion:** The prevalence of IHD among DM patients was high, found to be 19.0%. Factors associated with increased risk of myocardial ischemia were older age, past history of using alcohol, history of obesity and abdominal obesity, high total cholesterol and high-risk TC/HDL ratio. Predictors of myocardial ischemia were being female, past history of chest pain, past or current history of cigarette smoking, higher than normal levels of blood urea, blood pressure, duration of treatment, triglycerides and very high TR/HDL ratio. **Recommendations:** Awareness and knowledge about IHD and the associated factors should be addressed to diabetic patients as prevalence is high. Clinical efforts directed at comprehensive evaluation of the DM patients for myocardial ischemia with earlier detection of the predictors will aid in improving diagnosis and management thus lessening the complications associated with IHD. Approaches aimed at early DM diagnoses, maintaining DM patients in treatment and achieving normal blood pressure are herein recommended.

16. Bilaro, E. (2018).Hiv Viral Suppression Among Adults On Antiretroviral Therapy AtTemeke Regional Referral Hospital Care and Treatment Clinic, Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: HIV viral load test has been recently rolled out as the standard of care for monitoring patients' response to Antiretroviral Therapy (ART) in Tanzania. Scarce information on HIV viral suppression exists in Tanzania since the adoption of this intervention at public health level. **Objectives:** This study aimed at determining HIV viral suppression rate among patients attending at Temeke regional referral hospital care and treatment clinic within twelve months of using antiretroviral therapy. **Methodology:** Two study designs were used; a hospital-based retrospective cohort study was conducted among HIV patients initiated on ART between May and November 2016 at Temeke Hospital, Dar es salaam, Tanzania to assess proportion of patients with viral suppression after one year of using ART, and a cross-sectional component was used to assess factors associated with HIV viral suppression. Viral load suppression was defined as HIV-RNA below 50 copies per ml. **Results:** A total of 484 patients were retained at Temeke Regional Referral hospital CTC after 12 months of initiation. Among these, 419 (86.6%) patients had HIV viral load measurements within 12 months of ART use. HIV viral suppression was achieved in 318 (75.9%) patients between 6th and 12th month of ART. Factors associated with HIV viral suppression at 12 months were; good adherence to ART; (OR: 11.4; 95% CI 1.1 – 115.5; P = 0.04) and baseline CD4 + T lymphocyte count ≥ 200 cells/µl (OR: 11.2; 95% CI 1.4 – 87.2; P = 0.02). **Conclusion:** HIV viral suppression at Temeke HIV CTC is still below the recommended WHO target to end AIDS epidemic by 2030; which requires 90% of patients on ART to have viral suppression to attain the sustainable development goal, SDG (3.3). Earlier initiation of ART among HIV patients would significantly improve HIV viral suppressi

17. Boniphace, C. (2018). Evaluation of The Antimalarial Activity and Sub-Acute Toxicity of the Polyherbal Preparation Used as Malaria Remedy in Tarime District.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Malaria continues to be a threat to lives and economic growth particularly in sub Saharan Africa countries. Various communities in malaria endemic regions have been using traditional herbal preparations for treatment of malaria; however, most of herbal preparations used lack scientific information on their safety and antimalarial effectiveness to support their use.

Main **objective:** This study aimed to assess the antimalarial activity and sub-acute toxicity of the polyherbal preparation composed of Bridelia micrantha, Mussaenda arcuata, Vangueria apiculata and Tarenna pavettoides subspecies gillimanii used in Tarime district for treatment of malaria. Materials and **Methods:** The extract of the polyherbal preparation of four medicinal plants was prepared according to instructions given by the traditional healer and extracts of individual plant leaves were obtained by 80% ethanolic extraction. Both the aqueous polyherbal and individual plant ethanolic extracts were tested for their chemo-suppressive antimalarial activity against Plasmodium berghei infected mice. The percentage parasitaemia, percentage suppression, mean survival time and body weight of P. berghei infected albino mice were used to assess the antimalarial effectiveness of the polyherbal preparation and individual plant extracts. A limited dose toxicity of the polyberbal extract was tested in three animals one at a time at 2000 mg/kg. The sub-acute oral toxicity test of the polyherbal preparation at 500, 1000 and 2000 mg/kg dose levels given for 28 days was carried out as per the Organization for Economic Co-operation and Development (OECD) guidelines 407. Changes in body weight, clinical signs, hematological, serum biochemical and histopathogical parameters of test animals administered with the polyherbal extract were evaluated with reference to control animals. The experimental results were expressed as mean ± SD and compared by One Way ANOVA followed by post-hoc Tukey's test in SPSS programme version 20. The difference was considered statistically significant at the level of $p \leq 0.05$. **Results:** The polyherbal extract did not show antimalarial activity against P. berghei infected mice upon 4-day oral administration of doses 100, 250 and 500 mg/kg. For individual ethanolic extracts, none of the extracts exhibited significant antimalarial activity against P. berghei in the infected mice. A limited test for the polyherbal extract at 2000 mg/kg revealed it to have no immediate toxicity effects to treated animals. In the sub-acute toxicity study no significant change was observed in the body weights, clinical signs, hematological and biochemical parameters in wistar rats administered with the polyherbal extract at doses of 500, 1000 and 2000 mg/kg body weight compared to control wistar rats treated with distilled water. The histopathological analysis of the animals' organs revealed no significant difference between the control and test groups except at 1000 and 2000 mg/kg where variable changes were observed in the stomach. **Conclusion:** The polyherbal extract did not show antimalarial activity against P. berghei in albino mice. The sub-acute toxicity results appeared to

show that the polyherbal extract is safe at lower doses. Recommendations: Further studies should be done focusing on the toxicity profiles of individual plants in the herbal combination.

18. Buay, P.B. (2018). Assessment of Lifestyle and Social Related Factors in Patients with KidneyDiseases, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: The prevalence of kidney disease is now increasing and contributes to an increased burden of disease to many low income countries' health systems. The incidence of the disease is estimated tobe high and its treatment is unaffordable due to high cost associated with medication and treatment modalities. This brings more challenges especially for patients in low income countries like Tanzania where their low social economic status denies them access to high cost treatment such as dialysis. Aim: The main **objective** of this study was to assess lifestyle and social related factors in kidney diseases patients in Tanzania. **Method:** This study was conducted at MNH; the hospital was purposely selected because it is one of the national referral hospital providing specialized renal services. The target population for this study was all patients who have developed kidney diseases exclude low income unable to afford dialysis. A total of 374 respondents who had renal disorders were included. Data were collected using open and closed questions which were divided into several parts capturing demographic characteristics, lifestyle and social related factors to kidney diseases. Data from questionnaires were cross-checking to detect errors and omissions, coded according to the number of variables and their responses and finally tabulating into the complete dataset. In addition to that, statistical analysis was performed using the SPSS 20 software program. The data were analyses by descriptive statistics, including the percentages. **Results:** Findings of the study revealed that the prevalence of kidney disease in this study was more in males (63.6%) than in females (36.4%). Aged between 45 and 60 years were the most group with highest (33.42%) and (28.9%) had age of above 60 years while the rest were below 45 years. Mean while 58% were married and the rest were single, widowed or separated. About 35.8% had primary education followed by 34.5% who had secondary education. The rest either had higher education or did not have any formal education. Existence of previous chronic disease, 25.9% reported to had diabetes mellitus prior to development of kidney disease. With regard to lifestyle related factors, it was found that

physical activity a positive effect on any chronic diseases conditions. The number of participants who were physically inactive was higher than that of the physically active. In this study about 27.00% of the participants only reported to exercise daily while 53.7% reported to not exercise at all. Meanwhile majority of participants were having income range between 100,000 Tshs-500,000Tshs per month (44.38%). More than half of the participants were also taking alcohol (55%). About 34.49% of participants indicated to drink more than 3 drinks per day. Weight of an individual on the other hand has shown to be risk of kidney disease; about 44.38% of participants were overweight about 17% were obese. **Conclusion:** It can be concluded that both social and lifestyle related factors identified in this study associated with the kidney disease. These findings supplement the previous findings which were reported by other studies conducted in different parts of the world. More studies are needed and community mobilization in Tanzania to prevent the consequences of these factors that can be modified by the healthy lifestyle practices.

19. Bwire, G. (2018). Magnitude of Immunoglobulin G Responses to Plasmodium Falciparum Antigens Between Healthy Children with Normal Hemoglobin and Homozygous Sickle Cell Trait.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Sickle hemoglobin (HbS) is protective against malaria, and protection is more marked in heterozygous (HbAS) than in homozygous (HbSS) individual. Evidence suggests that both innate and adaptive immunity are required for protection. This study explored the relationship between magnitude of IgG responses and malaria protection in HbSS disease. **Objective:** To compare levels of IgG antibody responses to Plasmodium falciparum antigens between malaria free children with HbSS and those with normal hemoglobin (HbAA) living in malaria endemic region. **Methodology:** Plasma samples were tested for antibodies to Plasmodium falci parum Erythrocyte Binding Antigen (PfEBA-175), Plasmodium falciparum Zygote and Ookinete Surface Protein (yPfs28C: Recombinant), Plasmodium falciparum Gametocyte Protein (Pfg27) using Plasmodium falci parum Enzyme Linked Immunosorbent Assay (ELISA). Mann Whitney U test and independent t test were used to compare levels of continuous variables between the two groups (HbSS Vs HbAA) whereas linear regression was used to characterize relationship between concentrations of IgG antibodies and independent

variables. A two tailed P value < 0.05 was considered statistically significant. **Results:** Among 220 children enrolled into the study, 54% were males and 46% were females. Children with HbSS were predominantly younger, underweight and anemic than children with HbAA. The differences in age, body weight and hemoglobin levels were HbSS (9. ± 3.1 years) vs HbAA (10 ± 3.2 years), p = 0.031, HbSS (22.1± 7.3 kg) vs (27.6 ±11.8 kg), p < 0.0001, HbSS (8.2 ± 1.5 g/dl) respectively. The magnitudes of IgG responses were significantly higher among children with HbSS than with HbAA. The median IgG levels to PfEBA-175, Pfg27, yPfs28C antigens were HbSS 20.7 ng/ml (IQR; 18.1-25.6) vs HbAA 2.3ng/ml (IQR; 1.21 - 3.04), P<0.0001, HbSS 2.76 ng/ml (IQR: 2.08 5.69) vs HbAA 1.36 ng/ml (IQR: 1.28 − 1.76), p < 0.0001, and HbSS 26592 ng/ml (IQR:10817- 41462) vs HbAA 14164 ng/ml (IQR; 3069 - 24302) p <0.0001, respectively. In both groups, an increase in age, body weight, or hemoglobin level had no impact on the levels of IgG specific immune responses to Plasmodium falciparum antigens. **Conclusion:** This study found significantly higher levels of malaria specific IgG responses in children with HbSS than in children with HbAA, indicating that IgG antibodies play a role in reducing the incidence of malaria in children with HbSS.

20. Chagula, H.R. (2018). Assessing The Involvement of Private Health Facilities in Pharmacovigilance Activities in Selected Regions in Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Poor quality products, adverse drug reactions and medication errors greatly influence health care system by negatively affecting patient care and increasing healthcare cost. Reporting of these parameters may help to improve patient health care. In Tanzania despite the establishment of Tanzania Food and Drug Authority and all the efforts made by the authority, under-reporting of the aforementioned pharmacovigilance areas is still a big challenge in the country. **Objective:** To assess the involvement of private health facilities in pharmacovigilance activities in selected regions in Tanzania. **Methodology:** This was a descriptive cross section study, conducted in Mwanza, Arusha and Mbeya. Multistage random sampling technique was used in selecting private healthcare facilities for the purpose. One hundred sixty nine (169) health care facilities were visited and assessed using checklist and one hundred and ninety two

(192) health care providers were interviewed using standardized questionnaires. Descriptive statistics was used and P< 0.05 was considered to be statistically significant. **Results:** The study shows that 17% of the participants had good knowledge on pharmacovigilance activities. Results also show that 10.7% of the facilities had system for monitoring and reporting adverse drug reactions, poor quality products and medication errors. None of the healthcare facilities studied had any guidelines on how to document and send reports to TFDA. In this study only 9.3% of the respondent who encountered adverse drug reactions and only 9.4% of the respondents who encountered poor quality products reported the encounter to TFDA   Regarding knowledge, 69.8% of the participants had no knowledge on how to report, where and when to report ADRs, poor quality products and medication errors. Results also show that there was a statistical significant association between trainings (P=0.000), type of profession of health care providers (P=0.000) and type of healthcare facilities (P=0.017) and knowledge of health care providers in pharmacovigilance activities **Conclusion:** Majority of the participants had poor knowledge on pharmacovigilance activities and only few facilities had the system for monitoring and reporting adverse drug reactions, poor quality products and medication errors. Availability of pharmacovigilance guidelines in the health facilities, adequate training of health workers, frequent supervisions and timely distribution of forms for reporting adverse drug reactions, medication errors and poor quality products may help to improve the documentation and reporting of these Pharmacovigilance activities.

21. Charles, F. (2018). Knowledge, Attitude and Utilization of Prostate Cancer Screening and Associated Factors Among Men in Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Prostate cancer carries a high morbidity and mortality if it is not diagnosed early. Studies have reported poor knowledge and attitudes toward Prostate cancer as barriers to utilization of screening services. However, there is limited information of the public's knowledge, attitude and utilization of prostate cancer screening among men in Dar es Salaam and therefore relying information from elsewhere in the world, despite the fact that influencing factors for utilization are not the same. This study therefore assessed the knowledge, attitude and

utilization of prostate cancer screening and their associated factors among men above 40 years in Dar es Salaam. **Objective:** The aim of the present study was to assess knowledge, attitude and utilization of prostate cancer screening and associated factors among men aged above 40 years in Dar es Salaam, Tanzania. Design: Descriptive Cross-Sectional study was conducted in Dar es Salaam from May to August, 2018. **Methodology:** Multistage random sampling was used to recruit participants and structured questionnaires were used to collect information. Data were checked for completeness before were entered and analyzed using the Statistical Packages for the Social Sciences (SPSS) version 20.0. Categorical variables were summarized using proportions while continuous variables were summarized as Median and Inter-Quarterly Range (IQR), Chi square test was used to compare differences between proportions and binary logistic regression modeling was used to determine predictor factors for utilization of prostate cancer screening. Both crude and adjusted Odds ratio were calculated and presented with corresponding 95% Confidence intervals. All the analyses were two-tailed and significance level set at 5%. **Results:** A total of 388 men with median age of 53 (IQR 44-55) participated. Half (52.1%) of the respondents had poor knowledge about prostate cancer and screening. Only 30 (7.7%) respondents screened for prostate cancer. Regression analysis revealed that old age [Odd Ratio (OR), 12.0; 95% CI, 4.3-33.4; P<0.0001] and Monthly income [OR, 12.5; 95% CI, 4.3-36.7; P<0.0001] and knowledge [OR, 37.1; 95% CI, 5.0-275.5; P<0.0001] are the significant predictors for utilization of prostate cancer screening among respondents. **Conclusions:** This study reported poor knowledge about prostate cancer and low utilization of prostate cancer screening among respondents. The education level was a significant factor associated with good knowledge about prostate cancer and screening. Older age, Income and knowledge were identified as significant predictors for utilization of prostate cancer screening. Therefore, provision of knowledge and appropriate information on prostate cancer and screening is highly required.

22. Claire, N. M. (2018). High-Risk Histopathologic Features Analysis of Primary Enucleated Retinoblastoma in Tanzania Patients.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Inocularretinoblastoma; massive choroid infiltration, post-laminar optic nerve invasion, invasion of the optic nerve to the surgical margin, sclera invasion, and extrascleral extension are now accepted as the high-risk factors for local recurrence, metastasis, and indication for adjuvant therapy. The presence of high-risk histopathologic features in enucleated eye specimen is an indication for adjuvant chemotherapy to limit tumor local recurrence and systemic metastasis. **Objective:** To describe the histopathology of retinoblastoma and determine prevalence of high-risk histopathologic features in primary enucleated eye specimens of retinoblastoma in Tanzania. **Methods:** This was a retrospective cross-sectional histopathologic review of 132 primary enucleated eyes with retinoblastoma during a 4-year period from January 2013 to December 2016 in the Histopathology Unit at Muhimbili National Hospital. We retrieved patients' records, slides and blocks for histology. Demographic, clinical and histopathologic data were collected using excel data collection sheet. Prevalence of high-risk histopathologic features, proportion of the patients that needed adjuvant therapy and proportion of completeness of histopathology reports were determined. Continuous variables were summarized using mean, median, mode, standard deviation and range. Frequency tables, bar charts and pie charts for categorical variables were done by excel. The association between demographic, clinical data, growth pattern and the need for adjuvant therapy was established by univariate and multivariate logistic analyses using Statistics and data (STATA) software, version 13. The association was considered significant for a p-value less than 0.05. **Results:** Sixty-eight of 132 participants were male. The median age was 33 months, ranging from 3 to 108 months. Bilateral disease was noted in 23/132 participants (17.4%). Leukocoria was the predominant presenting sign. The mean duration of sign to surgery was 11.06 months. Eight two of 132 participants (62.1 %) were in clinical stage group E. One or more high-risk histopathologic features were noted in 62.9% (83/132) participants. Massive choroid infiltration was recorded in (59.8%), post-laminar optic nerve invasion in (7.5%), surgical margin optic nerve invasion in (30.3%), scleral invasion in (10.6%) and extrascleral invasion in (31.8%).The combination of surgical margin optic nerve invasion andextrascleral invasion was the overall high-risk feature encountered 30.1% (n=25/83).Statisticallysignificant association was notedbetween the need for adjuvant therapy and symptoms duration period more than six months, clinical stage group E and

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both mixed and exophytic tumor growth patterns. Half of the histopathology reports issued for our participants during the study period were found miss complete information about tumor extension and presence or absence of high risk features. **Conclusion:** The prevalence of retinoblastoma high-risk histopathologic features in Tanzania is high. Though some demographic and clinical factors may predict the presence of high-risk histopathologic features, the histopathology remains the gold standard to determine who need adjuvant therapy in intraocular retinoblastoma after enucleation.

23. Damiani, D.K. (2018). Mortality and Its Predictors Among Children Admitted in The General Paediatric Ward Muhimbili National Hospital from October 2017 To April 2018.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Child mortality is one of the sensitive indicators of a country's development. Global under 5-mortality is still high especially during the neonatal and infant period. Globally, annual under-five mortality has declined from 91 to 43 per 1000 live births from 1990 to 2015. In Tanzania, under-five and infant mortality rates declined from 147 to 67 and 99 to 43 deaths per 1,000 live births in the same period, respectively. There is variation in the causes of death among different age groups. More interventions are needed during these periods to reduce mortality. Objective of this study: was to determine mortality rate and its predictors among children admitted in the general paediatric wards, Muhimbili National Hospital from October 2017 - April 2018. **Methodology:** A prospective cohort study was designed to investigate the predictors of deaths occurring among children aged from 1-59 months admitted in the paediatric department wards from October 2017 to April 2018. Nine hundred and twenty-five (response rate 94.9%) consecutively admitted children were recruited and followed up until discharge or death. The cumulative incidence rate of mortality was calculated. Causes of death were identified and risk factors associated with mortality were assessed. Multivariate analysis was conducted to determine and quantify the relationship between different predictors of deaths. P-value of <0.05 was considered statistically significant. **Result:** A total of 925 children aged 1-59 months with a median age (IQR) of (13 (6, 26) months, male: female ratio of 1.5:1 participated in the study. The overall mortality rate was 12.2% (95% CI: 10.2%-14.5%). The leading underlying causes of

death were septicaemia (27%), malnutrition (12%), congenital heart disease (12%), pneumonia (11%) and HIV (9%). More deaths were observed at night, during the first 24 hours of admission and weekends. Predictors of mortality were found to be low wealth quintiles (lowest quintile (AOR=4.0; 95%CI: 1.19-13.51), second quintile (AOR=5.2; 95%CI: 1.65-16.69) and middle quintile (AOR=3.6; 95%CI: 1.14-11.33)), unconsciousness on admission (AOR = 18; 95%CI: 6.70-56.82), inability to feed (AOR = 5.7; 95%CI: 1.97-16.51), lethargy (AOR = 4.9; 95%CI: 2.32-10.40), severe wasting (AOR = 4.5; 95%CI: 2.49-8.10) and respiratory distress (AOR = 2.6; 95%CI: 1.40-4.97). **Conclusion:** Mortality rate is still high compared to the WHO target. More deaths were observed during the first 24 hours of admission. Infectious diseases and malnutrition were the leading causes of death. Low household wealth, unconsciousness, inability to feed, lethargy, severe wasting and respiratory distress were significant predictors of deaths. **Recommendation:** Care of the children should be improved in the first 24 hours of admission, during the nighttime and weekends. Clinicians should closely monitor children with predictors of mortality as they have a higher risk of dying.

24. Deng, A.W. (2018). Titleclinical and Histopathological Characteristics of Patients with Glomerulonephritis Syndrome Attending Renal Unit at Muhimbili National Hospital in Dar Es Saalam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: The histologic pattern of specific glomerulopathies and their related clinical presentation vary according to age, sex, race, socioeconomic status and geographic location. The underlying histopathological pattern of patients presenting with glomerulonephritis syndrome in Tanzania is virtually unknown. **Objectives:** This study was set to determine different Biochemical and histopathological patterns of glomerulonephritis syndrome at Muhimbili National Hospital in Dar es Salaam Tanzania. Patients and Methods: Descriptive hospital based case series, all adults from (18yrs and above) with proteinuria and hematuria who underwent renal biopsy from April 2017- December 2017 were consecutively recruited into this study. Patients infected with HIV, hepatitis B virus and hepatitis C virus were excluded due to resources constraints. **Results:** 55% participants with glomerulopathies were enrolled for this study, but40 were eligible for percutaneous renal biopsy. Two-thirds of participants were female

(67.5%) with mean age (±SD) of 32.7 (9.8) years. on clinical characteristics the most common symptoms were Edema 31(77.5%) and Foamy urine 31(77.5%) followed by oliguria 17(42.5%), hypertension 14(35%) finally fever and other symptoms 5(12.5%). The commonest lesions were Focal segmental glomerulosclerosis (32.2%), followed by minimal Change disease (20.0%) and membranous nephropathy (17.5%). Membranoproliferative glomerulonephritis, IgA nephropathy and was (5.0%). Among others histologic findings including secondary glomerulopathiesrenal amyloidosis and Lupus nephritis were (5.0%) each, inconclusive findings (10.0%) and undetermined due to excessive fibrosis (1%). Conclusion: Primary glomerulopathies in Tanzania occur more commonly among young age (≤ 40 years). Female patients were common presented with glomerulonephritis syndrome, while secondary glomerulopathies were presented in both Gender. There is considerable heterogeneity in the histologic spectrum of glomerulopathies which is influenced by age and a gender factor, Focal segmental glomerulosclerosis was the leading cause of primary glomerulopathies in this study. **Recommendation:** We recommend that kidney biopsying should be part of routine evaluation for patients with glomerulonephritis syndrome in our setting before giving corticosteroid and other adjuvant therapy. The findings from this study underscore the need to start and maintain the Tanzania Kidney Biopsy Registry that will be a great resource for future research on the causes and prevention of kidney diseases in Tanzania.

25. Dilunga, G.D. (2018). Pain Assessment and Management of Adult Trauma Patients Presenting at The Emergency Medicine Department of Muhimbili National Hospital, Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Proper pain assessment is a core component in management of trauma patientsbut prior literature has suggested that pain management is inadequate in emergency settings. With the development of emergency medicine in Low Income Countries (LIC), the procedures for pain assessment and management of trauma patients have not been well studied and protocols have not been established. We aimed to describe practices of pain assessment and management in an emergency department in Tanzania**. Methods:** This was a prospective cohort study of consecutive adult trauma patients presenting to the Emergency Medicine Department of

Muhimbili National Hospital (EMD-MNH) in Dar es Salaam, Tanzania from July 2017 to December 2017. Case report form (CRF) was used to record demographics andclinical characteristics of participants, whether or not pain was assessed at either triage or in the treatment area, and the administration of pain medications. The assistant also assessed pain independently with the Numeric Rating Scale (0-10). Outcomes were proportions of patients who received pain assessment, patients who received pain medication and the medications administered. **Results:** We enrolled 311 (10.9%) trauma patients during the period of study. The median age was 32 years (IQR 25-43 years) and 228 (73.3%) were male. The most common mechanism of injury was motor vehicle crash 185 (59.4%), and of these, 87 (47%) involved motorcycles. About 310 (99.6%) patients had pain assessment documented arrival, and 285 (91.6%)had a second assessment. Pain scores obtained by the research assistant were: mild pain score (NRS 1-3) 154 (49.5%) patients; moderate pain (NRS 4-6) 68 (21.8%); and severe pain (NRS 7-10) 89 (28.7%). Pain medications were given to 144 (46.3%) patients;29(20.1%) of those with mild pain, 41(28.7%) of those with moderate pain score and 74(51.4%) of those with severe pain. The use of opiates increased with increased pain severity. **Conclusions:** In this ED in LIC, the assessment of pain was well documented, however less than half of patients with documented pain received pain medication while at the ED. Future studiesshould focus on identification of factors affecting the provision of pain medications to trauma patients in the ED.

26. Doanati, G. (2018). Risk Factors for Birth Weight in Term Pregnancy at Muhimbili National Hospital Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Low birth weight (LBW) is defined as a condition where the weight at birth of a newborn is less than 2,500 grams according to World Health Organization. Epidemiological studies have shown infants born with LBW are approximately 20 times more likely to die compared to those born with normal birth weight. It is estimated that at least 13.7 million infants are born every year at term with LBW, representing at least 11% of all newborns in developing countries. **Objective:** This study aimed to ass es risk factors for LBW in term pregnancy among women delivered at Muhimbili National Hospital (MNH), Dar es Salaam. Materials and methods: Unmatched hospital based case control study was conducted in maternity labour wards

of MNH from October to November 2017. Informed consent was sought from eligible respondents after being provided with information on the aim of the study, benefits and right to withdrawal. Data was collected by interviewing the participants using the structured questionnaire in Swahili language and were coded and entered and analysed using SPSS statistical software version 20. Bivariate analysis and then a multivariate analysis for those variables where statistical significant with p-value < 0.05, was done to determine independently factors associated with LBW. **Results:** A total of 408 women (102=cases and 306-control) were enrolled in this study. The mean weight of the newborns among the cases was 2141.18grams (SD: 285.59) and controls was 3240.95gram (SD: 405.59) and prevalence of LBW in this study was 7.9%. After controlling for confounders, the following factors were identified associated with LBW. These factors include maternal age <20 years (AOR: 3.9; 95% CI: 1.5-10.2), previous history of LBW (AOR: 25.8; 95% CI: 7.7-86.9), not using ITN during pregnancy (AOR: 2.5; 95% CI: 1.1-5.7), Hb test done <4 during pregnancy (AOR: 2.5; 95% CI: 1.1-5.6), HTN during pregnancy (AOR: 8.7; 95% CI: 3.4-22.2) and vaginal bleeding ≥2 days in 2nd or 3rd trimester (AOR: 4.4; 95% CI: 1.2-15.9). **Conclusion:** Low birth weight is an important factor for perinatal morbidity and mortality and is a common problem in the developing world. Our results show that term LBW is related to multiple causes and that most of them are preventable with educational programs and also strict and regular prenatal care. Decreasing incidence of LBW children can be achieved by cooperation between different parts of health and clinical systems.

27. Ebrahim, S.N. (2018). Dysglycaemia and Its Associated Factors Among Patients with Chronic Kidney Disease Attending Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Chronic kidney disease (CKD) is a non-communicable disease (NCD) with global impact and importance. It is a known cause of significant morbidity and mortality as well as an economic burden. CKD has been associated with other NCDs like hypertension and diabetes mellitus. It has also been found that CKD has an impact on the control of blood glucose levels resulting in glycaemic dysregulation through various mechanisms; causing either hypoglycaemia

or hyperglycaemia. **Objectives:** The objectives of this study were to determine the level of dysglycaemia and its associated factors in patients with CKD attending the Muhimbili National Hospital. Materials and methods: This was a cross-sectional hospital-based study involving 328 sampled CKD patients attending the MNH renal unit. An OGTT was done and their level of glycaemia assessed. The data was analyzed by the SPSS software version 20.0. The study duration was from July 2017 – January 2018. **Results:** Of the 382 study participants recruited into this study, 128 (39%) were known to be diabetic. The remaining were screened and 7/328 (2.1%) were newly diagnosed diabetes and 17/328 (5.2%) were found with impaired glucose tolerance. 7/128 (5.5%) and 20/128 (15.6%) of the 128 known diabetics were found to have hypoglycaemia and burnt-out diabetes respectively. Age above 50 years (OR 2.92, 95% C.I. 1.71 - 4.99), presence of hypertension (OR 2.96, 95% C.I. 1.25 – 7.02), and a positive family history of diabetes (OR 7.98, 95% C.I. 3.74 – 17.02) were found to be independent factors significantly associated with dysglycaemia. **Conclusions:** Diabetes is a frequent condition occurring among CKD patients attending MNH. Impaired glucose tolerance is also found to have a substantial magnitude in this population. Age above 50 years, a positive family history of diabetes, and presence of hypertension were independent factors associated with dysglycaemia among CKD patients attending MNH

28. Esmailji, H. (2018). Efficacy of Single Dose Versus Multiple Dose Antibiotic Prophylaxis in Clean Orthopedic Surgery at Muhimbili Orthopedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Despite advances in infection control practices, surgical site infections (SSI) remain a substantial cause of morbidity and mortality among hospitalized patients. Bacteria contaminate every surgical wound. The most common source is the endogenous flora of the skin, which are usually comprised of aerobic gram-positive cocci. Optimal prophylaxis ensures that adequate concentrations of an appropriate antibiotic are present in the serum and tissue during the entire time the surgical wound is open and at risk for bacterial contamination. Anti-microbial prophylaxis after wound closure does not provide additional protection against SSI. Objective: To determine the efficacy of Single dose (intervention arm) vs multiple dose (control arm)

antibiotics prophylaxis in preventing SSI at MOI from October2014 to February 2015. **Methodology:** A hospital based prospective interventional, open label, two-armed, single-centred, randomized non-inferiority clinical trial. The study was conducted among 108 patients, randomized between single dose of antibiotic prophylaxis (intervention arm) and 5 days' dose (control arm), undergoing intramedullary nailingfor closed femoral fractures. Patients were evaluated by means of structured questionnaire and then followed up on Day 3, 10 and 30 for SSI symptoms and signs. The data obtained was analyzed by SPSS version 15.0. **Results:** A total of 175 participants were eligible for the study, of whom a total of 108 were analyzed (41 in intervention arm and 67 in control arm). At Day 10, the rate of superficial SSI was 4.87% (2/41) in intervention arm and 4.48% (3/67) in control arm (p-value= 0.923). On Day 30, 2.44% (1/41) in intervention arm and 1.49% (1/67) in control arm still had persistence of SSI after treatment (p-value= 0.723). The relative risk for developing SSI at Day 10 was 1.089 (CI 95%; 0.190-6.247) and at Day 30 was 0.82 (CI 95%; 0.076-8.73). **Conclusion:** The majority of participants in both arms were between 30-40 years of age, with male preponderance. The appropriate timing of antibiotic prophylaxis during surgery (between induction of anesthesia and incision) is essential in reducing SSI. The single dose (Intravenous Ceftriaxone) had the same efficacy over the multiple dose regimen in preventing SSI as the difference in prevalence of SSI in both arms were not statically significant.

29. Faustine, F.R. (2018). Diebetic Kidney Disease Among Children AndAdolescents with Type 1 Diabetes in Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Type 1 diabetes (T1D) is a growing concern worldwide. Diabetic Kidney Disease (DKD) is one of the common co-morbidity and cause of mortality in children and adolescents with T1D and the most common cause of chronic kidney disease (CKD) worldwide. Early screening and intervention can delay the progression to End Stage Renal Disease (ESRD). **Objective:** To assess the magnitude of diabetic kidney disease and the associated factors in children and adolescents with type 1diabetes attending diabetes clinics in Dar es Salaam. Methods: A hospital based cross sectional study was conducted amongst One hundred and seventy-five children and adolescents with type 1 diabetes, aged less than 18yrs with disease

duration of at least 2years attending diabetes clinic at Muhimbili National tertiary hospital and Amana, Temeke and Mwananyamala regional hospitals. Participants were consecutively recruited and screened for DKD on the basis of albumin-to-creatinine ratio (ACR)/proteinuria and estimation of glomerular filtration rate (eGFR). A detailed clinical examination, demographic interview and necessary investigations such as serum creatinine and glycated hemoglobin (HbA1C) were performed from each patient. SPSS version 23 was used to process data and logistic regression analysis was done to determine factors associated with diabetic kidney disease. A p-value of 0.05 was considered statistically significant. **Results:** The proportion of children and adolescents with diabetic kidney disease was 58.9% (103/175). The magnitude according to individual form of DKD was 40% (70/175), 22.3% (39/175) and 9.7% (17/175) for microalbuminuria, reduced eGFR and proteinuria respectively. About 8% of patients with microalbuminuria and 5.1% of patients with proteinuria had reduced eGFR. High blood pressure was significantly associated with proteinuria (p=0.026); OR(95%CI) while other factors such as glycated hemoglobin (HbA1C), body mass index (BMI) and diabetes duration were not significantly linked to any form of DKD. Conclusion and **Recommendations:** Diabetic kidney disease was noted to be prevalent in type 1 diabetic children and adolescents with microalbuminuria being the commonest form of DKD, followed by reduced eGFR (<60mL/min/1.73m2) and proteinuria. High blood pressure predicted the occurrence of proteinuria. More than half of participants had elevated HbA1C (≥7%), however it was not a significant link to DKD. Routine screening for early detection of DKD and timely intervention is necessary in these patients hence delaying the progression to ESRD. The cause of high rates of HbA1c needs to be identified urgently and strategize for intervention.

30. Florence, M. (2018). Indications and Perceptions Towards Eye Removal Surgeries Among Adult Patients and Parents/Guardians of Children Whose Eyes Were Removed at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Surgical eye removal is a therapeutic modality to treat life threatening ocular diseases such as malignancy, infections that are unresponsive to treatment, painful blind eye and phthisical eyes with severe cosmetic defects. It aims at saving life and improving quality of life

rather than vision. However, eye removal surgery especially without considering cosmesis, causes physical, socioeconomic and psychological effects such as shame, loneliness, sadness, insecurities, fear, social avoidance, stigma and regrets. **Aim:** To assess indications and perceptions towards eye removal surgeries among adult patients and parents/guardians of children whose eyes were removed at Muhimbili National Hospital. Materials and **Methods:** A descriptive hospital based cross sectional study was conducted from June to December 2017. The study employed both quantitative and qualitative methods. A total of 112 participants were recruited using non-probability consecutive technique. Two focused group discussions and two in-depth interviews were conducted using purposive sampling technique. A questionnaire with closed and open-ended questions and verbatim interviews were used to collect data. Statistical package science computer software (SPSS) version 20.0 and systematic thematic approach were used to analyze data. Ethical approval was attained from Senate research and publications committee of Muhimbili University of Health and Allied Sciences (MUHAS) and Directorate of research and publications of Muhimbili National Hospital (MNH). **Results:** Patients who underwent eye removal surgery were 112, 50 (45%) children and 62 (55%) adults. The mean age was 5.7 and 46.2 years for children and adult patients respectively, median age was 24.5 with a range from 0 to 97 years. Study participants included 50 (45%) parents/guardians of children whose eyes were removed and 62 (55%) adult patients whose one of their eyes were removed. Tumors (58%) in children and Trauma (32.3%) in adults were common indications for eye removal surgery. Enucleation was the most performed surgical procedure in children by 66% and evisceration in adults by 59.7%. Orbital implants were inserted in 37 (74%) children and 9 (14.5%) adults and eye prosthesis were inserted in 35 (70.0%) children and 15 (24.2%) adults. Most adult patients were the primary decision makers by 93.5% regarding eye removal surgery. In the parents/guardians group the decisions to undergo eye removal surgery were made by a single parent by 52% (mother/father/guardian alone). The proportion of participants with positive and negative perceptions was 63.4% and 36.6% respectively. Participants with negative perceptions were 48.4% among adult patients and 22% in parents/guardians group. Four main themes were identified; community and family perceptions, reasons for eye removal surgery, emotional reactions and challenges after eye removal surgeries. Conclusion: Majority of patients underwent enucleations due to intraocular tumors i.e. retinoblastoma and eviscerations due to ocular trauma. Exenteration was left for advanced ocular malignancy such as squamous cell

carcinoma of the conjunctiva. Social Stigma and cosmesis concerns contributed to negative perceptions amongst patients and parents/guardians of children whose eyes were surgically removed. **Recommendations:** Provision of orbital implants and eye prosthesis to improve cosmesis and reduce stigma is recommended. Psychosocial support in a multidisciplinary team approach is recommended to help patients and parents cope with the loss and regain normal life. Further study is recommended on decision making and factors related to refusal for enucleation in children with intraocular tumours.

31. Furumbe, E.G. (2018). Prevalence, Aetiologies and Management of Heart Failure Among Children Admitted at Muhimbili National Hospital, Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Heart Failure (HF) among children commonly causes morbidity and mortality hence affecting children, their caretakers and the healthcare system socially, economically and psychologically. Only a handful data is available in Africa with wide variations in magnitudes between and within countries and Tanzania is no exception. In Tanzania, evidence on heart failure is not available, making it difficult to inform policy and practices in prevention and case management. This study therefore sought to address the evidence gap in knowledge and therefore helping to improve patient care and clinical outcomes. Objective: To examine the prevalence, aetiologies, and management of heart failure among children admitted at Muhimbili National Hospital (MNH), Dar es Salaam Tanzania. **Methodology**: This descriptive study was done at pediatric department at MNH. All admissions aged one month to 14 years, were carefully evaluated for evidence of heart failure (HF), and consecutively recruited until the sample size of 450 was attained. Structured questionnaires were used to collect data, which included social demographic, and clinical details were documented using diagnostic criteria for HF based on symptoms and investigation results. Severity of HF was classified by using modified Ross classification and relevant investigations were done. The collected Data was analyzed using Statistical Package for Social Sciences (SPSS) version 20 for windows. **Results:** A significant proportion of children presented with signs suggestive of heart failure. A total of 51 (11.2%) out of 455 children seen during the study period, presented with clinical features of HF, there was no

differences in proportion between boys and girls. A high proportion of those participants (43.1%) with HF were less than one year of age. Using the Ross classification, 33 children were diagnosed with HF and of them; and 51.6% had class III for severity of the disease condition. For those children above five years diagnosed with HF (18), 61.1 % had New York Heart Association (NYHA) class IV. Structural cardiac lesions were the major underlying causes of HF with CHD accounting for 25 (49%). This was followed by RHD accounting for 27.5%, while severe anemia accounted for 19.6%, chronic kidney disease and HIV cardiomyopathy both accounted for 1.96% respectively. The commonest lesion was ventricular septal defect (VSD) with 16 (64%) among those with Congenital Heart Disease (CHD) while for those with severe anemia it was commonly due to Acute Lymphoblastic Leukemia (ALL), accounting for 40% among those with hematological malignancies. Commonest laboratory investigations done among those with HF were Full Blood Picture (FBP) (100%), Blood Urea Nitrogen (BUN) (80.3%), serum creatinine (86.2%), blood culture (25.5%) and sickling test (11.7%). Radiological investigations commonly done among HF patients were Chest X ray (100%); ECHO 76.5%; and ECG (17.6%). Antifailure medications that were commonly given were diuretics, followed by ACE inhibitors, digoxin and Beta-blockers being the least one, while those with severe anemia had Blood transfusion with treatment of underlying causes of anemia. This study found that in majority (92.3%) of those with HF the length of hospital stay ranged between 8 − 14 days with mean hospital stay being 21.4 days. A significantly large proportion (84.3%) of those with HF were discharged alive with case fatality being 15.7%. The duration of hospital stay was less than 7 days for the patients who died. Conclusion: There was a high prevalence of HF mainly due to CHD followed by RHD, which was the main cause of death. **Recommendations:** There should be larger study in order to get a more accurate picture of the burden of HF in this setting, among children.

32. Frank, M. (2018). Obstacles to Timely Elective Surgery Listing at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Surgical disciplines at Muhimbili National Hospital are experiencing a long waiting list for elective surgery. This prolongs patient's suffering, worsens financial constraints

to patients and hospital for caring these patients. Despite existence of the problem, no documented studies to address it. The findings of this study will help to improve our elective surgery bookings, reduce waiting list, and hence waiting time. **Methodology:** It was a descriptive cross sectional study conducted between April 2017 and December 2017, involving outpatients who are due for elective surgery following diagnosis of various surgical conditions. Data on socio-demographic, listing and visit characteristics were recorded using a questionnaire, and subjected to analysis by the Statistical Package for Social Sciences version 23.0 (SPSS 23.0). Analysis results for above variables were presented using percentage and frequency tables. Chi-square test was used to analyze the association between socio-demographic and visiting characteristics versus listing status. The level of significance was considered at 0.05. **Results:** The study involved 421 patients from the department of surgery who had come for listing during the study period. Mean waiting time was 2 ± 1 (1-6) months. Mean number of visits was 3 ± 2 times and the magnitude of delayed listing was found to be 62%. Lack of theater space was found to be an important reason for not being listed for surgery as it was found in 56.8% of the patients who missed an opportunity to be listed for surgery. Age, sex, disease category, waiting time and number of visits have been found to influence operation listing. **Conclusion:** Lack of theatre space is an important obstacle to timely elective surgery listing, with long queues during operation listing days and a significant number of patients making several visits for listing unsuccessfully.

33. Gina, R . (2018). Clinical and Radiological Outcomes of Closed Femoral Shaft Fractures Among Children Treated By Hip Spica at Muhimbili Orthopedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Fracture of the shaft of femur comprises 1.6% of all fractures in pediatric age group worldwide. The incidence of femoral fractures in children is 20 per 100,000 yearly in the United States and Europe. Diaphyseal fractures are the most common pediatric fracture of the femur, accounting for up to 62 percent of all femur fractures. Common mechanisms include falls, particularly from playground equipment, motor vehicle crashes and sporting injuries. Treatment of femoral shaft fractures varies with the age and size of children, associated injuries

and local practice. The use of hip spica as one of treatment option is controversial due to the fact that there are different opinions on immediate and late spica cast, single leg and traditional hip spica, the cutoff point of age at which hip spica should applied, the cost, the care of the child posts hip spica and if it can be applied in hot climates without skin breakdown as a complication. **Objective:** The objective of this study is to assess the clinical and radiological outcome of hip spica in the treatment of closed femoral shaft fractures among children treated at MOI, Dar es salaam, Tanzania. **Methodology:** This was a hospital based prospective descriptive study involving all the children of both sexes from 1 to 6 years of age with fracture shaft of femur presented to MOI were included in this study. 50 children who met the inclusion criteria were enrolled after obtaining written consent from their parents or guardians. The patients were admitted after establishing diagnosis of femoral shaft fracture using history, physical examination and xrays. Skin traction was applied before the patient went to the wards and later on hip spica was applied as definitive treatment. The patients were followed up at 1st and 2nd week to assess loss of reduction, using control xrays. When there was loss of reduction wedging and reinforcement of the cast was done. Patients were followed up at 4th, 6thweek after applying hip spica for regular follow up clinic. Then 10th, and 16th week after removal of hip spica; where by the limb length, rotation deformity, skin infection, pressure sores, hip, knee stiffness and level of activity were assessed. **Results:** From November 2017 to April 2018 a total of 50 children aged from 1.8 to 6 years old were recruited. There were more male children 34 (68%) than females, with the overall mean age of children recruited of 3.06 ± 0.94. Most (90%), had fracture of the middle third of femoral shaft where sex had no any influence on the location of fracture. Most sustained femoral shaft fracture following falls on playgrounds (62%), followed by falls from a height (20%), being hit byheavy object (12%) and MTC (6%). Outcome after removal of hip spica cast was satisfactory in 100% children. There was no skin infection, pressure sores, plaster reaction, limb length discrepancy, hip or knee stiffness, angular deformities in all study participants at 16th week of follow up. And all participants were able to walk without support. **Conclusion:** The study revealed that immediate use of skin traction and application of hip spica to pediatric patients with closed femoral shaft fracture is safe and effective method for treatment of closed femoral shaft fractures in children between 1 to 6 years of age. Recommendation: Early skin traction and hip spica application should be used in treatment of closed femoral shaft fractures among children between 1 to 6 years of age.

34. Haidar, T. K. (2018). Pregnancy Outcomes of Adolescent Primigravida Versus Non Adolescents Primigravida Deliveries at Bagamoyo District Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Adolescent pregnancy is the second leading cause of deaths in women 19 years and below. Multiple factors including culture, religion, educational, low level of sexual and reproductive health, contribute to increase in adolescent pregnancy. Around 70,000 adolescent girls die every year due to pregnancy complications and child bearing. Maternal age 19 years and below may play a role in adverse outcome and complications of pregnancy. Objectives: The aim of this study was to compare antenatal, intrapartum, and postpartum complications between adolescent primigravida with non adolescentprimigravida who delivered at Bagamoyo district hospital. **Methodology:** A hospital based cross sectional analytical study from 1st August 2017 to 31st January 2018 done. Obstetric outcomes in term of Post-partum Hemorrage, Anterpartum Hemmorhage, eclampsia, pre-eclampsia, anemia, mode of delivery, abnormal labor, low birth weight, low apgar score and congenital anomalies of the fetus were compared. **Results:** During the study period, there were 1440 deliveries. Out of these primigravida were 230. Among these 153 adolescent primigravida and 77 non adolescent primigravida were involved in the study. Mean age for adolescent was 17.92±1.84 and non adolescent was 23.84±3.69. The proportions of prolonged labor were 6.5% and 1.3% in non adolescent and adolescent primigravida, and anaemia was 37.7% and 19.0% with the p value 0.03 and 0.001. **Conclusion:** There is increase number of adolescent primigravida deliveries at Bagamoyo district hospital compared to non adolescent primigravida deliveries. Prolonged labor and anemia were found to be higher in non adolescent primigravida women and this was statistically significant.

35. Haji, M. (2018). Assessing Satisfaction WithMethadoneMaintenance Treatment and Satisfaction Related Factors Among Injection Drug Users at Kidongo Chekundu Mental Hospital in Unguja – Zanzibar.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Satisfaction is an essential component in methadone maintenance treatment. To ensure clients' satisfaction, methadone staff has to assess the accessibility of services and factors associated with clients' satisfaction in methadone maintenance treatment. Research related to client satisfaction with methadone maintenance treatment remains limited in Zanzibar. **Objective:** The study assessed client satisfaction with methadone maintenance treatment and factors associated with treatment satisfaction among injection drug users at Kidongo Chekundu Mental Hospital in Unguja - Zanzibar. It, specifically, sought to (i) ascertain whether injection drug users utilizing of MMT are satisfied with the services provided and (ii) to determine factors associated with client satisfaction of Methadone therapy among injection drug users. **Methods:** The study used a hospital – based descriptive cross sectional quantitative study design through convenient sampling. The study also employed 229 injection drug users to fill an administrative questionnaire at their methadone clinic. Data were collected though administrative questionnaire and analyzed by use of Chi-square and multiple logistic regressions to determine client's satisfaction and factors with treatment satisfaction. **Results:** Clients' health status was associated with their treatment satisfaction (AOR =7.782; 95% CI = (2.96-20.917). Client's access to other health services were found to be associated with satisfaction (AOR=0.267; 95% CI= (0.139-0.511). Others factors associated with treatment satisfaction were provider-client interaction (AOR=0.055; 95% CI= (0.005-0.573). Competence of health care workers, willingness of staff to provide health education and motivation to clients and health care providers (AOR= 0.294; 95% CI = (0.072-1.197). Follow up of clients who missed scheduled appointment (AOR=0.325; 95% CI= (0.133-0.798). **Conclusion:** Clients at Kidongo Chekundu Methadone Clinic were satisfied with the services provided to them. The study has identified clients' dissatisfaction with the methadone maintenance treatment for those who were denied services for one or other reason and thus might act as barriers for more drug users to attend clinic.

36. Haika, M.I. (2018). Brain Computed Tomographic Patterns In Patients With Stroke Attending Muhas AcademicMedical Centre.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Strokeis emerging to be one of the non-communicable diseases of public health concern in developing world, Tanzania included. Brain CT is a preferred imaging method for stroke patients due to its easy availability, accuracy and suitability for the unwell and medically unstable patients. Broad objective: To determine brain CT patterns in patients presenting with stroke at MAMC from December 2017 to March 2018. **Methodology:** This was a descriptive hospital based cross sectional study done for a period of four months from in MAMC Radiology department. Structured questionnaire formulated by the prinicipal investigator was used for recording patients' demographics, clinical notes and imaging findings. The investigation process was undertaken by an experienced radiographer and NCCT images where then interpreted by the principal investigator and radiologist. **Results:** were analysed by using the Statistical Package for Social Sciences (SPSS) version 20. Statistical Association was evaluated by the use of cross tabulations and Chi-square test to compare proportions. P value of < 0.05 was considered statistically significant. Results: A total of 200 stroke patients were included in the study, of whom 117(58.5%) were male, mean (SD) age was 60.5(±15.2) years and 90(45%) study participants were aged 65 years and above. Among the studied patients, 101(50.5%) had haemorrhagic stroke, 93(46.5%) had ischaemic stroke and 6(3.0%) had both types of strokes at different pathological ages. Risk factors for haemorrhagic stroke were high cholesterol (P value=0.004) and history of previous stroke episode (P value=0.003) and for ischaemic stroke were high cholesterol (P=0.002), history of previous stroke episode(P=0.001) and preexisting cardiac disease(P=0.028). Clinical features for stroke patients were hemiplegia/paresis (94%), altered conciousness level (65.5%), and facial weakness (61%). Significant proportion of haemorrhagic stroke patients presented for imaging in less than 24 hours of symptom onset (P value=0.000). In ischaemic stroke patients significant proportion presented for imaging in more than a week of symptom onset (P value=0.000). Conclusion: Risk factors significantly associated with haemorrhagic stroke were high cholesterol and history of previous stroke episode. Risk factors significantly associated with ischaemic stroke were high cholesterol, pre-existing cardiac disease and history of previous stroke episode. Higher proportion of patients in this study were found to have haemorrhagic stroke compared to ischaemic stroke. Hemiplegia/paresis, altered level of consciousness, headache, facial weakness, loss of balance and speech disturbance were the most common symptoms reported by the stroke patients.From this study, the highest

proportion of haemorrhagic stroke patients were found to present for imaging in less than 24hours of symptom onset compared to those with ischaemic type of stroke who presented much later.Sulci effacement, mass effect and lesion density are significantly associated with symptom duration in this study. **Recommendation:** A study with a larger sample size so as to better assess the association between brain CT paterns and risk factors. Secondly there should be more hospital based studies in our local setting to better assess the different imaging patterns and how they evolve over time and how they are related to various risk factors. Also, great emphasis should be put to ensure public awareness of risk factors and signs of stroke.

37. Hellela, C.L.M. (2018). Assessment of The Extent of Compliance of Pharmaceutical Drug Outlets InDar-Es-Salaam RegionTo the Guidelines Provided by The Regulatory Authorities.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Pharmaceutical drug outlets are reported to be a major source of medicine in majority of developing countries including Tanzania and plays significant role in the management of health of the population. To guarantee quality of medicines throughout the supply chain, the regulatory authorities provide clear guidelines on setting and running up pharmaceutical drug outlets. So far, there is lack of information in respect to what extent the pharmaceutical drug outlet owners in Tanzania setting comply with the requirements stipulated by the regulatory authorities in these guidelines. Therefore, this study was aimed at determining the extent of compliance of pharmaceutical drug outlet owners in Dar es Salaam region in respect to business location, storage condition and disposal of expired pharmaceutical products, staffing, and type of pharmaceutical products stocked and physical appearance of premises. **Objective:** To assess the extent of compliance of pharmaceutical drug outlets owners in Dar-es-Salaam region to the guidelines of setting and running their business as provided by the regulatory authorities. Methodology: The study was prospective descriptive cross sectional and was carried out in the five (5) districts of Dar es Salaam region namely Kinondoni, Temeke, Ilala, Ubungo and Kigamboni. **Results:** This study revealed that   53.6% and 46.4% of ADDO, wholesale and retail pharmacies, respectively, were located in areas which did not meet the requirements stipulated by regulatory authorities. Equally, 50.7% of ADDO and 59.3% of

wholesale and retail pharmacies, were found to have expired medicines in their storage waiting for disposal. It was also found that 58.5% of ADDO and 41.5% of retail and wholesale pharmacies had poor storage conditions for pharmaceutical products. This study also found that majority of pharmaceutical drug outlets owner had no enough information on staffing professionals, since 79.5% were employed via head hunting. Even though, more than 55.4% of employees in ADDO, retail and wholesale pharmacies were pharmaceutical personnel's. **Conclusion:** Majority of pharmaceutical drug outlets were located in areas which did not meet the regulatory bodies' requirements and had poor storage conditions. The pharmaceutical drug outlets were also found stocking expired, damaged and wrongly labelled pharmaceutical products. The staffing process of qualified pharmaceutical personnel was not satisfactory, thus, a database or recruitment agency with all necessary information of pharmaceutical personnel is required to easy the staffing process. Continuous education, law enforcement and public awareness is very important for improving setting and running of pharmaceutical drug outlets.

38. Hiliza, J. N. (2018). Prevalence and Factors Associated with Stunting Among Public Primary School Pupils in Kasulu District.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Literature shows that, under nourishment during the first 1000 days from pregnancy through a child's second birth day results in long term and irreversible damage with consequences at individual, community and national level. Globally, the prevalence of stunting has declined from 39.7% in 1990 to 26.7% in 2010 while stunting has stagnated in Africa since 1990 at 40% and little improvement is anticipated. Much of the studies on stunting have been done among under-fives, preschool children and women of childbearing age leading to interventions targeting these age groups. However, little is known about the magnitude of stunting in school going children and what factors drive their burden. This study aimed to estimate the prevalence of stunting among public primary school pupils and explore its associated factors in Kasulu District, Tanzania. **Objective:** To determine the prevalence and factors associated with stunting among public primary school pupils in Kasulu District. **Methodology:** A cross-sectional study was conducted in Kasulu District among 400 public

primary school pupils. Systematic random sampling was used to select study participants stratified into two age groups (5-7 years and 8-12 years). Socio-economic factors, dietary practices, water, sanitation and hygiene (WASH) behaviors; history of past illness and school performance/attendance was collected using a pre-tested questionnaire. Height measurements were standardized to World Health Organization height-for-age Z-Scores for both girls and boys. The data were analyzed using STATA software version 13, whereby descriptive statistics, vicariate and multivariable logistic regression analysis were done. **Result:** A total of 400 pupils (100% response rate) were recruited into the study, their mean age was 7.51 (Standard Deviation = 1.54) years and about a half (50.3%) were male. The prevalence of stunting was 31.8% with no sex difference (31.7 − females vs. 31.8 − males; p = 0.969). Household wealth was associated with stunting; lowest quintile (AOR = 28; 95% CI: 3.64 − 214.6; p<0.001) 2nd quintile (AOR = 17; 95%CI: 2.20 − 138.5; p<0.01), the 3rd quintile (AOR = 8.0; 95%CI: 0.99 − 64.67; p = 0.051) and 4th quintile (AOR = 4.2; 95%CI: 0.49 − 36.75; p = 0.191) when compared to 5th (highest) wealth quintile. Pupils who reported inadequate food in the household were at risk of stunting (AOR = 10.6; 95%CI: 4.60 − 24.60; p< 0.001), eating protenous food once a month or less influenced stunting (AOR = 14.6; 95%CI: 4.07 − 52.42; p<0.001). Those who reported not to wash hands after toilets at school, (AOR = 3.5; 95%CI: 1.62 − 7.58; p = 0.001), and at home (AOR = 13.0; 95%CI: 2.73 − 61.76; p = 0.001) were at risk of stunting. **Conclusion:** The prevalence of stunting among public primary school pupils is very high despite the huge investments to reduce it. Poor household wealth, household food insecurity, poor hand hygiene practices and lack of protein in a meal significantly influence stunting in primary school pupils. Also it affects the pupils' academic performance and attendance, availability of food in both quantity and quality, community nutrition awareness and safe and clean water could alleviate the pupils from continued effect of stunting.

39. Ibrahim, S. (2018). Profile and Treatment Outcomes of Lower Urinary Tract Injuries in Patients with Pelvic Trauma at Muhimbili National Hospital and Muhimbili Orthopaedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Lower urinary tract injuries are common in pelvic trauma cases and they are highly associated with high morbidity and even mortality. There is no data regarding lower urinary tract injuries associated with pelvic trauma in Tanzania. This study described experiences in the management and outcome of lower urinary tract injuries following pelvic trauma in our local setting. In some occasions symptoms of LUT injuries are overlooked in patients with concomitant pelvic trauma which leads to severe complications. Various complications are seen, associated with lower urinary tract injuries in patients with pelvic trauma in our setting. Different treatment modalities have been used with different outcomes Patients tend to present late, required intervention is often delayed, which contribute to adverse outcome. Objective: The objective of this study was to determine the proportion of lower urinary tract injuries among pelvic trauma patients and their treatment outcomes at MNH and MOI between April 2017 May 2018. **Method:** This was a prospective hospital based study conducted for a period of 14 months at MNH and MOI on patients having lower urinary tract injuries among patients with pelvic trauma. Data collected direct from patients, through history taking and physical examination, as well as from intraoperative findings were used to form data set. Also notes from patients' files and computer database on out-patient follow up visits were used to record patient's particulars, clinical presentation, type of treatment received, and their complications. Data entry and analysis were done by SPSS computer program. **Results:** In this study 724 patients with pelvic trauma were identified within the study period, out of those 54 patients with LUT injuries were studied, it has been seen that among the pelvic trauma patients with LUT injuries the majority were males 40 (74.1%) while females were 14 (25.9%). Out of 40 males 29 (72.5%) had bladder injury while 7 (17.5%) patients had urethral injury and 4 (10.0%) had combined bladder and urethral injury. Out of 14 female subjects, 10 (71.4%) had bladder injury, 2(14.3%) had urethral injury and 2 (14.3%) had combined bladder and urethral injury. The proportion of bladder and urethral injuries for men was4.0% and 0.97% respectively, and in women was 1.4% and 0.28%, respectively. And proportions of combined injuries in men were 0.55% and in women was 0.28%. Following LUT injuries in the study hematuria was the commonest clinical feature of LUT injury in the study sample which accounts for 98.1%, followed by abdominal pain, 87.0%, painful micturition,72.3%, where difficulty in passing urine occurred in 46.3%, and blood per urethral meatus in 29.6%. Twenty-four (54.5%) patients of bladder injuries were managed

conservatively, while 20 (45.5%) cases were managed surgically. Twelve (80.0%) cases of urethral injury were treated conservatively with urethral catheter or SPC catheter while only 3 (20.0%) cases were treated surgically. **Conclusion:** Due to the above findings having pelvic trauma is a predisposing factor to lower urinary tract injuries including bladder and urethral injuries or both, of which bladder injuries are the commonest. Males are more commonly affected than females. Gross hematuria is the commonest clinical presenting symptom of LUT injuries in pelvic trauma patients which gives an alarming sign of LUT injury in a setting of pelvic trauma so that further evaluation of lower urinary tract is to be done, and appropriate measures will be taken. Other symptoms include abdominal pain, painful micturition and blood per urethra.Bladder injury treatment for contusion and extraperitoneal raptured is mainly conservative, which is safe with minimal complications, done by ensuring continuous bladder drainage with urethral catheter, but for intraperitoneal bladder rapture, surgical treatment is safer For urethral injuries conservative management is the standard primary treatment with fewer complications, done by performing SPC and catheterization while urethroplasty is to be done later if the patient develops urethral stricture. Recommendations: In every pelvic trauma patient Lower Urinary tract should be well evaluated for injuries, common clinical symptoms should be thoroughly assessed including gross hematuria, abdominal pain, blood per urethra and difficulty or inability to urinate.

40. Ibrahim, S.M. (2018). Enablers and Barriers On Implementing Integration Of Health Management Information System Between National Health Insurance Fund And Accredited Health Facilities In Ilala Municipality, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: As membership for the National Health Insurance Fund (NHIF) increases, the Fund is becoming an important player in Health Care Financing in Tanzania.   In order to streamline its activities, the NHIF has introduced its own Health Management Information System (HMIS) Platform to enable online capturing of information for their members from health facilities. The implementation and use of this system depends on multiple factors which have been identified as enablers and barriers which may determine the success or failure of the

system. **Objective:** This study aimed at exploring the enablers and barriers on implementing integration of health management system between NHIF and accredited health facilities in Ilala Municipality. Methodology: To facilitate the study, qualitative technique in data collection was used. This technique was chosen in order to explore enablers and barriers from both NHIF and health facilities on the implementation of integration of HMIS between the two sides. A purposive sampling technique was used to select the respondents whereby a total number of 20 respondents were selected. In- depth interview method was used to collect data. Content analysis was used to analyse data. **Results:** This study has identified multiple factors both facilitators (enablers) and barriers associated with the implementation of health management information system integration between NHIF and the selected health facilities in Ilala municipality. For ICT infrastructure, the study identified the existence of ICT hardware and softwares as facilitators while system failure (networks and power cuts), user unfriendliness of the system and unsupportive infrastructure were identified as barriers for implementation of system integration. Also the study findings showed that the availability of policies, strategies, guidelines and standard operating procedures as facilitators (enablers) while, lack of awareness of the mentioned factors above were identified as a barrier. Furthermore, in the human resources aspects, the availability of trained personnel, availability of motivation, positive attitude and willingness of personnel and leadership and management support were identified as facilitators in facilitating implementation of system integration, where by shortage of trained personnel, absence of continuous professional education and lack of supportive supervision were identified as the main barriers. **Conclusion** and **Recommendations:** From this study finding show that, although the implementation of integration of health management information system between NHIF and the selected accredited health facilities seems to be working well, the identified barriers need to be addressed in order to make it more functional and effective.

41. Iddi, R.A. (2018). The Impact of Preoperative Checklist On Patients Listed for Elective General Surgery at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: One of the problems encountered in surgical practices worldwide is the cancellation of planned surgeries on the day of surgery. At MNH patients' cancellation is still a problem over the years with rates as high as between 20% – 29%. Among the causes, patients' factors have contributed to well over 40%. This has continued in spite of measures on the ground to control itReducing cancelation rates will ensure efficient management of the inadequate theatre space that the nation has for referred cases and avoid frustration to both patients and hospital staffs. Then; this study aimed at determining the impact of preoperative checklist among patients undergoing elective general surgeries at Muhimbili National Hospital. Materials and **Methods:** A quasi-experimental study was conducted at Muhimbili National hospital for 6 months, divided into control phase that established the baseline data; and the interventional phase where the preoperative checklist was used. Data was collected using a pre-tested checklist, coded and entered in the SPSS software version 22.0 for data analysis. **Results:** 298 controls and 300 cases and were recruited during this study. The cancellation rate was reduced from 19.1% in the controls to 16.3% in the cases. Patients' factors contributed to over 60% of all cancellations; however, those patients' factors were markedly reduced by 11% with the implementation of the preoperative checklist. The difference in proportion of patients with postoperative complications in cases and controls was not significant. **Conclusions:** This study has shown that the implementation of preoperative checklist has reduced the cancellation rate related to patient's factors. Preoperative checklist is a promising tool to reduce the rate of cancellation of planned surgeries if all patients will be cleared by it. **Recommendations:** The preoperative checklist should be used in daily routine in the department of Surgery at MNH to minimize the rate of cancellation of elective surgeries due to incomplete pre-operative workups of the patient and patients should be cleared by the preoperative checklist before being listed for elective surgery. Each surgical firm should have a feasible operation list to minimize the number of cancelled surgeries due to time-barred. **Keywords:** Cancellation, Preoperative checklist

42. Izina, A. (2018). Sonographic Findings AndAssociated Factors of Extracranial Internal Carotid Artery Disease Among Stroke Patients at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Stroke is among the top causes of morbidity, mortality and disabilities worldwide. Extra cranial carotid artery disease mainly due to atherosclerosis is among the common cause of cerebral vascular event. Stenosis involving theextracranial segment of the internal carotid arteryis a common site of symptomatic and clinically relevant stenosis. Ultrasound is the preferred initial modality for evaluation of extra cranial carotid arteries though this technique is not widely used at our settings hence there is little data on magnitude and extent of extra cranial carotid artery disease in patients with stroke**. Broad objective:** To determine sonographic findings and associated factors of extra cranial internal carotid artery disease among stroke patients at Muhimbili National Hospital from September 2017 to March 2018. **Methodology:** This was a cross sectional hospital based study, conducted at Radiology department, Muhimbili National Hospital over a period of 7 months. Consented patients with stroke aged 18 years and above referred to ultrasound unit were consecutively included for sonographic assessment of extracranial carotid arteries. Sonographic gathered data included peak systolic velocity of extracranial internal carotid artery and plaque characteristics as seen in real time. Demographic information and history of associated factors were recorded in structured questionnaire. Clinical and imaging information were recorded in data recording sheet. Statistical package for Social Science (SPSS) version 20 was used for data analysis. Descriptive analysis was used to present and describe sonographic findings of carotid artery disease and associated factors (age, sex, history of hypertension, diabetes mellitus, hyperlipidemia and smoking) of carotid artery disease. Pearson Chi-square and Fisher's exact tests were used to compare proportions. Statistical significance was tested at the P value of < 0.05. **Results:** Ninety-four (94) patients with stroke were studied. The age ranged from 29 to 99 years and the mean age was 62 ± 15 years. Thirteen patients (13.8%) had extra cranial internal carotid artery disease and among them significant stenosis was observed in only 4(30.8%) patients. Elderly population aged ≥61 years and male gender were the commonest affected groups 20.8% (P-value 0.027), 19.2% respectively. Intima media thickening was the commonest finding (39.4%). Most plaques were located at carotid bulb (41.1%) and majority (53.1%) had heterogeneous echo texture. The commonest associated factor was hypertension (89.4%) followed by male gender (55.3%) and hyperlipidemia (29.8%). Older age ≥ 61 years, Diabetes and Hyperlipidemia were significantly related with extra cranial internal carotid artery disease, (P-values= 0.027, 0.036, 0.018 respectively). **Conclusion:** Prevalence of

extra cranial internal carotid artery disease in patients with stroke was high thougha small number of patients had significant internal carotid artery stenosis. The disease prevalence increased with age. Male patients were more affected. Intima media thickening was the frequent finding, plaques were mostly located at the carotid bulb and showed heterogeneous echo texture. Diabetes, hyperlipidemia and older age (>61 years) were the most significant associated factors of extra cranial carotid artery disease. Recommendation: Ultrasound should be done in all patients with stroke to help in evaluation of the cause and prediction of risk of stroke recurrence. Ultrasound evaluation of carotid vessels to be included in stroke prevention protocols in older patients with Diabetes, hyperlipidemia, hypertension and other known risk factors for early identification of extra cranial carotid artery disease, specifically to identify significant stenosis heterogeneous plaques which are independent risk factor for stroke, Multicentre study to involve bigger sample size.

43. James, J.J. (2018). Colorectal Cancer Screening and Awareness Among Patients Attending Outpatient Clinic at Muhimbili National Hospital (Mnh), Dar Es Salaam-Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Colorectal cancer (CRC) is among the most commonly diagnosed cancers worldwide. There were 1,360,602 new cases of CRC worldwide and it was the 3rd most common cancer, accounting for 9.7% of all cancers apart from non-melanoma skin cancers (GLOBOCAN, 2012). The crude incidence of CRC in SSA for both sexes was found to be 4.04 per 100 000 populations (4.38 for men and 3.69 for women). It is the 5th most common cancer in SSA.CRC is not uncommon in Tanzania and it shows a trend towards a relative young age with a median age at presentation of 46 years'majority of patients presenting late with advanced disease. It accounts for 4.7% of all malignancies and with male to female ratio of 1.6:1. It also accounted for 5.4% of all cancer deaths among females in Tanzania (WHO, 2014). However, according to WHO report of 2014 there is no screening program for CRC in the country. Also there is no study that has been done to determine the prevalence of CRC or the public awareness about CRC in the country. **Objective:** To determine the prevalence of colorectal cancer and awareness among adult patients attending outpatient clinic at Muhimbili National Hospital

(MNH), Dar Es Salaam-Tanzania. **Methodology:** The study was descriptive cross-sectional study involving patients who are 40 years or older attending NHIF outpatient clinic at Muhimbili National Hospital (MNH) from October 2016 to March 2017. The patients were screened for CRC using FOBT and colonoscopy was performed for those with positive fecal occult blood and biopsies taken for histological confirmation. The level of awareness of CRC and its risk factors was assessed by administering a validated questionnaire. **Results:** The total of 512 participants were involved in the study with slight women predominance 52.7% (n=270). The mean age of the participants was 54.4 years and majority, 144(28.1%) had the body weight in the category of 70-79 kg with the mean weight of 76.4 kilograms. Of all participants, 91(17.8%) were hypertensive patients who came for routine follow up or drug refilling and 46(9.0%) had diabetes mellitus. Of all participants, 63 (12.3%) had positive FOBT and 33 (52.4%) of them underwent colonoscopy. Among patients who underwent colonoscopy, 7 (21.2%) had CRC. The overall prevalence of CRC among adult patients who are 40 years and above ranged from 1.4% to 2.5%. Of the all 512 patients involved in the study, 185 (36.1%)were aware of CRC. The awareness among males and females was 32.6% and 39.2% respectively. The level of awareness was lowest (32%) among those aged above 70 years and was highest (40%) among those aged between 50 and 59 years. The level of awareness was increasing proportionatelywith the level of education; 25% among those with no formal education and 41% among those with college or university education. Only 94 (38.8%) males and 102(42.1%) of females agreed that family history of CRC is a risk factor while 81(33.5%) males and 66(24.4%) females were able to identify old age as a risk factor. Rectal polyps was identified as the risk factor for CRC by 148(61.2%) of males and 155(55.9%) of females. Excessive alcohol use was identified as the risk factor for CRC by most of the respondents, 196 (81.0%) of males and 227 (84.1%) of females. **Conclusion:** Colorectal cancer is common in many asymptomatic patients with positive FOBT. FOBT can be used successfully as a screening tool for CRC. Te level of awareness of the CRC is generally below forty percent among adult patients attending outpatient clinic at MNH. **Recommendation:** We recommend routine screening of adults 40 years and above for CRC using FOBT. This should be accompanied with an educational program for raising the level of awareness of CRC among adults.

44. Joachim, G. (2018). Abnormal Retinal Findings Among Preterm Infants at Muhimbili National Hospital in Dar Es Salaam Tanzania.Muhimbili University of Healthy and Allied Sciences

Abstract

Introduction: Retinal abnormalities are common complications of preterm births. Little has been studied on its occurrence and the associated factors in low-income countries including Tanzania despite the high burden of preterm births. **Objective:** To determine prevalence, types and associated factors of abnormal retinal findings among preterm infants aged 28 to 42 days at Muhimbili National Hospital (MNH). **Methodology:** This was a hospital-basedcross-sectional study conducted at MNH Kangaroo Mother Care (KMC) unit. Participants included premature infants admitted or attending clinic at KMC unit from February to May 2018. A total of 188 preterm infants were recruited and fundoscopy examination was performed using indirect ophthalmoscope dioptre 20. Data wereanalyzed using SPSS version 20.0, measure of central tendency and dispersion like mean and standard deviation were to used describe continuous variables and proportions and frequency were used to describe categorical variables. Bivariate analysis was used to determine the association between infant's characteristics and abnormal retinal findings. Categorical variables were analysed using Chi-square tests and Fisher's exact test. Multivariate logistic regression was performed to determine the factors associated with retinal abnormalities and P-value of less than 0.05 was considered statistically significant. Results: Out of the total preterm infants, 176 (93.6%) children had normal retinal findings while 12 (6.4%) had abnormal retinal findings. Duration of oxygen therapy more than 7 days was significantly associated with retinopathy of prematurity (AOR 34, 95%CI (3.37-157.68)). **Conclusion and Recommendations:** ROP is prevalent in our setting and exposure to oxygen therapy for more than 7 days significantly increased the risk of ROP by 34folds. Therefore, there is need for routine fundoscopic surveillance in preterm infants born at gestation age of 32 weeks or less who have had oxygen therapy for more than 7 days.

45. John, G.S. (2018). Factors Associated WithPerinatalMortality in Institutional Deliveries Morogoro Region, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: There has been a significant reduction in under-five and infant mortality rate in Tanzania without a parallel drop in perinatal and neonatal mortality. A good number of studies on determinants of perinatal mortality in high, middle and low income countries were already conducted, however the evidence from Tanzania particularly in Morogoro region was limited. Broad objective: The broad **Objective:** of the study was to determine the factors associated with perinatal mortality among institutional deliveries in Morogoro Region. Materials & **Methodology:** An unmatched case control study was conducted in five hospitals of Morogoro region with the highest reported number of deliveries. Sample size was calculated using Fleiss Formula for unmatched case control study. The male newborn sex was considered the risk factor with 60% exposure among controls and odds ratio was 2.24 (Mbiba 2015). Using 95% CI and 80% power of the study and control to case ratio of 2:1 the minimum sample size was estimated at 324 (108 cases and 216 controls) with adjustment for 90% response rate. A case was a maternal birth outcome from a mother with GA $\geq$ 28 weeks or birth weight $\geq$ 1Kg born dead or alive but died within 24 hours of life. A control was a maternal birth outcome from a mother with GA $\geq$ 28 weeks or birth weight $\geq$ 1Kg born alive and surviving for more than 24 hours, which had happened in Morogoro region participating health facilities encountered during the study period. Pretested structured questionnaires, consent and data abstraction forms were used by trained research assistants to collect data. Data were entered and analyzed by Epi-info version 3.5.4 and Stata 13.1 statistical packages; univariate analysis was performed by running frequency of maternal socio-demographic characteristics, fetal/newborn characteristics of cases and controls. Bivariate analysis was performed and Odds Ratios (OR)'s were used as measures of association. Significance level was taken at 95% confidence level. Factors in bivariate analysis with a p-value of < 0.20, potential confounders with consideration of plausibility, collinearity and clustering effects were added into a multiple logistic regression model to assess the factors which were independently associated with perinatal mortality. **Results:** The factors that were determined to be independently associated with perinatal mortality include duration of labour of more than 24 hours [AOR= 14.98; 95% CI: 9.62- 23.32], hypertension during pregnancy [AOR= 5.23; 95% CI: 4.57 - 5.99], ANC attendance of less than 4 times [AOR= AOR = 2.62; 95% CI: 1.89 - 3.62], antepartum haemorrhage [AOR= 5.49; 95% CI: 2.65 - 11.38], miscarriage threat

during the index pregnancy [AOR= 4.20; 95% CI: 2.01 - 11.38], premature deliveries [AOR = 2.53; 95% CI: 1.45 - 4.40] and staying 5 or more km from the nearby health facility providing delivery services [AOR = 1.47; 95% CI: 1.47 - 1.91]. **Conclusion and Recommendations:** In Morogoro region, the risk factors for perinatal mortality in institutional deliveries include prolonged labour, hypertension during pregnancy, ANC attendance of less than 4 times, ante-partum haemorrhage, miscarriage threat, premature deliveries and distance of 5 or more km from the nearby health facility providing delivery service. Improved ANC attendance to mothers for 4 or more times, early detection, proper management of pregnancy risk factors and increased accessibility to services among pregnant mothers are recommended to Morogoro RHMT, CHMT and other stakeholders.

46. Jovin, G.F. (2018). Adherence and Factors Associated with Immunosuppressive Therapy in Post-Renal Transplant Patients at Muhimbili National Hospital (Mhn). Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Immunosuppressive therapy adherence is crucial for kidney transplanted patients as non-adherence to immunosuppressive therapy following kidney transplantation is responsible for 20% of late acute rejections and up to 36% of graft losses. **Objectives:** The aim of this study was to assess for associated with immunosuppressive therapy adherence among renal recipients at Muhimbili National hospital. **Methodology:** This cross-sectional study collected data from the transplant registry of Muhimbili National Hospital. We assessed for factors associated with adherence to immunosuppressive therapy among renal recipients. We recorded social demographic characteristics, drug history pre and post- transplant, co-existence of co-morbidities, health insurance status and duration from renal transplantation. A validated self-administered structured 8-item Morisky Medication Adherence Scale (MMAS-8) questionnaire was used to assess adherence. Linear regression analysis was used to ascertain for factors associated with adherence, and a p values of <0.05 was considered statically significant. Results: We included 170 renal transplanted recipients with male predominance 133 (78.2%). The mean age of the study population was 47.5± 14 years and median duration post transplantation was 210 months. Hypertension was the most common co-morbidity observed in 149(87%) renal

transplant recipients. Adherence to immunosuppressive therapy was high in 39 %, medium 35% and poor 26 %. Poor adherence was associated with lack of health insurance (OR 1.9; CI: 1.4-2.1; p =0.02) and residency outside Dar es Salaam i. e. Geographic distance to transplant service center (OR 2.6; CI: 2.0-2.8; P = 0.001). **Conclusion:** Adherence to Immunosuppressive therapy was affected by lack of health insurance and long geographic distance to the post-transplant center where services are rendered. **Recommendation:** Hence, universal health insurance coverage for all renal recipients and establishment of regional post-renal transplant service centers other than Muhimbili National hospital might be key for improving Immunosuppressive therapy adherence that is necessary for future graft survival.

47. Juma, S.M. (2018). Lipid Profile Among Type 2 Diabetes Mellitus Young Adult Patients Attending Mnazi Mmoja Hospital, Zanzibar.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Diabetes is characterized by chronic hyperglycemia and disturbances of carbohydrate, lipid and protein metabolism. We aimed to research association between serum lipid profile and blood glucose, hypothesizing that early detection and treatment of lipid abnormalities can minimize the risk for atherogenic cardiovascular disorder and cerebrovascular accident in patients with type 2 diabetes mellitus. **Methods:** This was a hospital-based cross-sectional study that was conducted at Mnazi Mmoja Hospital, Diabetic clinic in Zanzibar. MMH is the main referral hospital in Zanzibar. The hospital is located in the Stone Town, the historic centre of Zanzibar City. The hospital has an outpatient clinic, specialized clinics as well as several wards for in-patient services. Although termed as a referral hospital, basic outpatient services are also provided to the nearby communities. The study populations were those patients who presented themselves DC at Mnazi Mmoja hospital with type 2 diabetes, with the age between 18 to 45 years of age. Fasting blood glucose (FBG), total cholesterol (TC), high density lipoprotein (HDL), low density lipoprotein (LDL) and triglyceride (TG) levels were evaluated. Correlation studies (Pearson's correlation) were performed between the variables of blood glucose and serum lipid profile. Significance was set at p<0.05. **Results:** Serum lipid and lipoproteins were significantly higher in diabetic patients compared to non diabetic subjects

except HLD-C which is significantly lower in diabetic patients compared to non-diabetic subjects. Cholesterol mean level value in diabetic patients was significantly higher than the mean serum of non diabetic subjects (p=0.001). Mean value of triglycerides in diabetic patients was significantly (p=0.001) increased compared to mean of non diabetic subjects. LD L-Cholesterol mean value in diabetic patients was statistically significant (p=0.001) higher than the mean value of non diabetic subjects. Same results (p<0.05) were found when we compared glucose and lipid profile (TG, TC, LDL and HDL) in subgroups type2 DM and control subjects. **Conclusion:** Serum levels of triglyceride, cholesterol, LDL-cholesterol were elevated in diabetic patient compared to non- diabetic subjects. Low level of serum HDL-cholesterol in diabetic patients compared to non diabetic subjects. Also there is a relation between levels of lipids and duration of diabetes. Inversely correlations were found between triglyceride and H D L-cholesterol may be due to dyslipidemia. No gender differences inlipid profile observed in diabetic patients. Patient's healthcare and public awareness is very low and most patients are not controlled and they are unaware of their condition. The majority of diabetic patients are unaware of their healthcare. **Recommendations:** Measurement of serum lipid profile should be introduced to the management plan of diabetes. Large size of the samples and a long period is needed to study the effect of duration and gender. Also to establish regional and national training courses for diabetic educators and creation of new evidence based management plan for diabetics in Zanzibar for better healthcare and lastly regular test of glycosylated hemoglobin (Hb A lC) for each diabetic patients.

48. Juma, M.K. (2018). Abdominal Ultrasonographic Findings Among Patients Clinically Suspected with Portal Hypertension Attending Muhimbili National Hospital.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Portal hypertension is defined as pathological increase in portal venous pressure. It is one of the major complications of chronic liver disease especially liver cirrhosis. Massive Gastrointestinal bleeding resulted from ruptured gastric and oesophageal varices is the major complications of portal hypertension. It is one of the leading causes of death in portal hypertensive patients with cirrhosis. Mortality rate per single episode of variceal hemorrhage

ranges from 20 to 80 %. Little is known about the sonographic pattern of portal hypertension in our setup. This study is going to establish a data base for future reference as well as to improve diagnostic accuracy. Broad objective: To determine abdominal ultrasonography findings among patient clinically suspected of portal hypertension at Muhimbili National Hospital. **Methodology:** The study was descriptive cross sectional hospital based that included patient clinically suspected to have portal hypertension who underwent abdominal ultrasound at Muhimbili National Hospital from September 2017 to March 2018. Consenting: Patients were consecutively included in the study. Structured questionnaires were used for recording patients' demographics, clinical information and ultrasound findings. Data analysis was done using the IBM-SPSS (Statistical Package for Social Sciences) version 23. Statistical Association was done by using cross tabulations and Chi-square test was used to compare proportions. P value of < 0.05 was considered statistically significant. **Results:** This study included a total of 173 patients clinically suspected of portal hypertension in which 110 (63.3%) were male and 63(36.7%) were female. The mean age was 35years with age range of 17-82 years old. The prevalence of portal hypertension was 83.8%. The prevalence was more in male (63.4%) than in female (16.2%). Portal hypertension was more prevalent in the age groups 30-39 accounting for 35.5%The portal vein caliber > 13mm was noted in 48 (33.3%) cases of portal hypertension, and there were no statistical relationship between dilated portal vein and portal hypertension (P-value 0.05). Less than 20% mean increase in main portal vein diameter was strongly associated with portal hypertension patient (P- value 0.000). Collaterals were observed in 135 (93.1%) of cases of portal hypertension and showed strong relation with portal hypertension. The most common collaterals vessels noted were splenorenal seen in 45% of all collaterals observed followed by gastrooesophageal 40%. Other collaterals were gall bladder wall (23.5%) and paraumbilical (10.3%). There were no anterior abdominal wall collaterals seen. The most common sonographic pattern were splenomegaly (95.8%), followed by ascites (75.8%). These patterns showed strong relation with portal hypertension. Hepatopetal flow accounts for majority (63.3%) of portal vein flow direction and showed strong relation with portal hypertension. Other flow directions were hepatofugal (14.7%), bidrectional (17.6%), and Lack of flow (4.2%)The most common cause of portal hypertension was liver cirrhosis seen in 108 of cases followed by periportal fibrosis (45 cases). Other patients had portal vein thrombosis (16cases), hepatic vein thrombosis (7 cases) and portal vein carvenoma (2cases). **Conclusion:** Combination of grey scale and Doppler

ultrasound are valuable, cheap, non invasive and easy   technique in establishing the diagnosis of portal hypertension and for assesing the possible underlying causes. **Recommendation:** Another study should be done with large sample sizeSplenomegaly should be adopted in the ultrasound diagnostic protocol for portal hypertension in our set up. Findings from this study should be used locally as baseline data for future reference.

49. Kabanda, I.O. (2018). Maternal and Perinatal Outcomes among Primigravid and Multigravid Patients with Severe Pre-Eclampsia/Eclampsia Delivering At Muhimbili National Hospital: A Comparative Study.Muhimbili University of Health and Allied Sciences.

Abstract

Introduction: Severe pre-eclampsia/eclampsia is one of the top ten causes of maternal and fetal morbidity and mortality worldwide. These conditions are seen to have more impact on the low income countries. Parity is also another health issue seen in low income countries where high parity is observed for most women. Understanding the relationship between parity and what impact it has on the outcome on the mother and fetus is very important. **Objective:** The aim of the study was to compare the maternal and perinatal outcomes among primigravid and multigravid patients with severe pre-eclampsia/eclampsia delivering at Muhimbili National Hospital in Dar es salaam, Tanzania. **Methodology:** This was a hospital based cross-sectional study which took six months from 1st August 2017 to 30th January 2018. The study included all pregnant women with singleton pregnancy delivering at MNH admitted with the diagnosis of severe pre-eclampsia/eclampsia. Data were collected using a check list that included clinical parameters such as presence of headache, visual disturbance, epigastric pain, proteinuria, oliguria, blood pressure and laboratory parameters such as hemoglobin level, platelets count, hematocrit, creatinine, urea, uric acid, aspartate aminotransferase and alanine transferase which were analyzed using Statistic Package for the Social Science (SPSS) version 23. Descriptive statistics were done and the results were presented as frequencies, means, and standard deviations. Pearson's Chi-square and Fischers exact test was used to compare categorical variables. P-value <0.05 was considered statistically significant. The results of the analysis were presented in odds ratio and 95% confidence interval. Crude odds ratio was calculated to

understand the effect of the gravidity as an independent factor on the outcomes seen. **Results:** Multigravid women showed to have a higher of proportion (73.2%) of delivering preterm babies compared to the primigravid women (61.1%). There was evidence of statistical significance with the p value = 0.002 (COR=1.7; 95% CI, 1.2, 2.5). Higher proportion was seen in most outcomes among the multigravid women with AKI (10.4%), HELLP syndrome (16.4%), DIC (3.0%), abruption placenta (3.0%), and NICU admission (52.3%) compared to the primigravid women who had occurrence of the outcomes at a lower proportion AKI (9.7%), HELLP syndrome (11.4%), DIC (1.3%), abruption placenta (2.0%), and NICU admission 45.0%). **Conclusion:** Mutigravid women had a higher proportion of preterm labour as compared to primigravid women. There is no difference in other poor maternal and perinatal outcomes among the two groups. The lack of statistical significant differences in the other outcomes of interest in the study suggests that the outcomes of the disease are not affected by gravidity and that both primigravid and multigravid women should be screened and managed under similar protocols.

50. Kaberege, K., Aboud, S. (et .all). (2018). Determinants of viral load testing among HIV-infected patients attending Care and Treatment Clinics in Dar essalaam. Muhimbili University of Health and Allied Sciences,

Abstract

Background: World Health Organization (WHO) recommended viral load testing to be the gold standard method for monitoring response to anti-retroviral therapy in HIV-infected patients. However viral load testing has been a challenge in Tanzania like many developing countries, therefore we conducted a study to determine the level of second time viral load testing and associated factors among HIV-infected patients attending Care and Treatment Clinic (CTC) in Dar es Salaam. **Methods:** A retrospective cohort design was employed in this study between December, 2017 and January, 2018 at Mwananyamala, Temeke and Amana regional hospitals. A list of cohort of patients who were enrolled on Antiretroviral Treatment (ART) in 2016 was extracted from the CTC register. Registers and patient's files were reviewed to obtain information about viral load testing, patients were interviewed using structured questionnaire to determine factors associated with second time viral load testing. Data were entered, cleaned and analyzed using Epi Info software version 3.5.4, 7 and Stata. **Results:** Of the 194 patients, female

contributed 70.1 %(136) while 58.2 %(113) were self-employed. Majority (72.7%) of patients had primary education level. The proportion of patients that were tested viral load for the second time was 74.2%.In multivariate analysis the following factors were found to be associated with missing viral load for the second time: being single (adjusted RR: 8.6, 95% CI: 1.8-42.1),beingwidowed (ARR: 7.4, 95%CI: 1.3-42.9),not received enhanced adherence counseling (ARR: 26.6, 95% CI: 7.3-96) and not knowing the importance of testing (ARR: 3.3, 95% CI: 1.3-7.8).Of the 50 patients who missed the second time viral load testing 47 were tested. Out of the 47 tested 72% had their viral load suppressed. **Conclusion:** The proportion of patients who tested viral load for the second time ishigh in Dar es salaam. The study identified being single, widowed, not received enhanced adherence counseling and not knowing importance of testing as reasons for not testing viral load for the second time. The proportion of viral suppression among those missed the second testing is high. In order to improve viral load testing enhanced adherence counseling should be given to all eligible clients and also they should be taught the importance of testing. **Keywords:** Viral load testing, Care and Treatment Clinic (CTC),

51. Kafuru, K.D. (2018). Prevalence of Methicillin-Resistant Staphylococcus Aureus (Mrsa) Nasal Colonization and Associated Factors among Slaughterhouse Workers in Dar-Es-Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Meat is a source of nutrition to human health as it has vitamins, proteins fats and mineral salts which are needed for human growth. The increased meat demand in urban areas including Dar-es-Salaam has been attributed by increase in population growth. Various techniques are employed to increase production of meat some of those technique involve the; such as use of antibiotics to livestock to reduce bacterial infections and increase produces. Misuse of antibiotics cause some bacteria to develop drug resistance, which has resulted in emerging of new strains such as Methicillin Resistant Staphylococcus aureus (MRSA) which pose a threat to people, especially those working in contact with livestock. Together with environment of slaughterhouses, Dar es Salaam slaughterhouse workers are exposed to thousands of affected animals which are brought from different parts of Tanzania. **Objective:** This study determined the prevalence of Methicillin Resistant Staphylococcus aureus (MRSA)

nasal colonization among slaughterhouse workers and associated risk factors in Dar es Salaam region. Materials and methods: We conducted a cross-sectional study from June-July 2018 involving 258 slaughterhouse workers from 4 registered slaughterhouses in Dar-es-Salaam namely, Ukonga Mazizini, Kimara, Vingunguti and Tegeta. Participants responded to a standardized questionnaire and provided a nasal swab. Swabs were tested for identification of S. aureus isolates and isolates were tested for antimicrobial susceptibility using Oxacillin.Results: The prevalence of MRSA nasal colonization among slaughterhouse workers was 39.2%. Factors found to have statistically significant association with prevalence of nasal colonization of MRSA were lack of training (OR=0.417, 95% CI (0.202-0.858), p=0.018). **Conclusion and recommendation:** Prevalence of MRSA nasal colonization was found to 39.2% among Slaughterhouse workers and the contributing factors were lack of PPEs, absence OHS guidelines, lack of worker's trainings, absence of hand wash basin, poor environmental sanitation and poor slaughter house infrastructures. Effort should be made by LGAs, OSHA, TFDA and MOHCDGEC to ensure that all slaughterhouses worker receive regular OH training and they adhere to available legislations so as to safeguard the health of the workers and community from zoonotic infections. Also, there is a need to implement stringent and effective prevention and containment measures to reduce antibiotic resistance in the farm-to-plate continuum in Tanzania.

52. Kagwisage, J. (2018). Cost Effectiveness Analysis and Quality of Life Among Women Undergoing Induction of Labour with Misoprostol Versus Dinoprostone Vaginal Tablets at Muhimbili National Hospital in Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Labour induction with either misoprostol or dinoprostone results to comparable maternal and foetal clinical outcomes. The measure of value for money and quality of life to mothers which are to guide the choice of induction method to be used has not been explored. Aim: To measure and analyse cost, maternal-foetal outcomes and health related quality of life (HR-QoL) among women undergoing induction of labour with misoprostol versus dinoprostone vaginal tablets at Muhimbili National Hospital (MNH). **Methodology:** A single blinded randomized controlled trial was conducted at MNH. Pregnant women were randomized to

misoprostol and dinoprostone treatment groups. Data were collected using Case Record Form, Price List Form and (36 –item Short Form) postpartum quality of life questionnaire. Maternal and foetal clinical outcomes were computed using Chi-square test. Labour induction cost was estimated using the Students T test. Six domains (bodily pain, physical functioning, mental health, general health, social functioning and induction satisfaction) were used to measure postpartum HR-QoL. Univariate sensitivity analysis was performed to test robustness of the model. **Results:** Misoprostol achieved more vaginal deliveries compared to dinoprostone ($p < 0.00$). Maternal and foetal clinical outcomes were comparable in the two groups. Misoprostol was associated with significantly lower average cost of labour induction (TZS 227,213) compared to dinoprostone (TZS 307, 010) ($p < 0.00$); with an incremental cost effectiveness ratio of TZS (1001.96). The mean score for postpartum HR-QoL were significantly higher in the misoprostol group (92.89) compared to dinoprostone group (87.25) ($p < 0.00$). **Conclusion:** In low and middle income countries use of misoprostol is recommended for cervical ripening and induction of labour as it have high success rate, low cost and better HR-QoL. Further studies are recommended to explore the feasibility of labour induction with vaginal misoprostol by appropriately powered studies to address rare maternal and foetal adverse outcomes.

53. Kakumbula, H.T. (2018). Prevalence OfIron Overload Among Patients with Transfusion Dependent Anaemia Attending Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Blood transfusion provides a major rapid and effective treatment for transfusion dependent anaemia patients including those with thalassemia, sickle cell anaemia, myelodysplastic syndrome, aplastic anaemia and haemolytic anaemia. Unfortunatelyiron overload among transfusion dependent anaemia patients has been shown to be a potentially serious problem that is often overlooked because the symptoms are nonspecific and often develop gradually. A number of diagnostic tests are available, but their interpretation can be challenging. Once transfusional iron overload is diagnosed, the options for treatment are relatively straightforward in the majority of individuals. However, untreated individuals can develop life-threatening morbidity and mortality related to organ toxicity. Thus, it is important to

identify iron overload before organ damage occurs. **Objectives:** The study was performed to determine the prevalence of transfusional iron overload, to describe the clinical diagnosis, clinical presentation and iron status of individuals with transfusion dependent anaemia at MNH. **Methodology:** This was a descriptive, cross sectional hospital based study involving patients from 2 years and above with transfusion dependent anemia who have received ≥10 transfusions or ≥100mls/kg of red blood cells in their life time, attending inpatient and outpatient hematology services at Muhimbili National Hospital. A structured questionnaire was used to obtain information on socio-demographic particulars, type of illness and number of blood transfusions one has received in certain period of time. Blood samples were drawn for full blood count, serum ferritin, serum iron, serum transferrin and C-reactive protein. The collected data were analyzed by using SPSS version 20.0**. Results:** Majority of patients were aged between 2 and 17 years 59 (52.7%), followed by 18-35 years 28 (25%). In a total of 112 study participants 60(53.6%) were males. Of these 112 study participants, majority were observed to have aplastic anaemia 37 (33%), followed by acute leukemia 27 (24.1%). Most of the patients were observed to have had received blood transfusion for more than 12 months. The clinical signs and symptoms that were observed in transfusion dependent anaemia patients were tachycardia, bradycardia, skin hyperpigmentation and hepatomegaly. Serum ferritin, iron, and transferrin saturation were observed to be markedly elevated and transferrin was low. Of the 112 patients, 74.1% had ferritin levels > 1000ng/ml and 71.4% had TSAT > 45%. Conclusion: The prevalence of iron overload among transfusion dependent anaemia patients at Muhimbili National Hospital was 72.5%. Serum ferritin and transferrin saturation were observed to be significantly elevated in all clinical diagnoses observed in this study. **Recommendation:** Having confirmed that iron overload is common among transfusion dependent anaemia patients, there is a need of screening for iron overload in a patient with a history of recurrent blood transfusion of ≥ 10 units or ≥ 100mls/kg in lifetime.Ferritin level of > 1000ng/ml and TSAT of > 45% in a patient with the history of receiving blood transfusion of ≥ 10 units or ≥ 100mls/kg in life time, chelation therapy should be initiated since it is effective at reducing iron burden and preventing organ damage.Serum ferritin and transferrin saturation are the easily available tests that can be used to diagnose transfusional iron overload in our setup.

54. Kalemani, A. (2018). FactorsAnd Barriers to Heroin Injecting Behavior Change Among Clients Receiving Methadone Treatment in Dar Es Salaam City.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Injectable Drug Use (IDU) remains a complex problem globally. Tanzania, with an estimate of 50,000 injectable drug users, is the first Sub-Saharan African country to have established methadone treatment with three working sites. Concurrent heroin injection while in methadone treatment is a major setback for both treatment outcomes and Opioid Substitution Therapy as a HIV prevention program. This report identified factors and barriers to heroin injection abstinence. **Objective:** To understand factors and barriers to heroin injection behavior change among clients on methadone treatment in Dar es Salaam. Methodology: This was exploratory cross sectional study using in-depth interview guide to dig deeper to the factors and barriers to heroin injection behavior abstinence among the methadone clients. Thematic data analysis was done manually. Transcriptionof audio data was done and then transcripts were translated into English. Information in transcripts was categorized to develop codes (important categories). Themes were developed from codes and compiled to form main themes. **Results:** Peer pressure, anxiety management, young people's urge to experiment new things, and engaging into drug business as income generating activity are the major factors contributing to people starting drug use. To protect the young generation from joining the drug use community, prevention behavioral interventions should focus into these factors. Inadequate methadone dose was identified as a barrier to heroin injection. Respondents reported the effects of low dose being more conspicuous during the Initializing phase and withdraw phase. Lack of family support was also reported as factor contributing concurrent drug use. Clients who had family support are more likely not to continue using heroin while on Methadone treatment. Policies running Medication Assisted Treatment (MAT) clinic provides strict guidelines leading to frequent suspension from the program by health care providers, contributing to difficulties in abstaining from heroin injection. The use of heroin for sexual purposes is a barrier to heroin injection abstinence especially to sexually active clients who are determined to delay orgasm. Distance from methadone sites and lack of income generating activities are other identified barriers. **Conclusions:** Heroin injection and other drug use among Methadone clients is a problem that

needs to be addressed by Methadone providing programs. For better treatment outcomes, programs should be designed to individualize Methadone dosage, decrease clients' socialization with other drug using friends, and deploy methods such as "mobile methadone" which increases access of methadone to clients.

55. Kalisti, D. (2018). Factors Influencing Practice OfExpressing Breast Milk Among Working Postnatal Mothers at Reproductive and Child Health Clinics in Dar Es Salaam Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Exclusive breastfeeding has advantages for mother and infants. Many working postnatal mothers may not practice exclusive breastfeeding because of returning to work just after maternity leave. This challenge can be minimized by expressed breast milk. This study intends to fill in the gap of breastfeeding to babies, by ensuring exclusive breastfeeding when mothers are not available to breastfeed their babies. Aim: To describe factors influencing practice of expressing breast milk among working postnatal mothers at Reproductive and Child Health (RCH) clinics in Dar es Salaam.**Methods:** The study used a descriptive cross sectional design. Sample size was 275 postnatal mothers, selected from five district RCH clinics namely; Mnazi Mmoja, Magomeni, Kimara, Mbagala Rangi Tatu and Vijibweni in Dar es Salaam. Simple random sampling was used to select postnatal mothers. Data was collected by using interviewer administered questionnaire. Chi-square test was used to assess' factors associated with practice of expressing breast milk. A p-value less than 0.05, was considered to have significant association between dependent and independent variables. **Results:** In this study, 79.3% were married, 86.2% were between 20-35 years, 61.5% were self-employed and had primary level of education (37.8). Expressed breast milk feeding was practiced by 21.8% of the respondents. Family support (P= 0.16), use of formula and cow milk (P=0.005), feeling tiredness when expressing breast milk (P=0.004), lack of attention to express due to work (P=0.048), feeling of embarrassment and shy (P=0.018), perceived lack of benefit from milk expression (P=0.009), perceived traumatic expression (P=0.001) and lack of time (P=0.020) were statistically significantly influence expression of breast milk. Majority of mothers (75.0%) who were expressing breast milk were knowledgeable, correctly stored the expressed breast milk

(76.7%) and had high score on practice (96.5%). Conclusion: It is concluded that most working postnatal mothers do not express breast milk for their babies due to things that can be educated to mothers. These findings are alarming and more efforts need to be focused in improving health education during antenatal and postnatal visits on factors influence expressing breast milk. There is a need to sensitize and support working postnatal mothers to express breast milk for sustained exclusive breastfeeding. The knowledge observed among those who express breast milk is worth noting. Emphasis should be placed on more studies in the other clinics to generate generalizable results.

56. Kandege, Z. (2018). Assessment of Family Support On Antipsychotic Drugs Adherence Among Mentally Ill Patients at Muhimbili National Hospital in Dar - Es - Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Poor family support in patients with mental illness is a major challenge for antipsychotic drug adherence in Tanzania and other countries. Non adherence brings about negative effects and it results in a huge burden to patients, their families and mental health sector and country economy as well. Although, poor family support is reported as one of the psychosocial factors for relapse and non-adherence to medication for mental ill patients very little is known regarding the impact of family support on antipsychotic adherence in Tanzania. Therefore, there is a need to find out factors influencing family support on antipsychotic drugs adherence in order to suggest possible interventions on improving adherence and proper management of mentally ill patients. **Objective:** To describe family support on antipsychotic drugs adherence among patients with psychotic disorders attending psychiatric unit at Muhimbili National Hospital, Dar – es – Salaam Tanzania. **Methods:** This was a cross sectional study design. Data collection took place between April and May 2018. A total of 423 care givers visiting their patients at the psychiatric clinic were recruited. A structured questionnaire was used to collect data. Data were collected by the researcher and two research assistants and analyzed using computer software with SPSS version 20. Pearson Chi Square (X2) statistical test was used to assess the significant associations between an outcome measure (family support on antipsychotic adherence) and non-continuous variables (socio demographic factors, knowledge

of family care givers on antipsychotic drug adherence, resources available, types of support and barriers). The p-value of less than 5% was used to indicate the level of statistical significance. **Results:** Majority of caregivers (277, 65.5%) were not knowledgeable on medication adherence, and most were males (66.8%). Most of the caregivers lived in the same house with their patients and were taking care of their son or daughter. Majority (218, 51.5%) was employed or self-employed, and they had no enough money to care for their patients. They provided support to their patients such as follow up of or buying medication; however, sometimes they forget to give medication to their patients. Both males and females experienced serious burden on caring for mentally ill patients and those caregivers who experienced serious burden on influencing medication adherence had less knowledge on adherence. Barriers such as stress, feeling angry, health suffering due to care, feeling strained of the patients' needs and unavailability of money affected medication adherence and increased burden of care. **Conclusion and recommendation:** Most male caregivers were less knowledgeable on medication adherence. Although they provided support on medication follow up, sometimes they forgot to give medication to their patients. Both male and female reported serious burden such as psychological, physical and financial stress on ensuring medication adherence. Strengthening therapeutic relationship between nurses, patients and family caregivers is very important. Regular individual psychoeducation sessions and community based interventions would help to improve adherence and reduce re - hospitalization risk and relapse rate, hence better prognosis and preservation of resources like mental health services cost.

57. Kangusi, H. (2018). Malaria InIlala Municipality, Dar Es Salaam, Tanzania: On Climatic Factors Facilitating Continued Transmission and Health Workers' Knowledge and Perceptions On the Utility of Climate Data.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Malaria is still the number one killer disease inunderfive children and pregnant women, changing environmental and climatic factors pose the biggest challenge in fighting against the burden of malaria. Good knowledge on potential use of climate data and informations can be very useful for predicting outbreaks and preparedness interventions. In Tanzania several

studies have been conducted related to malaria were based on diagnosis methods, control and prevention measures. However, there are few studies on climatic factors facilitating continued transmission and health workers' knowledge and perceptions on utility of climate data for malaria control have been carried out**. Objectives:** This study examined the climatic factors facilitating continued transmission of malaria among underfive over the period of four years and health workers' knowledge and perceptions on the utility of climate data for planning malaria control activities in Ilala Municipality. **Methodology:** A time series ecological study of secondary data was carried out in Ilala Municipality to examine the relationship between time series meteorological data (temperature, rainfall and humidity) with malaria incidence among underfives from 2013 to 2016. The monthly meteorological and malaria incidence data were obtained from the TMA; and the NMCP respectively. Health workers' knowledge and perceptions on the utility of climate data for planning malaria control activities, was examined by a questionnaire survey among public health workers. Time series analyses were carried out to assess monthly seasonal climatic variability with malaria incidence. The relationship between meteorological data with malaria incidence data over the period was assessed by Pearson's analysis. Knowledge was measured by using a scoring system, while perceptions were measured on the Likert scale. The Chi-square test was used to test associations between variables, at the significance level of 0.05. **Results:** The malaria incidence among underfives showed a trend of decline from 0.093 (2013) to 0.064 (2016) indicating disease is still persisted. At a lag of one-month period, monthly climatic factors (relative humidity and minimum temperature) showed a significant and positive correlation with the monthly malaria incidence ((r=0.483, p=0.001 and r=0.346, p=0.013). However, at a lag period of three months, the climatic factors showed a negative correlation with monthly malaria incidence (r =-0.146, p=0.350; r=-0.041, p=0.066 and r= - 0.048, p=0.982). Of the 180 health workers surveyed; the large majority (90.5%) had a high level of knowledge on the utility of climate data for malaria control. Likewise, the large majority (80.9%) had positive perceptions on the influence of climate to the human health, particularly on malaria transmission; and this was significantly associated with years of work experience. **Conclusion:** Findings show that monthly climatic factors (relative humidity and minimum temperature) remained suitable, hence continued transmission of malaria. The high knowledge on the utility of climate data for malaria control and positive perceptions on the influence of

climate on human health indicate the potential of the health workers to accept and implement policy issues related with the use of climate data for malaria control activities.

58. Kapala, A.w. (2018). Factors of Overweight and Obesity among Women of Reproductive Age 15 – 49 Years in Ilala Municipality.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Non-communicable diseases (NCD) have become among public health problems, which contribute to mortality and morbidity globally. The widespread of NCD in the populations have led to the global increase of cardiovascular diseases such as heart diseases, high blood pressure which also increase health care costs. According to Tanzania Demographic and Health Surveys (2004/05, 2010 and 2015/16) the percentage of overweight and obesity has been increasing and affects more women than men in Tanzania, in all surveys Dar es Salaam region has the highest percentage of overweight and obesity compared to other regions. Despite such increase on overweight and obesity, there is inadequate information on the factors of overweight and obesity. **Objectives.** The broad objective of this study was to determine the factors associated with overweight and obesity among women of reproductive age in Ilala Municipality. **Methods:** A cross sectional study employing a two-stage clusters sampling procedure was conducted. Face-to-face interviews were held using WHO Steps questionnaire after customizing it to suite the study context. Anthropometric measurements - weight, height and waist measurements were made. Bivariate and Multivariate analysis was carried for determining factors of overweight and obesity. **Results:** 506 respondents were interviewed, percentage of overweight and obesity was 48.8% (n=245/506). Physical activity, dietary intake and age were factors for overweight and obesity. Respondents with 30-39 years [AOR=2.6; 95% CI: 1.4 - 4.8; P = 0.002] and 40 − 49 years (AOR=2.1; 95% CI: 1.1- 4.5; P=0.034) were more likely to be overweight and obese compared to respondents with age between 15 – 24 years. Additionally, women who had physical activity were less likely to be overweight and obese compared to their counter part who had no physical activity (AOR=0.6; 95% CI: 0.4 − 0.9, P=0.026), also women who had dietary intake were less likely to be overweight and obese than those who had no dietary intake (AOR=0.3; 95% CI: 0.1 - 0.8, P=0.039). **Conclusions:** Age, physical activity and

dietary intake are the factors associated with overweight and obesity among WRA in Ilala Municipality. Key Words: Overweight, Obesity, Women of Reproductive Age

59. Karimjee, T.S. (2018). Long-Term Outcomes of Intramedullary Nailing in Traumatic Diaphyseal Femur Fractures at Muhimbili Orthopaedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Intramedullary nailing is currently the preferred method of treatment of femur shaft fractures. Multiple studies have proved the superiority over other methods in terms of high union rates and low infection rates. There is a knowledge gap for long-term outcomes of intramedullary nailing at Muhimbili Orthopaedic Institute. The purpose of this study is to evaluate the long-term outcomes following intramedullary nailing in traumatic diaphyseal femur fractures. **Methods:** A cross-sectional study involved 111 patients who had undergone intramedullary nailing between the period of October 2008 and December 2015 at Muhimbili Orthopaedic Institute. A clinician-reported data collection tool was used to record patient particulars, injury and surgery details. All patients went through a clinical exam and radiological assessment. Participants also filled three patient-reported outcomes measures; the Knee injury and Osteoarthritis Outcome Score (KOOS) and Hip disability and Osteoarthritis Outcome Score (HOOS), and the EQ-5D-5L. Results: From 101 patients who met the inclusion criteria, majority were male with a mean age of 39 ($\pm$ 11) years. Mean period of follow-up after first surgery was 63.8 ($\pm$ 7.4) months. 58% of the patients underwent antegrade approach while 42% through retrograde approach. An increased rate of knee pain was observed with the retrograde approach while an increased rate of hip pain with the antegrade approach. The mean scores of knee flexion and hip extension fared worse in the retrograde group ($p=0.005$ and $p=0.026$, respectively). The KOOS scores were lower in the retrograde group while HOOS scores, EQ-5D-5L index and EQ-VAS were similar in both nailing groups. The overall scores of Sports/Recreation and QoL were lower than other subscales. The mean value of the EQ5D-5L index was 0.835 with many patients reporting a good quality of life with an EQVAS of 91.3%. A substantial correlation was seen between Visual Analogue Scale (VAS) pain and both disease-specific and generic-health questionnaires with a mean value of 0.64 (ranging 0.59 to 0.72). A fair correlation was seen for

mean values of age, knee flexion, hip extension, vi hip internal rotation, hip external rotation, rotational deformity, limb length discrepancy and angular malalignment of femur with correlation coefficient ranging from 0.20 to 0.33. The pain was the strongest predictor of the quality of life subscale of KOOS, HOOS, and EQ-5D-5L index (R2 = 49%, 35.6%, and 44%, respectively). Less significant predictors included hip flexion, hip extension, hip internal rotation, hip external rotation, rotational deformity, limb length discrepancy and angular malalignment of femur with a variance (R2) ranging from 4.1% to 7.0%. **Conclusion:** Quality of life is greatly affected by pain and it remains an important source of disability following intramedullary nailing of the traumatic diaphyseal femur fractures. Other less significant predictors include range of motion, rotational deformity, limb lengthdiscrepancy, and angular malalignment of the femur.

60.Kato, I. B. (2018). The Prevalence of Non-Communicable Diseases Among Hiv Infected Patients On Long Term Anti Retroviral Therapy Compared to Antiretroviral Therapy Naive in Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: HIV disease and the use of anti-retroviral treatment (ARTs) have been associated with increased risk of developing a variety of non-communicable diseases (NCDs). Long term use of ART has changed the clinical course of HIV/AIDS from disease associated with imminent death to a chronic condition associated with increased risk of developing NCDs. Currently there is inadequate data from SSA, on the associated factors, and magnitude of NCDs among patients on long term use of ART. **Objective:** To compare the prevalence of selected non-communicable diseases (NCDs) and associated factors among HIV infected individuals on ART for ≥ 5 years to ART naïve patients in Dar es Salaam **Methodology:** Subjects aged ≥18years attending HIV Care and Treatment Clinics, provider initiated treatment and counseling services at four hospitals in Dar es Salaam during the study period were interviewed to determine their suitability to participate in the study. ART naïve subjects and those on ART for ≥5 years were recruited into the study. Data on demographic characteristics, selected NCD risk factors and physical examination including measurements of blood pressure, height and body weight were recorded. Fasting blood glucose test was performed to study subjects with and with no history of diabetes

mellitus and oral glucose tolerance test (OGTT) was done to patients with impaired fasting glucose. Blood samples were drawn for biochemistry including lipid profile and serum creatinine. **RESULTS:** Overall,306 participants on long term (≥5 years) ART (LTART) and 306 ART naïve were recruited in the study. Females comprised 69.9% of the total study population; and 51.3% (220/428) of females were on LTART compared to 47% (86/184) of male study subjects (p=0.448). The mean age for the 612 study subjects was 41.2±12.8; and for those on LTART was 45±12.6 compared to 37.4±11.9 among ART naïve subjects (p<0.001). The prevalence of hypertension among participants on ART for ≥.10 years was 29.3% compared to 6.9%, among ART naïve patients (p<0.001). Impaired glucose tolerance (IGT) was found in 20.5%- 24.5% of patients on LTART compared to 4.1% among ART naïve subjects (P<0.001). Diabetes mellitus was detected in 20.3% of those on LTART compared to 3.9% ART naïve study subjects respectively (p<0.001). Renal dysfunction was found in 4.2% of LTART exposed and 5.6% among ART naïve patients (p=0.454). Hypercholesterolemia was found in 32.5% of patients on LTART compared to 16.7% of ART naïve subjects (p<0.001) whereas hypertriglyceridemia was found in 20.3% of subjects on LTART compared to 9.5% of ART naïve (p=0.009). Logistic regression analysis showed that history of alcohol use; age ≥40 years, ART use for ≥5years and hypertriglyceridemia were independent risk factors for NCD. **CONCLUSION:** Hypertension, impaired glucose tolerance, diabetes mellitus and dyslipidemia were significantly associated with long-term use of antiretroviral drug treatment.

61. Katumba, D.J. (2018). Risk Factors Associated with Stillbirths Among Women Delivered at Muhimbili National Hospital, Dar Es Salaam, Unmatched Case Control Study.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: About 2.6 million stillbirths occur globally each year. Developing countries contribute 98% of this burden. Tanzania is among the top ten countries with the highest number of stillbirths worldwide. Many risk factors associated with stillbirths are mostly non-specific and often varies from one setting to another. Muhimbili National Hospital (MNH) receives many referred women with preeclampsia and antepartum haemorrhage which need immediate delivery. But very little is known whether these factors contribute to higher number of stillbirths at MNH.

This study provides insight on risk factors associated with stillbirths. Aim: To determine the risk factors associated with stillbirth among women delivered at MNH **Methodology:** Unmatched case-control study was conducted in 2017 involving 146 cases and 292 controls of women who delivered stillbirths and live babies respectively. Structured questionnaire and checklist were used to collect socio-demographic, maternal and Obstetric factors respectively. Data was analyzed using SPSS version 23. Bivariate analysis was done using Chi square to determine association between independent and dependent variables. Logistic regression was conducted to find the independent risk factors associated with stillbirths. **Results:** During the study period a total of 2537 newborns were delivered. Stillbirths were 153 giving a stillbirth rate of 60 per 1000 total live births. Factors that were independently associated with stillbirth after controlling for potential confounders were gestational hypertension (AOR=2.3; 95%CI: 1.1- 4.6), preeclampsia (AOR=3.0; 95%CI: 1.5- 5.8), previous history of stillbirth (AOR=3.5; 95%CI: 1.7- 6.9), intrauterine growth restriction (AOR=3.2; 95%CI: 1.4-7.1), antepartum hemorrhage (AOR=20.5; 95%CI: 7.5-56.0) and fetal distress (AOR=3.3; 95%CI: 1.5-7.6). **Conclusion:** Stillbirth is among the adverse outcome of pregnancy at MNH. Timely and appropriate management of hypertensive disorders in pregnancy and antepartum haemorrhage is very crucial for prevention of stillbirths. Proper intrapartum monitoring of labour using Partograph is important intervention in preventing stillbirths.

62. Kaunda, P. (2018). Recording of   Partograph and Factors Influencing Its Documentation Among Skilled Birth Attendants at Mzuzu Central Hospital, Northern Malawi.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Malawi suffers unacceptably high maternal and neonatal mortality rates substantially caused by complications during labour and delivery. Literature shows that complete recording of partograph in monitoring women during labour significantly contributes to reduction and prompt management of these fatal complications. Although partograph is an essential tool, there is limited evidence on the status of recording among skilled birth attendants in northern Malawi. Aim: The aimof this study was to assess status of partograph recording and explore factors that influence its documentation among skilled birth attendants at Mzuzu Central

Hospital in Malawi. **Methods:** The study used a descriptive cross sectional design which employed mixed methods of data collection. The study involved a retrospective partograph review that collected data on recording of partograph using a data extraction form. This data was analysed using SPSS as well as descriptive statistics. The qualitative phase collected data on factors that influence recording of partograph among skilled birth attendants. The data was collected through individual in-depth interviews using a semi structured interview guide. This data was organised and analysed by Nvivo. All ethical principles as detailed in the Helsinki Declaration were followed. **Results:** Of the 369 partographs that were reviewedcomplete assessment record was only in 12.7% for foetal assessment, 13.3 % for maternal assessment and 24.7% for progress of labour. The most completely recorded parameter was liquor 71.8% followed by cervical dilatation 70.5% while the least completely recorded parameters were temperature in 13.6% and urine protein 2.2%. Factors that influence complete recording of partograph included knowledge of partograph, perceived requirements to complete partograph and challenges or barriers to complete recording of partograph. General knowledge, perceived benefits of complete recording of partograph, availability of equipment for assessments, supportive supervision and motivation were reported to promote complete recording of the partograph. Inadequate sphygmomanometers, Doppler machines, thermometers, staffing level, in service training and staff motivation were reported to hinder complete recording of the partograph. **Conclusion:** There is partial recording of partograph among skilled birth attendants atMzuzu Central Hospital. Therefore, it is essential to implement strategies that promote completerecording of partograph in order to reduce maternal and new born morbidity as well as mortality at this health setting.

63. Kawambwa, M.H. (2018). Incidence of Postoperative Complications Among Patients Who Are Undergoing Abdominal Surgery at Muhimbili National Hospital, Dar Es Salaam-Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Postoperative complications impart a very big burden in terms of morbidity and mortality. Factors associated with postoperative complications include patients' factors, infrastructure, clinicians' factor and procedure related. There is no data retrievable on overall

incidence and pattern of postoperative complications in Tanzania. This study aimed at assessing the incidence of postoperative complications and associated factors among patients who are undergoing abdominal surgery at MNH-Tanzania. Broad **objective:** To determine the incidence of postoperative complications and associated factors among patients who are undergoing abdominal surgery at MNH- Dar es Salaam, Tanzania. Materials and Methods: This was a hospital based cross-sectional study which involved patients who underwent abdominal surgery at MNH, Dar-es-Salaam, Tanzania, for twelve months (March 2017 to March 2018). Consented patients who met inclusion criteria were enrolled in the study. Patients were followed for 30 days postoperatively. Independent variables were demographic factors, surgical procedures and their indications, who performed that procedure, co-morbidities, type of anesthesia given, duration of surgery, and dependent variables were postoperative complications. Data was analyzed by SPSS window version 20. **Results:** A total of 164 patients were recruited. The incidence of complication was 40.9%, SSI being the commonest 21.3%. Factors which were statistically significant included; emergency surgery 62.2% (P=0.001), male sex 68.9% (p = 0.019), duration of surgery (> 4 hours) (P=0.001), preoperative blood transfusion 19(61.3%, P=0.007), preoperative serum Creatinine 12(92.3%, P=0.001), prolonged postoperative fasting (p = 0.001), use of TPN, low preoperative Hb level (p = 0.048) and poor nutrition status 24(63.2%, P=0.001). Mortality rate was 0.189. The average length of stay (LOS) for patients who developed complications and those without complication were (13.63±12.1 days) (9.35±12.2 days) (p = 0.028) respectively. Conclusion: In this study, SSI was found to be the commonest postoperative complication. Patients with complications had more morbidity and longer LOS.

64. Kawambwa, R.H. (2018). High Prevalence of Hiv, Hbsag and Hcv Among Injecting Drug Users in Dar – Es - Salaam: A Potential Stumbling Block in The Control of the Infections in Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: In 2014the number of people injecting drugs in Tanzania was estimated to be 50,000. However, relatively little is known regarding the prevalence of HIV and hepatitis B and C viral co-infections and factors associated with contracting the infections among them. This study aimed to examine prevalence of the three viruses and identify associated risk factors.

Methods: We determined, among injecting drug users in Dar es salaam, the sero prevalence ofhuman immunodeficiency virus (HIV), hepatitis C virus (HCV), hepatitis B surface antigen (HBsAg) and by sociodemographic and risky injecting behaviours. **Results:** A total of 219 injecting drug users from Dar-es-salaam were recruited, 164(79.4%) males and 55 (25.1%) females, aged between22 and 58years. One hundred and twenty-four (56.6%) of the injecting drug users had serological evidence of infection with at least one pathogen and 32 (14.6%) had multiple infections. The overall prevalence of HIV, HBV and HCV were 33.8%, 7.8% and 50.2%, respectively. Risky behaviors included sharing of needles (47.5%), not using condoms (48.9%), injecting for duration of over 3 years (32.0%) and injecting more than 3 times in 24hrs (79. 9%).Occurrence of at least one infection was independently associated with never using condoms OR=5.8 (95%CI: 2.8-11.9) and injecting for a duration of more than 3 years $p<0.05$, OR=4.00 (95%CI: 1.8-8.8). Conclusion: The high prevalence of HIV (33.8%), HBV (7.8%) and HCV (50.2%) observed among IDUs is very alarming to the general population where the prevalence of these viruses has been declining, and therefore appropriate interventional measures should be instituted.

65.Kazabula,M. Z. (2018). Postpartum Intrauterine Device: Knowledge, Attitude and Practice Among Women Attending Post Natal Clinics in Dar Es Salaam; Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Post partum intrauterine contraceptive devices (PPIUCD) use is worldwide increasing following several programs targeted to promote it. In Tanzania the use has also increased following the work of the Association of Gynecologists and Obstetricians of Tanzania (AGOTA) under International Federation of Gynecology and Obstetrics (FIGO) and other programs like Engender Health and Management and Development for Health (MDH). The knowledge, attitude and practice of PPIUCD need to be established so as to help the improvement of PPIUCD uptake. **Objective:** The objective of this study was to assess knowledge, attitude and practice of Post partum intrauterine device among women attending postnatal clinics in Dar es Salaam. **Methodology:** A descriptive cross sectional study was conducted in 5 health centers in Dar es Salaam. Multistage sampling was used to obtain the study

participants. A structured questionnaire was used to interview 600 participants aged 15-49 years attending their 42nd day postnatal clinic. Data analysis was done using statistical package for the social science (SPSS) version 23. Categorical Data were summarized into frequencies and proportion, and continuous data into mean and standard deviation. Computation was done to obtain different categories of knowledge and Attitude. **Results:** Participants who knew what IUCD is, were 52% and its longevity 61%. Abdominal cramp, irregular bleeding and abnormal vaginal discharge were known as side effect of IUCD by 8%, 24% and 20% respectively. Five percent of participants had good knowledge, 57% had average knowledge and 38% had poor knowledge. Cost effective (72%), provision of immediate contraception (55%) and the wish for future use (60%) of PPIUCD were attitudinal items with high score. Safety (20%), not interfering sexual intercourse (18%) and discussing with partner (26%) were the items with three lowest score. Forty-nine percent had satisfactory attitude and 51% unsatisfactory attitude. Of the study participants with history of previous use of contraception, methods included were injection (40%), oral contraceptive pills (37%), implants (29%), condoms (6%) and IUCD (6%). However, participants currently on contraception use, mostly involved, IUCD (49%) and Implant (41%). Commonly mentioned reasons for not choosing PPIUCD were intercourse related (23%), no need (21%) and the choice of another method (18%). Perforation (3%), infertility (5%) and birth defects (5%) were the least mentioned. **Conclusion:** Almost half of participants had average knowledge and only 5% with good knowledge. Attitude was satisfactory by nearly half of participants. PPIUCD was the commonest contraception in use among participants. Most of reasons for not using PPIUCD were more of misconception than reality. **Recommendation:** Couple counseling should be improved during ANC. Counseling for PPIUCD need to be integrated into other health related programs like cervical cancer screening. **Key words**: Knowledge, Attitude, Practice, Post Partum Intra Uterine Contraceptive Device, Post partum.

66. Khamis, A.M. (2018). Factors Associated with Preterm Babies' Deaths in Neonatal Unit at Mnazi Mmoja Hospital, Zanzibar.Muhimbili University of Healthy and Allied Sciences.
Abstract

Introduction: Globally, 15 million babiesare born prematurely and more than 1 million die due to complications of pre-term birth, and those who survive face a long life disability. According to Tanzania National profile of pre-term and low birth weight prevention and care, Tanzania ranked

number twelfth for per-term birth rates in 2015 and about 28% of all neonatal death were caused by premature complications. In Zanzibar, the number of pre-term death has been increasing from 123 in 2015 to 213 in 2017. This study intended to fill in the gap of specific factors leading to the death of preterm babies at the hospital in Zanzibar. **Methods:** This was a retrospective design used secondary data of premature babies born at Mnazi Mmoja hospital in Zanzibar for the periods of 2016 to 2017. The study included 349 out of 1362 records of registered preterm neonates who were systematically selected from neonatal Unit. Statistical Package for Social Science (SPSS) version 20 was used to analyze the data. Univariate analysis was used to examine the socio-demographic characteristics using frequency distribution. Logistic regression was used to determine the association between dependent and independent variables. A p-value less than 0.05 was considered statistically significant. **Results:** A total of 137(39.3%) neonates died for those registered from January 2016 to December 2017. Neonates Apgar score, gestational age of the mother, number of ANC visits neonate's mother attended, neonate's weight and days a neonate was hospitalized has shown to have direct association with neonate's outcome (alive/dead), all with p-value of < 0.001. The logistic regression to determine factors associated with preterm death was done. Neonates born with higher Apgar score, results show that they were less likely to die (Apgar score 4-6 OR 0.34, 95% CI 0.18-0.63 and P-value=0.001) and (Apgar score 7-10 OR 0.09, 95% CI 0.05-0.18 and P-value < 0.001) compared with neonates with lower Apgar score of 1-3. Likewise, preterm born with lower birth weight were more likely to die (Body weight 1-1.9kg OR 0.04, 95% CI 0.01-0.17 and P-value <0.001) and (Body weight 2-2.4kg OR 0.02, 95% CI 0.005-0.10) and P-value <0.001 compared to preterm who were born a bit higher birth weight. Preterm born by mothers who had higher gestational age at the period of birth were less likely to die compared to preterm born with mothers with lower gestational age (OR 0.15, 95% CI 0.09-0.26 and P- value < 0.001. Additionally, maternal conditions such as hypertension, pre-eclampsia premature labour and low number of antenatal visits contributed to preterm babies' deaths. **Conclusions:** Death of preterm babies was associated with both maternal and preterm babies' conditions. The study findings provide useful information which can be used by the Ministry of Health and other stakeholders to develop guidelines for management of maternal conditions during pregnancy and care of preterm babies.

67. Kheir, K.R. (2018). Assessment of The Quality of Fivisia Powder Processed at The Institute of Traditional Medicine.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: The quality of herbal medicine can be affected by different factors, some of which may be environmental conditions by which the medicinal plants are grown or collected, the area where they are dried and processed, the storage conditions, transport conditions and the manufacturing processes where medicinal products are produced. It is therefore important to standardize phytopharmaceuticals for maintaining reproducible efficacy and safety of Fivisia powder processed at ITM and used for the treatment of malaria has no established quality data on presence or absence of heavy metals, aflatoxins and microbial contaminants. **Objectives:** Broadly, this study determined the quality of Fivisia, a herbal medicine processed at the Institute of Traditional Medicine of The Muhimbili University of Health and Allied Sciences (MUHAS) regarding the presence or absence of heavy metals, aflatoxins and microbial contaminants. Materials and methods: Fivisia powder was obtained from the Institute of Traditional Medicine (ITM) in Tanzania where it is processed. The study was conducted at ITM - MUHAS in Dar es Salaam, Tanzania Bureau of Standards (TBS), Dar es Salaam and Chief Government Chemist Laboratory Agency (CGCLA), Zanzibar. Microbial contaminants were analyzed by using plate count method for moulds and Shigella spp. while Most Probable Number (MPN) method was used for determination of E. coli; Heavy metal analysis such as lead, cadmium, mercury, arsenic and chromium were analyzed using; Inductively Couple Plasma − Mass Spectrometry (ICP-MS) while aflatoxin analysis was done using High Performance Liquid Chromatography-Mass Spectrometry (HPLC-MS). Descriptive statistical evaluation using Microsoft Excel 2016 software was used to analyze presence and level of heavy metals, aflatoxins and microbial contaminants. The data were tabulated, expressed in mean±S.D, presented in graphs, and compared to WHO guidelines. Results: The quantity of molds in Fivisia powder was between 1.1×10^3 to 1.2×10^3 CFU/g which is below the legal limit according to WHO of maximum of 10^5 CFU/g, no any growth of E. coli and also there was no any growth of Shigella spp. Levels of heavy metals detected in Fivisia powder were; 1.69 ± 0.08 ppm ofChromium (Cr), 0.08 ± 0.01 ppm of Cadmium (Cd), 0.22 ± 0.01 ppmof Lead, 0.15 ± 0.08 ppmofMercury (Hg) and 0.04 ± 0.02 ppm of Arsenic (As). Heavy metals detected in all samples were within the permissible

limit for consumed herbal product according to WHO standard guidelines. All five samples of Fivisia powder were found free from Aflatoxin B1, B2, G1 and G2. Conclusion: The herbal medicine Fivisia processed at the Institute of Traditional Medicine; Muhimbili University of Health and Allied Sciences (MUHAS) is safe for human consumption based on the quality parameters that have been studied since heavy metals, microbial contaminants and aflatoxin were below the limit set by WHO.**Recommendations:** Further studies should be carried out focusing on other quality parameters like radioactive elements, ash content, moisture content. Apart from the Heavy metals that have been analyzed like mercury, cadmium, lead, arsenic and chromium there are other heavy metals like Copper, Zinc, Iron, Nickel, Cobalt, Antimony which need to be considered for further study in Fivisia samples.

68.Kibona, H.G. (2018). The Impact of Medical Therapy for Benign Prostatic Obstruction On the Health-Related Quality of Life at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.
Abstract

Background: Benign prostatic obstruction (BPO) is a common condition in older men thatcan often result in lower urinary tract symptoms (LUTS). LUTS associated with BPO can cause bladder outlet obstruction may have a significant negative impact on patients' health-related quality of life as can certain treatments for the condition. **Objective:** To determine the impact of medical therapy on health-related quality of life amongpatients on treatment for lower urinary tract symptoms due to benign prostatic enlargement at MNH.**Methodology:** A prospective hospital based descriptive study was carried out in urologyoutpatient clinics. Both public and private clinics from April to December 2017. All diagnostic and treatment options of patients were decided by attending clinicians. Patients were ≥30 years of age on medical treatment for LUTS due to BPO. Symptom and HRQL were measured at baseline and at 3 months using the international prostate symptom score (IPSS) and the Benign Prostatic Hyperplasia Impact Index (BII) score tools. **Results:** A total 150 patients were included in the analysis with median age was 54.6 years, mean PSA of 4.45ng/ml (SD5.13) and a mean prostate volume 54.62cc (SD5.13). Majority, 144(96%) had moderate and severe LUTS. Majority, 94(63%) men received a combination of tamsulosin and finasteride and 44(29%) men received tamsulosin. Pytotherapy

or its combination with finasteride were prescribed to few (7%). Medical therapy was associated with overall improvement of quality of life (p<0.001). Tamsulosin and combination of tamsulosin and finastride were equally effective in improving symptom and QoL. A combination of tamsulosin and finasteride was associated with more adverse effects. **Conclusion:** Improvements in QoL and symptoms was noted across the medical treatmentsmost widely used in real-life practice at MNH to manage patients with LUTS for BPO. Tamsulosin showed an equivalent efficacy to a combination of tamsulosin and finasteride at third month of therapy with fewer adverse effects than combination therapy.

69. Kihaga, S.P. (2018). Vaginal Birth after One Previous Caesarean Section: Success Rate, Immediate Maternal and Neonatal Complications at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Several authors have described vaginal delivery after caesarean section for non-recurring indications as safe. When the participant is well selected, trial of labour has a successful rate of 60-80%. Hence many hospitals worldwide are offering vaginal birth after caesarean section, leaving the century old dictum of "once caesarean always caesarean". In USA, the rate of vaginal birth after caesarean section has declined from 28% in earlier 90s to 8.6% in 2010. This   led the American College of Obstetrics and Gynecology to establish   an initiative, that in 2020 has to raise vaginal birth after caesarean section by 10%(1). Also this initiative has been adopted in United Kingdom. Yet, there is no such initiative in Africa including Tanzania.At Muhimbili National Hospital, vaginal birth after caesarean section is practiced to women with one previous caesarean section basing on the MNH criteria (appendix VI). The guideline at MNH, indicates that the specialist on call is the one to decide who should be attempted a trial of labour after Caesarean section (TOLAC). A Study done in 2010 by Pembe et al showed only 65% had success vaginal birth after caesarean section. It was concluded that there were many missed opportunities to women who could have successful vaginal birth after caesarean section (VBAC). Objectives: To determine the rate and immediate maternal and neonatal complications of vaginal birth after one previous caesarean section at Muhimbili National Hospital. **Methodology:** This was a hospital based cross sectional descriptive study. It was conducted in

two terms at Muhimbili National Hospital, from July 2016 to December 2016 and November 2017 to January 2018. Consecutive selection done to all women who had one previous caesarean section attended at MNH labour ward. This had done until sample size obtained, provided they gave consent particularly those who were not in contractions. To those who come in second of labour, the consent filled in the postnatal ward. Data was analyzed using descriptive method through SPSS version 20 determining the frequency and percentage of variables. Results: In the study period, there were two hundred and forty-five participants who underwent TOLAC. The proportional of successful VBAC was 35.1%. The significant determinant factors were; planned mode of delivery, cervical dilatation, status of membrane and state of amniotic fluid. Generally, the significant maternal complication was postpartum hemorrhage, there was no uterine rupture. There were 2(2.3) stillbirth in successful VBAC and 2(1.3) in unsuccessful VBAC. **Conclusion:** VBAC is a safe practice; the current successful VBAC rate of 35.1% was lower compared to other studies. This could be due to short duration of the study and a targeted population of term pregnant women with one previous caesarean section. Cervical dilatation on admission, status of membrane and amniotic fluid on admission were found associated with successful VBAC. A catastrophic complication of uterine rupture was not present in the study period. Hemorrhage was found significant to women who underwent TOLAC.

70. Kigayi, M. (2018). Prevalence and Associated Factors of Laryngospasm in Paediatric Patients Undergoing Adenotonsillectomy at Muhimbili National Hospital, Dar - Es - Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Adenotonsillectomy is among the most common paediatric surgical procedures in the world. Laryngospasm potentially fatal respiratory event is one of the perioperative complications of adenotonsillectomy with reported incidence as high as 21%-26%. With significant advances in aesthesia and surgical techniques the incidence of laryngospasm has decreased to as slow as 1.6% with inter-institutions discrepancies. If laryngospasm is not promptly recognized and managed it may result in life-threatening complications. There are multiple risk factors for laryngospasm comprising patient related factors, anaesthesia related factors and surgical related factors. However, laryngospasm is preventable and treatable

respiratory event. Despite the increasing rate of adenotonsillectomy generally in Africa and particularly in Tanzania, there are few studies on laryngospasm in paediatric patients undergoing adenotonsillectomy. The prevalence, the associated factors and the outcome of laryngospasm in paediatric patients undergoing adenotonsillectomy have not been studied at Muhimbili National Hospital. Objective: The aim of this study was to determine the prevalence, the associated factors and the outcomes of laryngospasm in paediatric adenotonsillectomy at Muhimbili National Hospital. Materials & Methods: This was a prospective descriptive quantitative cross sectional study. With convenient sampling technique from the 1st October 2017 to the 31st January 2018, we recruited a population of 281 paediatric patients aged 1 month to 12 years who were scheduled for tonsillectomy with or without adenoidectomy in the theatre of Muhimbili National Hospital. For each consenting parent or guardian, a research questionnaire and a structured data sheet were completed, documenting demographic information, clinical information, anaesthetic and surgical information. Data collected from the hand-written data form were transferred in Statistical Package for Social Scientists (SPSS) template and wereanalyzed with the SPSS computer program version 21. Continuous variables were presented as mean, standard deviation and categorical variables were presented as percentage. Association was tested via Chi-square test for categorical variables. A p-value of 0.05 was used for statistical significance. Results: The prevalence of laryngospasm in paediatric patients who underwent adenotonsillectomy at MNH was high (23.5%). Majority of laryngospasm were partial (87.8%) and occurred during emergence (60.6%) and recovery (31.3%) from anaesthesia (p-value 0.000). Laryngospasm was associated with history of upper respiratory infection of less than two weeks prior to adenotonsillectomy, use of cuffed endotracheal tube, multiple attempt atintubation, reinsertion of the guedel airway in an light anaesthesia, deep extubation technique, lack of premedication with Atropine and maintenance anaesthesia with Isoflurane (p value < 0.05). Majority of paediatric patients for adenotonsillectomy were anaesthetized by nurse anaesthetist (63.3%). Sex, age, ASA physical status, qualification and experiences of anaesthesia provider, co morbidities such as asthma, OSA, obesity and passive smoking did not show a significant association with laryngospasm at MNH. The laryngospasm complications' found was desaturation (87.9%) and bradycardia (25.8%); and all patients recovered after management without ICU admission. Conclusion and recommendations: The prevalence of laryngospasm in paediatric patients who underwent adenotonsillectomy at Muhimbili National Hospital was high (23.4%). The majority

of laryngospasm was partial and occurred during emergence from anaesthesia. Prevalence of laryngospasm was associated with history of upper respiratory infection in the two weeks prior to adenotonsillectomy, use of cuffed endotracheal tube, multiple attempt of intubation, reinsertion of the guedel airway in light anaesthesia, deep extubation technique, lack of premedication with atropine and maintenance anaesthesia with isoflurane.Majority of paediatric patients for adenotonsillectomy were anaesthetised by nurse anaesthetist.The complications of laryngospasm seen in this study were desaturation and bradycardia. In general, laryngospasm was well managed at Muhimbili National Hospital and all patients recovered. Refining of the anaesthesia by controlling vulnerable peri-operative precipitating and associated factors of laryngospasm found in this study and application of laryngospasm preventive strategies should be considered to reduce laryngospasm prevalence at Muhimbili National Hospital.

71. Kikompolisi, G.J. (2018). Influence Of Indoor Residual Spraying On Resting Behaviors Of Malaria Vectors And Human Behaviors In Relation To Community Protection In Kagera-Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Malaria is still a threat across sub-Saharan Africa where transmission is maintained by some of the world's most efficient vectors. Vector control measures including application of indoor residual spraying (IRS) have significantly reduced transmission, yet elimination remains a far target. Although the overall prevalence of malaria in Tanzania is 7% in 2017, some regions still have persistent malaria infection above the national average. This study assessed resting and host seeking behaviors of malaria vectors in Missenyi and Karagwe Districts with persistent malaria infection. Broad objective: To determine resting behaviors and species composition of malaria vectors in relation to IRS in Tanzania. Materials and methods: This was a cross-sectional study with both quantitative and qualitative approach. For the first part of the study mosquito collection was carried out in 48 randomly selected households. The second part of the study involved interviewing 396 heads of households on socio-economic factors, behaviors and malaria control measures from two the districts. The data entry, storage and analysis were done by using SPSS version 15 software. **Results:** Generally, by using Bucket trap, 80.3% (102/127) mosquitoes were collected from Missenyi. Proportion of An. gambiae

complex outdoors and indoors in Karagwewere 18.2% (2/11) and 64.3% (9/154) respectively. In Karagwe, outdoor proportion of An. gambiae complex was high 18.2% (2/11) as compared to low proportion of Missenyi 6.9% (6/87). This difference was not statistically significant, p=0.13 (p>0.05) t-test. Indoor collections revealed high proportions of An.gambiaes.l in Karagwe 64.3% (9/14) as compared 26.7% (4/15) from Missenyi district. This was not statistically significant at 95% CI, (p = 0.94) (p>0.05) by Anova test. PCR results revealed An. arabiensis as the predominant species in both Missenyi and Karagwe by 98.8% (166/168) and 82.8% (24/29) respectively. An.gambiae complex were found resting outdoors at 1 Meter location 22.2% (2/9) than at 5 meter and 10-meter location in Missenyi.Majority of mosquitoes were collected in bedrooms in Karagwe district 81.8% (9/11) than in Missenyi 18.2(2/11), this was statistically significant at 95% CI, (p = 0.039) (p<0.05) Chi-square test. Also majority of respondents reported staying outdoors at night before sleeping in both Missenyi and Karagwe by 28.3% (56/198) and 51.5% (102/198) respectively. During Focused Group Discussions (FGDs), residents mentioned behaviors that keep them outdoors without protection against mosquito bites such as; bathing children outdoors at night, staying in bars, and farming early in the morning and late evening. **Conclusion:** Overall, Karagwe had high proportion of An. gambiaes. l resting indoors and outdoors.PCR results revealed An. arabiensis as the predominant species in both Missenyi and Karagwe. Majority of An. gambiaes. l prefers resting near houses in Missenyi than in Karagwe. A considerable number of residents in both Districts reported staying outdoors at night. There is a need to resume the IRS campaign in Karagwe as high proportions of An. gambiae s.l were collected both indoors and outdoors. Health education and behavioral change programs should be provided in both districts to prevent residents from Mosquito bites while outdoors.

72. Kilemile, J. (2018). The Pattern OfManifest Strabismus In Patients Attending The Pediatric And Adult Ophthalmology Clinics At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Strabismus is a misalignment of eyes which can be a result of abnormalities in binocular vision or abnormalities of neuromuscular control of ocular motility. It can be

congenital or acquired in origin. Strabismus may lead to not only poor vision but also medical, social and psychological effects. The aim of this study was to determine the pattern of manifest strabismus in patients attending the Muhimbili National Hospital pediatric and adult ophthalmology clinics. **Methodology:** A descriptive hospital based cross sectional study was done from August 2016 to February 2017 involving patients attending Muhimbili National Hospital pediatric and adult ophthalmology clinics. Consecutive sampling was used to recruit 71 participants among 5569 patients attended the clinics during the study period. Patients meeting the inclusion criteria were interviewed on the history of strabismus, social and psychological challenges of strabismus in their life. Slit lamp and dilated fundus examination were performed followed by refraction and orthoptic assessment. **Results:** A total of71 patients were found to have strabismus, females accounted for 62% of the patients. The overall prevalence of strabismus was 1.3%. The most affected age group was between 0 to 15 years (66.2%). Esotropia (59.2%) was common than exotropia (22.5%). The prevalence of esotropia was decreasing with increasing age. Accommodative esotropia was the commonest form of esodeviation accounting for 28.2% of patients with strabismus. Among exodeviation, sensory (9.9%) and intermittent (7.0%) were common. Most patients (87.3%) had normal vision, 18.3% of patients had amblyopia with esotropia accounting more than half these. Hyperopia was the commonest type of refractive error in strabismus followed by myopia. Fifty patients reported social and psychological challenges due to strabismus such. **Conclusion and Recommendation:** The prevalence of manifest strabismus was low. Most of patients with strabismus had normal vision. The major cause of amblyopia was esotropia. There is a need for early identification and management of patients, notably children to avoid amblyopia and the consequent social and psychological challenges.

73. Kilima, M.A. (2018). Assessment of Metered Dose Inhaler Use Technique among Asthmatic Patients at Muhimbili National Hospital, Dar Es Salaam Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: In Asthma management, inhalers are the first line of drug administration. Metered Dose Inhalers (pMDIs) are prone to difficulties in use in patients who were not well trained on

their use. Poor inhaler technique is a problem not only among patients but also healthcare providers. Sub-optimal inhaler use leads to poor disease control and increased healthcare costs. In Tanzania, knowledge about appropriate use of inhaler devices is lacking. There is a need to address this treatment gap and provide recommendations for the key requirements for successful use of inhalers, in order to improve the quality of asthma care at MNH and in Tanzania at large. **Objectives:** The aim of this study was to determine the proportion of poor pMDI technique and its associated factors among asthmatic patients seen at MNH. Methodology: This was a hospital based prospective cross-sectional study which was carried out at the pulmonology clinic of MNH. A structured questionnaire was used to collect patients' demographic and clinical information. Patients' inhaler use was assessed by direct observation against a standard checklist. Patients' asthma control was assessed using Asthma Control Questionnaire (ACQ) and the Asthma Control Test (ACT). Data was analyzed using SPSS statistical software. Summary statistics were reported as frequencies with percentages. Associations between categorical variables were analyzed using the chi-square test. Multivariate regression was applied to determine predictors of poor inhaler technique. A P< 0.05 value was considered as statistically significant. **Results:** A total of 275 asthma patients using pMDI were enrolled. 114 (41.5%) were male and 161 (58.5%) were female. There were 18 healthcare providers among the study participants. Participants reported having received training on inhaler use technique predominantly from doctors (64%).The prevalence of improper pMDI technique was 97.1%. Out of 275 patients only 8 patients could perform all the steps correctly. The most common errors were; No full exhalation 267 (97.1%), No coordinated inhalation and canister actuation 241 (87.6 %), No or short breath hold 236 (85.8%), Multiple actuations and not repeating steps 2 to 9 for subsequent doses 263 (95.6 %). Factors which were significantly associated with incorrect inhaler technique were: Unemployment (P=0.016); Training time of less than 5 minutes 196 (78.7%, P=0.005); Being trained only at one occasion 185 (74.3%, P<0.001); and concomitant use of other asthma drugs besides inhalers 217 (78.9%, P=0.015). There was a strong relationship between poor asthma control and incorrect use of pMDI (P<0.01). Poorly controlled asthma was among 80.5% of patients. **Conclusion and recommendations:** The extent of incorrect inhaler technique among asthmatic patients at MNH is large. Poor technique is associated with poor asthma control. Majority of patients had received training on inhaler use from healthcare providers. The various errors observed on inhaler use signify that there is

undoubtedly a lack of expertise and consistency in offering correct inhaler use instruction. Resolution of the problem should start with healthcare providers themselves.

74. Kilimba, E.S. (2018). Factors Affecting Nhif Medical Equipment Loans Uptake among Accredited Health Facilities in Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract:

Background: This study examined National Health Insurance Fund (NHIF) in Tanzania as a tool of financing health care system to improve quality and increase accessibility of health services. There is low uptake and utilization of those financing loans (medical equipment loans) from the Health care facilities accredited by the Fund. The study was conducted in Dar es Salaam, to explore factors affecting NHIF medical equipment loans uptake among accredited health facilities in Dar es Salaam. **Methodology:** An exploratory Cross section design was employed and samples of 16 health facilities not taken NHIF loans and 8 health facilities taken NHIF loans were selected using purposive sampling. Qualitative approaches were used in a study phenomenon. Data was collected using key informant interview guides; thematic analysis approach utilized to analyze the data collected. **Results:** The results show that majority of health facility owners were not aware of the availability of the NHIF medical equipment loan that could encourages them to apply. However, few of them had being informed about NHIF loans but they had low knowledge on loan requirement; terms, conditions and procedures, this was attributed by low sensitization conducted by NHIF offices.The study also found that NHIF medical equipment loan uptakes being low was attributed by difficulties in procedures set by NHIF and other organs as Bank of Tanzania (BOT) and Social Security Regulatory Authority (SSRA) policy changes on recovery periods, grace period after loan, loans interest, time taken to access loans, infrastructure and shortage of the qualified medical personnel's. Therefore, efforts on NHIF MEL program sensitization is needed to rise up knowledge on terms and conditions of the program. **Conclusions:** Customer Awareness on NHIF medical equipment loans is very low,most of the health facility owners were too risk averse on taking loans which is hindrance to the entrepreneurship andSo many challenges mentioned by both the facility owners and NHIF loans officer that hinder implementation of the program. Recommendations: Awareness and more

advocacy on medical equipment loan should be made especially on terms and conditions and procedure of the NHIF loan. NHIF should establish a better tools of advocating its products and strengths its marketing and customer care department, operational research should be done on how best to operate the loans facilities to improve the number of beneficiaries

75. Kilufi, A.A. (2018). Awereness, Attitude AndPractices On Stunting Prevention Measures Among Fathers Working At Muhimbili National Hospital, Dar Es Salaam Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: The role of fathers on preventing stunting among children under-five years of age has not been adequately emphasized. In Tanzania, few studies has been carried out to identify knowledge, attitude and practices on stunting among fathers in feeding practices like exclusive breast feeding and complementary feeding. Objective: The aim of this study was to assess awareness, attitude and practices on stunting prevention among fathers working at Muhimbili National Hospital, Dar es Salaam. Methodology: A cross-sectional study was conducted at MNH, Dar es Salaam during the month of July 2017. A total of 345 fathers were randomly included in this studyy using simple random sampling technique. Data were collected using pre designed questionnaire with closed and open ended questions. Raw data were entered and cleaned into Statistical Package for Social Scientist (SPSS) software. Analysis of awareness, attitudess and practices was performed using descriptive statistics of frequency and percentages destribution. The awareness, attitude and practices on stunting was measured by finding the mean of awareness, attitude and practices. Results: Atotal of 345 respondent were included in the study. The result showed that, 83.8% of respondents had awareness on stunting prevention. 60.8% had positive attitude toward stunting prevention and 95.6% of the respondents practised on the stunting prevention. Conclusion and recommendation: Awareness, attitude and practice of fathers on stunting prevention was high in the study area. Therefore, awareness and attitude have great impact on the increased the adoption of good practices on stunting prevention among fathers. Therfore stunting prevention program involving fathers should be incooperated for better improvement of RCH programs.

76. Kimambo, E.E. (2018). Determinants Of Acceptance Of Cervical Cancer Screening Among Women In Mbeya City, South Western Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Cervical cancer is one of the most common cancers worldwide and it is the second most common cancer in sub Saharan Africa. Lack of effective screening and access to services that facilitate early detection and treatment has led to unacceptably high incidences of cervical cancer in Sub Saharan Africa as compared to the developed world. Objective: The aim of this study was to find out the determinants of acceptance for cervical cancer screening among women in Mbeya City in south-western Tanzania. **Methods:** A cross sectional community based study was conducted in Mbeya city in October 2017. A house to house visit was done in randomly selected households in Mbeya city. The study involved women aged 20 to 60 years. Data on socio-demographic, cultural and economic characteristics were collected using a researcher administered structured questionnaire; data was analyzed using SPSS version 23. Bivariate and then multivariate logistic regression were performed to obtain crude and adjusted odd ratios for the determinants of acceptance of cervical cancer screening. **Results:** A total of 603 women participated in the study. The prevalence of acceptance (proportion of women who ever attended a health facility for screening) for cervical cancer screening was 13.4%. Socio-demographic factors associated with acceptance for cervical cancer screening were older age (AOR 3.44, 95% CI 1.22 – 9.68), being married (AOR 13.91, 95% CI 1.52 – 27.51) and having formal employment (AOR 5.74, 95% CI 2.84 – 11.62). Other factors included; awareness about cervical cancer and screening services, attending health facility for other treatments (AOR2.57, 95% CI 1.49 – 4.42), being told about cervical cancer in hospital (AOR 7.78, 95% CI 3.56 – 16.97), having a relative who has suffered from or died of cervical cancer (AOR3.70, 95% CI 1.9 – 7.0), and using a car to reach the preferred nearest health facility (AOR2.72, 95% CI 1.03 – 7.17). **Conclusion:** Despite the fact that majority of women are aware on cervical cancer and availability of screening services, the acceptance and uptake of these services in Mbeya is very low. Therefore, efforts to increase coverage of cervical cancer screening should not only focus on raising the awareness but to increase knowledge about cervical cancer, benefits of routine screening and risks of not screening.

77. Kimangale, S.H. (2018). Post Traumatic Stress Disorder And Associated Factors Among Road Traffic Accidents Survivors Attending Muhimbili Orthopaedic Institute Clinics, Dar Es Salaam From June 2016 To June 2017.Muhimbili University of Healthy and Allied Sciences.

Abstract

Intoruduction: The problem of road safety became a challenge which costs a number of civilians in both lives and properties, and many people are left with permanent scars of disability which are accompanied with both emotional and psychological pains and sufferings. Apart from imposing physical damages to the survivors, road traffic accidents have been found to be a major cause of Post-Traumatic Stress Disorder, often with long-lasting symptomatology. Objective: This study aimed to determine the prevalence of post-traumatic stress disorder and associated factors among road traffic accidents survivors attending Muhimbili Orthopaedic Institute Clinic, Dar es salaam. Study design The study employed a hospital based cross-sectional study design. Study population The study was conducted among motorcycle and motor vehicle accident survivors attending the Orthopaedic clinic at Muhimbili Orthopaedic Institute Dar es Salaam between June 2017 to June 2017. Method Data were collected using a self-administered socio-demographic and Post-Traumatic Checklist as per DSM – 5 (PLC-5 standard). Descriptive and inferential data analysis were done using SSPS version 20. Results Four hundred and fifty (450) patients were recruited for the study, of which half were men. Of all, motorcycle accident survivors were 170 (37.8) while motor vehicle accident survivors were 280 (62.2). The mean age for survivors was 37.12 (SD 13.31), Mean age of those who had PTSD was 36.89 years (SD 12.2). PTSD is prevalent among RTA survivors, 124 (27.6%) of all survivors participated in the study showed positive vi findings at 95% CI. Hyperarousal and re-experiencing symptoms found to be the most common symptoms among RTAs survivors. It was also found out that being single, having accident in a certain type of automobile, using alcohol prior to accident and being hospitalized after accident were associated with increased risk of developing PTSD. Conclusion: The prevalence of PTSD among adult RTAs survivors attending MOI outpatient clinic between June 2016 to June 2017 was 27.6% suggesting that PTSD in Orthopaedic patients is significant and needs clinical attention; hyperarousal and re-experiencing being the most common

symptoms among RTAs survivors while having accident in a certain type of automobile, being single, consuming alcohol prior to the accident, being hospitalized are risk factors for the development of PTSD, this is seen to other East African countries like Kenya, Uganda and other African countries like Nigeria and Ethiopia. Recommendations Routine: screening for PTSD for all road traffic accident survivors and treatment of the affected patients, both, public education and outreach programs on Psychotrauma should be introduced at MOI. There should be collaboration between MOI, MNH and MUHAS (Orthopaedic and Psychiatric Departments) to ensure a holistic management of Orthopaedic patients as well as proper documentation of data concerning prevalence of PTSD and associated factors. The researcher recommends further study on prevalence of PTSD among hospitalized Orthopaedic patients compared to non-hospitalized.

78. Kimanga, P.H. (2018). Factors Associated with Asymptomatic Malaria Infection Among Primary School Pupils in Buhigwe District, Kigoma, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Malaria remains a major public health problem in developing countries. In 2016, approximately 216 million new cases of malaria were reported worldwide, Sub-Saharan Africa accounting for 80% of these cases(1). Studies have shown that asymptomatic malaria is prevalent in highly endemic areas of Africa and is a new challenge for malaria prevention and control strategies. School survey done by national malaria control program in 2015 Kigoma Region had malaria prevalence of 30.3% which is far above the national average (14.8%). This study aimed at determining the factors associated with asymptomatic malaria infection among primary school children in Buhigwe district. **Methods:** This was a cross sectional study involving 341 pupils aged between 7-18 years. A four stage cluster sampling technique was used to select the participants. Data was collected using structured questionnaire for pupils and observational checklist during home visit. Study participants were subjected to malaria rapid diagnostic test (mRDTs). Malaria microscopy was used to identify the type of species. Data was entered, cleaned using Microsoft excel and analyzed using EPI Info software version 3.5.4 and 7. **Results:** A total of 341 pupils from Murunyenyi and Mgogo primary schools were recruited in the study with 100% response rate. There was almost proportionate distribution of pupils

between the two school, 173 (50.7%) from Murunyenyi primary school and 168 (49.3%) from Mgogo primary school. The mean age of pupils was 11 years with 2.7 Standard Deviation. The prevalence of asymptomatic malaria infection was 29%. Relative to older pupils, pupils 11 years and below had twice the odds (OR = 2.2; 95% CI: 1.33, 3.63) of having malaria infection. Likewise, compared to girls, boys had twice the odds (OR = 2.62; 95% CI: 1.53, 4.46) of having malaria infection. **Conclusion and recommendation:** From this study Pupils in Buhigwe primary schools have prevalent asymptomatic malaria. Several factors such as age, sex, outdoor activities afterschool hours and presence of stagnant water around home were found to be independently associated with asymptomatic malaria infection. Regular/scheduled screening and treatment of asymptomatic malaria in Buhigwe district primary schools is recommended to half the high prevalence of the infection.

79. Kimaryo, Y. (2018). Kinasopharyngeal Carriage of Streptococcal Pneumoniae Among Healthy Under Five Children Vaccinated with Pneumococcal Conjugate Vaccine In Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Streptococcal pneumoniae infections are a threat to under-five's health causing significant morbidity and mortality worldwide. It is the commonest cause of bacterial pneumonia, meningitis and septicemia among children. Streptococcal infections are usually preceded by nasopharyngeal carriage thus nasopharyngeal carriage can be an important measure of streptococcal infections in the community. **Objective:** This study aimed at determining nasopharyngeal carriage of Streptococcus pneumoniae, common serotypes, associated factors and their drug susceptibility pattern among healthy under five children vaccinated with PCV-13 attending RCH clinics in Dar es Salam. Method: This was a descriptive cross sectional study conducted at Reproductive and Child Health clinics in Dar es Salam in healthy under-fives from September 2017 to February 2018.Study participants were interviewed using a structured questionnaire and a single nasopharyngeal swab was taken for culture, identification, serotyping and antibiotic susceptibility tests for Streptococcus pneumoniae. Data was analyzed using SPSS version 20.0. **Results:** Out of 350 children included in the study 84(24%) had nasopharyngeal carriage for Streptococcus pneumoniae, carriage was more in females (26.3%) than males

(22.3%) and age group 25-36 months (27.8%) accounted for the highest carriage. Serotypes isolated were more of those contained in the PCV-13 vaccine (70. 2%).Serotype 1 was commonest (27.1%) followed by serotype 3 (22%) and 23 (15. 3%).The least common serotype was 6 (1.7%). Recent history of upper respiratory tract infection was associated with carriage (OR 0.025 p <0.05). Almost a one-third (29.5%) of S. pneumoniae isolates were not susceptible to penicillin. **Conclusion:** Despite vaccination with PCV-13 in children nasopharyngeal carriage is still present by 24% in Dar es salaam and the existence of penicillin non susceptible strains is still high (29.7%). Serotypes contained in the vaccine are still present in the community and thus I recommend continuous surveillance on influence of PCV-13 on Streptococcusl pneumoniae.

80. Kimu, C.D. (2018). Factors Influencing Timing of Initiation of Complementary Feeding Among Mothers Having Children Aged 6-23 Months Attending Public Health Facilities in Ilala Municipality.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Inappropriate child and infant feeding practices remain to be a public health problem in many developing countries as a major determinant of malnutrition in under five children which contributes to half of the 9.7 million annual under five deaths in Africa. About 6% deaths could be prevented through universal coverage of breastfeeding and appropriate complementary feeding practice. Therefore, the Objective of this study: was to determinefactors influencing timing of initiation of complementary feeding among mothers with children aged 6-23 months. **Methods:** This was a cross sectional study conducted in public health facilities in Ilala. Municipality in Dar es Salaam. Health facilities were identified from District Health Information system generated from facility monthly reports. Then facilities were selected by using simple random sampling technique. A systematic random sampling method was used to select mothers attending daily for RCH services. Mothers were interviewed using structured questionnaire. The data were entered into the SPSS database then analyzed using SPSS statistical software. Categorical variables were summarized using percentages generated using frequency distribution tables. Association between thedependent and independent variables were examined using bivariate and multiple logistic regressions. **Results:** The study found that 427 mothers were interviewed. The response rate was 99.8% and only (35.8%) of mothers initiated

complementary feeding timely. A large proportion 284 (66.5%) of mothers had adequate knowledge on infant feeding practices. When the decision about daily child care servicesin the family made by other relatives itwas more likely to initiate complementary feeding timely (OR, 2.57 95% CI 1.09, 6.06) compared to when the decision is made by parents of the child. When the decision on child purchases of daily needs in the family was made by relatives there was three times higher odds to initiate complementary feeding timely (OR, 2.73, 95% CI 1.20, 6.19) compared to the decision made by parents of the child. **Conclusion and recommendations:** The proportion of mothers initiating complementary feeding timely is low although the knowledge on correct timing was high. When the decision about daily child care services and purchase of daily needs in the family was made by other relatives, it influencedtimely initiation of complementary feeding in this study. Health education should be emphasized by Ilala Municipal among mothers on the dangers of early/late complementation.

81. Kiponza, R.T. (2018). Puerperal Sepsis: Common Bacterial Pathogens And Their Susceptibility To Current Antibiotics At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences

Abstract

Background: Puerperal sepsis (PS) accounts for about 15% of maternal deaths worldwide. In Tanzania about 9.2% to 17% of maternal deaths are due to PS. The causative agents for PS include a wide range of aerobes and anaerobes with variations in prevalence and antimicrobial sensitivity pattern. The use of empirical antimicrobial therapy without regular microbiologic surveillance leads to antimicrobial resistance. This study aimed at identifying the common bacterial pathogens causing puerperal sepsis and their antimicrobial susceptibility pattern at Muhimbili National Hospital. **Methodology:** A cross-sectional descriptive study was conducted among 197 women admitted with PS from December 2017 to April 2018. Non probability sampling was used and all participants who consented and met inclusion criteria was recruited. Blood and endocervical swab samples were collected on existing infection guidelines for clean practice and equipments. Blood cultures were performed in the BACTEC 9240® instrument with BACTEC Aerobic Plus® and facultative anaerobes lytic bottles at 370C for 48 hours. Sub cultures were done in blood, nutrient and MacCconkey agar media. Antimicrobial sensitivity

tests were done by using disc diffusion technique (Kirby-Bauer method). Data was analysed using SPSS statistical software version 23. **Results:** Out of 197 cases, bacteremia was detected in 22 (11.17%) cases. There was predominance of gram negative bacili, which were isolated in 93 (86.92%) cases while gram positive cocci were isolated in 13 (12. 15%). E. coli was the most commonly isolated 68 (99.37%) and was sensitivite to meropenem (94.2%) and Gentamicin (60.9%). Klebsiella were sensitive to meropenem (86.4%) and ciprofloxacin (50%). StaphAureus were sensitive to clindamycin (100%) and Erythromycin (63.6%) while Pseudomonas was sensitive ciprofloxacilinand and cotrimoxazole by 50%. Enterococci were sensitive to doxycycilin (100%) and Erythromycin (50%). The gram negatives isolated were the Extended Spectrum Beta Lactamases producers while Staphylococcusaureus isolated were Methicillin-Resistant Staphylococcusaureus (MRSA) producers, and they were multi-drug resistant organisms.**Conclusion:** The most common organisms causing PS from this study are Escherichia coli, Klebsiella and Staphylococcusaureus.Escherichia coli was sensitivite to meropenem and Gentamicin, Klebsiella spp were sensitive to meropenem and ciprofloxacin, Staphylococcusaureus were highly sensitive to clindamycin and Erythromycin

82. Kisaka, L. (2018). Timing AndFactors Associated with First Antenatal Care Booking Among Pregnant Women at Amtullabai Karimjee Clinic in Ilala District, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Antenatal care (ANC) is one of the key interventions to reduce maternal and perinatal morbidity and mortality. World Health Organization recommends first booking before 12 weeks of gestation. Early ANC booking enhances positive maternal and fetal outcome through early detection, prompt treatment, referrals and management on expected physiological changes. Despite high ANC coverage (98%), cost-free and easily accessible, little is known why in Tanzania only a few (24%) pregnant women book their first ANC early. **Aim:** This study was aimed to determine timing and factors associated with first ANC booking among pregnant women at Amtullabai Karimjee Clinic, Dar es Salaam. **Materials and Methods:** A descriptive cross-sectional study was employed. The systematic random sampling method was used to recruit 311 eligible pregnant women. Data were collected with an interviewer-structured

administered questionnaire with 22 closed-ended questions. Data were analyzed using the statistical package of social sciences (SPSS) computer software version 20 followed by data generation of frequency distribution tables and figures. A bivariate logistic regression analysis was used to examine independent variables that influence the dependent variable. $p<0.05$ was considered statistically significant. **Results:** A total of 311 pregnant women were interviewed. 31.2% (97) booked earlier within 12 weeks of gestation while 68.8% (214) booked after 12weeks of gestation according to WHO ANC recommendations. Early ANC booking was determined by having tertiary educational level, planned pregnancy, earlier pregnancy recognition and experience/presence of any complications. Most barriers cited did not know the recommended time to initiate the booking, waiting for the fetus to move and previous experience of long waiting time. **Conclusion:** The study showed that most pregnant women book late than WHO and national ANC recommendation (within 12weeks of gestation); late booking creates lack of accurate early pregnancy assessment. Key barriers cited for early ANC booking gives efforts toward maternal education, benefits of early ANC booking, ways of early recognition of pregnancy, and modification of prompt ANC services. Therefore, it would be more beneficial to attempt using qualitative design with community surveys to explore more fromwomen on benefits for early ANC booking.

83. Komba, B.E. (2018). Predictors OfPoor Outcome After Obstetric Vesicovaginal Fistula Repair at Comprehensive Community Based Rehabilitation and Disability Hospital in Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Obstetric fistula is a serious injury resulting from obstructed labor causing significant maternal morbidity in women in developing countries. Despite International and national efforts, prevention and treatment of obstetric fistulas still remains a concern and a challenge in these low income countries. In order to maximize probability of successful surgical repair, it is important to identify women at-risk for poor surgical outcomes so that they can be given appropriate care.**Objective:** To determine predictors of poor outcome among women who underwent obstetric Vesico-Vaginal Fistula (VVF) repair at Comprehensive Community Based Rehabilitation and Disability Hospital in Tanzania (CCBRT DH), Dar es Salaam.Methodology:

Review of all women who underwent obstetric VVF repair at CCBRT DH over the period of 2 years, from 1st January 2015 to 31st December 2016 was conducted. The medical records of 702 women were available for data extraction. Information such as age at index fistula occurance, parity, marital status, site of the fistula, number of prior repair attempts, route of repair, status of vaginal, residual bladder size and urethral involvement; were extracted using a compilation sheet. Poor outcome was defined as failure of fistula closure evaluated by dye test; or presence of urinary incontinence at hospital discharge. The information extracted was coded, entered, cleaned and analyzed using Statistical Package for the Social Sciences (SPSS), Version 20.0. Categorical variables were summarized as proportion and continuous data were summarized as mean, median, standard deviation and range. Chi square test was used to test for association among categorical variables. P –value less than 0.05 was considered to be significant. Variables with p-values of less than 0.2 in bivariate analysis formed the independent variables in the multivariable analysis. **Results:** The success rate of obstetric VVF repair was 83%. Overall, 119 out of 702 (17.0%) women who underwent obstetric VVF repair had poor repair outcome. The proportion of women who had failure of fistula closure at hospital discharge was 6%, whereas 11% had urinary incontinence.Factors that independently predicted poor outcome were presence of moderate and severe vaginal scarring (OR=1.9; 95% CI= 1.0, 3.5; p=0.04) and (OR=2.5; 95% CI= 1.3, 4.6; p<0.01) respectively; involvement of urethra (OR=3.8; 95% CI= 2.3, 6.3; p<0.01); small residual bladder size of less than 6cm (OR= 2.3; 95% CI= 1.3, 4.1; p<0.01); juxtaurethral fistula (OR=2.6; 95% CI= 1.2, 5.4; p=0.01) and having two or more previous repair attempt (OR= 8.4; 95% CI= 1.3, 19.8; p<0.01).**Conclusion:** Features of severe urethra and bladder injury, presence of vaginal scarring, fistula close to the urethra as well as number of prior repair attempts; have been shown to predict poor outcome after repair.Institution of urethral catheter to prevent formation of severe vaginal scarring as well as care during the first repair attempt is vital in order to maximize the probability of successful repair.

84. Komba, J.C. (2018). Prevalence of Recurrent Readmission and Associated Factors Among Patients with Mental Illness at Muhimbili National Hospital, Dar Es Salaam-Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: A subgroup of patients with severe mental illness (SMI) is sometimes referred to as "revolving door patients" because of their recurrent hospital readmissions. Predictors of recurrent readmissions among people with SMI in both high and low income countries include; poor adherence to psychotropic medications, illness perception, and stigma from having a mental disorder, prescribing practice and discharge planning; but these have not been explored in Tanzania.Aim: To determine the prevalence of recurrent readmission and associated factors among patients with mental illness at the Muhimbili Department of Psychiatry and Mental Health.**Methodolog:** This was a hospital based descriptive cross-sectional study where quantitative methods were used to collect information from March to May 2018. The study was conducted at the Department of Psychiatry and Mental Health premises of Muhimbili National Hospital, located in the Ilala Municipal, of the Dar es Salaam region. The sample population comprised all adult patients (18 years and older) diagnosed with mental illness who were admitted during the data collection period and those at the outpatient clinic who have ever been admitted. The collected quantitative information was entered and analyzed using Statistical Package for the Social Science (SPSS) Version 20. The outcome measure was the number of admissions in the past one year, having at least three admissions in the past one year was defined as recurrent readmission.The independent variables included; socio-demographic factors (age, sex, marital status and level of education); illness factors (psychotropic drug adherence that was measured using adherence assessment scale, patient's perception of illness that was assessed using illness perception questionnaire, felt stigma that was assessed using self-stigmatization scale and perceived social support that was assessed using Duke UNC social support scale) and physician communication which was assessed using physician communication questionnaire.**Results:** A total of 285out of 356patients completed surveys. The mean age of the participants was 34.6 (SD 8.42) years with a third of the participants being in the age group of 25-34 years (46.3%) with more than half being male (54.4% male versus 45.6% female). Majority of the participants were single (55.4%) with more than half of the participants (62.8%) having no formal education or primary education (none/below secondary). The Total prevalence of revolving door phenomenon in the past one year was 18.6%. Reported self-stigma and being an in-patient at recruitment were significantly associated with recurrent readmission. The highest strength of association was with reported self-stigma that increase by almost three times the

likelihood of reported recurrent readmission in the past year (aOR 2.92; 95% CI 1.44-5.91; p=0.003). Furthermore, being recruited from the inpatient department, increased the likelihood of past year recurrent readmission by almost two and half times compared to recruitment for the OPD (aOR 2.56; 95% CI, 1.31-5.06; p=0.01). **Conclusion:** The prevalence of recurrent readmission among patients with mental illness is high (18.6%), with higher rates in the inpatient department. Reported self-stigma and being an in-patient at recruitment were significantly and independently associated with recurrent readmission. **Recommendations:** This study calls for further studies on recurrent readmission existing risk factors at higher socio-ecological levels including the macro level. A qualitative study among patients with recurrent readmission may also be more useful to generate experiential narratives on stigma and how this might influence e.g adherence to medication in order to inform stigma reduction intervention. Given the social basis of stigma, community programs including relatives and neighbors of patients with mental illness should also be considered in order to address the stigma towards patients with mental illness.

85. Leonard, B. (2018). Pattern of Warfarin Related Complications and Anticoagulation Profile Among Patients On Regular Warfarin Therapy at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Warfarin is a synthetic oral anticoagulant of choice in Tanzania and commonly used worldwide. Management of its anticoagulation effect remains a challenge due to anticoagulation shortfalls among patients on regular warfarin therapy. This study aimed to determine the anticoagulation profile, prevalence of complications associated with warfarin therapy and to study the reliability of INR measurements among patients on regular warfarin therapy attending hematology anticoagulation clinic at MNH.**Methodology:** This was a cross sectional study, which included 190 patients on regular warfarin therapy, attending hematology anticoagulation clinic at MNH. Blood samples were taken from the recruited patients for laboratory tests which included INR measurements. Other clinical records were obtained from patients' medical records and from interviews. Data collected were coded and analyzed by Statistical Package for Social Sciences (SPSS) version 22 computer software. A Chi square test

was used to test for associations between INR and the independent variables whereby a p-value of < 0.05 was regarded as a significant association. **Results:** The commonest indication for anticoagulation was Mechanical Heart Valve Replacement (68.9%). Only 20% of the study participants had their INR within the therapeutic range. Out of all the study participants, 20.5% reported to have experienced warfarin induced bleeding whereas 3.2% reported to have experienced thromboembolic complications. There was no considerable noted influence of the studied risk factors on INR and warfarin related complications. Repeated INR measurements did not show significant variation. **Conclusion:** Complications related to warfarin therapy are evident and poor anticoagulation profile was reflected by majority of the patients who didn't achieve the target INR. Having adhering patients to warfarin therapy yet showing non therapeutic INR indicates that though INR is presently indispensable, yet it should be used cautiously as a sole indicator and additional clinical assessments should be made in patients showing persistent non-therapeutic INR.

86. Longombe, N.A. (2018). Clinical Characteristics and Treatment Modalities of Prostate Cancer Patients at Ocean Road Cancer Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Prostate cancer is one of the most frequently diagnosed cancers of men with 913,000 new cases worldwide every year and the number one diagnosed cancer in men living in developed countries. Despite increasing prevalence of prostate cancer patients in Africa in general and in East African countries in particular, there are not enough studies that properly describe clinical characteristics and treatment modalities of prostate cancer patients in Tanzania.Aim: Description of clinical characteristics and treatment modalities of prostate cancer patients at Ocean Road Cancer Institute between 2014 and 2016.**Methods:** The study was a retrospective study assessing patients treated for prostate cancer at ORCI from January 1st 2014 to December 31st 2016. For each patient, a data collection sheet was completed and was transferred in Excel data base to be analyzed with the Statistical Package for SocialScientists (SPSS v. 20.0) computer program. A 95% Confidence Interval and p-value of 0.05 were used for statistical significance. **Results:** A total of 106 cases were included. The mean age of the cohort

was 71 years [50-95]. The histology of all patients was adenocarcinoma. Majority had stage IV disease (67.6%). Almost all patients (91%) were treated with palliative intent and this was strongly associated with stage of disease at presentation (p value < .001). Furthermore, 61% of patients reported with wide spread metastasis; 24% had radiotherapy and close to 90% received ADT. Importantly one year overall survival was 85% in this cohort. **Conclusion**: This study showed that the majority of prostate cancer patients report at Ocean Road Cancer Institute with stage IV disease and with widespread metastasis. Nevertheless, an overwhelming majority were still alive during the first year of follow up. A follow up study to understand reasons behind late presentation is much needed.

87. Luambano, D. (2018). Association of Corporal Punishment and Psychological Factors Among Secondary School Students in Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Corporal punishment is the mostly debated topic worldwide especially among parents and education systems. Historically, corporal punishment has been used as a disciplinary method for ensuring the young generation is living and raised within acceptable morals and traditions. The most given forms of corporal punishments given to students in secondary schools in Tanzania are canning, pinching, beating, pulling ears and forcing children to stay in uncomfortable positions. There is, however, minimal information of the associations between such punishments and the psychological distressamong secondary school students. Of particular interest for psychological distress are the syndromes of depression and anxiety, as an internal resource that may buffer against psychological decompensation; these consequences may have negative outcomes on psychological health. Due to these possible consequences of an approach to disciplining, a gap is identified suggesting need to examine corporal punishment and its associations with psychological distress.**Objectives:** To determine the associations between experience of corporal punishmentand symptoms of anxiety and depressionamong secondary school students in Kinondoni Municipality Dar-es-Salaam.Materials and **Methods:** A cross-sectional study, multi-stage sampling which involved randomly selection of 406 participants in 10 purposively selected secondary schools in Kinondoni Municipality, Dar -es-Salaam Tanzania.

The structured questionnaire adopted from Thomas Ndwiga (Measure Corporal Punishment) and Standardized tool (Hopkin symptom checklist- Anxiety and depression symptomatology was used. Analysis done by using SPSS V.20 **Results:** Data from 406 recruited participants were analyzed. Female adolescents constituted 209 (51.5%) of all participants. The mean age (Standard Deviation) of the participants was 16.0 years (1.38), with the oldest being 19 years and the youngest 13 years. Most 333 (82%) participants in the study reported experiencing corporal punishment. The forms of corporal punishment reported most by participants was canning 405 (99.8%), kneeling down 396 (97.5%), doing push-ups 378 (93.1%) and being asked to frog-jump 334 (82.3%). Prevalence of psychological distress was 355 (87.4%)Furthermore, there was associations between corporal punishment and psychological distress (p=0.02) **Conclusions and recommendations:** More than three fourths (82%) of the students included in the study reported experiencing corporal punishment. Furthermore, the result revealed association of corporal punishment and psychological distress in secondary schools. This emphasizes the need to inform government, caregivers and population at large on the adverse consequences of using corporal punishment at school and therefore advocate for current policy focus to shift from corporal punishment to positive punishment. In addition, there is a need for capacity building concerning psychological distress as the effect of corporal punishment in school support system (school counselor, social welfare officer and teachers) for early detection, minimal intervention and referral for those in need.

88. Lucumay, N.J. (2018). Pre-Referral Stabilisation, Referral Documentation and Opportunities for Improvement of Pre-Referral Care Provided to Adult Trauma Patients Referred to Emd Mnh.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Trauma is among the leading cause of morbidity and mortality globally. Low and middle-income countries have a disproportionate high burden due to rapid urbanization, poor infrastructure, and poorly resourced trauma care facilities. Pre-referral stabilisation of acutely injured patients and timely referral for definitive care, have been shown to significantly improve outcomes. In most Low-income countries, including Tanzania, the pre-referral stabilisation and trauma care processes are yet to be well characterized.AIM: To describe pre-referral

stabilisation, referral documentation and opportunities for improvement of pre-referral care provided to adult trauma patient referred to Emergency Medicine department (EMD) Muhimbili National Hospital (MNH).METHODS: This was a prospective descriptive cross-sectional study at the EMD-MNH, conducted between July 2017 and December 2017; the study was carried out in two phases. Phase I was a descriptive observational study of adult (≥ 18 years) trauma patients referred to EMD-MNH: data on demographics, clinical characteristics, types of pre-referral stabilization provided to the patient and clinical outcomes was collected using a purpose design Case Report Form that is built in an online data capture software. Phase II of the study was a questionnaire based survey of providers on perception of the information provided on the referral note for continuity of care. Quantitative data was summarised using descriptive statistics. RESULTS: We enrolled 368 (13%) of adult patients from 2947 patients who presented to EMD during the study time. The median age was 34 years (Interquartile rage 26- 44 years), and 281 (76%) were male. The majority of patients 261 (70.9%) were referred from the district hospitals. Road traffic crash 104 (28.6%) was the most common mechanism of injury. Head injury 109 (29.6%) and extremities injuries 179 (48.6%) were the most frequent EMD diagnoses. Only 29 (7.9%) patients received at least one form of stabilisation prior to referral to MNH. The completeness of documentation on demographics, vitals, mechanism of injury and examination was 338 (90%) generally. Total of 51 (28%) EMD health care providers responded to questionnaire based survey, majority 43 (84%) were doctors, and all had worked for 5 years and below. The median perception on the usefulness of referral note documentation for the continuity of care of adult trauma patients was 4 (IQR 3-4). CONCLUSION: Among adult trauma patients who attended EMD MNH from the peripheral hospitals road traffic injuries was the frequent mechanism of injury with overall male predominance. The majority of patients presents after 24-hours, and do not receive initial stabilisation per WHO recommendations. Despite this, providers perceived the documentation of the referral note to be useful in informing the continuity of care at EMD. Future studies should focus on identification barriers of pre-referral stabilisation of adult trauma patient referred to EMD MNH.

89. Lukali, J. (2018). Computed Tomography Scanning Parameters and Radiation Doses in Paediatric Patients at MuhimbiliNational Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Computed tomography (CT) examinations have been increasing since its evolution in 70's. Although it provides good contrast resolution and rapid scanning, it leads to larger doses of ionizing radiation compared to conventional x-ray. Children have much risk from a given radiation dose than adults both because they are more radiosensitive and they have longer life time in which a radiation-induced cancer could develop. CT scanning parameters are the main determinants of radiation dose received by the child; therefore, it is important to adjust them according to child's age and body size. The aim of this study is to determine CT scanning parameters and radiation doses for pediatric patients according to age and body size at MNH.Broad objective: To determine Computed Tomography scanning parameters and radiation doses in pediatric patients at Muhimbili National Hospital.**Methodology:** This is a hospital based cross sectional study which was conducted at Radiology department, Muhimbili National Hospital from September 2017 to March 2018. Children referred for CT scan were included in the study following informed consent from the parents/guardians. Children underwent CT examination by using a Siemens Somatom Definition Flash, Frank furt, Germany model dual tube with 128 slice, 64 slices each tube. Structured questionnaires were used for recording patients' demographic data, clinical indication of CT, and scanning parameters. CT dose estimation was calculated from CT dose calculator computer software supplied by Imaging Performance and Assessment of CT scanners (ImPACT). Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 20. Statistical Association was done by using cross tabulations. P value of < 0.05 was considered statistically significant. **Results:** The mean age of the study participants was 6.3 years with a range of 0.01-15 years. Majority of children were males, and the majority of children were from age group of 1-5 years. Head trauma was the commonest indication with the majority patient aged 6-10years. Sixty-four percent (112/174) of the CT examinations were of the head, twenty-six percent (45/174) were of abdomen and ten percent (17/174) were of the chest. The tube potential and tube current for head examinations were higher than for the chest and abdominal examinations. The mean tube potential and tube current for the head were 115.4kVp and 209.45mA respectively with no evidence of adjustment based on body size and age of the patient. The mean tube potential and tube current for chest and abdomen were adjusted for paediatric body size and age with the mean

value of 84.52 kVp and 90.42kVp for the tube potential and 126.5mA and 91.25mA for tube current respectively. The doses for Head CT examinations were higher compared to the chest and abdomen, the mean CTDIvol (mGy) 11.78, DLP(mGy.cm) 231.42 andCTDIw (mGy) 16.6, but relatively lower than other international values.The calculated mean CTDIvol 11.8, 0.89, 1.79 and DLP 232.6, 36.5, 86.5 for head, chest and abdomen respectively were significantly lower than the values displayed on the console i.e. 36.7, 2.7, 2.6 CTDIvol and 731.7, 78.6, 114.8 DLPs.**Conclusion:**Scanning parameters for head CT examinations are not adjusted for paediatric examinations. The use of large tube potential and tube current for head examinations has led to large doses for head examinations. The radiation dose mean values for CTDI vol, and DLP were significantly lower than those from other countries, however lowest doses have been reported to IAEA. We therefore still have the chance to further reduce our doses to the lower levels than these so as to reduce the level of radiation to our children. **Recommendations:** 1The use of recommended scanning parameters for head CT examination such as low tube potential (kVp) and low tube current in paediatric imaging should be adhered.2. Further CT dose reduction is needed despite the fact that our doses are lower compared to many other international values. This is because we need to minimize the radiation dose to children to as low as reasonably achievable. .3. Further studies with larger sample size should be conducted all over the country involving different CT centers, using this study as a base line to develop Diagnostic reference levels for paediatric CT examinations.

90. Lukwinyo, B.Y. (2018). Pattern and Functional Outcome of Hand Injuries Among Patients Treated at Muhimbili Orthopaedic Institute (Moi). Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Hand and fingers are most often injured in work place (1)(2)(3). For acutely injured hand, the treatment goals are to alleviate pains, repair the injured structures, prevent complications, and restoring the normal function (3).Hand injuries can result in a considerable society burden including costs for the provision of acute health care services, as well as, reduced socio-economic productivity due to the injured person's limited capacity to perform daily functional activities throughout their recovery(2)Hand injuries are common at MOI; 10-15

persons with hand injuries are attended at MOI emergency department every month(4).**Objectives:** To determine pattern and short term functional outcome of hand injuries among patients attended at MOI.Methodology: A descriptive prospective hospital based study was conducted at MOI on adults aged 18years and above with hand injuries from June 2016-May 2017. Convenience sampling technique was used to get the sample size. 70 patients met the inclusion criteria and were recruited after consenting for the study. Data were collected with help of one research assistant and guided with a structured questionnaire and BMHQ. Goniometer and ruler were used to accomplish data collection process. The outcome was assessed using objective and subjective criteria at 2nd, 6th, and 12th week post treatment. The objective outcome was assessed using Belsky`s, Gingrass`s criteria for fingers and thumb injuries and Dargan`s criteria for tendon injuries. The subjective criteria was assessed using BMHQ. The data obtained were analyzed using SPSS version 20. **Results:** A total of 70 patients with hand injuries were recruited with 66 being evaluated foroutcome. The modal age group was 20-29 years. Males outnumbered females in a ratio of 6.8:1. Among the recruited patients, 54.3% had a primary education.45.7% depend on petty business to sustain their life. The right hand was affected more than the left hand. The right hand was dominant hand in 87.1%. Road traffic crashes, machines and assaults were the leading causes of hand injuries.72.9% were open injuries and 27.1% were closed injuries. The open injuries included lacerations 42.9%, traumatic amputation 12.9%, abrasions 8.6%, crush and degloving injury 8.6%. Phalanges of the middle finger were the most fractured bones. Among the phalanges comminuted fracture pattern was the most common 38.9%.The transverse fracture pattern was common among the metacarpals.Dislocation was most noted in the interphalangeal joints where proximal interphalangeal joint was dislocated in 38.5% and distal interphalangeal joint was dislocated 23.1%.Extensor tendons were injured in 58.3% while the flexor tendons were injured in 41.7%.Among the flexor tendons, flexor digitorum superficialis was the most injured tendon in 60%.The functional outcome using objective criteria was good to excellent. The mean MHQ score was 79.7%**Conclusion:** From this study it is observed that most hand injuries are due to road traffic crashes, machines and assaults. The fifth and second metacarpals are the most frequently injured. When joint dislocation occurs, the interphalangeal joints are the most likely to be affected. Flexor digitorum superficialis and Extensor digitorum communis are the leading tendons to be injured. Skeletal pain and deformity are the commonest complications of hand injuries however adhering to physiotherapy largely

minimize the deformity. The functional outcome of hand injuries at MOI is good to excellent in terms of overall hand function, activities of daily living, pains, work performance, aesthetics and patient satisfaction with hand function. The mean MHQ score was 79.7% at three months

91. Lulalabuka, N.B. (2018). Clinical-Pathological Characteristics of Colorectal Carcinoma and Factors Influences 2-Years Survival Among Patients Attended at Ocean Road Cancer Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Colorectal cancer is one of the most common cancers worldwide and its incidence is reported to be increasing in resource-limited countries, probably due to the acquisition of a western lifestyle. Information regarding colorectal cancer in Tanzania is limited. This study was conducted at Ocean Road Cancer Institute (ORCI) to assess the association of clinical-pathological characteristics with treatment outcome of patient with colorectal cancer treated at ORCI.Methods: This was cross sectional study that involved histological confirmed colorectal carcinoma treated at ORCI from 2010-2015.**Results:** A total of 100 files were extracted from medical records, 63% were males and 37% females. 21% of patients were below 40 years of age. Left-sided tumor was also seen in this study accounting for 46%. Abdominal pain, rectal bleeding and constipation were commonly presenting symptoms observed accounting for 72%, 68% and 55% respectively.Histologically moderately differentiation adenocarcinoma was common histological type seen accounting for 80%.Late presentation of disease was also observed in this study where most of the patients presented at group stage III and IV accounting for 37% and 56% respectively.Colostomy was the most surgical procedures performed in this study group.Regarding chemotherapy FOLFOX 4 was the most common chemotherapy used and rectal carcinoma patients were commonly treated with chemo-radiation.Using Kaplan Meir analysis median overall survival was estimated to be 9.4 months.**Conclusion:** A significant proportion of patients in this study population are young. Survival from colorectal cancer is poor owing largely to the late presentation seen in this study group.

92. Lulaga, M. (2018). Contraceptive Use and Its Associated Factors Among Grand Multiparous Women Attending Reproductive and Child Health Clinics in Public Health Facilities in Mbeya City.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Grand multiparity is common in Sub-Saharan Africa and is among the contributors of bad obstetric performance indices in the region. The use of highly effective modern contraceptives to prevent pregnancy in grand multiparous women is crucial. This study aimed at determining proportion of contraceptive use and its associated factors among grand multiparous women attending Reproductive and Child Health services in Mbeya city. **Methods:** Analytical cross sectional study was conducted among 607 grand multiparous women attending RCH services for child growth mornitoring in Mbeya city. Data was collected on socio-demographic and socio-cultural economic characteristics, contraceptive use and other factors that are associated with contraceptive use using a structured Swahili questionnaire. Data was analyzed using SPSS software version 23. Bivariate and multivariate logistic regression analysis was done to identify factors associated with contraceptive use. **Results:** Majority (63.3%) of grand multiparous women were current modern contraceptive users. Contraceptive use significantly associated with age of woman of 40 years or more (AOR=7.0; 95% CI=3.9-12.4); being employed (AOR=3.5; 95% CI, 1.5-8.1); self-employed (AOR=2.4; 95% CI, 1.2-4.6) and christian (AOR=5.4; 95% CI, 1.6-18.3). In addition, contraceptive use was associated with having at least five surviving children (AOR=2.5; 95 % CI, 1.5-4.2); joint decision making (AOR=2.4; 95% CI, 1.2-5.0); high family income (AOR=2.7; 95% CI, 1.1-6.2); high knowledge of modern contraceptives (AOR=4.7; 95% CI, 1.5-15.2); and previous contraceptive use (AOR=3.0; 95% CI, 1.7-5.4). **Conclusions:** Nearly two-third of grand multiparous women were current users of modern contraceptives. The use was associated with advanced age, cohabiting, employed, higher number of living children, small family size preference, joint decision making for contraception, high monthly income, high knowledge of contraceptives and previous history contraceptive use. Programmes to prevent grand multiparity, poverty reduction, improve child survival, empower women in education and decision making. The regional reproductive and child health office should focus on couples to encourage communication and male involvement for contraception as well as all other reproductive health services.

93. Lutege, W.M. (2018). Open Versus Laparoscopic Cholecystectomy for Symptomatic Gallbladder Stone Disease at Mnh Dar Es Salaam, Tanzania; A Comparative Study.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Laparoscopic cholecystectomy (LC) is now the gold standard for the treatment of symptomatic and uncomplicated gallbladder stone disease (1,2). It is safe, cost-effective, has rapid recovery times, superior cosmetic results, and comparable morbidity to that of OC (3). Most of these data come from developed countries where approximately 75% of all cholecystectomies are done laparoscopically (4). In contrast, Tanzania is a resource-limited country with less than optimal health care system and only a small number of governments and private health facilities offer laparoscopic surgery, with such constraints on health care infrastructure and training opportunities, one would expect this kind of service to be of limited application.Therefore, this study aimed to assess and compare the outcomes of open versus laparoscopic cholecystectomy in the treatment of symptomatic gallbladder stone disease at MNH, March 2012 to February 2017.**Methodology:** A retrospective cohort study was carried out at MNH for a period of twelve months. Data sheet was used to abstract information regarding patient'soperative time, hospital stay duration, complications, and mortality. An independent sample t test was used to compare the operative time, hospital stay and for complications Chi-square test was used. To evaluate statistical significance of the results P value of <0.05 was considered statistically significant. **Results:** The rate of conversion to an open cholecystectomy was 3.29%. The mean operative time was 109.78±40.38minutes longer in LC compared with79.78±27.23minutes in OC (P-Value = 0.000). The hospital stay was significantly longer in the OC group compared to LC group with mean hospital stay of 3.82±2.25days and 2.15± 1.165days respectively (P=0.000). The overall complication rate was in the LC group 8(8.79%) than in the OC 6(6.59%) however this difference was not statistically significant (P=0.578). Mortality rate was 2(2.2%) in LC, no death occurred in OC (P=0.155). **Conclusion:** LC and OC are comparable procedures for the treatment of gall stone disease in terms of morbidity and mortality although significantly shorter hospital stay, quick recovery and longer operative time

were in LC group. At MNH LC should be a procedure of choice and further study on cost-effective of LC should be conducted.

94. Lyapa, O.T. (2018). Predictors Of Fertility Desire in People Living with HIV and AIDS in Iringa Municipality in 2017.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Life expectancy and health of people living with Human Immunodeficiency Virus (HIV) has been increased and improved by use of Antiretroviral Therapy (ART). This has led to the increase in sexual activity in people living with HIV. There is widespread pressure on couples and particularly on women to have children from family and community members. There is also cultural pressure to continue childbearing if the desired number or gender of children has not been achieved. Knowing their fertility desire is important in planning and reducing risk of vertical transmission. **Objective:** The aim of the study was to determine factors that predict fertility desire among people living with HIV/AIDS in Iringa Municipality.Methodology: A facility based cross sectional study was conducted in Iringa Municipality where a total of 540 people living with HIV/AIDS attending Care and Treatment Clinics (CTC) were studied. Information on fertility desire and factors affecting desire was collected using a structured researcher administered questionnaire. Written informed consent was obtained from each participant. Data was analyzed using SPSS version 23 computer program. Bivariate and multivariate analysis was done to those factors which had association (P value 0.05) **Results:** A total of 540 PLWHA participated. Over 70% were in age category of above 35 and married. Over 50% were farmers. Desire to have children in the future were reported by 49.8% of participants. Fertility desire was more expressed in individuals with younger age (AOR 3.5 95% CI, 1.87-6.44) and those who had no living children with HIV in the family (AOR 3.5 95% CI, 1.99-3.58). Fertility desire was less expressed in individuals with sufficient knowledge on PMTCT (AOR 0.5 95% CI, 0.26-0.81) and those who had less number of living children (AOR 0.1 95% CI, 0.07-0.21). **Conclusion:** Approximately half of PLWHA desire to have children. Fertility desire was determined more by young age and absence of living children with HIV/AIDS in the family. Reproductive health services (contraception, counseling on decision to have a child and safer conception and delivery) should be provided with emphasis and attention

at routine HIV and AIDS care and treatment clinics especially to people of young reproductive age.

95. Lyimo, E. (2018). Early Clinical OutcomesOf Patients Wound, Using Negative Pressure Wound Therapy in Wound Dressing of Patient with Open Fractures of the Tibia and Fibula Gustilo Anderson Grade Iiib at Muhimbili Orthopedic Institute 2018.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Open fractures are often high-energy injuries and are frequentlyassociated with life-threatening injuries, skindegloving, soft tissue crushing, and contamination. Open Tibia fractures causes great suffering to patients andare an enormous economic burden especially in developing countries. Negative Pressure Wound Therapy (NPWT) has shown a promising treatment method when managing these wounds. The four primary effects of NPWT are; wound contraction, stabilization of the wound environment, decreased edema and removal of wound exudates, and micro deformation. These effects allow NPWT to speed wound healing; increase blood flow around wounds; improve wound bed preparation for subsequent closure or coverage, and change wound biochemistry, bacterial burden, and systemic response. **Objective:** The study aimed at determining the early outcomes; granulation tissue formation, wound site infection, re-debridement and grafting proportion, when using negative pressure wound therapy (NPWT) in the management of wounds in patients with Gustilo-Anderson IIIB fracture of the tibia treated at MOI from June 2017 to March 2018 **Methodology:** One arm cohort study was conducted at Muhimbili Orthopedics and Trauma Institute (MOI)from June 2017 to March 2018. Twenty four patients meeting the inclusion criteria were enrolled into the study consecutively as they presented to the hospital, data was collected using a structured questionnaire and Bates-Jansen wound assessment tool was used in the assessment of wound on each dressing change, **Results:** A total of 24 patients were enrolled during the study period, 18 (75%) were males and 6 (25%) were females, male: female was 3:1, the mean age was 36.67 standard deviation 15.216 years, the majority of patients (54.2%) were in the age group between 21-40 years, the mean time from injury to intravenous antibiotics prophylaxis was 6.54 standard deviation 1.719 hours, the mean time from injury to surgical debridement was 9.79 standard deviation 1.587 hours. The mean

duration of using NPWT was 4.9 standard deviation 1.6 days, and the mean number of dressing change was 2.88 standard deviation 0.338. The duration for formation of healthy granulation tissues covering more than 90% of the wound bed was found to be 4.92 standard deviation 1.586 days, the infection rate was found to be 16.7 %. The proportion of patients who underwent graft procedure to cover the soft tissue defect was 16.7%, the mean wound area reduction was 10.42 cm2 (63.46%) p-value <0.001, re-debridement was found to be 20.8% of these, 16.64% was due to infection and 4.16% was due to secondary necrosis. The early infection rate was 16.7% , time from injury to antibiotics of more than 6 hours was associated with development of infection p-value = 0.018, while time from injury to surgical debridement was not associated with development of infection p-value = 0.288.**Conclusion and recommendations:** Road traffic accidents (RTA) are in rise, due to poor infrastructures, increase in motorcycles as means of transportation, these contributes to a raise in high energy injuries which pos treatment challenges due to complex soft tissue disruption, the affected age group is between 21-40 years, this group is the working force for the economic growth of our country. New modality of wound dressing using NPWT shows promising early treatment outcomes and lowers the complication rates. There was statistical association between development of early infection and delay in prophylactic antibiotic. There is need of affirmative actions to advocate early intravenous antibiotics prophylaxis to patients with open fracture to lower the infection burden. This can be achieved by regular training first health care responders who provide the basic life support to trauma victims. A larger multicentre case control study is needed in order to establish the effectiveness of using NPWT in wound management of open fractures compared to wet dressing in Tanzania

96. Lyimo, M.A. (2018). Reasons for Delay in Seeking Treatment Among Women with Obstetric Fistula Admitted at Ccbrt Hospital in Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Obstetric fistula is a childbirth injury caused by prolonged, obstructed labour. It occurs when pressure from the baby's head compresses the mother's soft tissue in the birth canal, which obstructs blood flow. Without blood, the tissues die and a hole forms between the bladder

and the vagina or the rectum and the vagina. Despite free obstetric fistula treatment, there has been an increase in delay seeking fistula treatment among women with fistula in Tanzania. It is estimated that there are about 21,400 women in Tanzania with untreated obstetric fistula. Objective: This study aims at exploring reasons for the delay in seeking treatment among women with obstetric fistula admitted at CCBRT hospital in Dar es Salaam. **Methodology:** Explorative design was employed using an in-depth interview guide, whereby eighteen women with obstetric fistula admitted at CCBRT hospital were interviewed. The interviews were conducted in Kiswahili, lasted for about 30-45 minutes. These interviews were audio-recorded, transcribed verbatim, and translated into English. Thematic analysis guided the analysis and assisted by Nvivo + software on reasons for the delay in seeking obstetric fistula treatment. **Findings:** The study findings showed that delay in seeking obstetric fistula treatment is related to inadequate knowledge, lack of information on obstetric fistula condition, treatment of obstetric fistula, stigma, isolation as well as women seeking traditional and cultural treatment which limited women from seeking modern treatment. The study also revealed that distance, transportation, and cost contributed at large for women with obstetric fistula delay in seeking treatment. **Conclusion:** Delay seeking obstetric fistula treatment is still a major problem in Tanzania, while main reasons leading to women delay in seeking fistula treatment being lack of knowledge on obstetric fistula, long distance, and transportation cost to treatment centers, stigma as well as seeking traditional and cultural treatment. Ministry of health in collaboration with NGO's and private institutions should strengthen education programs through various sources to communities will help people understand about fistula including the nature of the condition, cause, and treatment so that women living with fistula receive fistula treatment and social support without any delay.

97. Lyimo, R.H. (2018). Factors Associated With High Hiv Viral Load Among Adolescents And Youth After Enhanced Adherence Counseling; Cross Sectional Design From Tanzania Routine National Hiv Care And Treatment Database.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: This study explores factors that are associated with high HIV viral load among adolescents and youth after enhanced adherence counselling documented in Tanzania national CTC2 database. **Methods:** This descriptive study uses secondary data from a field research conducted from 1/10/2016 to 31/12/2017 regarding patients eligible for HIV viral load test, received HVL test and identified with high HVL which was extracted from national HIV/AIDS CTC2 database, HVL registers and CTC2 cards. Information on enhanced adherence counselling was obtained from EAC registers and file reviewing from health facilities where the study was conducted. Bi variate and multivariate logistic regression was performed to explore the relationship between viral load, gender, age, marital status, time on ART, baseline HVL counts, WHO stage, weight, receiving (or not receiving) enhanced adherence counselling and the study outcome of interest (viral suppression). **Results:** A total number of 726 HIV adolescents and youths were enrolled into three sessions of enhanced adherence counseling, 558 (76.9%) remained with high HIV viral loads. The factors that were statistically significant associated with persistence high HIV viral load were, being older adolescents (15-19 years) (AOR 1.89, 95%CI 1.68-2.13) compared to younger adolescents. Male adolescents and youths were more likely to have persistence high HIV viral loads (AOR 1.74, 95%CI 1.56-1.93) compared to their female counterparts, patients with CD4<500 cells/μl (2.60, 95%CI 2.08-3.25) were also more likely not to suppress HVL as compared to those with high CD4 500cells/μl or more. Adolescents and youths who were on ART for 7 to 12 months before testing HVL for the first time were 4.5 times more likely to have persistence high viral load compared to those who were on ART for six months (AOR 4.51, 95%CI 2.74-7.42). Those who were on ART for more than a year were 10.9 times more likely to have persistence high viral load after EAC compared to those who were on ART for only six months (AOR 10.94, 95%CI 7.63-15.70). Persistence of high viral load after EAC among adolescents and youths who were in WHO Stage 2 disease were 1.5 times of those in WHO stage 1 disease (AOR 2.17, 95%CI 1.36-3.46) and those in WHO Stage 4 were 2.08 times those in WHO stage 1 (2.08, 95%CI 1.34-3.22). The persistence high viral loads among adolescents and youths who had first viral load count above 5,000 copies were more than 1.5 times more likely of those in between 1000 and 5000 inclusive (AOR 1.6, 95%CI 1.46-1.94). **Conclusion:** Older adolescents (15-19) and those with advanced disease (WHO clinical stage 3 and 4, on ART for more than 12 months and with CD4<500 cells/μl) were most likely to have

high viral loads and least likely to achieve viral suppression at retesting; receiving adherence counselling was not associated with higher likelihood of viral suppression. Although the level of viral resistance was not quantified, this study suggests the need for ART treatment support that addresses the adherence problems of younger people; and to define the elements of optimal enhanced adherence support for adolescents on ART. Assessment for possible drug failure among those who continue to present high viral loads should be done and strategies to switch into second line regimen should be of paramount importance.

98. Maduhu, I.A. (2018). Health Facility Readiness for Provision Of Cervical Cancer Screening In Kinondoni Municipal, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Cervical cancer is the second most common cancer among women worldwide. About 83% of the cases occur in developing countries, representing 15% of female cancers. Cervical cancer ranks as the most frequent cancer among women in Tanzania, and the most frequent cancer among women between 15 and 44 years of age with age specific incidence rate of 34 per 100,000. Inspite of the fact that the government of Tanzania is undertaking   program for prevention and management of cervical cancer, the prevalence remains high compared to other developing countries. This study aimed to assess the facilityreadiness for cervical cancer screening, and provider's knowledge on cervical cancer screening in Kinondoni Municipal **Objectives:** To assess public health facilities readiness on provision of cervical cancer screening services as part of comprehensive cervical cancer prevention and treatment in Kinondoni municipality.**Methodology:** A descriptive cross-sectional study was conducted in Kinondoni municipality from August 2017 to October 2017 whereby a total of 14 public health facilities were surveyed. It included   2 public hospitals, 2 health centers and 10 dispensaries that were expected to be providing cervical cancer screening services. Information on facility readiness on cervical cancer screening, referral modalities, healthcare provider's knowledge on cancer screening services and availability of equipment and supplies for screening was collected using a structured researcher administered questionnaire and a checklist. Data were analyzed using SPSS version 23.0 computer program whereby Categorical variables were analyzed and

compared using the chi square test and continuous variables were analyzed as mean, standard deviation and compared using student's t-test. In any comparison a p-value of less than 0.05 was interpreted as statistical significant. Facility readiness was assessed based on the presence of all basic items in the Tanzania National Guideline that include Infrastructure, equipment, Consumables and trained personnel, and working referral system. Knowledge was assessed using a Universal grading system. **Results:** Thirteen (92.8%) out of fourteen health facillities had cervical cancer sreening services which was Visual Inspection with Acetic Acid (VIA). Out of these only three (21.4%) facility had all the readiness components fulfilled. A total of 105 health personel from 14 public health facilities were recruited in this study and majority of the participants were nurses 79 (75.2%), followed by Doctors21 (20%). Only18(17.14%) of the interviewed staff had attended cervical cancer screening training. Of all the staff, sufficient knowlege on Cervical cancer was documented in (63.8%) with significantly higher proportion among doctors (95.2%) compared to nurses (55.7%), p<0.004. **Conclusion:** Facility readiness for comprehensive cervical cancer screening and treatment is low among public health facilities in Dar es Salaaam. Moreover, inspite of higher knowledge on Cervical Cancer screeningamong staff the great majority were lacking training on Cervical cancer screening.

99. Makubula, L.M. (2018). Incidence And Associated Risk Factors for Airway Adverse Events in Intubated Icu PatientsAt Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Airway adverse events in intubated intensive care unit patients have been reported all over the world. The patterns of these events include Unplanned Extubation, Tube blocking, Endobronchial intubation, Tube kinking and leaking cuffs. However, the most common ones are reported to be unplanned extubation and tube blocking. Low level of sedation and low number of ICU staff has been reported to play a role in unplanned extubation whereas prolonged intubation was associated with tube blocking among other factors All these adverse airway events could lead to catastrophic effect to the patient since most of these patients had cardiopulmonary compromise. This was also accompanied by difficult airway management yet intervention was needed as soon as possible to minimize the effects. This study looked at the incidence, patterns,

associated risk factors and the outcome of these airway adverse events. **Methodology:** An observational prospective cohort study was conducted among intubated ICU patients at Muhimbili National Hospital. All intubated patients admitted to ICU were followed up after obtaining proxy consent from next of kin. A structured data collecting form which was updated every day during patient stay with endotracheal tube or tracheostomy tube was used. Patterns of airway adverse events plus associated complications were recorded from day of intubation till when the patient was extubated either due to improvement or death. Level of sedation, use of Humidifiers, Primary diagnosis, Physical restraints and technique used to secure the endotracheal tube plus numbers of tube days were also recorded. **Results:** 98 patients with a total of 521 tube days were studied. There were overall 22 airway adverse events occurring in 22 patients with an incidence of 22.45% of patients and 4.22% / 100 tube days.The airway adverse events were 17.39% of patient and 3.40 %/100 tube days due to unplanned extubation and 6.52% of patients and 1.24%/ 100 tube days due to tube blockade.Unplanned extubation and tube blockade were the most common adverse events, no other airway adverse event were noted during a study period.Of the 22 adverse events majority of them did not get serious complications, apart from one case who sustained cardiac arrest following unplanned extubation. **Conclusion and recommendations:** From this study it was noted that the overall incidence of 4.22%/100 tube days was quite high compared to studies from other Intensive Care Units. Tube blockade and unplanned extubation were the commonly observed airway adverse events. This was contributed by inadequate staff during night shifts, non routine use of Heat and Moisture Exchangers plus presence of auxiliary and less experienced staff in the units. We recommended training of critical care nurses and strict one nurse to one ventilated patient to be observed during all shifts.

100. Makuri, C.M. (2018). Factors Associated with Prolonged Bleeding Time Following Removal of Arterio-Venous Fistula Needles After Hemodialysis Therapy in Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Patients with End Stage Renal Disease (ESRD) are managed with hemodialysis (HD) in which heparin is added to facilitates blood flow, prevents formation of thrombosis and avoid clotting of the dialyzer. Bleeding at fistula sites in patients with ESRD is a common and

potentially serious complication thatcontributes to blood loss (anemia). Aims: This study aimed at determining the factors (such as body mass index, serum urea levels, monocytes counts and hemodialysis dose) that influencing activated partial thromboplastin time (aPTT) and compression time) following removal of fistula needles. Methods: This was a descriptive cross-sectional study. Consecutive sampling technique wasemployed to recruit a total of 115 ESRD patients who underwent maintenance hemodialysis between May and October 2017 at Muhimbili National Hospital and Access Dialysis Centre in Dar es Salaam, Tanzania. A case report form (CRF) was used for data collection. Data was analyzed using Statistical Package for Social Sciences (SPSS) software version 21. Prolonged bleeding was assessed by measuring aPTT and compression time (CT), separately. Descriptive statistics and logistic regression analysis were used to assess the association between factors and tease out the independent factors associated with prolonged bleeding at fistula puncture site. A two-tailed p-value <0.05 was used as a cut-off for statistical significance. **Results:** One hundred and fifteen patients were recruited for this study whereby 81(70.4%) of participants had elevated aPTT (> 31 seconds) and 4 (3.5%) had prolonged compression time (> 15 minutes). The mean (±SD) aPTT and compression time of the participants were 42 ± 17.6 seconds and 5 ± 2.9 minutes respectively. Over three quarter of participants 111(96.5%) had compression time ≤ 15 minutes. Compared with patients who had below normal serum urea levels, patients with elevated serum urea levels (> 7.4mmol/L) had a significant four-fold elevation in the mean aPTT value (OR=4.143 95% C.I (1.021-16.810), p=0.047). Further, compared to patients with normal BMI, patients with low BMI, overweight and obesity were all insignificantly associated with elevated mean aPTT value by 69.6%, 56.8% and 32.1% respectively. **Conclusion:** The findings have demonstrated that elevated serum urea levels are significantly associated with prolonged aPTT, indicating that adequate hemodialysis dose has to be encouraged for optimal hemostasis in HD patients. The increase in body mass index and monocytes counts are insignificantly associated with prolonged aPTT, indicating that the variation in aPTT may be secondary to pharmacodynamic variability instead of the patient's BMI and monocytes counts. **Recommendations:** Serum urea levels should be factored in when gauging the individual risk of arterio-venous fistula site bleeding for patients using heparin for anticoagulation during hemodialysis. Dose individualization is recommended since each patient has different coagulation profile, capacity to bind to plasma proteins with a unique dissociation constant and the rate of clearance. Further studies are recommended to elucidate how other

predisposing factors such as heparin dose, BMI, body weight, monocytes counts and hemodialysis dose affects A-V fistula bleeding using large sample size.

101. Malaja, N. (2018). Magnitude AndAssociated Factors of Contrast Induced Nephropathy Among Patients Undergoing Coronary Angiography and Percutaneous Coronary Intervention at Jakaya Kikwete Cardiac Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Contrast media are increasingly used in diagnostic and interventional coronary angiographic procedures but are also known causes of acute kidney injury - a condition known as contrast induced nephropathy (CIN). CIN is usually self-limiting but has poor outcome to those who develop residual disease. There is however paucity of data on CIN in our local setting due to the fact that both investigational and interventionalcoronary angiogram is new in Tanzania, this is the first study to look at the magnitude of CIN in our local setting.Objective:To determine the magnitude and associated factors of CIN among patients undergoing coronary angiography and percutaneous coronary intervention at the Jakaya Kikwete Cardiac Institute (JKCI).**Methodology:** A hospital based cross sectional study was conducted among adult patients (≥18 years) with coronary artery disease undergoing elective coronary angiography and percutaneous coronary intervention at JKCI from August 2017 to January 2018. All eligible patients were conveniently and consecutively recruited until a sample size was obtained. Patients' socio-demographic and clinical characteristics were collected using a structured questionnaire and case report forms. Serum creatinine was taken within 24 hours before the angiography procedure and repeated at 24- and 72-hours after procedure. CIN was defined as an increase of serum creatinine of ≥25%, or an absolute increase of ≥44µmol/L of serum creatinine from baseline serum creatinine levels within 72 hours following an exposure to contrast media. **Results:** During the study period 222 fulfilled the inclusion criteria but 210 were available for the final analysis. The mean ±SD age of the study population was 61.3 ±10.9 years, and 75 (35.7%) were females. Hypertension, diabetes mellitus, smoking and alcohol consumption was present in 86.7%, 37.7%, 12.4% and 37.6% respectively. The magnitude of CIN was found to be 19 %. In univariate analysis, factors associated with CIN were positive history of heart failure,

myocardial infarction, pre/post procedure hydration, contrast volume >100mls, triple vessel disease and post CAG/PCI hospital stay of ≥3days. On multivariate logistic regression analysis the independent predictors of CIN were history of heart failure (OR = 7.34, 95% CI 1.55 – 34.83), central obesity (OR = 3.12 95% CI 1.22 – 7.97), triple vessel disease (OR = 10.14, 95% CI 2.07 – 49.65) and associated with longer post procedure stay of ≥3days (OR = 4.1, 95%CI 1.75 – 9.76), all p<0.05.**Conclusion:** The magnitude of CIN among patients undergoing coronary angiogram or percutaneous coronary intervention at the Jakaya Kikwete Cardiac Institute is 19% and is independently associated with positive history of heart failure, central obesity, multi-vessel disease and longer post-procedure hospital stay. **Recommendations:** Attending cardiologists, physicians and nurses should be made aware of the risk of CIN and extra care should be taken to avoid CIN in patients at risk. A follow-up study is warranted to determine the long term outcome of patients who are found to have CIN.

102. Malingi, M.J. (2018). Magnitude and Pattern of Gastroenterological Malignancies Among Patients at Muhimbili National Hospital, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Gastroenterological malignancies in 2012 were highest in incidence and mortality, globally, with 4 of the top 8, and 4 of the top 6 respectively, being from this system. Developing countries including Tanzania were noted to be experiencing an increased frequency of these cancers, possibly due to adoption of a western lifestyle. There is limited data regarding the latest clinicopathological presentation and possible associated factors of these malignancies. **Objective:** To evaluate the magnitude, patterns and possible associated factors of gastroenterological malignancies among patients attended at Muhimbili National Hospital, Tanzania. Methodology: This was a cross sectional study carried out at the surgical wards and the gastrointestinal clinic at Muhimbili National Hospital, between June and December 2017. The study involved patients with malignancies in the esophagus, stomach, colon, rectum and anus. Data on the demographics, clinical presentation and exposure to suspected risk factors was collected from patients using a structured questionnaire and clinical information was sourced from their files. The data was cleaned, coded and then analyzed by SPSS computer software

version 20.0. **Results:** 270 participants were recruited, giving a magnitude of 15.1% all patients being attended to for a diagnosis of cancer. The participants had a male predominance of 182(67.4%) & a mean age (SD) of 56.4 (±14.6) years old. The study found that esophageal cancer 175(64.8%) was the most common gastroenterological malignancy, while Small bowel cancer was the least 4(1.5%). Alcohol consumption 211(78%) and an Age group of 40 – 70 years 194(72%), were the most prevalent associated factors of gastrointestinal cancer, while smoking was more common among patients diagnosed with esophageal cancer 96(55%) and HIV infection/AIDS was more common among patients diagnosed with small bowel 1(33.4%) and anal cancer 2(13.3%). vi Conclusion: Gastroenterological Malignancies have a significant magnitude among patients at MNH and they present with a unique profile. Lack of awareness of these diseases and their associated factors poses a great challenge in the prevention and subsequent management of these patients. Addressing these challenges will help reverse the trend of an increasingincidence of these malignancies in Tanzania.

103. Mallya, B.P. (2018). Prevalence of Occupational Asthma and Use of Protective Gears Among Car Painters in Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Car painting industry has offered employment to large number of people in our country especially young adults who couldn't access higher level education. The spray paint used is a mixture of solvents including isocyanates which affects human pulmonary system and it's the most common cause of asthma or painters' lung disease. However, little is known on occupational associated respiratory problems in Tanzania. **Objective:** The main objective was to assess prevalence of work related asthma and use of protective gears among car painters in Dar es Salaam. Methodology: A cross- sectional study was conducted between February- August 2017 among car painters from 35 car garages of Ilala, Kinondoni and Temeke municipalities of Dar es Salaam region whereby 480 participants were interviewed through questionnaire. Pulmonary function tests were done by means of spirometer. Data entry and analysis was done by using Epi info software version-3.5.4. Results: Out of 480 participants, who were enrolled in the study, 10% were asthmatics and 3% had occupational asthma. Diagnosis was made by

symptoms in which asthmatics who reported worsening of symptoms at work places were categorized as occupation asthma cases. Only one participant used respirator to prevent inhalation of noxious agents during painting process. Most frequent mentioned medications by asthmatics were cough syrups 26%, antibiotics 24% and herbal remedies 21%. **Conclusion:** This study has demonstrated prevalence of occupational asthma of about 3% among car painters in Dar es Salaam. It also revealed low rate of use of protective gears among these workers.

104. Manani, A. M. (2018). Quality of Evaluating Referral Notes of Polytrauma Patients Attended at Muhimbili National Hospital and Muhimbili Orthopaedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Referral letters are key to good healthcare and act as a bridge between primary, secondary and tertiary healthcare clinicians. They are a way of relaying information for both simple and complicated cases in our health facilities. A referral letter gives details on patients demographics, clinical information, social issues and clinicians' details(6). **Objective:** Evaluating referral notes of poly-trauma patients attended at Muhimbili National Hospital and Muhimbili Orthopaedic Institute from June 2017 – February 2018.Materials and **Methods:** This was a descriptive cross-sectional study which was conducted at emergency departments of Muhimbili Orthopaedic Institute and Muhimbili National Hospital from June 2017 to February 2018. All patients referred as poly trauma cases were included in the study. Structured questionnaires were used for recording patient's demographics, clinical information and imaging findings noted on the referral notes. Data analysis was done using the Statistical Package for the Social Sciences (SPSS) version 20. Statistical analysis was done by using cross tabulations and Chi-square test was used to compare proportions. P value of < 0.05 was considered statistically significant. **Results:** The study included 56 referral letters of poly trauma patients. 5.4% of referral letters had no patients name, 80.4% had no physical address, 80.4% had no patients' mobile number and 53.6% had no hospital number documented. With regard to history, 78.6% had no presenting complaints, 12.5% no history of presenting illness, 16.1% had no clinical findings and 55.4% had no investigation results. There was no indication of urgency of referral among 94.6%, no past medical history among 96.4% while 33.9% current or past medical history

and 91.1% missed allergies documentation. Special needs of the referred patients and detailed information of the practitioner such as email, physical address, and mobile number and practitioners full names were not captured in the referral letters. **Conclusion:** From this study, it appears that essential information is lacking in referral letters of poly trauma patients' referred to Muhimbili National Hospital and Muhimbili Orthopaedic Institute. Patient's information and demographic, clinical information, special needs and referring practitioner's details that would aid in patients care by receiving health facility were lacking. **Recommendations:** There is a need to improve on the referral information of poly trauma patients to optimize care given to them in health facilities. A standard referral guideline maybe useful to improve documentation.

105. Manyahi, J.R. (2018). Severe Maternal Outcome Among Patients with Severe Pre Eclampsia and Eclampsia at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Hypertensive disorders in pregnancy (HDP) is the second most common direct cause of maternal deaths accounting for 14% of maternal deaths worldwide.Severe pre eclampsia and eclampsia are among the HDP which cause significant morbidity and mortality,hence categorized as Maternal Near Miss (MNM).At Muhimbili National Hospital these are the leading causesof maternal deaths (MD) accounting for 19.9% of MD.**Objective:** The aim of this study was to determine the proportion of severe maternal outcome among patients with severe pre eclampsia and eclampsia and to determine MNM indices at Muhimbili National Hospital in Tanzania. Methods: A descriptive cross sectional study was conducted at Muhimbili National Hospital. Women with severe pre eclampsia and eclampsia were recruited for the study. Data was extracted from patient files after admission, and followed up until discharge or death; after discharge was categorized as MNM or death as MD. Such data included: age, parity, gravidity, gestation age, hypertensive disorder, admission to ICU, organ dsyfunction, matenal death, mode of delivery and referral status then filled in a structured check list form. The information extracted was coded, entered cleaned and analysed using Statistical Package for the Social Sciences(SPSS), Version 22. Continous variables was summarized into mean and standard deviation. Categorical were summaized as frequencies and percentage. Outcome indicators were

calculated. **Results:** During the study period there were 3853 deliveries, whereby 3661were live births. A total of 320 women were recruited in this study, nearly two thirds of women, 199 (62.2%)had severe pre eclampsia while 121 (37.8%) had eclampsia, 310 (96.5%) women had been referred from other health facilities. Seventy-one women (22.1%) were found to have severe maternal outcome whereby 63 had MNM with organ dsyfunction and 8 maternal deaths. Overall MNMR was 87.4 per1000 live births,54 per 1000 live birth for severe pre eclampsia and 33 per 1000 live births for eclampsia. Overall SMOR was 19.4while that for severe pre eclampsia was 12 per 1000 live births and that foreclampsiawas 9.5 per 1000 live births. Mortality index was11%; 9% for severe pre eclampsia and 11.4% for eclampsia. Case fatality rate was 2.5%; 2.1 for severe pre eclampsia and 3.3% for eclampsia. **Conclusion:** There is high proportion of women with severe maternal outcome attributable to severe pre eclampsia and eclampsia, with reduced proportion of maternal deaths as compared to previous studies. This signifiesimprovement of performance in our health facility in dealing with patients with severe morbidities due to severe pre eclampsia and eclampsia, however more effort has to be put to reduce maternal mortality to the acceptable standards

106. Maro, H. (2018). Brain Mri Findings in   Hiv/Aids Patients with Neurological Symptoms at   Muhimbili National Hospital, Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: HIV/AIDS is a pandemic infectious disease affecting about 36.7 million people globally, with 22 million out of these residing in the Sub-Saharan Africa. In Tanzania the prevalence of HIV/AIDS is 5.1% with an estimated population of 1.4 million living with the disease. Approximately 40%-90% of patients with AIDS will develop CNS manifestations during the course of their illness. We studied brain MRI scans among HIV/AIDS patients who presented with clinical neurological manifestations at MNH. **Methods:** A cross sectional hospital based study was conducted for duration of six months among adult HIV/AIDS patients undergoing MRI brain imaging for neurological complaints attending Radiology and Internal medicine departments at Muhimbili National Hospital (MNH), Dar es Salaam. The interpretation

of the MRI brain scans were done by the Principal Investigator and Radiologist and reported findings were stored in a data sheet along with recent CD4 counts, viral load , ARV status and socio-demographic information retrieved from hospital records. Descriptive analyses were performed to summarize the data collected. To assess different associations, t-test or Wilcoxon test was used for continuous variables as appropriate while for categorical variables, a Chi-square test or Fisher exact test was used accordingly. Lastly, a multivariate logistic regression was used to assess association of abnormal brain MRI findings with different predictors with results presented as odds ratios and plotted in a coefficient plot. All analyses were performed in Stata software version 13.1 (Stata Corporation, College Station, Texas, USA). **Results**: The mean age of participants was 44 years (age range from 18-66years), with females accounting for the higher proportion (74.3%) amongst the 101 enrolled participants. Most participants were from Dar es Salaam, predominantly from Ilala district. Out of 101 brain MRI scans of the study population, 67% had abnormal findings predominantly among patients with CD4 cell count below 200cells/µL and viral load above 50 copies/mL. Infarct, diffuse global abnormalities (defined as cerebral atrophy with/without symmetrical white matter hyperintensities) and focal mass lesions with mass effect accounted for more than half (62%) of the abnormal brain MRI findings. In a multivariate logistic regression adjusted for viral load and CD4 cell counts, patients with viral loads above 50 copies/mL had twice the odds of abnormal MRI as compared to those with less than 50 copies/mL (i.e., aOR 2.06, 95% CI 0.48-8.82) while those whose CD4 cell counts are above 200 cells/µL had 67% decrease in the odds of having abnormal MRI findings (aOR 0.33, 95% CI 0.07-1.5). Participants with seizure disorder had a 83% increase in the odds of having abnormal MRI finding as compared to patients without seizure disorders (aOR 1.83, 95% CI 0.33-10.4). **Conclusion:** Neuro-imaging is a crucial component in the management of HIV/AIDS patients presenting with neurological symptoms especially those with low CD4 counts (≤200 cells/µL) and viral load above 50copies/mL. Due to higher sensitivity and soft tissue resolution, MRI of the brain is a useful aid in the diagnosis and treatment response assessment of HIV/AIDS patients with neurological manifestations.

107. Martine, F. (2018). Early Outcome of Open Diaphyseal Forearm Fractures in Adults Treated with Open Reduction and Internal Fixation at Muhimbili Orthopaedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: The forearm and the hand work in concert to effect activities of daily living. The functional performance of the hand and forearm are highly dependent of the relative motion of the forearm bones, the carpal bone and phalanges. Again, the relative motion of the forearm bones is highly determined by the anatomical relationship of these bones. **Objectives:** To determine early surgical and functional outcome of open diaphyseal forearm fractures in adults treated with open reduction and internal fixation at Muhimbili Orthopaedic Institute from May 2017 to February 2018. **Methodology:** This was a Descriptive Cross-sectional study done on adults aged 18 years and above who sustained open diaphyseal forearm fractures who were operated by open reduction and internal fixation for a period of 10 months from May 2017 to February 2018. Participants who met the inclusion criteria were recruited in the study and followed at 2nd, 6th and lastly at 12th week postoperatively. Data were collected through a structured questionnaire. Outcome were assessed both by objective assessment using the Grace and Eversmann Score and Subjectively by using patient-reported criteria from the QuickDASH Score. Data obtained were analyzed by using SPSS Version 20 software. **Results**: During the study duration, a total of 48 participants were enrolled, of whom 44 (70.8%) were males and 14 (29.2%) female. Majority of the participants were in the age group 18 − 39 (72.9%). The mean age was 35.38 years with minimum of 19 years and maximum of 70 years (SD = 11.98). The leading mechanism of injury was motor traffic crash which accounted for 50% of all open forearm fractures followed by fall from height (16.7%) and physical assault (16.7%). Industrial injury contributed the least to the mechanism of injury (4.2%). Infection was the leading postoperative complication; 10.4% of participants developed infection postoperatively. Posterior Interosseous Nerve (PIN) and ulnar nerve palsy had equal proportions (4.2% each). At completion of follow-up, 74 out of 81 forearm bones (91.4%) had shown radiological signs of union with the Mean time to union of 7.78 weeks, minimum of 6 weeks and maximum of 12 weeks (SD 2.76). forearm bone fractures which were fixed by vi plates and screws had a shorter mean time to union (7.5 weeks) than those who were fixed by IM Rush rod (8.4 weeks) and the difference was statistically significant on Students' t-test (pvalue = 0.046). The objective functional outcome on the Grace and Eversmann rating system revealed that 50% of all the participants had excellent score while 34% had Good, 8% had Acceptable and 8% had Unacceptable results. The Overall Mean QuickDASH Score was 15.9 with Minimum of 0 and

Maximum of 47.7 (SD = 12.8) **Conclusion:** Motor traffic Crash continues to take the lead in causation of forearm fractures among patients attending MOI. The age group most affected by this types of injury are young adults. Infection was the leading complication among open forearm fractures that underwent open reduction and internal fixation and was closely related to the degree of soft tissue damage. Plating of forearm fractures is associated with higher rates of radiological union than IM Rush rods. Among individuals who had both bone forearm fracture, those who were treated by double-plating had better objective functional outcome than those who were fixed by combined plating and IM Rush rod. **Recommendations:** Where resources are available and the fracture is amenable to open reduction and internal fixation, forearm fractures are better fixed by using plates and screws.

108. Martin, G. (2018). Barriers for Optimal Use of Antenatal Services Among Pregnant Women in Tarime District- Mara, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Antenatal care is an approach employed to reduce the maternal and perinatal morbidity and mortality. Tanzania adapted the WHO focus antenatal care which focus on risk approach, which targeted women based on risk factors, to an individualized, targeted approach, which aims to detect complications as they arise. It also deals with treatment of identified conditions, supplementation of minerals and health information [1]. Despite the effort of the government to provide antenatal care services for free from public and some faith based facilities, still large percentage of pregnancy women attend less than four antenatal visits compared to the standard which require to have more the four antenatal visits to be able to receive complete package [2, 3]. Many studies have been conducted to understand the barriers but mostly were quantitative studies and non-have been conducted in Tarime District. This study was conducted qualitatively and it explored the barriers for optimal use of ANC among pregnant women in Tarime Dc. **Objective:** The study aimed to explore the barriers for optimal use of antenatal care among pregnant women in Tarime District- Mara, Tanzania. **Methodology:** The study employed a cross section explorative approach by conducting in-depth interviews to 8 pregnant women, 4 community health workers and 4 health facility in-charges and also focus

group discussions to 32 pregnant women to explore individual barriers, community barriers and facility barriers for optimal use of ANC among pregnant women. Data were recorded in tape recorder and then stored in computer before transcribed. Data were then analysed by thematic approach by familiarized with data, assigned preliminary codes to the data in order to describe the content, searched for patterns or themes in the codes across the different interviews, reviewed themes, defined and named themes and produced the report. Results: Upon analysis of the result, the study revealed the following key findings: barriers for optimal use of ANC can be grouped into community barriers, facility barriers and individual barriers. The identified community barriers were low community awareness on ANC and myths about ANC in the community. The identified themes under facility barriers were facility accessibility, shortage of skilled staff which goes in hand with quality of ANC services and availability of essential medical supplies. The generated themes under individual barriers were age of the pregnant women, level of education, economic status, presence of risk factors, marital status, presence of history of complication and number of parity. **Conclusion:** This study revealed that there are a number of community, individual and health facility barriers which hinder optimal use of antenatal care services in Tarime district. Health education at health facilities and at community should be strengthened to remove community and individual barriers among pregnant women to utilize antenatal care. Health facility in-charges should make sure the essential supplies are available in advances to avoid stock out.

109. Marombwa, R. (2018). ComparisonOf Local, Australasian, Manchester, Canadian and South African Triage Scales in Predicting Outcomes of Paediatric Patients Below the Age of 5 Years with Nontraumatic Medical Complaints Presenting to The Muhimbili National Hospital, Emergency Medicine Department. Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Triage of paediatric patients pose a unique challenge due to several factors such as need for special communication skills for providers and difference in response to physiological stressors in paediatric population. While several region's specific validated triage systems exist in the world, Tanzania lack context –appropriate, validated triage tools. Emergency Medicine

Department (EMD) at Muhimbili National Hospital (MNH) in Tanzania uses a local triage system based on emergency severity index whose performance in relation to other triage systems is unknown. **Objective:** To compare the performance of local, Australasian, Manchester, Canadian and South African triage scale in predicting outcomes below the age of 5 years with nontraumatic medical complaints presenting to the MNH-EMD **Methodology:** This was prospective descriptive study of Paediatric patients presenting to the EMD-MNH, from November 2017 to April 2018. Purposively designed data collection form was used to record patient's clinical records, and relevant information for triage purpose according to Local triage system (LTS), Canadian Triage and Acuity Scale (CTAS), Australasian Triage Scale (ATS), Manchester Triage Scale (MTS) and South African Triage Scale (SATS). Descriptive statistics was used to summarise data and analysis was done using counts, frequencies, median and quartiles. Sensitivity, specificity, positive and negative predictive values were calculated to determine the ability of the triage scales in predicting need for admission and 24hrs mortality. **Results:** A total of 384 paediatric patients who received triage at EMD-MNH by LTS were studied, their median age was 17 months (Interquartile range 7-36 months) and 211 (54.9%) were male. Using LTS, 67 (17.4%) patients were triaged in emergency (level one), 291 (75.8%) in priority (level 2) and 26 (6.8%) in queue (level 3) categories respectively. Among 67 patients who were triaged level 1 by LTS, only 36 (53.7%) and 25 (37.3%) of them were identified as level one by SATS and MTS respectively. Only 26 (6.8%) were triaged least urgent patients by LTS, SATS identified 21(80.8%) of them as least urgent. There is high sensitivity (80-100%) and specificity (79.9 -80.2%) in predicting mortality while sensitivity for predicting admission was found to be low (27.1- 28.4%) among all triage scales. The urgency to medical care was better predicted by MTS, CTAS, ATS and SATS (all had sensitivity of 100%) compared to LTS (sensitivity 80%). **Conclusion and Recommendation:** There is performance variations among LTS and other triage scales in predicting need for admission, mortality and waiting time among Paediatric population. Further studies are needed to determine the reliability and validity of the triage tool suitable in our settings.

110. Marwa, R. I. (2018). Perceived Barriers Towards Provider Initiated Hiv Testing and Counselling in Pediatric Clinics in Mwananyamala and Temeke Hospitals in Dar-Es-Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: According to Provider-Initiated HIV Testing and Counseling, healthcare providers recommend HIV testing and counseling to persons attending health care facilities as a standard component of medical care. In order to reduce the morbidity and mortality of late HIV diagnosis, timely diagnosis and initiation of ARVS are required. This aims to accelerate universal access to HIV prevention, treatment, care, and support services for people living with HIV/AIDS (PLWHA). Broad **objective:** To explore perceived barriers towards PITC provision in pediatrics clinics. Materials and methods: The study adopted cross-sectional exploratory study design. The study employed an in-depth interview to collect data from the informants inMwananyamala and Temeke hospitals in Dar-es-Salaam. Nineteen people were recruited purposely for in-depth interview. All the interviews were audio recorded, transcribed verbatim and translated from Swahili to English. Lastly, data were analyzed using a thematic analysis approach. **Results:** This study revealed that six healthcare providers barriers including inadequate training on PITC among healthcare providers, little practice of PITC provision, inability to properly counsel patients due to little knowledge, poor attitude of healthcare providers on PITC provision, shortage of healthcare providers and little motivation and incentives. Patient's barriers included little understanding of PITC among parents/guardians of the children and its importance to their children's health, the absence of the parents, overcrowding of the patients at clinics, HIV/AIDS stigma, lack of privacy at clinics and harsh language by some of the healthcare providers. Health facility barriers included inadequate space to provide PITC and shortage of medical equipment and medical supplies for HIV testing. Policy-related barriers included the absence of PITC guidelines in each consultation room.   **Conclusion:** Barriers towards PITC provision in the pediatric department is multifactorial involving healthcare provider's barriers, patient's barriers, health facility barriers and policy-related barriers**. Recommendations:** The government should increase investment in the health sector and this can be through working together with MOHDGEC and other NGO's. This will help to distribute funds to reach more health facilities hence more opportunities for PITC training and more incentives and motivation to the healthcare providers and other infrastructures development for effective PITC provision.

111. Massawe, W.A. (2018). Prevalence and Clinical Characteristics of Laryngopharyngeal Reflux Disease Among Adult Patients Attending Orl Department at Muhimbili Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Laryngopharyngeal reflux disease (LPRD) is a condition with nonspecific symptoms and always patients present late with advanced disease which may predispose to malignancy. The magnitude and clinical characteristics of the conditions are not known among patients attending ORL services at Muhimbili National Hospital.Aim of the study: **The aim of my** study was to establish the prevalence and clinical characteristics of LPRD.Materials and methods: This was a hospital based descriptive cross sectional study, conducted in the wards and clinics of Otorhinolaryngology department of Muhimbili National Hospital.Patients with symptoms of laryngeopharyngeal reflux disease were included in the study. Data was collected using questionnaires and clinical examination forms, were proccessed and analysed by using SPSS statistical analysis package. **Results** presented in frequency tables, cross tabulations and figures. Results: This study recruited 256 participants among them males were 131(51.2%). The mean age was 41.38 ± 13.94 SD. Prevalence of LPRD was 18.4% without gender predilection. The commonest symptoms were globus sensation, hoarseness of voice and excessive urge to clear the throat with 95.7%, 88.1% and 83.0% respectively while the most observed signs were thick endolaryngeal mucus, Vocal cord edema and partial ventricular obliteration with 90.9%, 88.6% and 72.7% respectively. Laying down less than two hours after meal and spices foods consumption were the leading risk factors. Hypertension and DM type 2 were the most prevalent comorbid conditions associated with LPRD. **Conclusion:** The prevalence of LPRD is high among patients attending ORL services at Muhimbili national hospital. All patients with LPRD related symptoms should get thorough evaluation for early diagnosis and treatmen

112. Masoud, H.A. (2018). Short Term Clinical and Radiological Outcome of Closed Displaced Diaphyseal Tibia Fractures Treated Non Operatively at Muhimbili Orthopedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Tibia fracture is the most common musculoskeletal injury. There is a rise in prevalence of the tibia fractures in developing countries due to the increase in number of motorcycles used as fast and cheap means of transport. The most common mode of treatment of these fractures is closed reduction and immobilization with an above knee cast. **The aim of this study:** is to determine the short term clinical and radiological outcome of closed displaced diaphyseal tibia fractures treated by closed reduction and casts at Muhimbili Orthopedic Institute.**Methodology:** The study was a prospective hospital base cross sectional study of 63 patients with closed displaced diaphyseal tibia fracture aged 15 to 60 years recruited by convenient sampling after inclusion and exclusion criteria has been metInformed consent was obtained and the patients were treated non operatively by closed reduction and immobilized with an above knee cast.Control AP and lateral view x-rays were used to assess the post reduction alignment. Follow up done in 2nd, 6th and 12th week post reduction. Patients were interviewed, clinically examined and radiological findings recorded using structured questionnaires. At the end of follow up patients were assessed for union, delayed union, malalignments and operation rate. Data was analyzed using statistical package for social sciences and approval for the study was obtained from Muhimbili University of Health and Allied Sciences ethical committee. Permission to conduct the study was granted by the Executive Director of Muhimbili Orthopaedic Institute.Result: I n this study 63 patients with closed displaced diaphyseal tibia fracture were recruited with males 52 (82. 5%).The age group from 30-39 years had the highest proportion of patients (33.3%). Road traffic accidents were the commonest cause of injury with a proportion of 85.71%. AO fracture type A1 was the commonest fracture type. Most patients had acceptable post reduction alignment 58 (92.1%). At two weeks follow up, 12 (19.1%) patients had loose cast, one patient developed a wound and no patientdevelopedcompartment syndrome. All patients had knee stiffness at 6 weeks when the casts were converted to patella bearing casts. Rust scores were significantly different from 6 weeks of follow up to that of 12 weeks with mean score at 6 weeks 7.54, 95% CI 7.2-7.9 whereas the mean score at 12 weeks was 10.2, 95% CI 9.7-10.7, p<0. 001.At 12 weeks of follow up 62 patients were assessed. There were 3 patients who developed shortening >1.5cm, 4 patients had recarvatum and procarvatum >10 degree, 3 participants had valgus and varus deformity >7 degree and 8 participants had delayed union. 40 patients out of 63 were found to have complications with a complication rate 63.5%. Also 10

patients out 63 were operated which is making the operation rate of 15.9%, 95% CI 7.5-25.6. **Conclusion:** Tibia diaphyseal fractures occur most frequently among young age males due to motor traffic crashes. Type A1 was the AO type. Post reduction alignment of the fracture was important factor in determining the outcome of fracture as poor alignment has the worst outcome. 40 (63.5%) patients had complications and poor clinical andradiological outcome. Complications rate was increasing with increasing the age of the patients and motor traffic injury was associated with high complication and operation rate. Nonoperative treatment with cast for closed displaced diaphyseal tibia fracture is not satisfactory. **Recommendation:** Improvement of method of closed reduction and immobilization of closed displaced diaphyseal tibia fracture through teaching of young and inexperience doctorsPatients and relatives should becounselled about complications such as malunion or delayed union when treated non surgically with castAll the patientswho develop complicationsafter non surgical treatment should be managed surgically as early as possible

113. Matimba, H.H. (2018). Genetic Relatedness and Virulence Factors Of V. Cholerae Isolated from Different Regions in Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Cholera, a disease caused by V. cholerae continues to cause morbidity and mortality in developing countries including Tanzania. Out of 200 serogroups of V. cholerae, only V. cholerae O1andO139 have been associated with epidemics. Since August 2015 Tanzania Mainland has experienced cholera outbreak affecting all the 26 regions. There is a lack of information to confirm whether these waves of outbreaks are related/linked or are caused by different strains of V. cholerae**. Aim:** To determine the genetic relatedness and virulence factors of V. cholerae isolated in different regions from 2016-2017.Material and **methods:** A cross-sectional study that involved patient's record review, updating line list and genetic characterization of V. cholerae isolates from different regions of the country was carried out. Line list was obtained from epidemiology unit. Ninety-nine V. cholerae isolates were collected from 11 regions of the 26 regions that experienced cholera between January 2016 and December 2017. Samples were cultured using conventional culture and isolates identified using

biochemical and serological tests. All the isolates were tested for anti-microbial susceptibility using Kirby Bauer disc diffusion method. DNA extraction was performed using Qiagen-QIAamp DNA Mini-Kit and subjected to Multi-Locus Variable-number tandem-repeat Analysis (MLVA) for genetic relatedness and Mismatch Amplification Mutation Analysis (MAMA) PCR for toxin genes. Ms excel was used to analyse the line list while eBurst software v3 (http://eburst.mlst.net) was used to assess genetic relatedness. **Results:** All 99 isolates were V. cholerae O1 Ogawa and Inaba serotypes. Serotype Ogawa was the most predominant 97 (98%). All isolates were sensitive to trimethoprim-sulphamethoxazole, tetracycline, doxycycline, ceftriaxone, and chloramphenicol while only 87.8% were sensitive to ciprofloxacin. All isolates were 100% resistant to erythromycin, nalidixic acid, ampicillin and amoxicillin. MLVA results showed isolates were genetically related with a small genetic diversity. MAMA PCR signified the isolates were positive for ctxA, tcpA El Tor genes responsible for cholera toxin production and intestine colonization. **Conclusion:** The cholera outbreaks were predominantly caused by V. cholerae O1 serotypes Ogawa, El Tor variant and the isolates were 100% resistant to erythromycin, nalidixic acid, ampicillin and amoxicillin. V. cholerae O1 strains were clonally related regardless of the place and year of isolation

114. Matondo, L.O. (2018). Neurocognitive Functioning Among ChildrenWith Sickle Cell Anemia Attending Sca Clinic at Mnh, Dar-Es-Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Children with Sickle Cell Anemia are at a higher risk of developing neurological sequelae like abnormal intellectual functioning, poor academic performance, and abnormal fine motor function and attention deficits. There is a paucity of data about neurocognitive impairment among children with sickle cell anemia in Tanzania. Recognition of the magnitude of neurocognitive impairment will help to provide insight in the causative as well as preventive aspects of the same. Therefore, this studywas carried out to determine the prevalence and factors associated with neurocognitive impairment in children with sickle cell anemia. **Methods:** A hospital-based descriptive cross-sectional study was carried out among children attending sickle cell clinics of MUHIMBILI National Hospital during a five months' period. The Rey Osterrieth

Complex Figure test (ROCF) and KOH block designs tools that have been previously validated through another study locally were used. Additional information on demographic characteristics were also collected using a predetermined questionnaire. Proportions and comparisons of means were used to examine associations between neurocognitive impairment and independent variables for associated factors. **Results:** A total of 313 children were included in the final analysis. Among the participants 80 were in the normal siblings group and 233 were children with SCA. Among all the participants, majority of the participants in the sickle cell group were of the age group 14-15 years 45.9%. In the comparison group majority were in the age 9-10 years 43.8%. The neurocognitive scores in children with sickle cell anemia was significantly different to the normal siblings. In the copy ROCF, the neurocognitive function in SCA participants was 68.2% below the mean as compared to 45% of their counterparts, p=<0.001. Additionally, there were no significant difference in memory between children with SCA compared to normal siblings (14.8% vs. 12.5%, respectively, p = 0.606). Children with SCA had higher proportion of impaired IQ (85.4%)as compared to children without SCA (72.5%) and the difference was statistically significant, p=0.009. Factors associated with neurocognitive impairment were age above 13 years, low BMI and absenteeism from school. **Conclusion and recommendation:** children with SCA had more impairment in the copying ROCF test and IQ. Werecommend assessment at younger age groupin order to know when they start to get impairment so that we can do intervention early. Increased sample size in future studies so that we can do matching of the SCA children and their siblings. Longer-term cohort follow-up for following up those children with neurological impairment.

115. Mdegela, S. (2018). Assessment of Knowledge and Practices On Cord Care Among Postnatal Mothers' Attending Public Health Facilities in Morogoro Municipality.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Cord care means keeping the cord clean and dry without application of a harmful substance, such as cow dung and ashes, to the cord stump to avoid cord infection. Newborn care is important during the critical first week of life when most neonatal deaths often occur due to lack of knowledge and poor practices resulted by poor attendance to postnatal clinic. The lives of

newborn depend upon Mothers knowledge on health care and practices especially about cord care. The cord stump remains the major means of entry for infections after birth. Clean cord care practices help to prevent infections in order to reduce neonatal morbidity and mortality. Education level and parity of the mothers has a great influence on knowledge and practices about cord care. **Objective:** To assess knowledge and practices on cord care among postnatal mothers' attending public health facilities in Morogoro municipal in order to improve neonatal outcome. Methodology: A cross sectional study design using a quantitative approach was employed. The study was conducted within Morogoro Health facilities located in Morogoro municipal in the Morogoro Region. The study population comprised of all postnatal mothers attended at postnatal clinic during the study. The study recruited a sample size of 251participants. Data collection was done by the use of semi structured questionnaire consisting of open and closed ended questions of cord care. Data analysis was done by use of Statistical Package for Social Sciences (SPSS) software program version 21.0. Both descriptive and inferential analysis were done where by logistic regression and chi square test were used to determine the association between dependent and independent variables. The results with a p-value of ≤0.05 were considered as statistically significant. **Results:** A total of 251 postnatal mothers participated and (95.2%) reported that they got information about postnatal checkup at the health facility. Also, of all interviewed 132(52.6%) had adequate knowledge and 47 4% had inadequate knowledge. Majority (85.7%) argued that stump umbilical cord should be handled with clean dressing/cover and 80.1% of them reported that, stump cord should not be wet/soiled. Of all factors assessed only education level and parity showed significant relationship with knowledge on cord care; the higher the education level, the higher the knowledge of cord care. Mothers who at least attended primary, secondary or higher education more often had adequate knowledge about cord care OR 3.19(1.06-9.57) p-value=0.04, 3.16(1.02-9.73) p-value=0.05 and 6.24(1.44-27.06) p-value=0.01 respectively as compared to mothers with no formal education. Women who had given birth to four or more children were 3 times more likely to have adequate knowledge on cord care as compared to women with had given birth to a single child OR 3.11(95%CI 1.42-6.81) p-value 0.01.A small proportion of mothers' still have a habit of applying substances on babies' umbilical cord. About 11.9% of postnatal mothers reported that they were applying some materials on stump cord. **Conclusion:** This study revealed that mothers' level of knowledge about cord care is moderately satisfactory though more effort is needed to provide awareness to

mothers on the importance of antenatal and postnatal visits where they can receive information about maternal and newborn care. In general, this study identified that level of education was an independent predictor for mother's level of knowledge about cord care. Mentorship session for nurses and midwives about postnatal care services is needed and also mothers need competency based training from nurses and midwives concerning cord care.

116. Mendoza, F.N. (2018). Exploring Factors Influencing Risky Sexual Behaviours Among Street Adolescents InIlala, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Most of the sexual practices during adolescence period are unsafe due to lack of awareness about sexual and reproductive health, limited access to health services, lack information about contraception and susceptibility to sexual abuse (1). Little is known on the situation of street adolescents defined as homeless who experience extreme poverty and are more vulnerable than their family based counterparts. That is, there is dearth of research evidence on sexual risk behaviours and associated circumstances among street adolescents. It is this gap in knowledge that this study intended to fill. Rationale: The result obtained in this study informs policy development and street adolescents programming to ensure inclusion of one of the most vulnerable groups and development of more sustainable and impactful programmes. Overall **Objective:** To explore factors associated with risky sexual behaviours among street adolescents in Ilala, Dar es Salaam region. **Methods:** The exploratory research design was adopted in this study. Data were collected from a quota sample of street adolescents using In-depth Interview and Focus Group Discussion with schedule. Data collected were summarized, coded and analysed using NVIVO analysis software. At this stage line by line coding are involved to develop concepts, then interpretation of resultant codes into descriptive themes, and the themes further distilled into abstract analytical themes in which results are printed. Findings were narrated to explain the factors associated with risky sexual behaviours. Key respondents were requested to willingly participate while researcher explained the purpose of the study, read the consent form and asked permission to conduct an interview. All information provided were kept confidential and the information used for research purpose only. Findings: The study findings

identified risky sexual behaviours of street adolescents and the associated factors. A considerable number of street adolescents started sexual activity early and have practiced risky sexual behaviours that predisposed them to different sexual and reproductive health problems. Risky sexual behaviours that street adolescents engage in included: inconsistent use of condom, having multiple sexual partners, practicing group sex, having same sex relationships and having older sexual partners. The risky sexual behaviours of street adolescents are influenced by factors like engaging in sex for money, forced sex, having sex for pleasure, peer pressure, influence of alcohol and drug abuse. **Conclusion:** The study suggests that street adolescents are at high risk of acquiring sexually transmitted diseases because of risky sexual behaviours practiced by them. Reducing risky sexual behaviours among street adolescents can be achieved through well designed sexual education programs in the street.

117. Meza, W.J. (2018). Mortality and Its Determinants Among Surgical Critically Ill Patients Admitted at Muhimbili National Hospital from August, 2017 To January, 2018.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Critical sickness is a potentially fatal multisystem process that can result in significant morbidity or mortality, however, accurately identifying which patients are at high risk of death after major surgery and\or ICU care remains difficult. Simplified Acute Physiology Score II (SAPS II) was designed to measure the severity of disease for patients aged 15 or older, admitted to intensive care units. It gives a point score between 0 and 163, and a predicted mortality between 0% and 100%. **Objectives:** The aim of this study was to assess mortality and its determinants in surgical critically ill patients admitted to Intensive Care Units at Muhimbili National Hospital from August, 2017 to January, 2018.Methodology: A cross sectional analytical study was employed. The study was conducted at Muhimbili National Hospital in the surgical Intensive Care Units. A calculated adjusted minimum sample size of 206 was used, which was obtained by the formula for cross sectional studies with proportion and quantitative approach. Non probability sampling was employed. A validated and tested tool, the SAPS II was used to predict the intensive care unit mortality. Data were obtained by both a face to face interview with the patient/relative/care giver after signing informed consent form and from the patient medical

records (patient file) using a questionnaire. Data was analyzed using SPSS version 20/22. Demographic information was cross tabulated. The association of categorical variables with the outcome was determined by using chi-square test. The p-value of ≤ 0.05 was considered statistically significant. Outcome indication was calculated using the total number of ICU admissions during the study period and the total mortality in ICU admitted patients in the same period. Results were reported as number (n) and frequency (%). Univariate and multivariate logistic regression were used to determine the association between independent variables and the outcome. Ethical clearance was sought from MUHAS ethical research committee (IRB). Permission to conduct the study was obtained from the Executive Director of Muhimbili National Hospital.**Results:** A total of 240 surgical patients admitted to ICU were recruited in our study with mean age of 36.95 years (SD±19.16). Most of the patients 197 (93.4%) admitted at ICU underwent major surgery. More than one third 89 (37.1%) of the patients died in the ICU while 151 (62.9%) of them were discharged during the study period. Increased SAPS II score, complication in the ICU and patients with ASA 4 classification were significantly independent variables associated with the ICU mortality. Patients who had SAPS II score of 29 points and below were 94.1% less likely to die in the ICU as compared to patients with SAPS score of 53 points and above (AOR=0.059, 95% CI, 0.019-0.183, p value <0.001). Patients who presented with complications in the ICU such as sepsis and acute kidney injuries among others were 1.9 times more likely to die in the ICU as compared to patients who didn't have any complications (AOR=1.94,95% CI,1.259-3.847, p value 0.006). ASA 4 patients were more likely to die in the ICU than those with a lower ASA classification (AOR=21.74, 95% CI, 1.259-3.847, p value 0.007). **Conclusion:** Surgical patients admitted in ICU at MNH encounter significant mortality (37.1%). Independent factors associated with high mortality include: increased SAPS II score, occurrence of complications in ICU and ASA IV classification. **Recommendations:** Multicenter studies should be carried out as this study had only small sample size of 240 patients; which in our opinion may not be suitable to draw major conclusion. Further studies and application of SAPS II scoring system should be emphasized. There should be absolute evidence based strategies and significant improvements in ICU care for our surgical patients especially those predicted to have a poor outcome

118. Mguta, M.J. (2018). Computed Tomography Angiographic Findings in Patients with Aortic Aneurysms At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Aortic aneurysms are among the fatal cardiavascular disorder associated with sudden death. Most of patients (70%) die on the way to the hospital or at home. Its prevalence is higher in developed countries and regional prevalence has been observed to increase in developing regions. There is scarcity of research in this study area in developing countries hence little is known on radiological pattern of aortic aneurysms (AAs) at our settings. The study aim was to evaluate radiographic patterns of AAs of patients referred for Computed Tomography angiography (CTA) at Muhimbili National Hospital (MNH). **Broad objective:** To determine magnitude, patterns and associated factors of AAs among patients referred for CTA at MNH. **Methodology:** This descriptive cross sectional study was conducted at MNH, Radiology department between June 2016 to april 2018. A total of 64 patients referred for chest and abdominal CT angiography (aortography) were studied. Structured questionnaire were used for recording demographic data, clinical findings, associated factors of AAs and radiological findings. Descriptive data analysis was done to examine magnitude of AAs using frequency and proportions. Characteristics of AAs were analyesd using chi-square tests. All analysis was conducted using Statistical Package for Social Science (SPSS) version 20. P value >0.05 was considered statistically significant. **Results:** Thirty-six (56.2%) out of 64 patients were male and 28(43.8%) female. The mean age was 56 years, s.d ±16.6. Age ranged from 11 to 91 years. Prevalence of aortic neurysms was 62.5%. Patients in the age group of 61-70 years were most affected (76.5%) followed by 51-60 years (71.4%). Proportion of male patients with AAs was higher 24(66.7%) compared to female patients (57.1%). Aortic aneurysms (AAs) occurred more in patients aged 61 years and above (32.5%). Proportion of male patients with aortic aneurysm was higher 24(60%) than that of female patients 16(40%).Pulsatile abdominal swelling (90.0%) and chest pain14 (63.6%) were significantly related to abdominal aortic aneurysms (AAAs) and thoracisaneurysms (P value = 0.0001 and 0.0001) respectively. Abdominal aorta was the commonest location for AAs (40.6%) than thoracic aorta (26.6%). Aortsclerois was the most frequent related finding 15(37.5%). The proportion of patients with thrombotic AAs was low

6(15%) and none was observed among patients with no AAs (P value =0.046). There was a strong relationship between Cigarettes' smoking and AAs (p value = 0.001). Conclusions: Prevalence of aortic aneurysms (AAs) is high (62,5%) in patients referred for CT angiography (aortography) at Muhimbili National Hospital. It is a disease of old age with men being more prone than female. Cigarettes'smoking is the strongest cormobid factor for development of AAs. Infrarenal abdominal aorta is the commonest location for AAs than other segments of aorta. **Recommendations:** Aortography (CTA of aorta) should be recommended in all patients suspected with AAs.More multicentre study with larger sample size and a longer study duration is recommended to validate the current findings.

119. Minja, A.N. (2018). Uptake and Determinants of Hiv Retesting Among Postnatal Mothers Attending Private Health Facilities in Dar Es Salaam Region, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: HIV retesting in late pregnancy is crucial to identify and initiate long life ARV for pregnant women who might be in the window period to prevent mother to child transmission of HIV and keeping their mothers alive. Tanzania National guideline recommends that all pregnant women and their partners should be tested and counseled for HIV during their first ANC visit, among those HIV negative they should be retested for HIV during the third trimester, during labor or at delivery. **Objective:** The study aimed to determine the uptake and determinants of HIV retesting among postnatal mothers previously negative for HIV at initial antenatal clinic HIV testing in private health facilities. **Methods:** Facility-based cross-sectional study was conducted from May to July 2018 after approval by the institutional review committee of MUHAS. A total of 395 postnatal mothers who delivered within seven days prior to the study period participated in the study. Only mothers who had negative HIV testing results at initial ANC HIV testing earlier in the index pregnancy were involved. They included those who delivered during the study period and those who delivered in the past seven days prior to the study. One to one structured questions were used for interviewing respondent. Informed consent was sought from all participants before the interview. Data were cleaned and entered into EPIDATA then be analyzed by SPSS version 20. Chi square was used to test for association

between categorical variables and outcome variables of retesting. All variables with p value of ≤ 0.2 in bivariate analysis were included in the multivariate logistic regression model to control for confounders where odds ratios and their 95% CI were used to assess statistical significance and strength of association. Cut-off for statistical significance level was set at p value of ≤ 0.05. **Results:** This study found low uptake of HIV retesting among postnatal mothers. Of 395 mothers enrolled in the study, 227 (57.5%) were retested for HIV. Among those retested, 7 (3.1%) found to be HIV positive in a repeat test. Variables independently statistically associated with retesting were ANC booking after 24 weeks (AOR-=.17, 95% CI 0.07, 0.39, p-value 0.0001), parity of more than 3 live children AOR= 0.15 95% CI 0.03, 0.62, p value 0.01. ANC attendance of 4 or more visit (AOR 2.18, 95% CI 1.23, 3.89, p value 0.01), Perceived suboptimum quality of counseling (AOR 1.87, 1.18, 2.94, p value 0.01) and those perceived high stigma level (AOR= 0.45, 95% CI 0.29,0.71 p value 0.001) **Conclusion:** Uptake of HIV retesting among postnatal mothers was associated with high stigma level, parity of more than three children, ANC attendance of 4 or more visit suboptimal counseling and late booking at ANC after 24 weeks. **Recommendation:** Strengthen health education and sensitization to mothers in all areas, on the importance and benefits of HIV retesting.

120. Mithe, S.E. (2018). A Descriptive Survey of Pediatric Soft Tissue and Bone Sarcomas.At Muhimbili National Hospital, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Sarcomas are malignant tumors that arise from mesenchymal tissue at any site of the body. They can generally be grouped into two main categories: soft tissue and bone sarcomas. Soft tissue sarcomas (STS) are rare childhood tumors and comprise of about 12% of pediatric cancers. They are classified according to their presumed tissue of origin. STS in children are divided into two distinct groups: rhabdomyosarcoma (RMS) and non rhabdomyosarcoma STS (NRSTS). RMS is the most common childhood STS and accounts for more than 50% of the cases. Bone tumors in children are generally classified according to their cytologic features into those which produce osteoid and those which do not produce osteoid. Those tumors which produce osteoid are termed osteosarcomas (OS). Those which do not

produce osteoid are generally the chondrosarcomas and the Ewing's sarcomas (ES). In Tanzania, there is very scarce information on the magnitude and trend of these bone and soft tissue sarcomas in children. The relatively small number of cases seen and the diversity in their histopathological presentation and biological behavior makes a comprehensive understanding of these disease entities extremely difficult in this resource limited setting. In addition, various tailored protocols from Europe and America have been adapted over the years for the treatment of these rare childhood malignancies but none has been extensively studied in this set up. **Objectives:** This study aimed to describe the epidemiology of pediatric soft tissue and bone sarcomas with regard to age, sex, histology and the clinical pathological profiles in children presenting for treatment in Tanzania. Additionally, the study described the type of treatment delivered and the treatment outcomes including the overall survival for children seen at the Muhimbili National Hospital (MNH). Materials and **Methods:** A descriptive retrospective study was carried out in children with a confirmed histological diagnosis of either bone or soft tissue sarcoma who presented for treatment at the Muhimbili National Hospital, Pediatric Oncology unit between January 2011 and December 2016. Data extraction forms were used to collect the data. The study excluded all subjects whose records were incomplete. The data was analyzed using the statistical package for the social sciences (SPSS) version 20.0 for windows. **Results:** A total of 135 cases were reviewed, 66 (49%) were males and the majority presented with stage III and IV disease (48.6% and 87.1% respectively) with slightly over 90% of them generally presenting with a painless swelling, while the rest presented with both pain and swelling (7.4%). Among the STS, RMS was the most common type in children and accounted for more than half of the cases seen (74.1%). The embryonal subtype was commoner (74.2%) than the alveolar subtype (25.8%) and it was associated with an overall better treatment outcome. Among the bone sarcomas, osteosarcoma was the most common variant accounting for over 80% of the cases. Ewing's sarcoma was quite rare in our set up and accounted for less than 15% of the bone sarcoma cases. IVA (Ifosfamide, Vincristine, and Actinomycin D) was the most commonly prescribed chemotherapy regimen for the RMS patients and a tailored version of the MAP (Methotrexate, Adriamycin and a Platinum combination) regimen was used for most of the osteosarcoma cases. In the STS group, 37 patients (41.6%) achieved a complete response, 12 patients (13.5%) achieved a partial response and 40 patients (44.9%) had no response. Those with stage IV disease and received just palliative treatment were grouped in the no response

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category (18%). Many of the NRSTS patients had a poor response. Majority of the bone sarcoma patients also had a poor response as they presented with stage IV disease and ended up requiring only palliative treatment (52%). Factors found to be significantly associated with a higher complete response rate included early stage disease (stage I or II), embryonal histology, tumor in favorable sites and tumor size of <5cm for STS and <8cm for the bone sarcomas. The lung was the commonest metastatic site for most children. There was a trend for better 2-year overall survival for STS in early stage disease (stage I and II) 74.5% compared to late stage disease (stage III and IV) 20.6%, p<0.001. A similar trend was noted for bone sarcomas; 91.7% versus 25.3% for early stage and late stage disease respectively, p=0.001. **Conclusions and Recommendations:** This study showed that pediatric soft tissue and bone sarcoma patients in Tanzania present with similar epidemiological and clinical features as in other developing countries. Disease stage is strongly related to treatment outcome with later stages of the disease having an overall poor prognosis. The tumor grade and pathological surgical margins were not routinely reported in most of the cases seen in this series. Pathologists and the surgeons are thus urged to be more vigilant on this matter since these are important prognostic factors.

121.Mjema, K. M. (2018). Clinical Epidemiology, Management and Predictors of Outcomes of Adult Patients with Non-Traumatic Acute Abdomen Presenting to The Emergency Department of Muhimbili National Hospital. Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Abdominal pain in adults represents a wide range of illnesses, from benign to life threatening conditions warranting immediate interventions. Emergency medicine as a new specialty provides an opportunity for early recognition and provision of appropriate treatment. However, the range of possibilities poses a unique challenge to emergency care providers particularly in low-income countries where there is general paucity of data on aetiology and outcomes for patients presenting to acute intake areas. **Aim:** To describe the clinical profiles, management and outcomes of adult patients presenting with non-traumatic abdominal pain to the Emergency Medicine Department of Muhimbili National Hospital(EMD-MNH). **Methodology:** This was a prospective cohort study of adult patients presenting to the EMDMNH with non-

traumatic abdominal pain. A case report form with inbuilt online data capture software was used to record data on demographics, clinical presentation, management, diagnosis and outcomes of patients. Data was summarized using descriptive statistics. Relative risks (RR) were ascertained to determine factors associated with mortality. **Results:** A total 3381 adult patients presented at the EMD during the study period, 288 (8.5%) presented with abdominal pain, and of these 199 (69.1%) patients consented and were enrolled to our study. The median age was 47 years with IQR (35-60 years), 126 (63.3%) were female, and 118 (59.3%) were referral cases. Top EMD diagnoses were malignancies 67 (33.7%), intestinal obstruction 15 (7.5%) and UGIB 10 (5%) while final diagnosis were malignancies 71 (35.7%), intestinal obstruction 11 (5.5%) and PUD 9 (4.5%). Most common interventions given were intravenous fluids 57 (20.8%), analgesia 49 (24.6%) and antibiotics 40 (20.1%). There were 39 (19.6%) patients discharged, 160 (80.4%) admitted of which 15 (7.5%) underwent surgery directly from EMD. 24-hour and 7-day mortality were 4 (2.0%) and 7 (3.5%) respectively while overall in hospital-mortality was 16 (8.0%). Significant risk factors for mortality seen in this study included male patients Relative Risk (RR) 2.88 (p = 0.03), and ICU admission RR= 14 (p <0.0001). **Conclusion & Recommendations:** Abdominal pain is a common complain amongst adult patients presenting to the EMD-MNH. This presentation was associated with significant morbidity and mortality as evidenced by very high admission rate, need for surgical intervention and an in hospital-mortality rate of 8%. Future studies and quality improvement efforts should focus in identifying aetiologies, risks and appropriate interventions to optimizeoutcomes.

122. Mkuchika, E.M. (2018). Treatment Outcome of Patients with Persistent Gestational Trophoblastic Disease Attended at Muhimbili National Hospital and Ocean Road Cancer Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Gestational trophoblastic disease (GTD) is a group of tumors that arise from abnormal proliferation of trophoblast of the placenta. The disease is divided into benign and malignant forms. The malignant forms of the disease which is the focus of this study are collectively known as Gestational Trophoblastic Neoplasia (GTN). A true GTN include Choriocarcinoma, Placental Site Trophoblastic Tumor (PSTT) and Epithelioid Trophoblastic

Tumor (ETT). In case of missing tissue for definitive histological diagnosis, the malignant disease is diagnosed clinically on the basis of a rising serum β-hCG after molar pregnancy evacuation, and referred to as Persistent GTD. **Objectives:** To evaluate treatment outcome and survival of patients with persistent Gestational Trophoblastic Disease (GTD) attended at Muhimbili National Hospital (MNH) and Ocean Road Cancer Institute (ORCI) for a period of five years. Methodology: This retrospective cohort study was carried out on patients with persistent GTD, treated at MNH and ORCI between Jan, 2011 and Dec, 2015. Analysis was done by using Statistical Package for Social Science (SPSS v.20). Kaplan-Meier curves were used to establish 3years overall survival rate and log rank test was done to compare different survival curves. **Results:** 58 women were enrolled aged between 19 years and 51 years with a mean age of 33 years. In most cases diagnosis of the disease was made clinically based on serum β-hCG levels post molar pregnancy evacuation. Methotrexate was the most common (87.5%) single agent chemotherapy used in low risk disease while MAC (33.3%) and EMA/CO) were commonly used in high risk diseaseAmong patients with low risk disease 19 patients (61.3%) had complete response, 6 patients (19.4%) had persistent disease and only one patient (3.2%) had a recurrent disease. About 22.6% of patients with low risk disease had to be switched to second line chemotherapy. Among patients with high risk disease, the complete response rate was 42.9% (n=3) for MAC regimen and 75 % (n=9) for EMA/CO regimen. The 3-years overall survival according to Kaplan Meir analysis was 71%. Patients with early stage disease (FIGO stage I & II) and those with WHO prognostic score of 0-6 had better survival rate. Conclusion: The three years' survival rate of patients with persistent gestational trophoblastic disease (GTD) attended at Muhimbili National Hospital (MNH) and Ocean Road Cancer Institute (ORCI) was 71%. Methotrexate was the commonest chemotherapy used for low risk disease and EMA/CO was the commonest chemotherapy regimen used for high risk disease.

123. Mbocha, N. (2018). Conjuctival Blood Splash and The Risk of Hiv Transmission During Intramedullary Nailing at Muhimbili Orthopaedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: While most health care workers make an effort to avoid needle-stick injury, some pay little attention to reduce the potential route of infection occurring when blood splashes into the eye. It has been shown that transmission of HIV, Hepatitis B or C can occur across any mucous membrane. During trauma and orthopedic surgery, the use of power tools increases spraying of blood, hence resulting in an increased risk of infectious splash injury to the eyes and face. **Methodology:** A hospital based cross-sectional study was done. The protective eye goggles were provided to the HCWs participating in sign nail insertions. The number of macroscopic splashes on each were counted using a magnifying glass to determine the quantity of blood and the risk of HIV transmission with each procedure. A structured questionnaire was used to collect data on utilization of eye protective devises at MOI. The data was analyzed using the Statistical Package for Social Sciences and approval for the study was sought from Muhimbili University of Health and Allied Sciences ethical committee. Permission to conduct the study was granted by the Executive Directors of Muhimbili Orthopedic Institute and Muhimbili national hospital. Results: A total of 491 goggles were examined for blood splashes following 188 sign nail operations. The proportion of goggles with blood splashes was tested and the study established that 454 (92.46%) goggles had blood splashes whereas 37 (7.54%) goggles did not have blood splashes; the mean number of drops were 7.43 drops per goggle that falls into the category of Median splash. The total number of blood drops during the entire study period was 3373.The number of splashes ranged from 0 drops to 37 drops. The incidence of Blood splashes during the operations was found out to be significant (pvalue=<0.0000001, at 89.06%- 94.11% confidence interval. vi Of the 56 Health Care Workers who filled the questionnaires, 16 (28.6%) admitted to have never worn eye protective devices. Of these, 5 (31.25%) gave a reason of unavailability, 3(18.75%) mist formation, 6 (37.5%) use of prescription glasses and 2 (12.5%) gave other reasons. Of the 40 (71.4%) participants who had worn eye protective devises, 13 (23.2%) always wear the devises during surgery. 27 (8.2%) do not always utilize the protective devises. Reasons for not wearing the devises always included unavailability, 26 (46.2%) responses, misting, 13 (23.2%) responses, forgetting 2 (3.6%) responses and 1 (1.8%) respondent did not give any reason. Some participants gave more than 1 response. **Conclusion:** The risk of conjunctival contamination and HIV transmission is very significant with every sign nail insertion done and the use of eye protective devises is still low at MOI. Universal precautions are needed when

handling any patient, given the high prevalence of HIV among the patients attended at MOI and the high incidence of conjunctival blood splash injury during orthopedic procedures. Therefore, there is need to enforce changes in attitude and practices in the use of the eye protective devises.

Recommendations: Routine wearing of protective goggles during all orthopedic procedures is recommended in order to protect the HCW against conjunctival blood splash injury and disease transmission. Improvement in understanding of the need of HCW to protect themselves should be done through regular CME"s. The hospitals should provide the eye protective goggles, and as with other protective devises e.g. glove, the goggles should be made mandatory for each HCW participating in any orthopedic procedure. Those using prescription glasses should be advised to wear the wrap-around goggles over their glasses. Misting and some slight discomfort on the other hand is really an issue. However, the benefitsoutweigh the discomfort.

124. Mlay, C.I. (2018). Assessment of The Use of Electronic Medicines Inventory Management Systems in Public and Private Hospitals in Dar Es Salaam Region, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Inventory management is part of the supply chain management which is involved in ordering, receiving, storage and controlling the amount of products for sale. Without adequate inventory management practices, hospitals run the risk of not being able to provide patients with the most appropriate medication when it is most needed. The electronic medicines inventory management systems (eMIMS) have a number of advantages over the manual systems, including the ability to easily provide reports of stock levels, sales, and purchases. They provide accurate data for forecasting medication requirements thus may lead to cost-effective bulk purchasing, reduced stockouts, increased patient safety, improved compliance, significantly reduced workload, save time and improved medication management. In Tanzania, there is lack of literature on the use of the eMIMS. The study therefore investigated the use of the eMIMS in public and private hospitals in Dar es Salaam Region.Study **objective:** To assess the use of electronic medicines inventory management system in public and private hospitals in Dar es Salaam Region.Methodology: A descriptive cross-sectional study was conducted in all private and public hospitals in Dar es Salaam Region registered in the Tanzania National Health Facility

Registry (HFR). Health care workers in the study sites who are involved in medicines inventory management were interviewed using the self-administered structured questionnaires. Descriptive and chi square statistical tests were used and a P< 0.05 was considered to be statistical significant. **Results:** A total of 34 public and private hospitals were visited and 132 respondents were interviewed; among these pharmacists and pharmaceutical technitians formed the major (78.8%) professional cadres. The study revealed that 81.1% respondents from public and private hospitals were using eMIMS.Amongst of the 107 eMIMS users from both public and private hospitals, both the 'level of use' and 'knowledge levels' on eMIMS were found to be moderate (46.7%). Equally, in the 46 public hospitals respondents; majority of the challenges encountered during eMIMS implementation included power (electrical/ solar outlet) shortages (65.2%), lack of ICT skilled personnel (32.6%) and internet and network problems (71.7%); however, private hospitals had fewer challenges. In the public hospitals mostly reported eMIMS functions included 'alert on expiry of medicines' (80.4%), 'provision to remove expiry medicines from the active stock' (78.3%) and 'provision for returns of medicines' (69.6%). Private hospitals reported fewer functions which include 'alert on expiry of medicines' (31.1%), 'provision to remove expiry medicines from the active stock' (47.5%) and 'provision for returns of medicines' (44.3%). Amid 107 eMIMS users from public and private hospitals, majority (87.8%) were satisfied with the eMIMS use. Nonetheless, more than half respondents (58.9%) needed more time to learn how to make efficient use. **Conclusion:** In this study it was revealed that majority of the hospitals were using eMIMS but with limited parameters. The respondents had moderate 'level of use' and 'knowledge levels' on eMIMS and public hospitals were also faced with shortage of power energy and internet and network connection. Therefore, eMIMS applications were underutilized. In addition, majority of the respondents in the public and private hospitals were generally satisfied with eMIMS use, even though; more training and re-training on system use is required.

125. Mlinga, M. (2018). Pattern and Aetiology of Foot Injuries Treated at Muhimbili Orthopaedic Institute (Moi). Muhimbili University of Healthy and Allied.

Abstract

Background: Foot injuries are among the common injuries sustained by trauma patients, they occur in various patterns and due to different causes such as motor traffic crash, falling from height, occupational related injuries, and sports.They may occur as isolated foot injuries or may occur with multiple associated injuries.Foot injuries are commonly missed especially on the event of a multiply injured patient.MOI as the leading trauma care centre in the country attends a lot of patients with foot injuries; however there is lack of collective information with regard to either isolated foot injuries or in combination with other injuries that may commonly occur.**Objective:** This study was conducted with the objective of finding the prevalence of foot injuries and associated injuries in patients attended at MOI which is a tertiary hospital for the duration of 6 months from July 2017 to December 2017.**Methodology:** This is a descriptive cross sectional study, in which 90 patients with foot injuries were enrolled from a total of trauma patients who were attended during the 6 months of study duration.A structured questionnaire was filled in by the investigator on the first encounter with the patient to capture all the important data such as age, sex, mechanism of injury and a detailed pattern of the injury. Any other accompanying injuries on other parts of the body but in the same patient were regarded as associated injuries. **Results:** The prevalence of traumatic foot injuries was 5.5% among 1642 trauma patients attended at the Muhimbili Orthopaedic Institute. The male: female ratio was 4:1. The mean age of the patients was 32 years +/- 2 (range 11 – 64 years). The most affected age group was 30- 39 years. Motorcycle crash (44.4%) was the commonest mechanisms of injury followed by motor vehicle crash (17.8%). There were 56 patients with fractures of foot bones and a majority of them (71.4%) had open fractures. Also 55.6% of the patients had fractures of metatarsal bones. In addition to the foot injuries 35.5% of patients had concomitant injuries to other parts of the body, these concomitant injuries involved the limbs (49.4%) while injuries to the head or chest or abdomen was found in 32 patients as a concomitant/associated injury. **Conclusion and recommendations:** Road traffic accidents especially those due to motorcycle crash continue to be a common cause of foot injury. Foot injuries may be isolated or may occur in association with injuries to the long bones of the lower or upper limbs, chest and abdomen.The productive work force age groups are the majority among injured patients.Open metatarsal fracture is the commonest type of foot injury.Further research with regard to the factors

predisposing motorcycle crash victims to sustain foot injuries is necessary as well as studies assessing treatment modalities and outcome of foot injuries should be done at the institute.

126. Modi, N. G. (2018). Assessment of The State of Anaesthesia and Its Related Services at Four National Hospitals in South Sudan.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: The provision of safe anaesthesia and its related services still present major health challenges worldwide, and in sub-Saharan Africa in particular. Main factors influencing this among many others are; inadequate infrastructure, scarcity of skilled human resource, limited anaesthetic services and shortage of equipment and drugs. About 2000 million of the global population lack safe anesthetic services according to the WHO global report for 2008. **Objective:** To evaluate the current status of anaesthesia and its related services at four national hospitals in South Sudan.**Methodology:** A descriptive cross sectional survey was conducted in the four national referral hospitals of the republic of South Sudan which are Juba, Wau and Malakal Teaching hospitals as well as Juba Military hospital between August and October 2016. Data was collected by interviewing the director's general, heads of anaesthesia, emergency and critical care departments using structured questionnaires. Data collected generated information on infrastructure, human resources, services offered, supportive services, drugs and equipment availability. This was stored in SPSS version 21.0 and presented using excel. Ethical approval for the study was obtained from MUHAS Senate Research and Publication Committee and the Ministry of Health, Republic of South Sudan Directorate of Monitoring Evaluation and Research. Results: Total of four hospitals were studied, with 12 operating rooms in total, reliable source of water in all of them but only two had a reliable source of electricity. Only two hospitals had established anaesthesia department, with one anaesthesiologist serving in them. Dissociative ketamine and spinal Anaethesia were the anaesthetic technique of choice, no inhalational or intubation. Important deficit was noted in all the hospitals in terms of drugs, equipments and anaesthetic services in all the hospitals and services were restricted intra-operative care. Only one hospital had an ICU with a bed capacity of 4 beds and patient: nurse ratio of 2:1. Anaesthesiologist had no role in ICU. Only one hospital had dedicated areas for emergence and

critical ill patients and most of the critically ill patients were managed on the ordinary wards in all hospitals. Both laboratory and radiology services were very limited in all hospitals surveyed. **Conclusions and recommendations:** There is a shortage of infrastructure, human resource, equipments, drugs and supportive services in the field of anaesthesia, emergency and critical care in South Sudan. Improve funding in health care budget with a strategic plan is required to facelift anaesthesia and emergency and critical care services. Major investments in term of equipment, drugs and training in anaesthesia and critical care are required to modernize and improve the saftey of anesthesia in South Sudan.

127. Mohammed, A. S. (2018). The Role of Blood Transfusion in The Occurrence of Surgical Site Infection Among Operated Patients AtMuhimbili National Hospital, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Several studies have shown that allogeneic blood transfusions can induce clinically significant Immunosuppression referred to as transfusion-associated immunomodulation (TRIM). TRIM has been linked to an improved clinical outcome in the setting of renal allograft transplantation. TRIM-associated effects include an increased rate of cancer recurrence and of post-operative bacterial infection. This study was carried out to determine the prevalence and factors associated with Surgical Site Infection among post-operative surgical patients following exposure to blood transfusion in the surgical units of Muhimbili National Hospital.**Methodology:** A nested case control study was carried out at the surgical units of Muhimbili National Hospital from May through December 2017. The study involved two groups of post-operative patients (i.e. those who were transfused and those post operatives who had not been exposed to blood transfusion) admitted to the surgical wards. Study subjects were recruited conveniently until the desired sample size was achieved. A well-structuredquestionnaire containing socio-demographic characteristics, patient's preoperative, perioperative and postoperative information was administered to study subjects who met the inclusion criteria and consented to participate in the study. Data was checked for completeness, coded and entered into SPSS version 22. Frequencies, proportions and measures of central tendency and measure of dispersion were calculated. Odds ratio was used as a measure of

association. **Results:** A total of 200-study participants were recruited during the study period. The median age was 47.5 years with a range of 12 to 94 years. Majority of respondents were female (53%) while age group 45 year and above constituted 57%. More than half of the study respondent had HB level of 11 g/dl and above. With regards to hospital stay, 58% stayed less than 7 days. 93 study respondents (47%) were transfused during surgery with more females transfused compared to males (58% vs. 42%) while age group 45 years and above had the highest cases of those who were transfused. Twelve percent of those who were transfused developed surgical site infection.There was nearly equal number of males (9) and females (8) participants who developed surgical site infection with participants in the age group above 45 years, those with Hb level below 11g/dl and participants with hospital stay more than seven (7) days having developed more cases of surgical site infection.**Conclusion:**This study has failed to reject the null hypothesis hence but has shown a possible increased risk for SSI among patients receiving BT. Although many studies have shown the association between BT and overall infection, there is scant literature on the association between BT and specific infections. Low hemoglobin, which is related to BT, was however shown to have significant increased risk for occurrence of SSI. Similarly, prolonged hospital stay was also found to have increased risk of SSI development. Smoking was however found to be the most important factor in the occurrence of SSI in our cohort of patients. Due to frequent complications seen in transfused patients, a more restrictive transfusion practice may be safe and efficient. Patients undergoing BT were more likely to experience complications and that the triggering level of Hb and target of transfusion should be restricted. **Recommendations:** Further studies that are surgery specific to assess the role of blood transfusion influence on surgical site infection. Counseling the surgical patients on cessation of smoking at least two weeks before surgery to scale down on the adverse effects of cigarette smoke on wound healing. Adhere to established guideline in preoperative preparation to optimize postoperative outcomes.

128. Mohamed, A. S. (2018). Medical Evaluation of Patients with Non-Traumatic Chest Pain Presenting to The Emergency Department at Muhimbili National Hospital, Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Non-traumatic chest pain (NTCP) is a common reason for emergency department (ED) attendance in high income countries (HICs), with the primary concern focused on life threatening cardiovascular diseases (CVD). The few studies done in low and middle income countries (LMICs) suggest respiratory aetiologies are most common in these settings. However, as hypertension and diabetes mellitus (DM) increase in the population, the incidence of CVD in EDs may be more prominent than previously thought. We aimed to describe evaluation and outcomes of adult patients presenting with NTCP to the first full-capacity ED in Tanzania.**Method:** This was a prospective descriptive study of all adult patients (≥18years) presenting to the EMD with a complaint of NTCP from September 2017 to April 2018. Structured questionnaires were used to document patient's demographics, investigations, diagnosis, treatments, EMD disposition and patient's outcomes. Data is presented and analysed using descriptive statistics, counts, median, interquartile range, relative risks and Chi square test as appropriate. **Results:** We enrolled 349 (1.2%) patients with NTCP out of 29,495 adult patients who presented during the study period. The overall median age was 45 years [Interquartile range 29-60 years], and 177 (50.7%) were female. Hypertension 82 (23.5%) and heart failure 48 (13.8%) were the top pre-existing comorbidities. Most patients presented with difficulty in breathing 109 (31.2%) and cough 62(17.8%). At EMD 241 (69.1%) patients received electrocardiography, 150 (43%) chest X-ray and 119 (34.1%) point of care troponin. Overall 53 (15.2%) patients received antibiotics, 35 (10%) antiplatelet, 29(8.3%) opioids analgesia 29 (8.3%) antihypertensive, 26(7.4%) oxygen therapy, 20 (6%) nitrates and 8 (2.3%) anticoagulants at EMD and in hospital. The top final hospital diagnoses were heart failure 21 (12.6%), pulmonary tuberculosis 21 (12.6%), chronic kidney disease 17 (10%) and Acute coronary syndrome 16 (9.6%). From EMD 180 (51.6%) patients were discharged and 167 (48%) were admitted, 2 (0.6%) transferred out and no patient died at EMD. The 24hours and overall 7 days in hospital mortality was 5 (3%) and 16 (9%) respectively. **Conclusion:** In a cohort of adult patients at EMD MNH, heart failure and PTB were the leading causes of NTCP, and ACS was present in 9.6%, in our setting NTCP have high mortality and ACS was the leading risk factor for death. EMD providers in LMICs must increasingly consider cardiovascular and respiratory causes of NTCP to optimise the outcomes.

129. Moses, M.A. (2018). Assessment of Nurses Knowledge On the Use of Mechanical Ventilators in Public and Private Hospitals in Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Studies indicate that prevalence of the admitted patients in ICU who requires mechanical ventilations range from 30-70%. However, the use of mechanical ventilation is associated with some complications to the patients. This means appropriate knowledge and skills is required for nurse and physicians to know on how to use mechanical ventilators for better patients' outcome and prevention of complications. Tanzania in particular many strategies have been taken, one of the strategies undertaken by these hospitals management is to train ICUs nurses abroad and to invite intensives' experts from different places to come and assist on bed to bed training. However, the impacts of these strategies have not been assessed in terms of nurses' knowledge and skills to the use of mechanical ventilators to patients'care. Objective: To assess nurse's knowledge on indications, modes, settings, complications and preventive measures for mechanical ventilator use at public referral and private hospitals. **Methodology and materials:** This was a descriptive cross sectional study. The study was conducted in ICUs and EMDs of public and private hospitals. Using Muhimbili national hospitals (MNH, MOI and JKCI) as public referral hospitals and Aga Khan, Rabininsia and Regency for private hospitals. The sample size for this study included a total of 137 registered nurses working in emergency departments and ICUs of specific Hospitals who were selected in a conveniently way. Data was collected by using structured questionnaire to assess nurse's knowledge on mechanical ventilation use at public and private hospitals in Dar es Salaam. Descriptive statistical data analysis such as frequencies and percentages were used to make interpretation of findings easier. **Results**: Nurses in this study demonstrated satisfactory knowledge on patients' indication for mechanical ventilation (68.6%), mechanical ventilation modes and settings (54.7%), complications related to mechanical ventilator machine use to the patients (68.6%) and the preventive measures of the complications (69.3%). This imply that nurse provide care to critically ill patients with moderate knowledge and hence reduce the risk of patients' complications on mechanical ventilation and improves patients' outcomes.**Conclusion and recommendations:** There were knowledge gaps in the areas of patients' indications for the

criteria of high CO2 production for the burns, sepsis or severe agitation, chest trauma, diaphragmatic rupture, use of ventilation modes that reduces the work of breathing by overcoming the resistance created by ventilator tubing and use of CPAP and BiPAP modes, poor classifications of the mechanical ventilation related complications caused by ventilator induced lung injury, pulmonary inflammatory response and atelectasis. However, nurses generally mentioned only infection as results of mechanical ventilation complications. There is a need for the hospital management to develop evidence based protocols and guidelines for mechanical ventilation needs and general care for critically ill patients that will be used by nurses as tool to guide assessment and actions to be taken when there are any abnormal findings on the mechanical ventilator machines.

130. Moshi, J.M. (2018). Nurse's Experiences of Practicing Endotracheal Suction at Intensive Care Units of Muhimbili Hospital, Dar Es Salam Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Airway management in ICU includes use of oral or nasopharyngeal airway, endotracheal tube and tracheotomy. Endotracheal tube is a type of artificial airway which is inserted through the mouth or nasal cavity to the trachea to maintain clear and patent airway (Noppens, 2012). Patients with endotracheal tubes requires endotracheal suctioning (ETS), the procedure done by the ICU nurses. Endotracheal suction involves mechanical aspiration of pulmonary secretions from patient's artificial airway to prevent obstruction. When done inappropriately, ETS can lead to reduced patient comfort and safety leading to complications. Aim of the study: The aim of this study was to explore nurse's experiences of practicing endotracheal suction at Intensive Care Units (ICUs) of Muhimbili National Hospital (MNH), Muhimbili Orthopedic Institute (MOI) and Jakaya Kikwete Cardiac Institute (JKCI) Dar es salaam, Tanzania. Two specific objectives guided the study; first was to explore nurse's experience on the practices of ETS in ICUs at Muhimbili hospital. Second was to explore nurse's perceptions on best practices of ETS in ICUs at Muhimbili hospital. **Methods and materials**: An exploratory qualitative study design was used; utilizing in-depth interviews and observation check list for data collection. A total of 15 nurses from three selected hospitals in Muhimbili

complex Dar es Salaam were individually interviewed using semi-structured interview guide. Twenty (20) observations were done to 20 different nurses when performing ETS from ICUs at Muhimbili hospital. Thematic analysis using deductive approach was done by using pre-determined themes derived from standard operating procedure (SOP) for ETS.Results: Nurse's practices regarding ETS were suboptimal with minimal adherence to infection preventions as well as comfort and safety measures. Poor awareness of pain management during ETS procedure, use of large catheter, inappropriate position of patient during suctioning and application of high suction pressure were found to the majority of the participants. Furthermore, participants observed failure to practice hand washing before ETS, failure to do auscultation before and after ETS and prolonged suctioning. Lack of trained personnel, shortage of nurses as well as inadequate equipments needed for suction were perceived by majority of nurses as obstacles to best practice of ETS.Conclusion: Despite the availability of few skilled nurses in ICUs, the ETS practice in ICUs in specialized hospitals in Dar es Salaam is still poor in infection prevention practices and maintenance of patient safety and comfort due to limited human resources and relevant equipments.

131. Motega, E.F. (2018). Pattern Of Presentation, Bacteriology And Management Of Oral And Maxillofacial Infections At Muhimbili National Hospital, Dar-Es-Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Oral and maxillofacial infections affecting the skin or mucous membranes of the face and oral cavity comprise a wide variety of infections that present in diverse patterns. Such infections may be localized and indolent, or invasive and life-threatening. These infections may be conveniently categorized as odontogenic and non-odontogenic. In Tanzania, there has been a countrywide paucity of information regarding these infections especially its pattern of presentation and specific management. **Objective:** To determine the patterns of presentation, bacteriology and management of oral and maxillofacial infections in patients attending Muhimbili National Hospital, Dar es salaam, Tanzania. **Methodology:** This was a descriptive and hospital based cross sectional study which was conducted among patient with oral and maxillofacial infections who attended at oral and maxillofacial surgery outpatient department

(OPD), Emergency department (EMD) and those admitted in ward 23 and 24 of Muhimbili National Hospital (MNH) in Dar es salaam, Tanzania from 1st April 2017 to 31st December 2017. The sample size of this study was 100 patients. The study participants were interviewed using a prepared closed ended questionnaire. Specimen collection by aspiration or by using swab were performed under aseptic technique and subjected to culture. Culturing for colony characteristics followed by gram stain was used for provisional identification of pathogenic bacteria. Further identification was done by a set of biochemical tests, API 20E, and VITEK. Antimicrobial susceptibility pattern of isolated bacterial pathogens was determined by Kirby Bauer disc diffusion method. The data obtained were analyzed using statistical package of social sciences programme (SPSS) software version 20.0. Statistical significance testing was done using Chi-square test (X2), significant level $p<0.05$ was considered statistically significant. **Results:** This study comprised of 36 (52.2%) male and 33 (47.8%) females, with an age range of 2–70 years and mean age of 33.5 years. Odontogenic and non-odontogenic infections were seen in 56(81.2%) and 13(18.8%) respectively. The fascial spaces were involved in 45(65.2%) study participants and the submandibular space was the fascial space most commonly involved in both single space and multiple space infections (55.6%). A total of 146 strains of microorganisms were isolated from 91.3% of the samples collected. About one-third (30.5%) of the sample processed had single growth (mono isolate) while the rest had mixed growth of aerobic and anaerobic organisms. More aerobic organisms 106 (72.6%) were isolated compared to anaerobic 40 (27.4%). Prominent organisms isolated were Streptococcus viridians 26 (17.8%) followed by Staphylococcus aureus 18 (12.3%), whereas Prevotella 13(8.9%) was the commonest isolates among anaerobic organisms. Overall, aerobic isolates had poor susceptibility to ampicilin, tetracycline, cotrimoxazole and penicillin, but high susceptibility to amoxicillin/clavulanate, ciprofloxacin, gentamycin, clindamycin and imipenem. Majority of anaerobic bacteria were found to be susceptible to most of the antibiotics used. **Conclusion:** Oral and maxillofacial infections were commonly polymicrobial in nature and frequently arose from odontogenic than non-odontogenic sources of infections. Multiple fascial space involvement occurred more than single space. A high bacterial resistance was observed on ampicillin, tetracycline, penicillin G, and cotrimoxazole, suggesting the need for routine culture and sensitivity tests of isolates and rational use of antibiotic in the management of oral and maxillofacial infections.

132.Mpemba, G. (2018). Mri Findings in Patients with Prostate Cancer Attending Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract.

Background: Prostate cancer is among cancers which affects men and remains a major concern in the world. It is diagnosed as the fourth most common cancer in both sexes combined and the second most common cancer in men worldwide. Clinically prostate cancer has been diagnosed basing on patient's symptoms and signs. These are correlated with histological findings and PSA in staging and decisions on the treatment plan. The aim of this study was to show the role of MRI in prostate cancer patients attending at MNH. **Methods:** A cross sectional analytical hospital based study was conducted. A total of 66 patients who were histologically diagnosed with prostate cancer were involved. A convenient sampling method was used in selection of clients at Urology clinic and ward at MNH. A semi-structured questionnaire was used for data collections. MRI was performed to all recruited patients. A combination of four MRI sequences was used during the staging process. The sequences were T1W, T1W + Contrast, T2W and SPAIR. Relationship between independent and dependent variables was analyzed using SPSS version 23. Chi- square $\chi 2$ test was used to show the associations between the two variables. P value of <0.05 was considered statistical significant. **Results:** The age range was between 43years and 94years. The mean age was 70years. About 98.5% of patients were above 50 years. Patients who had advanced disease (stage IIB and above) accounted for 97%. About three quarter of the patients had ECE. Symptoms such as burning/painful micturation, blood in urine and bone pain were most common in patients who had MRI stage III and IV of prostate cancer. Urological symptoms such as urge, decreased urine stream and dribbling did not show significant relation with different MRI stages. Patients who had advanced MRI stages (stage IIB and above) had higher Gleason scores ($\geq$ 7) and PSA levels above 10ng/ml. Both Gleason scores and PSA levels showed significant relation with MRI stages (p-value <0.05). About 97% of patients had bilateral lobular involvement while those who had rectal and bone involvement represented 1.5% and 10.6% respectively. Loss of lymph node fat hilum on MRI T1W and T2W indicated tumour infiltration by the tumour. Only pelvic bone were assessed for distant metastasis due to MRI technique used. **Conclusions:** High levels of PSA ($\geq$10ng/ml) and Gleeson score ($\geq$7) suggests

advancement of prostate cancer stages. A Multplanar 1.5-Tesla MRI was very important tool in staging process of prostate cancer. MRI showed clearly the extent of cancer within the gland, local spread and distant metastasis. The tools higher resolution differentiated clearly between pathological and non-pathological tissues. Combination of different sequences improved the efficacy during the staging process. Localization of tumour within the gland or ECE infiltration was easily assessed by MRI. The information helped in decision making to whether the cancer could be treated via follow up, hormonal replacement therapy or surgical approach. Factors such as PSA level and Gleason score yielded best results in terms of prostate cancer stage predictions when combined with MRI findings.

133. Mpinga, G.E., B. (2018). Effect of Antenatal Corticosteroids On Early Neonatal Outcome Among Preterm Neonates Delivered at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: In 2015, one million out of 15millionpretermneonates died as a result of prematurity; 60% of these deaths occurred in Africa and south Asia. Premature babies suffer short and long-term complications. Provision of antenatal corticosteroids (ACS) to women at risk of preterm birth has been proven to reduce neonatal complications due to prematurity.

In 2015, Muhimbili National Hospital (MNH), adopted the Tanzania Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) guidelines, and has advocated routine administration of ACS to women with risk of preterm birth from≥28 to <34 weeks. The trend of early neonatal complications and mortality due to prematurity was not known since the implementation of guideline at MNH. Data addressing the effect of ACS exposure to preterm neonates were scarce. **Objective:** This study aimed to assess the effect of antenatal corticosteroid (ACS) exposure to preterm neonates delivered at MNH. **Methodology:** A prospective cohort study done at MNH. It involved 160 preterm neonates with estimated gestation age (GA) from ≥28 to <37 weeks together with their mothers. Data were collected using Kiswahili structured questionnaire. Data analysis was done by SPSS statistics version 23. Chi square test, Fisher's exact test and bivariate logistic regression analysis was done to identify the association between exposure to ACS and neonatal outcome. Level of significance was set at

95%. Results: Antenatal corticosteroid exposure significantly reduced risk of respiratory distress syndrome (RDS) by 58 %, (COR=0.42, 95%, CI, 0.2-0.8, p<0.01) and Death by75%, (COR=0.25, 95%, CI, 0.1-0.8, p=0.01). Likewise, ACS exposure has no association with increased incidence of Sepsis (COR=0.5; 95% CI 0.2-1.4) and necrotizing enterocolitis (NEC) (COR=0.49; 95% CI=0.1 2.7). **Conclusion:** Antenatal corticosteroid exposure was significantly associated with reduction of RDS and mortality among preterm neonates. However, NEC and neonatal sepsis were not associated with exposure of preterm neonates to antenatal corticosteroids. **Recommendation:** Improved access to antenatal corticosteroids (ACS) should be encouraged to prevent death due to RDS.

134. Mrema, A.P. (2018). Assessing Prescribing AndMedication Administration Error in The Management of Acute Diarrhea Amongst Pediatric Inpatient at Regional Referral Hospitals in Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Acute diarrhea is a major public health problem especially in developing countries. It accounts for 700,000 deaths in children under five years of age worldwide making it the second leading cause of child mortality. Standard treatment guideline for diarrhea management is zinc supplement and ORS (Oral Rehydration Salt) which are regarded as universal treatment of acute watery diarrhea. There is dearth of information on the magnitude and type of medical error occurring in the course of implementing the standard management of diarrhea among children. **Objectives:** to determine prescribing and medication administration errors in management of acute diarrhea among pediatric in patients in Regional Referral Hospitals Dar es Salaam, Tanzania.Methods Facility-based cross-sectional study was conducted. Retrospective data from July 2017-July 2018 of 1200 prescribing and medication administration errors to pediatric inpatients was done. After approval of the institutional ethics committee, data was collected to get the following details of demographic characteristics: age, gender, weight, diagnosis, medication details that checked for medication errors in acute watery diarrhea such as wrong drugs, wrong frequency, wrong dose, duration not written, route of administration not written, no prescribers signature, omitted dose by comparing with National essential drug list,

Standard treatment guideline and WHO pocket book for treatment of acute diarrhea.In the management of diarrhea, all these three guidelines recommend use of Oral Rehydration Solution (ORS) and zinc supplements for acute watery diarrhea (AWD).Raw data was cleaned and coded then entered into EPIDATA software and analyzed using SPSS Version 22. Proportions were used to describe the basic characteristics of the study participants such as age and sex as well as the types and pattern of prescribing and medication errors. Bivariate analysis was conducted were Chi-test was used to test association between categorical variables. A p value of <0.05 was used to show statistical significance. Variables were included in the multivariate models if they were significantly associated with the outcomes in bivariate analyses (P < 0.05) or if they were believed to be mechanistically relevant (age and sex for prescription errors). Consequently, all variables were then used in multivariate logistic regression analysis and adjusted odds ratios with 95% CI were used to assess the significance and strength of associations. **Results:** Out of 1200 prescriptions reviewed during the study, the highest prescribing errors were wrong timing 53.92%, wrong dose 19.72%, and wrong drug 12.25%, and the most medication administration errors observed were omitted drugs, 62.25%, documentation errors 62.17%, and unauthorized drugs 5.42%. Prescription error was 40% more likely among prescriptions of those one year and older compared to those younger than one year (AOR=1.41, 95% CI 1.08-1.83; p-value 0.01). Also prescription by medical officers and interns were significantly less likely to contain a prescription error (p-value <0.001). AWD with comorbidity 37% less likely to have prescription errors compared to AWD without comorbidity. Compared to registered nurse administered prescriptions, an enrolled nurse administered prescription had about 40% was less likelihood to be found with an error (p-value<0.001). Also, administration for condition without comorbidity compared to comorbidity was less likely to be found with an administration error (p-value 0.01). **Conclusion:** Prescribing and medication administration errors were a significant problem in pediatric inpatient setting in the selected hospitals. Of these errors; wrong timing, wrong dose, wrong frequency, omission, documentation errors and timing were the most common types of errors observed with high proportion. Zinc supplements and ORS prescription pattern in this study was lower than what is recommended by WHO diarrhea treatment guideline. There is a need to ensure that mechanisms are in place like those of continuous prescription and drug administration audits to monitor, improve the prescription habits of doctors, and administration habit to ensure doctors and nurses adhere to National and international standards in management

of acute watery diarrhea. **Recommendation:** Continuous medical education in relation to medication errors should be organized by the hospitals and other stakeholders.Refresher training and mentorship to medical doctors on the importance of adhering to standard treatment guideline; it has been effective in reducing use of drugs for diarrhea diseases worldwide.The government and hospital managers should ensure National guideline for the treatment of acute watery diarrhea is in place.The magnitude of medication administration errors could significantly be reduced by giving in-service training to the nurses on the Safe administration of medications, sensitizing the nurses to adhere to the six rights of medication administration and fostering a culture of triple checking of medication before administration.

135.Mrema G.H. (2018). Determinants ForOccupational Injuries Among Telecom Construction and Service Workers in Dar Es Salaam Region, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: The construction industry is an important part of the economy in Tanzania. Work-related injuries among construction and service workers have been attributed to lack of experience, fatal injuries or non-fatal injuries, lack of knowledge, lack of safety training, low education, and alcoholic drink. Despite having risks assessments conducted, policies and regulations with regard to Occupational Health and Safety there has been an increase in work related injuries in Tanzania. Little is known about factors contributing to occurrence of work related injuries in Tanzanian telecom construction and service industry. **Aim:** This study aims to assess determinants for occupational injuries among telecom construction and service workers in Dar es Salaam region, Tanzania.**Methodology:** A cross-sectional study was conducted among 385 telecom construction and service workers in Dar es Salaam region, Tanzania. Stratified sampling technique was applied to get participants for this study. The selected companies were among those who construct and maintain telecom infrastructures in Tanzania. A questionnaire was used for data collection, data were entered to SPSS-version 23 for analysis where chi-square test and logistic regression models were used to explain the differences between groups. **Results:** Out of 385 telecom construction and service workers 210 (54.5%) reported to have been injured at any time within the past the year. Of these injuries, cut (49.0%), abrasion (29.5%) and

electrocution (19.0%) were commonly reported among telecom construction and servicing workers. Parts of the body affected were hands (50.5%), fingers (36.7%), lower limbs (9.5%), head (7.1%) and chest (5.2%). Alcohol use, chart or talk in mobile device while driving, time occurrences of health & safety training, time occurrences of site supervision, sleep disorders, service duration, education level, employment pattern, salary and area of resident increased odds of having occupational injuries. **Conclusion:** A relatively high proportion of occupational injuries was reported among telecom construction and service workers. Majority of workers experiencing hands, fingers, legs and chest injuries even though they had reported to have PPEs. Temporary workers and those with low education sustained more injuries than their counterparts.

136. Mrema, M.T. (2018). Oral Hygiene Practices And Periodontal Conditions Among Chronic Kidney Diseases Patients Attending.Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Periodontal diseases are among the most common infectious diseases seen in humans characterized by gingival inflammation, as well as loss of connective tissue and alveolar bone from around the roots of the teeth, if untreated may eventually lead to tooth loss. Chronic Kidney Disease is a condition which is characterized by either kidney damage or a decrease in kidney function lasting three months or longer. Studies have established a relationship of CKD with periodontal diseases but the relationship yet established is an association and not causation. Poor oral hygiene is linked with periodontal disease, and lack of proper tooth brushing and other measures of oral hygiene can encourage bacterial deposition and build-up of dental plaque on teeth and gums which can set a stage for inflammatory changes in periodontal tissues. There is pronounced relationship between poor oral hygiene and increased accumulation of dental plaque, Calculus, high prevalence and increased severity of periodontal disease. **Objective:** The aim of this study is to assess oral hygiene practices and periodontal conditions among Chronic Kidney Diseases patients attending the Muhimbili National Hospital.Material and methods: This was hospital based descriptive cross-sectional study conducted at nephrology clinic at Muhimbili National Hospital. A total of 154 CKD patients, 84 (54.4%) male and 70 (45.5%) female aged 22 to 77 years were recruited. Full-mouth examination was performed and all six surfaces of teeth

were examined. The subject's socio-demographic and Oral hygiene practices were gathered through self-administered structured questionnaires followed by full mouth clinical examination carried out by a single examiner for assessing the presence of plaque, calculus, gingival bleeding on gentle probing, periodontal pocket depth, gingival recession and periodontal attachment loss. The gathered information were coded, entered in a computer and analyzed using IBM Statistical Package for Social Sciences (SPSS) version 20. Frequencies and percentages were generated to show the distribution of specific parameters in periodontal patients. Mean scores were calculated for each periodontal parameter scored and the independent sample 't' test was used for comparing the mean number of sites with plaque, bleeding, calculus, pockets, gingival recession and connective tissue attachment loss according to the age groups, education and sex respectively and the level of statistical significance was set at $p < 0.05$. ANCOVA was used to analyze the effect of confounder. Chi square test were used for comparing proportion. **Results:** The study population is composed of 154 CKD patients of whom 84 (54.4%) were males and 70 (45.5%) were females providing a male to female ratio of 1:1. Their age ranged from 22 to 77 years (Mean 49.93±13.06). Very few participants (1.3%) had no formal education and (45.5%) had primary education, and majority (53.2%) had secondary or higher level of education. Concerning brushing habits (51.9%) brushed once per day, (48.5%) brushed more than once per day, Regarding the use of brushing device (mswaki) for tooth cleaning (97.4%) reported to be using plastic tooth brush only for brushing and (2.6%) reported to be using both plastic and chewing stick for cleaning their teeth. All studied participants (100%) reported using fluoridated tooth paste for brushing. The mean number of sites with gingival bleeding was 7.27 ± 9.24. The prevalence of dental plaque was (74.7%). The mean number of surfaces with dental plaque was 46.73 ± 36.91. The prevalence of dental calculus was (70.8%). The mean number of surfaces with calculus was 34.31±29.61. The prevalence of periodontal pockets as (36.4%) The mean number of sites with gingival recession was 7.98 ± 10.24. The prevalence of attachment loss was (39%). The mean number of surfaces periodontal pocket was 4.12 ± 6.74. The prevalence of gingival recession was (54.5%). The mean number of surfaces with attachment loss was 7.81±11.79. **Conclusion:** In conclusion, most of the study population brushes their teeth once per day and visited a dentist less than once annually, oral hygiene status in this study population was poor, majority of the patients presented with plaque, calculus and gingival bleeding on gentle probing in most of the teeth surfaces examined. Periodontal pocket depth and attachment

loss were associated with malessex. **Recommendations:** Based on the findings of the study the following recommendations are made: Oral Health measures should be in conjunction with objective clinical parameters in disease assessment, planning, treatment, and subsequent evaluation of care. Further studies on Oral hygiene practices and periodontal conditions among chronic kidney diseases should be done in population based study.

137. Msangi, A. (2018). Assessment of Comprehensive Post Abortion Care Services in Public Health Facilities in Temeke District, Dar Es Salaam. Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Abortion complications contribute around 11% of all pregnancy-related deaths in Tanzania. Reduction of these deaths may significantly be achieved by provision of comprehensive post abortion care (CPAC) services. **Objective:** The aim of the study was to assess comprehensive post abortion care services in public health facilities in Temeke district, Dar es Salaam. **Methodology:** A descriptive cross-sectional study was conducted among 26 out of 28 public health facilities. Information on CPAC services including; treatment to incomplete abortion, counselling, contraceptive services, screening and testing for sexually transmitted infections, cervical cancer screening and availability of equipment and supplies were collected using a structured questionnaire and a checklist. Two hundred healthcare providers were interviewed to determine their level of knowledge towards CPAC services. Written informed consent for study participation was obtained from all the facility managers/representatives and healthcare providers whom were included in the study. Data were analysed and summarized into frequencies and percentages. **Results:** More than half (58%) of public health facilities had readiness to provide CPAC services. All the facilities that were ready, provided the service during the time of the study. Post abortion contraceptive services and screening for syphilis and human immunodeficiency virus (HIV) were being provided by almost all public health facilities. Cervical cancer screening was available in less than one-third (31%) of the facilities. Overall, nine out of ten healthcare providers (89.5%) had adequate knowledge on CPAC services. All hospitals and health centres provide post-abortion treatment and have MVA room/theatre dedicated for the service. Nine out of twenty dispensaries provide post-abortion treatment, five

have MVA room while four use the delivery room. Hospitals and health centres have good infrastructure, equipment and supplies than dispensaries. **Conclusion:** The study has revealed that all hospitals, health centres and two-fifth of dispensaries are ready to provide CPAC services. More dispensaries need to be prepared to have the muchneeded readiness for provision of CPAC services. Areas to be strengthened include space for treatment of incomplete abortion, equipment, supplies and increasing the number of trained healthcare providers on CPAC services.

138. Msumi, R.J. (2018). Predictors for Successful Induction of LabourAt Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introdution: of labor is the use of techniques for stimulating uterine contractions to accomplish vaginal delivery prior to the onset of spontaneous labor. Induction of labor with the goal of achieving vaginal delivery prior to spontaneous onset of labor is recommended when the benefits of delivery out-weight the risk of continuing the pregnancy. The practice of induction of labor at Muhimbili National Hospital is faced with low success rate of about 60% compared to more than 80% success in the developed world. The low success rate of IOL at MNH could be contributed by factors beyond the known predictors for induction success. The study intended to identify patient and facility related factors that affect the rate of successful induction of labor. **Objectives:** To determine the predictors for successful induction of labour at Muhimbili National Hospital. **Methodology:** Analytical cross-sectional study on women undergoing induction of labor at MNH. These were women with indication for IOL, single viable fetus with cephalic presentation, gestational age of $\geq$ 28 weeks, recruited consecutively before IOL untilsample size was reached. Social demographic, obstetric characteristics were obtained through patient interview and methods of inductions, time of initiation of first dose were obtained from the patient's files, all thesewere collected using a structured questioner, then analysed using SPSS version 23 computer program. Univariate analysis was used to describe socio-demographic characteristics, while Bivariate and multivariate were used to determine the association of factors with success of induction of labor. P value <0.05 was considered statistically significant in all tests of significance. **RESULTS:** The study included 400 women,

of these participants, 297(74.2%) had success of vaginal delivery while 103(25.8%) had failure of IOL. The hypertensive disorders were the commonest indications of IOL 182(45.5%) followed by post-date 103(25.7%). Women induced with amniotomy and oxytocin had (AOR 2.1:95% CI=1.1,4.5), misoprostol (AOR 4.3,95%CI=2.2,8.6), parity (AOR 1.9; 95%CI= 1.1,1.3), favorable cervix (AOR=5, 95% CI=2.0,12.3), term (AOR=2.2;95% CI=1.3,4.0) and postterm pregnancy (AOR=3.1; (95% CI=1.7,5.8) were independently associated with success of IOL. Other characteristics such as maternal age and fetal weight were not associated with success of IOL.**Conclusion:** The main predictors of the outcome of IOL were Bishop score greater than 7, term and postterm, use of amniotomy with oxytocin, misoprostol and parity greater than one. IOL carries high risk of maternal morbidity, it is mandatory to assess predictors for success of before IOL.

139. Msuya, Z.K. (2018). Dust Exposure and Related Health Effects Among Workers in Gypsum Industries in Pwani Region, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Gypsum industries produce building materials such as gypsum boards and gypsum powder. Gypsum ores are extracted from ground materials that may contain silica and other toxic materials which can potentially affect respiratory function of exposed workers as well as irritations of the eyes and skin. **Objective:** This study aimed at describing occupational dust exposure levels and related health effects among workers in gypsum industries in Pwani.**Method**: Cross sectional study design was conducted. We interviewed a total of 89 workers; 52 in gypsum industry and 37 in drinking water industry for respiratory health symptoms and other health effects related to dust exposure by using modified BMRC questionnaire. Checklist was used to assess working environment and workers' practices. A total of 30 Personal total dust samples were collected by using SKC pumps. Data were analyzed by SPSS package in computer. **Results**: The Geometric Mean of total dust among gypsum workers was 11.79(SD±5.06) mg/m3 significantly higher compared to drinking water industry workers 0.24 (SD±2.46) mg/m3, P<0.05. Respiratory symptoms were higher among gypsum industry workers cough (65.4%), chest pain (51.9%), phlegm (32.7%), compared to drinking water

industry workers cough (21.6%), chest pain (18.6%), phlegm (3.8%),). Safety training on work among exposed workers protects them from respiratory symptoms (OR=0.091, 95% CI: 0.20-0.422). Prevalence of reported skin symptoms among gypsum workers were itching (27%), redness (15.4%) and blisters (10.8%) and in drinking water industry were 13.5%, 10.8% and 5.8% respectively. **Conclusion and Recommendation:** The study concludes that prevalence of respiratory health symptoms and dust exposure levels were higher among exposed workers than in un-exposed. The dust concentrations among exposed workers exceeded the TLV for total dust of 10mg/m3. We recommend the implementation of effective dust control measures including occupational health and safety training to workers.

140. Mtani, H. S. (2018). Clinical Audit of Discharge Information Given to Women Who Had Caesarean Delivery at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Puerperium is the critical time for women's health status. Information and instructions offered at the time of hospital discharge to women who have delivered is of great relevance as it enables them to have a safer puerperium and better future of obstetric carrier. Audit of such information may help to improve its quality and subsequently improve the quality of maternal health. This study aimed to show to what extent information given at the time of hospital discharge to women who had caesarean delivery conforms to pre-developed protocol. **Methods:** Cross sectional study involving 380 womenwas conducted at Muhimbili National Hospital between December 2017 and February 2018. An exit interview using a questionnaire was conducted to see what information and counseling had been given to women discharged from hospital. A checklist containing the particulars from MNH pre-defined discharge summarywas used to collect information put in discharge summaries given to particular women. Data was coded, entered and analyzed using a computer software SPSS version 23.0 and results summarized using frequency distribution. **Results:** Fourteen percent of women had discharge information that met a pre developed criteria. Conformity to verbal information protocol was met on 24.0% of women while conformity to discharge summary documentation protocol was met on 18.2% of forms. The least provided information was on whether a patient had history of

hypersensitivity (1.8%), procedures performed (1.8%) and investigations results (2.4%). There was a significant difference in documentation of patient clinical history, physical examination findings and attending clinician's name between intern doctors, residents and specialists. **Conclusion:** Discharge information given to women who had cesarean delivery partially conformed to pre-developed protocol. Regular audit of such information and provision of brochures and leaflets to patients may increase its quality.

141. Mtoke, U. (2018). Evaluation of Freshness and Establishment of Extent of Formaldehyde Contaminationinmackerel Fish in Dar Es Salaam. Muhimbili University of Healthy and Allied Sciences.

Abstract:

Background: Fish are a nutritious food consumed in everyday life by all age groups. However, fish is very perishable good. Lowering the temperature of fresh fish by icing or cold pressing as soon as it is harvested is a cost effective method of fish preservation. Tanzania being a tropical country encourages fast deterioration of fish if not properly handled. Available reports suggest that formalin/formaldehyde, basically a substance used for preservation of tissue and not intended for human consumption, has been sometimes added or sprayed to the fish by the unscrupulous traders while transporting to domestic marketing chain to prevent spoilage and to increase shelf life. Formalin is very hazardous when consumed. On top, poor handling of fish like carrying in traditional baskets and boxes without icing may result in spoilage which may lead to scombrotoxism (Scombroid-fish poisoning). **Aim:** This study focused on establishing the extent of formaldehyde contamination in the selected Mackerel fish marketed in the Dar Es Salaam region and evaluating its freshness based on pre-established physical parameters. **Methodology:** Samples used were bought from markets, street vendors and Supermarkets located in five districts of the Dar es Salaam region by convenient sampling. Samples were collected in three different sessions. The collected samples were sent to the Medicinal Chemistry laboratory, School of pharmacy for physical and chemical analysis. Physical parameters were analyzed by a subjective sensory method based on organoleptic characteristics. Formaldehyde presence and content was determined by extraction using centrifugation method followed by High Performance Liquid chromatography at the Pharm R& D laboratory, School of pharmacy**.**

Results: In total of 64 samples, of which 61 testing samples from the five districts in Dar es Salaam and 3 samples of fresh mackerel used as negative control obtained soon after harvest from the water were collected and evaluated. The results obtained showed that all samples had an acceptable grade of freshness. However, it was revealed that more than (85%) of samples were detected with formaldehyde. The content of formaldehyde in Mackerel varies in ranging 0.1mg/kg to 46.01mg/kg, more than 18% (11) of samples were observed with formaldehyde content more than 20mg/kg, which is above the minimum requirement by WHO (6-20mg/kg), more than 67% of the samples had content below 20mg/kg and the 14% 3 of samples were formaldehyde free. While the fresh mackerel sample were not detected with formaldehyde. The natural formaldehyde in fish by WHO is between 6-20mg/kg. **Conclusion:** This study shows that the Mackerel fish circulating in Dar es Salaam have an acceptable degree of freshness which reflects their good physical characteristics. However,on further laboratory analysis it was revealed that formaldehyde was detected in more than 85% of the mackerel marketed in Dar es Salaam,On quantifying the formaldehyde content, more than 18% of samples were revealed with content more than 20mg/kg which exceeded the limit by WHO (6-20mg/kg).**Reccommendations:** This study involved small sample size, which has given the baseline information on contamination of formaldehyde in mackerel; other studies should beconducted on a bigger sample size to give conclusive decision on this issue as it concerns public health.

142. Muchira, F. (2018). Factors Associated with Risky Sexual Behaviour Among Adolescent Girls and Young Women Living with Hiv in Shinyanga Region.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Adolescents and young women who live with HIV have sexual desires like all other adolescents. It has been reported that between 10-64% engage in risky sexual behaviours. Risky sexual behaviours expose them to a number of health problems which include re-infection with the HIV virus, unplanned pregnancy, infections with STDs and transmission of the virus to uninfected partners and infecting their unborn babies. In Shinyanga Region, there is an information gap regarding risky sexual behaviour among HIV+ AGYW and associated factors.

Such information is paramount in the planning of interventions targeting adolescents and young women living with HIV AIDS. This study is aimed at bridging an information gap regarding risky sexual behaviour among AGYW living with HIV. **Objective:** To assess the factors associated with risky sexual behaviour of AGYW living with HIV in Shinyanga Region of Tanzania. **Methodology:** This study was a cross -sectional study conducted among 200 AGYW living with HIV attending HIV care and treatment clinics in Shinyanga Region. Two stage cluster random sampling was used to select study respondents. Data collection was done using questionnaires with structured questions. Data were entered to the computer using SPSS statistical software, cleaned and analyzed using the same software. Descriptive statistics were used to summarize the variables of interest and the Chi Square test was applied to assess association between explanatory variables and risky sexual behaviors. P value of less than 0.05 was considered statistically significant. **Results:** A total of 200 respondents were interviewed from nine health facilities in Shinyanga Region of whom 76% (151) had ever had a sexual encounter and 136(89%) reported a sexual encounter six months prior to the study. Respondents who engaged in unprotected sex during the most recent sexual encounter was high 62(41%) while 52(34%) AGYW reported to have two or more sexual partners in the preceding six months. Overall 100(66.2%) were found to have risky sexual behaviour. There was no single variable that was statistically significantly associated with risky sexual behaviour. **Conclusion:** The study found out that condom use among the AGYW who live with HIV is low and about one third has multiple sexual partners. Single respondents were less likely not to use condoms while those who were divorced/separated/widowed were more likelyto not to use condoms compared to married, AGYW who were not desiring children were significantly more likely not to use condoms compared to those desiring while those with a single sexual partner were less likely to use a condom compared to those with multiple partners. Respondents who were married/cohabiting were significantly less likely to have multiple sexual partners compared to those who were widowed/separated/divorced while respondents who were not desiring children were less likely to have multiple sexual partners. **Recommendation:** Ministry of Health, Community development, Gender Elderly and Children (MoHCDGEC) needs to integrate safe sex education to care and treatment clinics including increased provision of IEC material regarding importance of condom use and having one sexual partner. Health facilities need to

strengthen reproductive health services to increase condom use and counselling on sexual behaviours.

143. Mugiyabuso, P.C. (2018). Prevalence of Hearing Loss Among Head and Neck Cancer Patients Receiving Chemotherapy with or Without Radiation Therapy at Orci.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Hearing loss affects the quality of life of people in low and middle income countries. Worldwide about 5.3% of people have disabled hearing (WHO, 2012). This population is expected to increase significantly by 2050. (1) It affects all age groups with unequal distribution. (2) Majority of the affected people reside in developing countries. In the past, most cancer patients who survived through treatment with various chemotherapeutic regimes considered themselves serendipitous to be free from this devastating disease. Nevertheless, the outcome of adverse reactions of chemotherapy and/with radiation in relation to the Quality of life (QoF) such as hearing loss was crucial but   neglected. (1) **Objective:** The aim of this study was to determine the prevalence and patterns of hearing loss among head and neck cancer patients receiving chemotherapy with or without radiation therapy at Ocean road cancer institute in Tanzania. Materials and methods: This was a descriptive cross sectional hospital based study conducted at ORCI in 2017. 138 cases who had been on treatment for the period of six weeks were recruited in the study. Patient history was taken, age, body surface area, drug dosage and duration of treatment were asked and crosschecked from the patient's file. Otoscopic examination was done prior PTA test. PTA was done in a quiet room, at frequency range of 250HZ to 8000HZ using Amplivox 270 audiometer. Data collection was done by using a special designed questionnaire. Data analysis was done using the Statistical Package for Social Sciences version 20 and a p value of <0.05 was considered significant. **RESULTS:** Among 138 patients in the study population, 68(49.3%) were males and 70 (50.7%) were females. Age ranged from 16- 89 years. Mean age was 50.78years with Std deviation of 14. 958.Most cases were in the age group of 36-55years 66(47.8%), least cases were above 75years 5(3.6%). Hearing loss was found in 98(71%) cases and was bilateral in most of the patients. Among 98 patients with hearing loss, 93 (95.0%) patients had sensorineural hearing loss which was bilateral with equal severity except

for one patient who had unilateral sensorineural hearing loss. 3(3.0%) patients had conductive hearing loss which was bilateral, Xiv and 2(2.0%) patients had mixed hearing loss in which one patient had bilateral and the other one had unilateral mixed hearing loss. The most affected age groups were 56-75years and >75years (80.0%) each, the least affected group was 16-35years (45.5%). Increase in age was associated with increased risk of developing hearing loss(P.value=0.029). Males had higher prevalence of hearing loss (76.5%) than females (65.7%). Gender was not associated with increased risk of developing hearing loss. (P.value =0.164). Conductive and mixed hearing loss were seen only in patients with sinonasal and nasopharyngeal cancer respectively. However, there was no statistical significance on the relationship between the site of the tumor and type hearing loss (P.value=0.23). Treatment modality (chemotherapy alone or chemoradiation therapy) had statistical significant effect on the type of hearing loss (P.value =0.045) but it had no statistically significant effect on severity of hearing loss (Pvalue=0.526). Out of 138 patients, 79 patients used chemotherapy alone which consisted of various drug group combinations. Among these patients, 53(67.0%) developed hearing loss. Use of a single drug group or combined drug groups had no statistical difference on severity of hearing loss (P.value=0.603). High cumulative doses of platinum and taxane compounds were associated with increased severity of hearing loss, this association was statistically significant. (P. values=0.003, 0.021). **Conclusion:** Chemotherapy with or without radiotherapy is the main stay in treatment of most malignancies including head and neck cancers, however its ototoxic effect especially hearing loss needs to be checked in order to prevent permanent disability that can occur post treatment. Audiological follow up in cancer patients before, during and after treatment is the main stay for earlier detection of hearing loss and can help to guide the dosage to be delivered according to the patient's condition, and earlier provision of hearing rehabilitation services.

144. Mugisha, T.V. (2018). The Pattern of Ocular Findings Among Students with Albinism in Coastal Zone of Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Albinism is a group of inherited disorders in which melanin biosynthesis is reduced or absent. Clinically, albinism presents as a pigmentation abnormality of the skin, the

hair and the eyes. Albinism is associated with a number of visual disorders. Signs and symptoms include severe photophobia, monocular vision, strabismus, pendular nystagmus, iris transillumination defects, optic disc and foveal hypoplasia. Albinism is also associated with high refractive errors including high astigmatism. Consequently, visual acuity is generally reduced, leading to visual impairment. The World Health Organization estimates that Tanzania has approximately 35,000 people with albinism (1 in 1400). **Aim:** The aim was to assess the pattern of ocular findings among students with albinism in coastal zone of Tanzania.Materials and methods: The study was a school based cross sectional study conducted among students with albinism in coastal zone of Tanzania from 7thto 12thJune 2017.Systematic random sampling technique was used to recruit 114 students from a total of 465 students with albinism who attended the Dar es Salaam vision camp organized by Standing Voice UK. Visual acuity, intraocular pressure, anterior and posterior segment were assessed and recorded. Refraction, low vision and orthoptic assessment were also done. Axial length and corneal curvatures were measured and recorded. All students with conditions requiring management were given appropriate treatment and referrals. **Results:** A total of 114 students with albinism participated in this study. The mean age of study participants was 17.9(7.5SD) years and ranged from 6 to 35 years. The female to male ratio was 1.6:1 and the majority of the participants (76%) had moderate visual impairment after correction. The commonest anterior segment finding was iris transillumination defects found in 87.7% of eyes. Posterior segment findings were peripheral retinal hypopigmentation (100%), foveal hypoplasia (100%), optic nerve hypoplasia (99.1%) and nystagmus (95.6%). Myopia and myopic astigmatism were the common refractive errors found in 64% of the eyes. The mean visual acuity improvement after spectacle correction was 0.16 logMAR (95%CI 0.13-0,19). Strong correlation was found between axial length and refractive errors (r= -0.848). The majority of the students (59.2 %) had never had prior ocular examination. **Conclusion:** In this study, most of the students with albinism had moderate visual impairment. There was a significant improvement in visual acuity following optical correction in students with albinism. However, a great number of students did not have spectacles or low vision devices.

145. Muhanuzi, B. (2018). Clinical epidemiology, management and outcomes of pediatric patients with respiratory compromise presenting to an emergency medicine department of a tertiary hospital in Tanzania: A descriptive cohort study. Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Respiratory compromise is one of the common causes of paediatric emergency visits and is the leading cause of cardiac arrest among paediatric patients. In Tanzania, as in other low-income countries, little is documented about the clinical epidemiology, management and outcomes of paediatric patients with respiratory compromise attending in acute care settings.

Aim of the study was to describe the clinical epidemiology, management and outcomes of paediatric patients with respiratory compromise presenting to the Emergency Medicine Department (EMD) of Muhimbili National Hospital (MNH). Methods: This was a prospective cohort study of consecutive paediatric patients (below age of 18 years) with respiratory compromise presenting to EMD-MNH from July - November 2017. Informed consent was obtained prior to being enrolled in the study. A standardized case report form with in built online data capture software was used to record study information, including demographics, relevant clinical characteristics and overall patients' outcomes. The study data was summarized with medians and interquartile ranges, counts and proportions as appropriate. Results: We enrolled 165 (3.3 %) children with respiratory comprise from 5041 children who presented to EMD-MNH during the study period. The median age was 12 months (Interquartile range: 4-36 months), and 90 (54.4%) were male. Overall 92 (55.8%) of children were in respiratory failure upon arrival to EMD, and the rest 73 (44.2%) were in respiratory distress. Oxygen therapy was initiated at EMD for 143 (86.7%) children, while 21 (14.7%) children received assisted ventilation. Blood gases analysis was done to 90 (54.5%) children at EMD. 18 (10.9%) children developed cardiac arrest at EMD, and only 2 (11.1%) of them survived to hospital discharge. Majority 147 (89.1%) of patients were admitted to the hospital, while 14 (8.5%) children died in the EMD. The overall hospital mortality was 51(30.9%) **Conclusions:** In a cohort of paediatric patients presenting to EMD, with respiratory compromise was associated with significant morbidity, as evidenced by the need for assisted ventilation, antibiotics, intubation and high rate of cardiac arrest. The

observed mortality rate was 31%. Future studies should focus on identification of predictors of poor outcomes among children with respiratory compromise in EMD.

146. Muhochi, P.S. (2018). Incidence of Oxygen Desaturation During Patient Transfer to Pacu at Muhimbili National Hospital from August 2017-January2018.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Oxygen is very essential for life at cellular level. Any significant compromise to body oxygen supply can leave the individual with permanent brain damage if death did not set inn(1). It is well known that in operating room and in recovery room patients are well monitored with pulse oximeter to detect any significant oxygen desaturation which can lead to hypoxemia and intervene timely. But during patient transfer from operating room monitoring is optional depending on the institutional standard operating procedures and guidelines. (2) Since the introduction of pulse oximeter in anesthetic care monitoring about 30 years ago; many researches in different part of the world have been conducted to detect the existence of hypoxemia during patient transfer from operating room to recovery room and associated factors. These researches came up with findings which showed the prevalence of the problem in given settings and the associated factors.There is no data at MNH which show the existence or absence of the problem, which can help improve the practice of monitoring oxygen saturation during patient transfer to recovery room.**Objective:** The main objective was to determine the magnitude of oxygen desaturation during patient transfer from operating room (OR) to post anesthetic care unit (PACU) at MNH between august 2017 and January 2018. And to trace down risk factors for oxygen desaturation. Method: This was a prospective, observational, non-interventional one center, case only cohort study which was done at MNH in the department of anesthesia. In different days all patients who were transferred from OR to PACU after major surgery under general anesthesia (GA) were included and followed up, oxygen desaturation was regarded as $SPO_2 < 95\%$. And sixteen factors related to anesthesia, surgery and patient were recorded Findings: 246 patients were involved. 1 patient developed severe laryngospasm and 1 developed apnea during transfer to PACU. Those two patients ended up in severe hypoxemia of $SPO_2 < 30\%$ and intervention was done quickly by giving oxygen supplementation in recovery room. The

incidence of oxygen desaturation during transfer was found to be 17.1%(42patients), these 42 patients were rushed to PACU where oxygen was given. On chi-square test 4 factors seemed to be statistically significant for desaturation on transit to PACU(p<0.05). After running a multivariate logistic regression analysis 1 risk factor for oxygen desaturation was identified to be statistically significant: ASA-Class > ASA-II. (p=0.000) an increase in ASA-class >ASA-II had the odds of desaturating 16.3 times greater as compared to lower ASA-class, reported with 95% confidence interval. **Conclusion:** The existence of oxygen desaturation during patient transfer to PACU was established at MNH. Its incidence was found to be 17.1% and this is consistent with the findings of studies of the same nature done in other parts of the world. An increase in ASA-class above class II was found to be a risk factor for desaturation during transfer. The identification of the problem at MNH calls for refined monitoring practice for patients during transfer to PACU. Supplemental oxygen should be considered for patients with high risk factors.

147. Mukamana, F. (2018). Assessment of Willingness to Donate Eyes Among Patients Attending Ophthalmology and Ent Clinics at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Eye donation is an act of high-level kindness to humanity and the society, which involves the will of a person to consent for removing his/her, eyes from the body after death. This consent can be signed by the donor before his/her death by writing a will to be an eye donor (pledge eyes), but also the permission can be given by a close relative of the deceased, if he/she did not deny to be a donor while still alive. Donated eyes are used to treat patients with blindness due to corneal diseases, by corneal transplant. Eyes which cannot be used for corneal transplant can be used for research and teaching purposes. Willingness to donate eyes depends on awareness about importance of eye donation within the population. Therefore, it is important to know the factors associated with the willingness to donates eyes in order to have sustainable local corneal transplant services. **Objective:** The aim of this study was to assess willingness to donate eyes among patients attending the Ophthalmology and ENT (Ear, Nose and Throat) clinics in Muhimbili National Hospital (MNH)". **Methodology:** Across sectional descriptive hospital based study with quantitative and qualitative approaches was done from July to

December 2017. Study participants for quantitative part were selected by systematic random sampling technique. A predesigned pretested questionnaire was used and a face to face interview was conducted to correct data for quantitative part of the study. Qualitative data were collected through focus group discussion (FGD) and study participants were selected by purposive sampling technique. Data analysis: Quantitative data analysis was performed using SPSS version.20; Chi-square (χ2) and t tests were performed and multivariate analysis was done to test association between variables. Frequencies and proportions were selected according to level of measurement. P value of < 0.05 was estimated as statistically significant. Data were summarized in tables, pie and bar charts for easy presentation. Systematic thematic analysis was used for qualitative data, whereby all similar themes were grouped accordingly. **Results:** A total of 434 participants were enrolled in the study and the response rate was 100%. Majority were female (58.06%), 74.1% were from Dar es Salaam and 44.9% were in age group between "18-33" years. One third (32.5%) of all respondents, were aware that eyes can be donated and 83.7% of them knew that donated eyes are used for corneal transplant. Only 13.5% know that consent for eye donation can be signed by a close relative of a deceased person. Willingness to donate eyes in this study was observed in 47.9% of all respondents. The main reason for willingness to donate eyes was to help a blind a person (64.2%). About 29.5% were willing to donate eyes because they will not need them after death and 6.3% were willing because it is a noble work. Perceived reasons for unwillingness were lack of information about eye donation (31.7%) while 24.7% were uncertain on the use of donated eyes and religious reasons composed 22.0%. Only 4.4% said that eye donation is against their culture. Willingness to donate eyes was associated with awareness (p=0.0001), sex (p=0.049) and religion (p=0.010). For all participants, 82.2% said eye donation services are important for the population and 45.1% of them think that to become an eye donor is a personal decision. Common perceived reasons for eye donation importance were that eye donation services can reduce the burden of blindness (83.5%) and Corneal transplant services would be cost effective (47.1%). Among participants who said that eye donation services are not important, 53.5% of them think that eye donation is a kind of organ trafficking. Eight themes emerged from FGD: Helping others, Religion, fear, death and body, organ trafficking, community education, benefits of eye donation, decision making about becoming an eye donor. **Conclusion:** The present study showed that majority of the participants was not aware of eye donation. However, willingness to donate eyes was seen in nearly a half of study

participants and most of the participants think that eye donations services are important for the population. Negative perception about eye donation was associated with lack of information, cultural beliefs, religious beliefs as well as personal fear. Therefore, raising awareness about eye donation through community education is important to raise willingness to donate eyes.

148. Mukurasi, K.I. (2018). Linkage ToCare and Associated Factors Among Newly Diagnosed Hiv Infected Clients in Njombe Region, Tanzania 2017 – 2018.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: HIV/AIDS is major public health problem in Tanzania, where its estimated that 1.5 million persons are living with HIV. Guided by the UNAIDS' 90-90-90' ambitious but achievable treatment target to help end the AIDS epidemic, the Government of the Republic of Tanzania adopted a test and treat guideline where all clients who test HIV positive are to link to care and start antiretroviral therapy as soon as possible. However, there is still a knowledge gap in the number of people linked in Tanzania resulting in missed opportunities for timely initiation of antiretroviral therapy and retention to care, that might make it hard to attain the target. The study was aimed at determining factors associated with linkage to HIV care among newly diagnosed HIV positive clients in Njombe Region, Tanzania.**Methods:** The study was carried out in 3 councils of Njombe Region, Tanzania. A total of 382 newly diagnosed HIV- positive adults from 5 facility testing points and 3 community testing points were enrolled using a structured questionnaire. The cohort was followed up for 1 month from the day of diagnosis. Data were entered and analyzed using EPI Info version 7.3.5 and Stata version 13.0. Time to linkage was estimated using Kaplan–Meier methods and Cox proportional hazard regression models were used to evaluate factors associated with linkage to care. **Results:** The majority (70%) of participants were females, and the median age was 32 years (IQR 26,38). Of the participants,263 (69%) were tested at a health facility testing point and 119 (31%) at community testing points. At 1 month the overall linkage rate was 70%(95%CI; 65%-74%). A total of 185 participants (51%; 95%CI 46%-56%) linked to care on the same day of testing. Results indicate that the probabilities of linking to care are similar among those who were tested in the community and those tested at health facility (Log rank test p=0.1). Unemployed participants

were more likely to link to care compared to peasants (HR=1.62; 95% CI; 1.01-2.58). And those participants with a secondary level of education and above were more likely to link to care (HR=2.53; 95% CI; 1.27-5.02). While participants aged between 35-44 years were less likely to link to care (HR =0.67; CI; 0.46-0.97). Participants who reported high transport cost to the referred Care and Treatment Centre (CTC) were less likely to link to care (HR =0.37; 95% CI; 0.15-0.90). **Conclusion and recommendations:** The study shows that linkage to HIV care is still a challenge in Tanzania. More interventions are needed to follow up and ensure that newly diagnosed clients are linked to care. In addition, continual community health education on the importance of early linkage and early initiation treatment should be given and CTC services be brought closer to the community.

149. Mundamshimu, J.S. (2018). Assessment of Family Member's Level of Satisfaction with Care Given to Their Patients in The Emergency Department, Bugando Medical Centre Mwanza, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Family members accompanying critically patients in the emergency department experience physiological, psychological and emotional impacts. Emergency Health Care Providers play an important role of caring these patients and family members during this crisis. However, Meeting family members and patient expectations is one of the main challenges in the emergency department of many health facilities within developing countries' health systems. Therefore, to improve quality of care given at emergency department, there is a need to identify areas of dissatisfactions that, if left without being intervened will contribute to poor quality services delivered to patients with emergency conditions and their family members at the emergency department. Study aim and rationale: The study was aiming to assess the level of family member satisfaction in the emergency department at Bugando Medical Centre. This is one way of assessing quality of care in the emergency department. The information from this study is helpful for informing the hospital management and policy makers on the areas within the emergency department that need to be intervened with regard to service delivery in order to improve the care given at emergency department. **Methodology:** The study used descriptive cross sectional design with quantitative approach. The study included family members

accompanying patients in the emergency department and 426 participants were involved in the study. Data were collected using structured questionnaire which was adopted from Brief Emergency Department Patient Satisfaction Scale (BEPSS) and being modified by the researcher. This was done after their patients being stable waiting for transfer or discharge. Data were analyzed using statistical package for social sciences version 21(SPSS), a computer software package. **Results:** Results of this study revealed that 89.9% of participants were satisfied with the sense of respect by nurses and doctors towards patients, 69.7% were satisfied with pain relief from patients, 80% of participants were satisfied with privacy and confidentiality in the department and lastly regarding type of care was emotion support to family members where by 77.7% of family members were satisfied. Regarding waiting time 60.1% of participants were satisfied with the time spent in the triage, 60.1% were satisfied with the time spent before seen by doctors in resuscitation cubes or entering in the treatment rooms, 58.5% were satisfied with time spent in the department before begin of treatment, 58.2% were satisfied with the time spent in the department before admission or discharge home. Concerning emergency department environment 81.9% participants were satisfied with the availability of wheelchair and stretcher in the department, 88.5% were satisfied with cleanness of the emergency department environment and 77.9% were satisfied with overcrowding of the emergency department environment. On the part of communication 74.2% of participants were satisfied with the willingness of doctors and nurses to answer their question,76.1% were satisfied with provision of understandable information, 77.7% were satisfied with provision of honest information, 80.8% were satisfied with consistency of information provided to them from doctors and nurses and lastly 73.7% of participants were satisfied with the way doctors and nurses telling family members about what is going on about their patients in the emergency department. **Conclusion and Recommendation:** Findings of this study indicates that family members were satisfied with the care received (type of care, waiting time, environment, and communication) in the emergency department. However, there also a considerable number of family members who were not satisfied with some of the care received in the department.Considerable number of family members who were not satisfied were found on type of care specifically on pain management 129 (30.3%), on the waiting time specifically on waiting time in the triage 170 (39.9%), waiting time before seen by doctor 170 (39.9%), waiting time before beginning of treatment 177 (41.5%), and waiting time before admission or discharge 178 (41.8%). The last area that was on communication specifically on

doctors and nurses informing family members of what is going on about their patient 112 (26.3%) and on willingness of doctors and nurses to answer family member's questions 110 (25.8%). Therefore, effort is required to improve the mentioned areas which can be achieved by on job training, short courses and establishment of protocols and guideline sons pacified area

150. Mushi, A.L. (2018). Effectiveness of Urinalysis Parameters in Diagnosing Urinary Tract Infection Among Pregnant Women Attending Antenatal Clinic in Singida Regional Referral Hospital. Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Treatment of urinary tract infection (UTI) in many health facilities of developing countries is done empirically without knowing specific etiological agents or their susceptibility to the prescribed antibiotics. Simple screening tests such as nitrite, leucocyte esterase and pus cells count can be performed in diagnosing UTI in pregnant women, even in resource-deprived settings, after evaluation for effectiveness. **Methodology:** A cross-sectional study was performed among 225 pregnant women attending Singida Regional Referral Hospital between December 2017 and February 2018. Mid-stream urine was collected aseptically and examined for nitrites, leucocytes esterase and pus cells count. Urine culture preferred as gold standard followed by susceptibility test of the isolates. **Results:** Significant bacteriuria (≥105cfu) was detected in 37(16.4%) of the women. The nitrite test had 48.6% sensitivity and 94.7% specificity, 66.7%positive predictive values (PPV) and 90.4% negative predictive values (NPV). Leucocytes esterase had sensitivity, specificity, PPV and NPV of 56.8%, 88.8%, 50%, 90.4%, respectively. For pus cells count (>5/hpf) sensitivity specificity PPV and NPV were 94.4%, 91.5%, 68% PPV and 98.9% NPV. The combination of nitrite and leucocyte esterase had 70.3% sensitivity and 84% specificity, with PPV and NPV of 46.4% and 93.5%, respectively. Positive nitrite or positive leucocyte esterase or pus cells ≥5/hpf had sensitivity of 100%, with specificity of 79.8% and PPV and NPV of 49.3% and 100%, respectively. Positive nitrite or positive leucocyte esterase or pus cells ≥10/hpf had sensitivity of 94.6%, with specificity of 84.6% and PPV and NPV of 54.7% and 98.8%, respectively.The most frequently isolated organism was Escherichia coli (57%).Out of all isolates, 34 (91.9%) were sensitive to nitrofurantoin, 33 (89.8%) to amoxicillin clavulanic acid, 31 (83.8%) sensitive to amoxicillin, 31 (83.8%) sensitive

to cotrimoxazole 28 (75.7%) sensitive to ampicillin, 23 (62.2%) sensitive to cefotaxime and 20 (54%) gentamicin. **Conclusion:** The prevalence of UTI among pregnant in studying area was 16.4%. Leucocyte esterase is more reliable to detect UTI cases. Combination of dipsticks and pus cells are good predictor of UTI. The antimicrobial drugs which is best to be used in studying area for treatment of UTI among pregnant women are nitrofurantoin, amoxicillin and amoxicillin clavulanic acid.

151. Mushi, V. (2018). Factors Associated with Persistence of Onchocerciasis Transmission After Two Decades of Community-Directed Treatment with Ivermectin In Ulanga District, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Community Directed Treatment with Ivermectin (CDTI) was initiated in Tanzania since 1997 in Mahenge focus endemic for onchocerciasis with an operational prediction for interruption of transmission after 14-17 years. Ulanga as one of the hyperendemic districts, have received 20 rounds of annual CDTI. However, a transmission assessment survey done on 2017 showed there was persistent transmission. Knowledge, attitudes and perceptions of the community drug distributors (CDDs) and individuals in the community towards onchocerciasis and preventive chemotherapy potentially affects CDTI coverage, consequently leading to persistent transmission. This study sought to investigate the current burden and its associated factors. Objective: The study examined the current O. volvulus prevalence and the associated factors in Ulanga district, two decades after initiation of mass drug administration for control. **Methodology:** A cross sectional study involving both quantitative and qualitative methods was carried out using primary and secondary data. The primary data entailed structured community interviews among 422 community members on their knowledge regarding onchocerciasis, attitude and perception on the preventive use of Ivermectin. This was complimented with qualitative data using key informants, in-depth interviews and focused group discussions. Secondary data from NTDCP was used for establishing, the current prevalence of O. volvulus. The quantitative data were organized to obtain proportions and their 95% CI. Associations between variables were assessed by the Chi-square test at significance level of 0.05. The qualitative data were organized in themes and content analysis. **Results:** Out of 587 children < 10 years of age tested for the presence of IgG4 antibodies to antigen Ov16; 17 (2.9% [95% CI:

1.7- 4.4]) were positive showing active transmission of onchocerciasis. There was association between duration of residence and age of the children with being infected; children aged 5 to 9 years were more infected than children less than 5 years of age (p=0.032) which was contributed with duration the children have stayed in Ulanga. The older children were at higher risk of exposure to O. volvulus infection compared to children aged less than 5 years (OR = 6.626; 95% CI: 0.864-50.824). Out of 422 household members interviewed; majority (94.1%) were found to have heard about onchocerciasis. However, they had inadequate knowledge on causative agent, transmission, treatment and prevention. Of the participants interviewed; 49.2% had low level of the knowledge, 35.5% had moderate level of knowledge and few 15.4% had high level of knowledge. Furthermore, the community held negative attitudes (46.2%) and perceptions (44%) towards ivermectin treatment. All community drug distributors interviewed could not tell the causative agent of onchocerciasis and how transmission occurs despite distributing ivermectin for several years. However, they had positive attitude and perception that ivermectin is the best drug for treatment and elimination of the disease in Ulanga.**Conclusion:** Two decades of CDTI have not interrupted transmission of onchocerciasis in Ulanga district as shown by the 2.9% prevalence in children < 10 years. However, there was a borderline level of knowledge on the causative agent, transmission, treatment and prevention as only about a half (50.8%) had moderate to high level of knowledge. The low level of knowledge coupled with negative perceptions and attitudes in a section of the community have the potential of affecting uptake and therefore total coverage of CDTI hence the persistence of transmission. Recommendations: Public health education should be reinforced in the community and community should be given an opportunity to participate in selection of the drug distributors that they think are capable so as to improve the participation in CDTI program.

152. Mushi, H.H. (2018). Factors Determining Utilization of Postnatal Care Services Among Postnatal Mothers at Ngarenaro Reproductive and Child Health Clinic, Arusha.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Six weeks following delivery is the most vulnerable time for postnatal women. About 40% of postnatal mother's experience complications after the delivery and 15% develop

life-threatening problems. Soon after delivery 34% of maternal death occurs due to hemorrhage and 10% sepsis. Essential care is thus very important to identify and prevent this alarming maternal death aggravated by these complications. At the moment, only 34% of postnatal mothers receive checkups in Tanzania despite recommendations that all postnatal mothers should receive postnatal care. **Aim:** This study aimed to assess factors determining utilization of postnatal care services among postnatal mothers at Ngarenaro Reproductive and Child Health Clinic in Arusha Tanzania. **Methods:** Cross-sectional study design employing quantitative approach was used to conduct the study. Sample sizes of 353 postnatal mothers attending RCH were obtained using Simple Random Sampling technique to select the study participants. Data were collected using researcher administered structured questionnaire with closed ended questions. After data collection and coding, entry was done and analyzed using Statistical Package of Social Sciences Computer Software Version 20. Chi-square and Binominal linear regression were used to determine the association between the dependent and independent variables nature. It was necessary to use the two tests because data were in groups and continuous form. Specifically, the reason of running chi-square test was to determine the existing relationship between variables. Variables assessed for association with utilization of postnatal care were (Age, marital status education and parity) while Binomial linear regression was run to determine whether independent variables (Antenatal care attendance, delivery method, occupation, place of delivery and complication occurred during delivery and women age) influence women to attend for the postnatal checkup. Declaration of the significance of the association was made using the probability value of 0.05. Possible associations and their statistical significance were measured using odds ratio at 95% confidence interval. **Results:** The proportional of women received postnatal care within 42 days after delivery was low. Women attendance within 7 day was high at 73%, however only 16.1% utilizes services as per recommendations, according to the study findings the frequently offered services were baby immunization 47% and baby checkup 23%. Findings shows that factors associated with postnatal care service utilization were Age 15-24 (p<.01) and women delivered by Caesarean section were more likely to utilize the services than their counterparts (p<.000). Furthermore, those women got complication after delivery utilizes the services than those who does not develop complication (p<.019). Women with children (3-4), (p.<03) and those given information on importance of postnatal care (p.<01) and appointment (p.< 0.002) were likely to attend for the

postnatal care services, however those who were missing appointment and health education were less likely to attend for postnatal care services. **Conclusion:** The finding of this study concludes that, postnatal care service utilization was low in Ngarenaro Reproductive and Child Health Clinic, Arusha. During postnatal period attendance, women are supposed to be offered services according to the guideline not only assessment for the baby and immunization services as indicated in the findings. Appointment and package of information on importance of postnatal care is needed for betterimprovement of postnatal care services utilization. Integration of postnatal care indicators in the different program for instance immunization is crucial. Therefore, Hospital Management Team (HMT) and local Government, in collaboration with stakeholders ought to collaborate efforts to scale up the postnatal care indicators through behavioral change communication to reach all community to reduce the burden of maternal mortality in Arusha.

153. Mulesi, E. (2018). Comparison of Clinical Characteristics, Care and Outcomes of Trauma Patients Presenting During Regular and Off Hours at Emergency Medicine Department of Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Trauma constitutes a significant public health burden, accounting for ten percent of all global deaths. World Health Organization estimates that mortality due to trauma is more than that caused by Tuberculosis, Malaria and HIV/AIDS combined. Disproportionately Low Income Countries (LIC) has higher trauma burden than Higher Income Countries (HIC) and relatively poor outcomes. Timing of presentation to the hospital such as regular work hours versus off hours have shown to impact outcomes in trauma in HIC. In Tanzania the timing of presentation in trauma has never been investigated. Aim: To compare proportion, clinical characteristics, care and outcomes of adult trauma patients (≥18 years) presenting to the emergency medicine department of Muhimbili national Hospital (EMD-MNH). **Methods:** This was a prospective comparative descriptive study of adult trauma patients (≥18years) presenting to EMD-MNH from July 2017 to December 2017. Structured questionnaires incorporated into online data capture software were used to document patients' demographics, clinical characteristics, care received and outcomes. Primary outcomes were difference in clinical

presentation and EMD care and secondary outcomes were mortality, length of hospital stay and disposition. Study data was summarized with descriptive statistics including mean, standard deviation, median and interquartile range. Student's t test (t-test) was used for comparison of mean and descriptive categorical data was analyzed using Chi-square (x^2) with SPSS version 21.0**Results:** We enrolled 1395 (49%) patients from 2898 trauma patients who presented to the ED. Of those who were enrolled, 818 (58.6%) presented during off hours. The median age of presentation of those enrolled was 33 years (interquartile range 26-44 years) and overall 1069 (76.6%) were male. Overall 1261 (90.4%) had minor Injury Severity Score (ISS) and 98 (7.6%) had moderate ISS, while 36 (2.6%) had major ISS. Among those 36 (2.6%) who had major injury (ISS≥15), 3(0.5%) presented during regular hours versus 31(4.0%) during off-hours with (p < 0.001). Overall 40(2.9%) that had used alcohol, and the majority of these 35(4.3%) presented during off hours while 5(0.9%) of regular hours (p<0.000). Overall 24h mortality with 2(0.2%) presenting during off-hours and none during regular hours, p<0.235. **Conclusion:** Off-hour presentation was associated with high male proportion, major trauma and injuries associated with alcohol influence. Even though these factors did not seem to impact on the ED and 24h mortality, clinicians are to be keener due to higher acuity and severity of patients presenting in off-hours in LIC.

154. Msemwa, J.R. (2018). Short Term Treatment Outcome of Adult Patients with Traumatic Humeral Shaft Fractures Treated Operatively At Muhimbili Orthopaedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Fractures of the humeral shaft are encountered commonly by orthopedic and trauma surgeon in their daily practice. Management of these injuries continues to evolve overtime as advances are made in both operative and non-operative techniques. Use of intramedullary nails, dynamic compression plates and functional arm braces are some of routinely applied methods. The purpose of this study was to determine short term treatment outcome of adult patients with traumatic humeral shaft fractures treated operatively at Muhimbili orthopaedic Institute for the period of 48 weeks between March 2017 to February 2018. **Methodology:** This was a descriptive prospective cross-sectional Hospital based study which

aimed at determining fracture union rate, rate of radial nerve palsy, extremity alignment and range of motion for shoulder and elbow of the involved extremity, for adult patients with traumatic humeral shaft fractures managed by operation at Muhimbili Orthopaedic institute for the period of 48 weeks. Forty- five (45) adult patients with humeral shaft fracture were treated operatively. Forty- three patients had closed humeral shaft fractures which failed non-operative management and 2 had acute open fractures respectively. Of the open fractures, one had Gustilo and Anderson grade I and the other one had grade IIIA. Treatment modalities were external fixation used to patients with open humeral shaft fractures. Intramedullary nail was used in one patient. In Forty-two patients (93.33%) dynamic compression plates were used. All patients were followed up for a period of 12 weeks. At 12th week extremity functional assessment was done using DASH score, this is a worldwide accepted tool for assessing functional recovery of upper extremity following surgery or injury. Briefly a score of 0-20 indicates excellent, 21-40 good, 41-60 indicates fair while a score of greater than 60 indicates poor. vi **Results:** Forty- one patients (91.1%) had union at 12th week of follow up. Four patients had primary radial nerve injury while nine patients (20%) had post operatively radial nerve palsy at 12th week follow-up. Forty-one (91.1%) patients had their fracture united with acceptable angular deformities and shortening. Two (4.87%) patients had varus angulation of <30°, one patient had <20° of antero-posterior angulation and 2 (4.87%) patients had shortening of <3cm. Reduction of shoulder range of motion was observed at 12th week follow-up among patients with united fractures, whereby two patients had shoulder flexion of < 160° normal range (160°-180°). Two (4.88%) patients had shoulder Adduction of <50°while one patient (2.45%) had shoulder abduction of <100°. Three patients (7.31%) had shoulder external rotation of <80° (normal range=80°-90°), while six patients (14.63%) had shoulder internal rotation of <60° (normal range=60°-100°). All patients had excellent to good function on DASH score at 12th week follow-up. Conclusion: The results in this study indicates acceptable union rate at 12th week post-surgery can be guaranteed when humeral shaft fracture is treated operatively particularly when dynamic compression plate is used as is the case to most patients in this study. Reasonably good extremity alignment and acceptable range of motion for the shoulder and elbow joints at 12th week post-surgery. There is a risk of radial nerve palsy, but this has been observed to decrease with time. Extremity functional recovery has been observed to be excellent to majority of the patients at 12th week post-surgery. **Recommendations:** I recommend surgery to be performed to humeral shaft fractures as there is

predictably acceptable fracture union rate, good extremity alignment, and good range of motion for the shoulder and elbow and excellent functional status at 12th week post-surgery. The advantages and disadvantages of operation should be shared with the patientbefore operation.

155. Mwaijega, L.E. (2018). Assessment of Ventilator Care Bundle Implementation Amongst Nurses in Icu at Tertially Teaching Hospitals, In Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: The ventilator bundle concept originated in 2005 from the Institute for Healthcare Improvement's. Care bundles are a cohesive group of evidence-based, well established clinical interventions that improve and standardize care, and that achieve significantly better outcomes when implemented together rather than individually. Nurses require appropriate knowledge, practice and influencing factors for effective care and ventilator associated pneumonia (VAP) prevention, by playing an active role in ventilator care bundle elements implementation. However, despite of strong available evidence Intensive care unit (ICU) nurses practices have demonstrated poor adoption and adherence in implementing evidence based ventilator care bundle elements. As a result, a number of ventilated patients continue to suffer from poor ventilator associated pneumonia (VAP) outcomes, including Tanzania Health care system. **General objective:** The general objective of this study was to explore knowledge, practice and factors influencing ventilator care bundle elements implementation amongst nurses in ICU at Muhimbili National Hospital, Jakaya Kikwete Cardiac Institute and Muhimbili Orthopedic Institute. Methods: Quantitative approach employing a descriptive cross-sectional design was used. The study was conducted at Muhimbili National Hospital, Jakaya Kikwete cardiac Institute and Muhimbili Orthopedic Institute ICUs in Dar es Salaam, Tanzania. A total of 102 ICU nurses caring ventilated patients participated. The study was approved by ethical committees of Muhimbili University of Health and Allied Sciences and permission to conduct a study was obtained from the executive directors of Muhimbili National Hospital, Jakaya Kikwete Cardiac Institute and Muhimbili Orthopedic Institute. A self-administered questionnaire was used to assess knowledge and influencing factors and a checklist was used for observation of the practice part. Collected data were coded, entered in computer, cleaned and analyzed using the statistical

package of social science (SPSS) version 20 with assistance of data manager. **Results:** The results of 11 knowledge items questionnaires revealed low knowledge score 68(66.7%) and most of the nurses were not implementing all of the ventilator care bundle elements for the prevention of VAP and there is no an influencing unified protocol to follow for VAP prevention. Conclusion: The results of the study indicated a need for training programs for ICU nurses, developing and implementing a protocol for VAP prevention in ICU.

156.Mwakapasa, E.G. (208). Loss ToFollow Up and Associated Factors Among Women Enrolled in Pmtct Program in Mbeya Region, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: More than half of people living with HIV in Sub-Saharan Africa are women. Approximately 1.4 million become pregnant each year; and most of the children born to these mothers acquire HIV through vertical transmission. Loss to follow up stands as a major problem to effective Prevention of Mother to Child Transmission (PMTCT) services especially in sub-Saharan Africa including Tanzania. Therefore, this studylooked at factors associated with loss to follow up among women enrolled in PMTCT program at health facilities in Mbeya region. **Methods:** A retrospective cohort study with a nested case control analysis for associated factors was employed in the study. Women enrolled in PMTCT program between 1st October, 2016 and 31st March, 2017 in selected health facilities (Igawilo, Uyole, Mbalizi, Kyela, Matema, Tukuyu, Mbarali, Chimala and Igogwe) in Mbeya region were eligible for enrollment in the cohort. A woman was lost to follow up if she was consistently out of ART for more than 90 days since last scheduled clinic appointment within follow up period (1st October, 2016 to 30th June, 2017). These women were also considered as cases in the nested case control analysis in a1:2 ratios. Controls were those who started ART under PMTCT between 1st October, 2016 and 31st March, 2017 and never missed their last scheduled clinic appointment for more than 90 days within follow up period. Records from PMTCT were reviewed whereby cases and control at a ratio 1.2 were identified. Data extraction tool was used to extract information from CTC-2 card and a structured questionnaire containing socio demographic information and information on factors associated with loss to follow up was used for interview. The exposure variables were

categorized into individual, interpersonal, community and institutional factors. Data were entered, cleaned and analyzed using Epi Info 3.5.4 data analysis software. **Results:** About three quarters (76.8%) of a cohort of women enrolled in PMTCT were 25 years or older with a median age (IQR) of 29 (25-32). Most participants (93.5%) were enrolled in PMTCT when pregnant and at WHO clinical stage 1 or 2 (78.2%). The rate of lost to follow up was 3.613 per 100 person-months of follow up (95% CI: 3.0-4.3). Among women who were lost to follow up, half [52.8% (42.8-61.1)] were lost to follow up between 1 to 3 months of follow up with median time to follow up (IQR) of 3(1-5). Loss to follow up was associated with age less than 25 years [AOR 2.4 (1.3-4.2)] and not having a treatment supporter at home [AOR 1.98(1.24-3.17. Women who lived 1km to 3kms, and more than 3kms away from clinic had lower odds of loss to follow up [AOR 0.49 (0.28-0.84)] and [AOR 0.17 (0.09-0.32)] respectively. **Conclusion:** Loss to follow up occurs early after enrollment and more substantial for young women. Presence of treatment supporter and distance to the facility plays an important role in retention to care among women enrolled in Prevention of Mother to Child.Transmission of HIV. **Recommendations:** There is a need for interventions to support women after PMTCT enrolment, targeting younger women in particular, and to actively follow-up those who miss early appointments. Furthermore, the interventions should emphasize on having a treatment supporter at home, and stigma reduction in the community which overrules the possible benefits of living nearby health facility in retention to care. Qualitative studies should be done to have an in-depth understanding of the individual factors and other external influences that contribute to LTFU.

157. Mwakawanga, D.L. (2018). Timing Of Umbilical Cord Clamping: Experiences And Perceptions Of Nurse-Midwives`And Obstetricians`At Temeke Regional Referral Hospital, Dar Es Salaam. Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Umbilical cord clamping is a crucial step during the third stage of labour that is done to separate the newborn from the placenta. The timing of umbilical cord clamping is still a controversial across the world. Despite the available evidence that delayed umbilical cord clamping is more beneficial to infants and the existence of the WHO recommendation since 2014, its implementation is still low in many countries. In Tanzania little is known about the

experiences, perceptions and factors influencing the practice regarding the timing of umbilical cord clamping. Broad objective: This study aimed at exploring the experiences and perceptions of nursemidwives` and obstetricians` regarding the timing of umbilical cord clamping at Temeke Regional Referral Hospital. **Methods:** An exploratory qualitative research design was employed, involving one focus group discussion with ten nurse-midwives. Nine (9) in-depth interviews with six nursemidwives and three obstetricians were conducted. Participants were recruited purposely. Discussion and interviews guides were used to collect data. The recorded interviews were transcribed and thematic analytical framework guided analysis of data. Results: Three themes illustrating the experiences of nurse-midwives and obstetricians emerged from the analysis. These were clamping the umbilical cord within 60 seconds, clamping the umbilical cord after cessation of cord pulsation and depending of the baby`s condition. The perceived benefits of delayed cord clamping were oxygenation, increased blood volume and haemoglobin level, bonding and nutrients and perceived risks were blood overload and infection transmission. Having good knowledge, adequate skilled human and non human resources and availability of guidelines and SOPs were factors described to enhance application of evidence on umbilical cord clamping. **Conclusion:** Despite that most of participants had experience of immediate umbilical cord clamping, nurse-midwives and obstetricians perceived that a delay of umbilical cord clamping has a potential benefit of oxygenation to the newborn requiring resuscitation. We recommend continuous and sustainable on-job training, allocation of adequate skilled human and non human resources and regular supervision as strategies to enhance application of evidence.

158.Mwamanenge, N.A. (2018). Prevalence, Associated Factors and Early Clinical Outcomea of Cute Kidney Injury Among Critically Ill Neonates Admitted at Muhimbili National Hospital, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Acute kidney injury (AKI) is an emerging public health problem globally; the burden of this condition in sub-Saharan Africa is not well documented particularly for neonates, infants, and children. Causes of AKI in neonates are several and include sepsis, and birth asphyxia; these are the leading causes of neonatal mortality globally. Critically ill neonates are at increased risk for AKI and timely diagnosis and management is crucial for their survival.

Objectives: To determine the prevalence, factors associated and early clinical outcome of AKI among critically ill neonates admitted at the Muhimbili National Hospital (MNH), Dar es Salaam.Methodology: This was a cross-sectional study conducted at the MNH neonatal unit. Participants included critically ill neonates admitted from October 2017 to March 2018. Critically ill neonates were recruited consecutively. Data was collected using a standardized structured questionnaire. Blood samples were drawn for measuring serum creatinine (SCr) at admission, at the 72nd hour and at the 14th day.

Data was analyzed using SPSS version 20.0 Univariate analysis was done using chi-square to determine the association between the different associated factors and AKI. Multivariate logistic regression was then used to determine the association between AKI and known associated factors found to be significant on univariate analysis. A p value of less than 0.05 was considered statistically significant. **Results:** A total of 378 critically ill neonates were enrolled with predominance of males 59.8% (226 participants). The median age (Inter-Quartile Range) at admission was 3 (1, 6) days. The prevalence of AKI was 31.5%. Independent predictors of AKI were neonatal sepsis (aOR 2.237, 95%CI 1.3-3.6, P=0.001), severe pneumonia (aOR3.0, 95%CI 1.0-9.3, P=0.047) and usage of gentamycin (aOR6.8, 95%CI 1.3-9.3, P=0.02). Complete resolution of renal dysfunction at the fourteenth day was seen in 83.1% while 16.9% had persistence of renal dysfunction. Participants with AKI were noted to have significantly higher mortality 70.6% as compared to those without AKI 29.4% p-value of 0.000. **Conclusion and Recommendations:** AKI is prevalent in critically ill neonates and has a high mortality rate. Early detection and management is critical in order to alleviate the morbidity and mortality associated with AKI.

159. Mwanginde, L.W. (2018) Carriage Rate Of Extended Spectrum Beta Lactamase Producing Enterobacteriaceae Among Food Vendors In Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Extended-Spectrum Beta-Lactamase (ESBL)-producing bacteria are Gram-negative bacteria that produce an enzyme, beta-lactamase that has ability to break down commonly used antibiotics such as penicillin and cephalosporins and render them ineffective for

treatment. The ESBL producing bacteria are a common cause of nosacomial and community acquired infection worldwide. Poultry meat food vendors are at high risk of contacting ESBL due contamination with infected animal products when handling them. Most of food vendors do not wear hand protective gears   when handling meat; therefore, they get direct contamination with the contaminated poultry meat. Aim: To determine the feacal carriage rate of ESBL producing Enterobacteriaceae among poutry meat food vendors in Dar es Salaam, Tanzania.**Method:** A cross sectional study conducted among poultry meat food vendor in Dar es Salaam, Tanzania.   The study included consented poultry meat food vendors from slaughterhouses and sellers of poultry meat in the streets and markets. Social-demographic data and associated factors were collected using standard structured questionnaires. Rectal swab samples were collected in transport media and processed at within 24hrs of collection. Specimen were cultured in MacConkey Agar supplemented with Ceftazidime. Identification of bacterial isolates were based on colonial characteristics, Gram stain and biochemical tests. ESBL producing enterobacteriaceae were confirmed by Double Disk Synergy method. Data were analysed using the Statistical Package for Social Sciences version 23. Association between ESBL and associated factors were analysed by logistic regression modeling. P value of < 0.05 were considered statistically significant. **Results:** Among 300 studied poultry meat food vendors, 107 (35.7%) were ESBL carriers. Majority of ESBL producing enterobacteriaceae were E. coli (78.5%) were and Klebsiella pneumoniae (21. 5%).**Conclusion:** The study demonstrates feacal carriage rate of ESBL producing enterobacteriaceae among poultry meat food vendors. Escherichia coli and Klebsiella pneumoniae were the ESBL producing enterobacteriaceae associated with food vendors in Dar es Salaam, Tanzania.

160. Mwakyusa, N. (2018). Pancreas Sonographic Findings Among Diabetic and Non-Diabetic Patients Attending Muhimbili National Hospital, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Diabetic mellitus (DM) patients have various types of morphological changes occuring in the pancreas associated with decrease in total pancreatic mass and ultrasound is the first-choice imaging modality for the pancreas. The aim of this study is to determinethe

pancreatic sonographic findings among diabetic and non-diabetic patients using ultrasound modality. There are no documented studies done in Tanzania on ultrasound assessment of pancreas in DM patients. **Methodology:** This was a cross-sectional study, hospital based study conducted at Radiology department of Muhimbili National Hospital (MNH) involving DM and non-DM patients who attended at MNH diabetic clinic. Collection of data was done through structured questionnaire which included patient's demographic characteristics, diabetes status, anthropometry measurement (weight, height and BMI) and pancreas sonographic **findings.** Calipers on screen were used to measure AP dimensions of pancreatic head, body, tail and duct while pancreas echogenicity was evaluated by comparing with liver echogenicity. SPSS version 20 was used for data analysis. P value of < 0.05 was considered statistically significant at 95% confidence interval. Ethical clearance was obtained from theMuhimbili University of Healthy and Allied Institutional Research Board (MUHAS-IRB). Informed consent was sought from the adult participant, parents or guardian for the children. **Results:** A total of 120 patients participated in this study, of which 36 were males and 84 females. Age ranged from 10-60 years old. Diabetic Mellitus was more prevalent among females than malesin both DM type 1 and DM type 2 with 29 (72.5%) and 26(65%) respectively. The study shows that, there were significant lowerAP dimensions of body and tail of pancreas (P=0.001) and (P=0.0001) respectively, in DM than in non-DM diabetes. There was strong correlation between increase in pancreatic head dimension with increased anthropometry measures (weight, height and BMI)There was a strong significance decrease in size of pancreatic body and tail with increase in duration of illness among Diabetic Mellitus patients in this study (P<0.01).Also, this study revealed there were significant changes in pancreas echogenicity, whereby DM type 2 was significantly associated with hyperechoic pancreatic head while DM type 1 was significantly associated with iso/hypoechoic pancreatic head. However, these changes in echogenicity were also age related. Patient's with infection or tumor involving the pancreas were excluded from the study. **Conclusion:** DM patients had smaller pancreas body and tail than non-DM. It was also noted DM type 1 had smaller dimensions of pancreas (head, body and tail) when compared to DM type 2 and non-DM.This study also showed increased pancreas head dimensions with increased weight, height and BMI in DM patients.The present study showed strong relation between increased duration of diabetic illness with decreased pancreatic body and tail dimensions.Also, this study showed that the pancreas head echogenicity was significantly hypoechoic and

hyperechoic in DM type 1 and DM type 2 respectively however age could be the contributing factor**. Recommendation:** 1. There is a need to consider a similar study design but with larger sample size and matched (age and sex) study population in the future2. Similar study should be conducted in different regions to get more representationof the different population ethnicity.

161. Mwenesi, M.E. (2018). Identification and Refferal of at Risk Pregnancies and Associated Factors in Kilombero District, Morogoro Region, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: The identification and referral of women with risk pregnancies is recognized as one of key interventions during antenatal care. In Tanzania, the Reproductive and Child Health card number 4 (RCH4 card) is a guideline used in screening of pregnancy in order to identify risk pregnancies early and refer to hospital where emergency care can be provided to the woman. Women's awareness of pregnancy risk factors and proper use of the RCH4 card can lead to early identification of risk pregnancies and hence timely and appropriate referral. Late or no referral due to missed risk factors has been associated with high maternal mortality. **Main Objective:** To assess identification and referral of at risk pregnancies and associated factors in Kilombero district, Morogoro Region, Tanzania.Methods: The study design wasa cross-sectional facility-based. It involved 418 pregnant women who were attending ANC in randomly selected health facilities in Kilombero district. A two stage cluster sampling technique was used to select the study sample. In the first stage, 27 dispensaries were selected randomly using simple random sampling technique and all health centres and the only hospital in the district were included. The sample size was calculated using Leslie's formula for a single proportion. For the second sampling stage, the sampling frame was the list of pregnant women registered in the facility Antenatal Clinic (ANC) register. A questionnaire with structured questions was used to interview women. Data was collected from RCH4 cards on risk factors identified and women were re-examined by the investigators to identify missed risk factors. The referral advice given was also noted. Data collected was analyzed using SPSS version 20 software where by descriptive, bivariate and multivariable analysis was done to determine independent factors influencing identification and referral of high risk pregnancies. **Results:** A total of 418 women were

recruited into the study with age range of 17- 43 years. About 32% of the women had pregnancy risk factors identified in the current pregnancy and recorded in their RCH4 cards. On re-examination, the proportion of women with pregnancy risk factors was found to be 55%. Around 44% of women had pregnancy risk factors missed. Age below 20 years and height less than 150 cm were the most missed pregnancy risk factors. Category C pregnancy risk factors were not assessed because they were not measured in most health facilities. Women who had no pregnancy risk factors during previous pregnancies had higher odds of having missed risk factors (OR=3.57, 95%CI=1.35-3.92). Similarly, women with less than 4 antenatal visits had higher odds of having missed risk factors (AOR=1.51; 95%CI=1.26-4.97). Respondents with no formal education had 3.53 higher odds of having missed pregnancy risks (95%CI=1.24-9.98) as compared to those who had primary or secondary education. Out of 132 women who were identified with risk factors on their RCH4 cards, only 44(33.3%) were provided with appropriate referral advice. Majority of women, who were identified to be at high risk during ANC visits with either age below 20 years, or five or more pregnancies and previous caesarian section delivery, were not provided with appropriate referral advice. Women with pregnancy of ≥24 weeks had higher odds (AOR=3.40; 95%CI=1.60-19.14) of receiving appropriate referral advice as compared to those with lower gestation age. Respondents with 3 or more antenatal visits had almost 5-fold higher odds of being provided with appropriate referral advice (95%CI=1.26-10.21) as compared to those with 2 antenatal visits. Compared to women with no formal education, those who had secondary level education had significantly higher odds (AOR=8.12; 95%CI=1.40-16.99) of receiving appropriate referral advice. Attending ANC at dispensary level had higher odds (AOR=1.37; 95%CI=1.17-1.79) of being provided with appropriate referral advice as compared to those seen at Health centres. None of the 30 health facilities visited had all essential equipment and supplies required for antenatal care services. Less than 50% of facilities had Hemoglobin level test, grouping and Rhesus factor, VDRL for syphilis or sugar for urine test available. Only 15(50%) of all facilities had urine albumin test available and 14(47%) of all facilities had an ambulance or an emergency transport for referred cases. **Conclusion:** There is a significant proportion of missed risk pregnancies in Kilombero district. Moreover, referral advice for women identified with risk factors is not being provided according to RCH4 guideline, with only a small proportion provided with appropriate referral advice. Antenatal Clinics do not have adequate essential equipment and supplies needed for provision of quality Antenatal care

services which will include diagnosis of the risk factors. **Recommendations:** Women should be made aware of the importance of communicating personal characteristics/obstetric history which is used to identify risk status to the health care providers. The MoHCDGEC should ensure that health providers are trained on risk screening and referral of at risk pregnancies and conduct further studies to assess the effectiveness of the RCH4 card as a guideline used to identify and refer women with pregnancy risks. The MoHCDGEC should also ensure that health facilities are well equipped and have essential supplies to enable provision of quality antenatal care risk screening services.

162. Mwita, M.E. (2018). Trauma Related Amputations of the Extremities Among Patients Treated at Muhimbili Orthopaedics Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Trauma related amputations of the extremities results in significant global morbidity and mortality. Tanzania appears to have a paucity of studies investigating trauma related amputations of the extremities**. Objective:** To determine extremity injuries leading to trauma related amputations of the extremities among patients treated at Muhimbili Orthopaedics Institute (MOI) from May 2017 to April 2018.Patients and methods: The study design was a hospital based descriptive cross sectional study, involving 62 patients who underwent trauma related amputations at Muhimbili Orthopaedic Institute (MOI) between May 2017 to April 2018. The study was set up in accordance with the Muhimbili University of Health and Allied Sciences standard using a valid questionnaire. Patients were interviewed, clinically examined and hospital medical records were reviewed. Data obtained included patients socio demographic characteristics, etiology, types of trauma related amputations and associated injuries. Data were analyzed using statistical package for social sciences (SPSS version 23) and approval for the study was granted by Muhimbili University of Health and Allied Sciences ethical committee. Permission to conduct the study was granted by the Executive Director of Muhimbili Orthopaedic Institute. **Results:** In this study there were 62 patients who underwent trauma related amputation of the extremities at Muhimbili Orthopaedic institute (MOI). The peak incidence of amputation was in the third and fourth decades of life 62.9% with 8.7% patients

being less than 20 years of age with male to female ratio of 3:1. The Majority of amputees had primary education 54.8% and were industrial workers, motorcyclist or petty trader. Trauma due to motor traffic crash 69% was the most common indication for trauma related amputations while trauma due to industrial machine was the most common cause of complete traumatic amputation of the extremities. There were 46 amputations of the lower limb and 16 of the upper limb. While injury by industrial machine was the most common cause for upper limb amputations, injury due motor traffic was most common cause of lower limb amputation. Major amputations were higher 74.2% than minor amputations. The most common level of amputation was above the knee. This constituted 37.1% of the patients representing major amputations. Toe disarticulations were common among minor amputations. **Conclusion:** Trauma related amputation of the extremities is a commonly occurs among economically active patients aged between 20-40 years. Trauma due to motor traffic crash particularly motorcycles is the main cause followed by trauma due to industrial incidences which is the most common cause of complete traumatic amputation. **Recommendation:** The observed pattern of predominantly major amputations and the relatively high morbidity associated with amputation in our environment call for appropriate policy response aimed at prevention and optimum care. My findings provide information on common injury types that can be used to support targeted approaches to reduce incidence of trauma related amputations of the extremities.

163. Mwombeki, H.L. (2018). PrevalenceOf Abnormal Pulmonary Function and Its Associated Factors Among Chronic Kidney Disease Patients Attending Nephrology Unit at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Abnormal pulmonary functions a very common complication among chronic kidney disease (CKD) patients which has been associated with clinical stages, malnutrition, inflammation, serum urea levels and duration of hemodialysis.Different studies have determined the prevalence and associated factors for abnormal lung function among CKD patients.Objective: The aim of this study was to determine the prevalence of abnormal lung function test and its associated factors among chronic kidney disease patients attending nephrology unit at Muhimbili National Hospital, Dar es Salaam.**Methodology:** This was a cross-sectional descriptive hospital

based study that was conducted among stage 3, 4 and 5 CKD patients for a duration of six months. Demographic data, laboratory parameters were recorded by using a questionnaire and spirometry findings were recorded using digital spirometer at nephrology unit at Muhimbili National Hospital.Data was analyzed using SPSS version 20.0 statistical software. Summary statistics are reported as frequencies with percentages. Associations were analyzed using the chi-square test. Logistic regression was applied to determine predictors of abnormal lung function test. A P< 0.05 value was considered as statistically significant. **Results:** A total of 110 patients with chronic kidney diseases were included. Males accounted for the majority (60%). Median age of study population was 48 years, the prevalence of abnormality of lung function was 50%(55/110), Among patients with stage V (70.9%) as compared to stage IV (23.6%) and stage III (5.4%), p<0.001.Pattern of lung function included restrictive pattern 24%, Mixed pattern 22% and obstructive pattern 4%, Stage V and IV had significant higher risk of developing abnormality in lung function compare to stage III p<0.001 **Conclusion and recommendations:** This study revealed a high prevalence of abnormality of lung function among chronic kidney disease patient, restrictive pattern was high compared to mixed and obstructive pattern.Stage V had significant higher prevalence of abnormality of lung function compare to stage III and IV, independent predictors of abnormality in lung function was gender and CKD stages.Clinician should screen for abnormality in lung function among CKD patient, to determine the type of lung dysfunction for appropriate management.

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164. Mziho, G.E. (2018). Assessment of Nurses Knowledge and Practices That Influence Pain Management of Cancer Patients at Ocean Road Cancer Institute and Muhimbili NationalHospital, In Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Pain is one of the main symptoms experienced by cancer patients and is the key reason that brings patients to the hospital. Approximately 69% of cancer patients have reported that pain limits their day-to-day life activities. Reducing the pain and suffering of cancer patients is crucial to delivering quality nursing care. **Aim:** To assess nurses' knowledge and practices that influences Pain Management in Cancer Patients at Ocean Road Cancer Institute and Muhimbili

National Hospital, in Dar es Salaam, Tanzania. So as to come up with optimal solution in cancer pain management. **Methods:** Descriptive cross-sectional study design with quantitative approach using self-administered questionnaires and checklist was used to assess nurses' knowledge and practices that influences Pain Management in Cancer Patients. Purposive sampling method was used to recruit participants. Data were analyzed by descriptive statistics such as frequency and percentage. **Results:** The study has found majority of nurses to have poor knowledge on some of the pain assessment categories; nurses failed to understand the rationale of additional anti-pain drugs when patient is on PRN basis. Failure in determining symptoms accompanied with severe acute pain, and accurate and reliable judge for the intensity of cancer pain. The study further found that nurses had poor practices of pain management in terms of pain assessment and documentations. **Conclusion:** The study found that knowledge deficits in nurses contribute to poor nurses' practices of pain management. This in turn has impact on the provision of effective pain management and optimal care given to cancer patients. **Recommendations:** Policy In order to improve nurse's knowledge and practices of pain management in cancer patients; there is a need for the MNH and ORCI to invest on emphasizing use of recommended guidelines for cancer pain assessment and management set by WHO and development of protocols and standard operating procedures.Program: They should also establish continuing education program for nurses to learn more on cancer pain management.To establish effective pain management committee involving all domains of health care professionals.Research: Conduct a similar study which should include all aspects of pain assessment, pain management and patients' satisfaction with nursing care in pain management.Nursing science: Teach nurses / student nurses on pain assessment and management to improve their knowledge and practices for pain management in cancer patients.

165. Nangi, N.M. (2018). Factors Associated with Delayed Diagnosis and Treatment of Tuberculosis in Mwanza Region Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Tuberculosis is one of major Public health challenges in the world as well as in our country Tanzania. The TB patient who is not in treatment continues to spread the disease to

the community, but when treatment starts, the organisms become weak and unable to cause infection to other people. Timely diagnosis and initiation of treatment will help to get good prognosis to the TB patient and prevent further spread of the disease. Mwanza region is the second after Dar es Salaam for having a total of 4295 active TB patients as per 2016 TB regional annual report. Aim: To determine factors associated with delayed diagnosis and treatment of TB in Mwanza region. **Methodology:** This was a Hospital based 1:1 unmatched Case-control study. The study was conducted at Sekou-Toure Regional Referral Hospital, Nyamagana District Hospital, Buzuruga Health Centre, Igoma Health Centre, Pasiansi SDA Health Centre and Pasiansi Dispensary, all in Mwanza region. The study population included all active TB patients attending at the above mentioned health facilities who were (within seven days) diagnosed and started TB treatment. The sample size was 322 calculated by Epi info applying Fleiss formula. **Results:** A total of 322 participants were enrolled of which 161 were cases. Mean age of participants was 42.2 years ±16.6 Standard deviation and males contributed 57.1%. Factors which had significant association with delay in TB diagnosis and treatment are; not knowing TB symptoms [OR=8.7, 95%CI=5.27-14.48, p=0.000], use of traditional medicine [OR=7.2, 95%CI=3.38-15.22, p=0.000], lack of formal education,[OR=1.6,95%CI=1.03-2.61, p=0.035], not knowing one's HIV status [OR=2.7, 95%CI=1.65-4.28, p=0.00004], unaffordable bus fare [OR=5.63, 95%CI=1.16-6.35, p= 0.018] and delay of sputum results [OR=2.0, 95%CI=1.01-4.03, p=0.043].**Conclusion:** Diagnostic delay leading into late commencement of TB treatment has been signified in Mwanza region, and is more likely among people who practice use of traditional medicine, lack of formal education and also who have: poor TB knowledge, sputum results delayed, low socio-economic status and unknown HIV status. The MoHCDGEC and other stakeholders should emphasize on public health education focusing on creating awareness on TB disease influencing early seeking behavior of health services in order to prevent TB transmission and deaths.

166. Ndayishimiye, P. (2018). Evaluation of Safety and Effectiveness of Carbamazepine in The Management in Newly Diagnosed Epileptic Patients in Tanzania.Muhimbili University Healthy and Allied Sciences.

Abstract

Background: Carbamazepine (CBZ) is widely used in the treatment of partial seizures and generalized tonic-clonic seizures in Tanzania. However, its safety in relation to various doses administered has not yet been reported**. Objective:** To determine the safety of various CBZ doses that gave optimal seizure clearance in newly diagnosed epileptic patients enrolled at Muhimbili National Hospital (MNH) in Tanzania.**Methods:** This was a cross sectional study which involved 112 epileptic patients attending MNH who were initiated CBZ and was naïve to the drug. Compliance was assessed by Morisky medication adherence scale-8. A structured case report form (CRF) was designed to collect study participants   demographic data, clinical information, medical history and co-medication. At baseline, medical history, previous or current medication and number of seizures were documented. The CBZ dose that was assigned to each patient was recorded. Blood for chemistry was also taken at baseline (Renal and Liver function tests) and those found to have compromised liver and kidney were excluded. The neurologist assessed the patients in terms of the types of seizures, the seizures episodes per week, previous experience on some antiepileptic drugs and current anti-epileptic drug regimen. Based on this information individualized doses for each patient were prescribed. Patients were told to come back 3 weeks later. Those who had poor seizure clearance were assigned higher doses on day 7 and the new doses was regarded as baseline and were further instructed to report back 3 weeks after the new dose. On the second visit (3 weeks later) LFTs and RFTs were taken for safety assessment and in addition number of seizures they experienced in the previous week, drug adverse reactions and seizure clearance were documented. A single trough blood sample for determination of CBZ plasma concentration was taken from each patient. A regression analysis with 95% confidence levels on the distribution of total carbamazepine serum levels in sub-range, range, and above-range in the groups of patients was studied. Association between CBZ doses, safety profile, seizures clearance and plasma concentrations at steady state were determined. Categorical variables were reported in frequencies. Patient's pharmacokinetics characteristics were summarized as medians with interquartile range and means with standard deviation. Regression analysis was used to determine the relationship between CBZ plasma concentration and independent variables. A two-tailed P-value of <0.05 was considered statistically significant.

Results: A total of 112 patients were enrolled for this study and majority (55%)   took 400 mg followed by 600 mg (24) while those who took 800 and 1000 mg per day were no more than 5

patients in total. Of these 78 (70%) reached therapeutic steady state plasma concentrations of carbamazepine (4-12 µg/ml) and supra 11 (10%) while sub therapeutic 23(20%) ranges. Overall, 60 Patients out of 112 (54%) had their seizures cleared and among them 55 patients (92%) were in therapeutic range while 4 (4/60) were supra and 1 was subtherapeutic while 32% had their seizure episodes reduced while 14% had treatment failure. The doses of 60 patients who cleared seizures were 200 mg (5 patients) 300 mg (3 patients), 400 mg (34) 600 mg (14) 800 (1) while 3 took 1000 mg per day]. Overall doses ranging 200-1000 mg per day cleared the seizure with the majority having taken 400 mg followed by 600 mg while those who were cure by the rest of the doses were few. Seizures episodes were categorized as, no seizures 35 patients, 1seizure episode 54 patients, 1< episodes<5 were 21 patients and more than 5 episodes 2 patients. Median CBZ steady state plasma concentration was 6.6 µg/ml (IQR=5.6-9.1) for participants whose seizures were controlled compared to 1.99 µg/ml (IQR1.15-8.9) in the uncontrolled seizures group. The non switch dose group had better mean CBZ steady state plasma concentration compared to switch dose group, and participants with the daily dose of 600mg had 45% increased odds of having a therapeutic steady state CBZ plasma concentration (OR= 4.46, 95% CI: 0.96-20.7, p-value=0.057). The most prominent CBZ toxicities were headache, blurred vision, dizziness and drowsiness and these were reported from patients who took 200-800mg CBZ per day. Disturbance in coordination with somnolescence appeared at highest dose in this study (1000 mg per day). Multivariate analysis showed that, the high adherence and 8 hours dosing frequency (OR=6.68, 95%CI: 1.26 − 35.28, p-value=0.025) and (OR=14.2, 95%CI: 1.42 − 141.1, p-value=0.024) respectively were statistically significant associated with CBZ therapeutic steady state plasma concentration. **Conclusion:** Carbamazepine was found to fairly safe and effective in the treatment of seizure disorders in epileptic patients at MNH. Nevertheless, based on small number of those who cleared their seizures, interventions for a close follow up to the patients are recommended. Key words: Carbamazepine, seizures, steady state plasma concentrations, treatment outcomes.

167. Ndilanha, D.J. (2018). Diagnoses of Specimens Collected Through Flexible Bronchoscopy from Patients at Muhimbili National Hospital January 2013 To November 2017.Muhimbili University Healthy and Allied Sciences.

Abstract

Background: Flexible bronchoscopy is the technique of visualizing the respiratory airway mucosa from the oropharynx to third generation branching. It is useful in the diagnosis of lung malignancies, lung infections, inflammatory conditions and interstitial lung diseases. It is more than a decade since flexible bronchoscopy was first used at Muhimbili National Hospital in routine diagnosis of pulmonary conditions. Despite its use for several years the diagnoses made have not been structurally organized and studied **Objective:** The study aimed at describing diagnoses of all specimens collected from patients who underwent bronchoscopy at MNH in the past five years from January 2013 to November 2017. **Methodology:** A retrospective hospital based cross sectional study was conducted among 451 patients and 360 patents had sample collected for analysis. Data collected included demographic and clinical variables. Descriptive statistics were used to summarize the study findings **Results:** The number of flexible bronchoscopy increased from 57 cases in 2013 to 180 cases in 2017, a more than threefold increase. Bronchoscopic samples studied included lung biopsies which accounted to 48.3% (174/360) and fluid samples (bronchioalveolar lavage and bronchial washings) which accounted to 80.8% (291/360). Adenocarcinoma was the most common lung cancer among all lung histological subtypes accounting to 33.9% (59/174). Generally, 64.3% (112/174) of all lung biopsies were malignant. Of 76 fluid sample sent for bacterial culture and sensitivity, 11/76 (11.8%) were culture positive, 49/76 (64.5%) did not grow any bacteria, 18/76 (23.7%) isolated normal flora. A total of 6 (10.7%) out of 56 samples which were sent for M. tuberculosis screening through GeneXpert MTB/RIF technology tested positive for M. tuberculosis**.** **Conclusion:** Lung tumor was the leading indication for bronchoscopy. Adenocarcinoma was the most common malignancy among others. Bacterial infections were among the reported findings in cytological samples.

168. Ndolichimpa, N.C. (2018). Ethical Factors, Socio-Cultural Values and Women Perceptions Towards Voluntary Non Remunerated Blood Donation in Dar Es Salaam Urban Cohort Study (Ducs) Ilala, Tanzania.Muhimbili University Healthy and Allied Sciences.

Abstract

Background: Voluntary non remunerated blood donation is the process of giving blood or blood components out of free will without receiving cash or anything which can be considered as the substitute of money. The non-remunerated blood donation method is ethically preferred because it demonstrates individual autonomy. Donors reach that decision after being fully educated and informed of benefits and risk of blood donation (BD) since no payment is provided to the volunteers. There are several campaigns of voluntary non remunerated blood donation, in Tanzania under the National Blood Transfusion Services (NBTS). The campaigns are conducted in schools, markets, churches, mosques and temples. Despite of those initiatives the response towards voluntary non remunerated blood donation does not satisfy the demand of blood.Objective: This study aimed to explore ethical factors,socio-cultural values and women perceptions towards voluntary non remunerated blood donation through the Dar es Salaam Urban Cohort Study (DUCS) in Ilala municipality.**Methodology:** This study used qualitative research, with explorative study design to find out ethical, socio-cultural issues and women perceptions towards voluntary blood donation amongst households in the Dar es Salaam urban cohort study (DUCS), in Ilala municipality Dar es salaam, Tanzania. Focus groups guides used specifically for data collection. Guides used were semi structured for more exploration of information. Thematic analysis method used to analyze data collected. **Findings:** This study revealed that ethical reasons associated with voluntary non remunerated blood donation are altruism, sympathy, social recognition and compensation. Reasons which were found to hinder volunteerism in blood donation werelack of trustfulness of healthcare providers and lack of community involvement. When compared with women, fear was found to hinder women from voluntarily donating blood. Culturally blood has value this hinders some donate voluntarily. **Conclusion:** In order to attain 100% voluntary non-remunerated blood donation by 2020 the ethical factors which motivate blood donors should be promoted whereas those which hinder donation should be addressed. Women have misconceptions towards voluntary blood donation hence education is needed to eradicate their myths.

169. Nicholaus, D.S. (2018). Decision to Have a Child with Hiv Knowledge: A Study Among Hiv Positive Women Attending Pmtct Clinics in Kinondoni Municipal, Tanzania.Muhimbili University Healthy and Allied Sciences.

Abstract

Background: The national HIV prevalence showing women (6.3%) in Tanzania is higher compared to that of men (3.9%). Transmission of HIV from mother to child accounts for over 90% of all HIV infections in children aged below 15 years.Pregnancy rate has increased among Women Living with HIV (WLHIV) from 28% in 2014 to 47% by 2017 in Dar es Salaam city despite the country's effort to integrate family planning services in care and treatment clinics.The higher pregnancy among WLHIV could be translated as possibility of increasing vertical transmission to the children born from these women.**Aim:** To determine the factors that influence with decision to have a child among HIV positive women attending PMTCT clinics in Kinondoni Municipal.**Methods:** A cross-sectional descriptive study was conducted from May to June 2018. A structured questionnaire was used to interview HIV positive women attending PMTCT clinics. All WLHIV attending the selected PMTCT clinics and happen to be available at the time of data collection were interviewed. Couples' socio-economic-demographic characteristics, external factors, and risk taking behavior associated with decision to have a child were explored. Sample size of approximate 426 women was used and simple random sampling technique was used to select the PMTCT clinics in this study. Ultimately twelve PMTCT clinics were selected depending on the average number of 35 clients per day in these PMTCT sites. All enrolled HIV positive women attending the twelve (12) selected PMTCT clinics in Kinondoni district were selected to participate in the study. Data was analyzed using STATA version 15. Chi-square test was used to test the significance of associations for categorical variables. Independent variables which were significant at $p < 0.20$ in the univariate analysis were included in multivariable logistic regression model. **Results:** A total of 426 WLHIV were interviewed. Participants' age ranged from 18 years to 47 years old. Mean age of the respondents was 27 years (SD $\pm$ 0.22). About seventy-two percent (307) of the respondents had made decision on their own to have a child. Among those who decided on their own to have a child about three quarter (73.5%) had disclosed their HIV status to their partners and more than two thirds (72.7%) of them knew the HIV status of their partners. About three quarter (178) of those who had disclosed their HIV status and knew the HIV status of their partners had made decision on their own to have a child. About two in ten (10) of the respondents who had disclosed their HIV status but did not know the HIV status of their partners did not make decisions on their own to have a child. The study found that WLHIV who were married or cohabiting were more likely to decide

on their own to have children than those who were not married (p<0.05). Participants with secondary and higher education and those with partners aged 30 to 34 years were more likely to decide on their own to have a child. All of the participants who aged 40 years and above reported to have decided on their own to have a child. WLHIV who had experienced stigma, (66.2%) decided on their own to have a child. About seventy-eight percent (77.9%) who made decision on their own reported likely to refuse sex if partner refused to use condom whereas twenty-two (22%) who did not decide on their own to have a child reported likely to refuse sex if partner refused to use condom. About three quarter (76.3%) who made decision on their own reported 'not risky' to affect your HIV negative partner when you have unprotected sex even if you are on ART. About seventy-three percent (72.7%) of the respondents who reported likely to expect not to affect a negative partner had decided on their own to have a child. **Conclusion:** The study demonstrated WLHIV can make decision on their own to have a child and disclosure of HIV status affects decision to have a child. **Recommendation:** Strengthen health education on the importance of disclosure of HIV status and strengthen strategies for disclosing the HIV status to sexual partners.

170. Ngogo, F.A. (2018). Laboratory Confirmed Salmonellosis and Associated Factors Among Patients Presenting with Typhoid Fever at Njombe Regional Hospital-Tanzania.Muhimbili University Healthy and Allied Sciences.

Abstract

Background: Salmonellosis remains an important public health problem globally. The disease is among the leading causes of morbidity and mortality in developing countries where clean, safe water and sanitation is a huge problem. In Njombe, there was drastic increase in the number of salmonellosis cases reported to the Ministry of Health through Health Management Information System (HMIS) between 2015 and 2016. Despite this little is known on the epidemiology of this disease in Njombe. This study was conducted to determine prevalence of salmonellosis, susceptibility patterns and factors associated with salmonellosis. **Methods:** A cross-sectional study was conducted from December 2017 to February 2018. Patients clinically suspected with typhoid fever attending Njombe Regional Hospital were systematically selected and enrolled into a study. Stool culture was performed on XLD Agar but also widal agglutination test results were

reviewed. Bacterial isolates were identified using biochemical tests and serotyping. Antimicrobial susceptibility testing (AST) was performed using the Kirby-Bauer disc diffusion method. Structured questionnaire inquiring demographic and associated factors information was administered to eligible participants who gave written informed consent. Data were analyzed using Epi Info software version 3.5.4. **Results:** The prevalence of Salmonella among 297 study participants was 16.5% by stool culture method however, 32.9% of the blood taken was reactive for Widal agglutination test and those with titer of ≥1:160 were 15.5%. Of the 36 isolates whose AST were performed, 100% were sensitive to ceftriaxone and ciprofloxacin, however 27.8% and 100% were resistant to cotrimoxazole and ampicilin respectively. The odd of being diagnosed with salmonellosis was high among participants who were: employed (aOR=3.8, 95%CI=1.53-9.40), using river/wells water (aOR=2.2, 95%CI=1.07-4.45), drinking untreated water (aOR=2.6, 95%CI=1.21-5.48) and eating at restaurant (aOR=3.4, 95%CI=1.28-8.93). History of abdominal pain (aOR=8.5, 95%CI=1.81-39.78) and diarrhea (aOR=2.3, 95%CI=1.12-4.68) had significant association with being diagnosed with salmonellosis. **Conclusion:** Prevalence of salmonellosis in Njombe is high and is associated with eating at restaurant, drinking untreated water, using wells/river water and being employed. Both typhoidal and non typhoidal Salmonella have developed resistance to some antibiotics. Regional Health Management Team should ensure continuous public health education and regular AST is performed in health facilities in order to control and prevent salmonellosis.

171. Ngonyani, C.H. (2018). Visual Outcome of Manual Small Incision Cataract Surgery in Adult Patients at Muhimbili National Hospital.Muhimbili University Healthy and Allied Sciences.

Abstract
Background: Cataract is the opacification of the crystalline lens of the eye, which causes progressive decrease in visual acuity, eventually leading to blindness and the precise treatment of cataract is surgical extraction. Cataract extraction is one of the common surgical procedures performed worldwide. Despite large number of cataract surgeries being performed, poor surgical outcome results in poor vision, therefore contributing in failure to reduce cataract blindness. In order to achieve better visual outcome, monitoring systems of cataract surgery is important to be

established. **Aim:** To assess visual outcome in adult patients who underwent manual small incision cataract surgery at Muhimbili National Hospital.**Methodology:** This was a hospital based observational descriptive case series of consecutive patients who underwent small incision cataract surgery at Muhimbili National Hospital from May 2017 to January 2018. A total of 190 patients who met the inclusion criteria were recruited into the study. The patients were examined on the1st day, 7th day and 6th weeks post operatively. Pre-operative and post-operative visual acuity was recorded and categorized according to WHO criteria of visual outcome. Demographic characteristics, post-operative refraction, intra-operative and post-operative complications were recorded. **Results:** The mean age and standard deviation of the study participant was 64.2(11.9) years. Of 169 eyes analyzed all patients were blind pre-operatively. Uncorrected visual acuity was >6/18 in 23.7% on day one and improved to 37.3% at 6 weeks. Uncorrected visual acuity was <6/60 in 28.4% on day one and reduced to 19.5% at 6 weeks. About 160(94.7%) eyes were refracted, the best corrected visual acuity was 6/18 or better in 110(65.1%) eyes and visual acuity <6/60 in 29(17.2%) eyes at 6 weeks. The intra-operative complication rate was 26.1% with posterior capsule tear accounting for 13.6%. Non glaucomatous optic atrophy was the commonest ocular comorbidity accounting for poor vision in 13.4% eyes on the six week after cataract surgery. **Conclusion:** Majority of the eyes which underwent cataract surgery at Muhimbili National Hospital attained good best corrected visual outcome (BCVA). Residual refractive error was the main reason of not attaining good outcome at 6 weeks. The major causes of poor visual outcome were the presence of ocular comorbidities and surgical complications. **Recommendations:** Good pre-operative evaluation by routine pupil light reflex testing to all patients. Availability of wide variety of IOL powers and proper biometry technique should be emphasized to reduce the residual refractive error. Regular monitoring of cataract outcome will aid in identifying gaps and improving the visual outcomes.

172. Ngulubayi, F.J. (2018). Prevalence and Factors Associated with Escherichia Coli O157: H7 Isolated from Under-Five Children Presenting with Diarrhea in Morogoro Region.Muhimbili University Healthy and Allied Sciences.

Abstract

Background: Escherichia coli O157:H7 strain is more common causative agent of diarrhea and are more resistant to majority of antibiotics like 3rd generation cephalosporin this facilitate the bacteria to continue multiplying and become more difficult to treat and thus cause high morbidity and mortality especially in children. **Objective:** To determine the Escherichia coli O157:H7 strain, antimicrobial susceptibility testing patterns and associated factors from children under five presenting with diarrhea in Morogoro Region. **Method:** A cross sectional study was conducted at Morogoro Regional Referal Hospital Diarrhea ward, Uhuru, Sabasaba and Mafiga Health Center in Morogoro Municipality. Questionnaire was used to collect information on social demographic characteristics and medical history of the children and mother or guardian. Stool specimen was collected from children as well as from their dippers and was cultured on MacConkey sorbitol for screening the Escherichia coli O157:H7 which were confirmed by serology test, drug susceptibility testing (DST) was performed. Data were analyzed using EpiInfo version 3.5.7 and 7. Bivariate and multivariate analysis was performed. Data were presented as odds ratio with 95% confidence intervals. A p-value of <0.05 was regarded as statistically significant. **Results:** A total of 287children under five years presenting with diarrhea were recruited from Morogoro Municipality to participate in the study. Of these, 151(52.6%) were male children. The median age was 13months (range 1 to 59). Of 287 stool samples, Escherichia coli O157:H7was isolated in the prevalence was 2.8%. Non education to parent/care giver, non tape water use, not washing hands after visiting toilet, age of a child>24, number of sibling >5per household were found to be independently associated with Escherichia coli O157:H7 in under five children. **Conclusion:** The prevalence of O157:H7 Escherichia coli in under five children were found to be low. High proportion of ESBL Escherichia coli was detected as well and making the use of commonly used antibiotics unsuitable for empiric treatment against diarrhea infection as all these isolates are resistant to most of antibiotics, health education on hygiene practices among parents/care giver, provision of clean water and routine diagnosis of Diarrheagenic Escherichia coli (DEC) and other diarrhea infections among under five are highly recommended to control and prevent spreading of resistant strains.

173. Nsato, S.B. (2018). Computed Tomography Pulmonary Angiography Findings in Clinically Suspected Pulmonary Embolism Patients at Muhimbili National Hospital Tanzania.

Abstract

Background: Pulmonary embolism is a blockage in the pulmonary artery, the blood vessel that carries blood from the heart to the lungs. The blockage is commonly caused by a blood clot, and is potentially life threatening because it can prevent blood from reaching the lungs. Diagnosing or excluding pulmonary embolism on clinical signs and symptoms is difficult since most of these clinical manifestations are nonspecific. Therefore, the need for accurate diagnostic tests to exclude or confirm pulmonary embolism is apparent. As a matter of fact, Computed tomography pulmonary angiography (CTPA) is becoming the Gold standard of care at many institutions for the evaluation of patients with suspected pulmonary embolism.The study assesses the imaging findings on Computed tomography pulmonary angiography (CTPA) in patients clinically suspected of PE in relation to demographics, risk factors and clinical presentation.Broad Objective:To assess CT Pulmonary Angiography (CTPA) findings among patients clinically suspected of pulmonary embolism attended CT UNIT at MNH Tanzania from August to March 2018.**Methodology:** A cross-sectional hospital based descriptive study conducted at the Radiology Department, Muhimbili National Hospital Daresalaam Tanzania from August 2017 to March 2018. The study included patients who were referred by clinicians with a clinical suspicion of pulmonary embolism (PE) and presented to Radiology department for Computed tomography pulmonary angiography (CTPA). Structured questionnaires were used for recording patient's demographics, clinical information, and imaging findings. The study was performed on 128 slices (64 slices each), images interpreted by the researcher and a consultant radiologist. Data analysis conducted using Statistical Package for Social Sciences (SPSS) version 20. Statistical Association was done by using cross tabulation, and Chi-square test used to compare proportions. P value of < 0.05 was considered statistically significant. **Results:** A total of seventy-four patients participated in this study, of which 27(36.5%) were male and 47(63.5%) female. The patients' mean (SD) age was 51.2($\pm$15.8) years old, ranges from 15-80 years old. Majority of the patients were in the age group of 61 years old and above 25(33.8%). Hemoptysis was found to be highly related with PE, 12(85.7%, P=0.0001). Although dyspnea was not

statistically significance, this parameter showed high magnitude, and it was found in all 25 patients diagnosed with PE through CTPA. There was no statistical significant relationship between PE risk factors; immobilization 24 (33.8%, P=0.987), deep venous thrombosis 1 (33.3%, P=0.987), pregnancy 1 (33.3%, P=0.987), and pulmonary embolism (PE).The Multi detector computed tomography pulmonary angiography (DCT-PA) radiological findings in acute pulmonary embolism patients which were strongly significant included, central filling defect which was 6 (100%, P=0.0001), and acute angle intraluminal filling defect 5(100%, P=0.0001). Another finding was complete occlusion 3(100%, P=0.001). In addition, there was strong significant relationship between chronic PE with linear filling defect 15 (93.8%, P = 0.001) and eccentric filling defect 13 (100%, P = 0.0001). **Conclusion:** Twenty-five (33.8%) out of 74 patients were found to have PE in this study. CTPA revealed significant radiological findings in both acute and chronic pulmonary embolisms. MDCT-PA was found to be a useful diagnostic tool in the work – up of patients suspected of having PE hence ensures a proper diagnosis and appropriate management to patients, thus saving many patients lives**. Recommendations:** CTPA is the gold standard of care for evaluation of patients with suspected pulmonary embolism. I recommend CTPA to be requested to all patients suspected with PE, as CTPA significantly shows radiological finding in acute and chronic PE. Since there are limited documentations about CTPA in diagnosing PE in developing countries including Tanzania, it is therefore vital to understand this study to assess the diagnostic role of CTPA in the management of patients with suspected PE. Moreover, we urge that findings from this research be able to provide baseline database for Researchers wishing to conduct a similar study in developing countries, particularly sub-Saharan Africa.

174. Nyagabona, S. K. (2018). Management Of Wilms' Tumor In Tanzania: Patient Profile And Treatment Outcome Of Tailored Protocol At Muhimbili Pediatric Oncology Unit.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Nephroblastoma also known as Wilms' tumor (WT), is an embryonal type of renal cancer, it is one of the most common solid malignant neoplasms in children. It accounts for approximately 90% of all paediatric tumors of the kidney. In Tanzania WT ranks second among

the most frequently diagnosed childhood cancers at the Muhimbili national referral pathology laboratory. Due to late presentation in our setting an intensified treatment protocol was established aiming to give an aggressive neo-adjuvant treatment, aimed for giving an added gain in terms of down-staging of the Tumor at surgery; hence achieve a more successful Tumor resection which in turn can reduce intensity of post-operative chemotherapy and the need for radiotherapy. **Aim:** To evaluate the epidemiology and disease profile of WT at our setting, assess treatment outcome post treatment with intensified treatment protocol, assessing 12 months survival and evaluate toxicity profile of the intensified treatment protocol. **Method:** This was a cross sectional study. Targeting children and adolescents diagnosed with WT, and treated using tailored treatment protocol at Muhimbili National Hospital. A sample size was 82 patients, with convenient sampling method was used to include all available data of patients fitting the inclusion criteria during the study period. **Results:** Of the enrolled 82 patients; majority were female with median age of diagnosis being 3 years with an Interquartile range (IQR): 2.5. 77% of patients presented less than 6 months after initial symptoms at MNH for diagnosis confirmation and definitive treatment. 71% of the patients presented with average tumor volume > 500mL. Loss to follow up was found to be about 20%. More than half (54%) of tumors were reported as completely excised without any tumor spillage or adhesions. **Conclusion:** An aggressive and prolonged treatment protocol for patients with larger tumors on presentation has benefit of down staging and improving surgical outcome but with an added tolerable risk of toxicity.

175. Ooga, L. (2018). Maternal and Fetal Outcome of Abruptio Placenta Among Women Admitted at Muhimbili National Hospital; Case Series.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Placental abruption accounts for 20–25 % of antepartum haemorrhages, and it is also associated with an increased risk of disseminated intravascular coagulopathy (DIC), severe maternal shock, renal failure, postpartum haemorrhage and maternal death. It has also been associated with adverse fetal outcomes including preterm birth, birth asphyxia, fetal distress, low apgar score, admission to neonatal intensive care unit, stillbirth and perinatal death. **Objective:** This study aimed at determining maternal and fetal outcomes of placenta abruption at Muhimbili

National Hospital (MNH). **Methodology:** A retrospective case series study was carried out in the department of Obstetrics and Gynecology, MNH from 1st January 2015 to 30th June 2017. All women with the diagnosis of placental abruption and having more than 28 weeks' gestation were included in the study. Case notes of 262 women were available for analysis. Data were collected using a checklist and results were analyzed and presented into frequencies and percentages. **Results:** Out of 23,459 admissions, 363 had a diagnosis of abruption placenta. Therefore 15 per 1000 pregnant women developed abruption placenta during the study period. Among patients who developed abruption placentae; one-quarter developed primary post-partum hemorrhage (PPH), nine out of ten developed anemia, more than half delivered by cesarean section and four out of five needed blood transfusion. Case fatality rate was 1.1%. The most common obstetric conditions among women with abruption placenta were pre-eclampsia and premature rupture of membranes. Regarding fetal outcomes; two-thirds resulted into stillbirth, more than one-half of the infants born alive needed intensive care unit admission and 15 died within the first week of life. **Conclusion:** Abruptio placenta is associated with adverse maternal and fetal outcomes. Early detection and prompt management will reduce morbidity. Joint care by obstetricians, intensivists and neonatologists is required for better maternal and fetal outcome.

176. Ogola, E.J. (2018). The Pattern of Urologic Injuries and Treatment Outcomes in Obstetric and Gynaecologic Surgeries as Seen At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: It is estimated that0.5% to 10% of urologic injuries are caused by obstetric and gynaecologic surgeries worldwide. However, there is paucity of information regarding the magnitude, pattern and treatment outcome of urologic injuries occurring as a result of obstetric and gynaecologic surgeries in Muhimbili National Hospital. This study is designed to describe the magnitude, pattern and treatment outcomes of iatrogenic urologic injuries complicating obstetric and gynaecologic surgeries in Muhimbili National Hospital. Broad **Objective:** To determine the magnitude, pattern, treatment and treatment outcomes of urological injuries after obstetric and gynaecological surgeries as seen at Muhimbili National Hospital. **Methodology:** This was a cross sectional study conducted in departments of urology and obstetrics and

gynaecology of Muhimbili National Hospital. The study population included all females who were diagnosed to have urinary tract injury in MNH following obstetric orgynaecologic surgery done in MNH or referred from other hospitals for 10 years from June 2006 to May 2016. Data was collected from patient files using structured data sheet. **Results:** During the 10 years of the study, there were a total of 1083 patients aged 18 and above with urologic injuries seen at MNH. Among these, those that met inclusion criteria were 52 (4.8%). Among these, 27 (45%) had bladder injuries, 29 (48.3%) had ureteric injuries. The total urologic injuries were 60 because 2 patients had both ureteric and bladder injuries and 2 patients had both bladder and urethral injuries Fourteen (51.9%) of bladder injuries were caused by laceration; 2 (7.4%) by transection, 1 (3.7%) by devascularization. There were 9 (33.3%) bladder injures with unspecified causes. Ligation of ureter(s) caused 10 (34.5%) of ureteric injuries followed by transaction and lacerations having caused 6 (29.4%) and 5 (20.7%) respectively. Most of mechanism of ureteric injury was unspecified in 12 (39.1%) cases. T hirteen of bladder injuries were managed by bladder repair, 7 cases by VVF repair; 5 cases by urethral catheterization and 2 cases were not yet repaired. Twenty-two of ureteric injuries were managed through ureteric reimplantation, 2 injuries by ureterostomy (ureteric exteriorization). Other ureteric injuries were managed by nephrostomy (1), ureteroureterostomy (3) and catheterization (1). Post management repairoutcomewas good in 19 of bladder and 25 of ureteric injuries. It was fair in 6 bladders and 3 ureteric injuries and was poor in 2 bladder and 1 ureteric injuries. **Conclusions and recommendations:** Urologic complications following gynaecological and obstetric surgeries are common in MNH at a prevalence of 4.8%. These iatrogenic injuries to the urinary tract occur more common during trans-abdominal hysterectomies and caesarean sections. Most of these injuries (70.3%) seen at MNH were referral from non academic hospitals. Surgeries done by Assistant Medical Officers contributed to 53.6% of these injuries which is twice than injuries caused by specialists and medical officers/registrars altogether. Post treatment/management outcomes were good for these injuries. However, documentation and reporting was found, in this study, to be inadequate. It is therefore recommended from this study that: There is a need to improve documentation in case notes of injuries in theatres so that accurate data/information may be available when needed. Obstetrics and gynaecolocal surgeries are highly specialized surgeries that should be done by surgeons who have acquired good training on surgical skills and relevant anatomical relations of pelvic organs. Assistant Medical Officers should not perform such

surgeries. Hysterectomies are the main surgery that led to many urologic injuries (both bladder and ureteric injuries). Extra care should be practiced while OBGY surgeons perform such surgeries to avoid causing such urological injuries. The government through Ministry of Health, Social Welfare, Gender and Children should train more medical officers and OBGY specialists and distribute them in non teaching hospitals. Most of bladder injuries are originating from emergency obstetric surgeries. It is clear that knowledge of correct protocols and adherence to precautions are important and should be maximally practiced while emergency obstetric surgeries are performed to avoid bladder injuries.

177. Omari, K.A. (2018). Association of Intimate Partner Violence and Depressive Symptoms Among Adults Attending Outpatient Department at Mnazimmoja Hospital, Zanzibar. Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Depression is an overwhelming disease burden affecting about 350 million people worldwide, and the leading cause of disability globally affecting about one in six people in their lifetime. Depression has been shown by different studies conducted from different geographical areas to be associated with low socioeconomic status, female gender, low academic achievements, unemployment and domestic violence lead by IPV. IPV is prevalent in different socioeconomic areas, with higher ranges in low socioeconomic areas and low ranges in higher socioeconomic areas.IPV and depressive disorder are linked in different studies of women in both low and high income settings. Little is known about the link of IPV and depression in Tanzania. Main objective:

To determine the association of intimate partner violence and depressivesymptoms, among adults attending general OPD at Mnazi Mmoja Hospital in Unguja, Zanzibar. **Methodology:** A hospital based cross sectional study design utilizing quantitative dataanalysis. Total sample sizes of 353 subjects were systematically sampled and interviewed using semi structured questionnaire. Data collected included socio-demographic characteristics, clinical diagnosis, depressive symptoms (PHQ-9) and experiences of IPV (CTS). Analysis was done using SPSS version 20 of which descriptive statistics were used for summarizing data, chi-square to asses variation of which the resultant p value of <0.2 entered multivariate analysis. PHQ-9 scores for severity of depressive

symptoms. **Results:** A total of 353 participants were recruited in the study, of which 226 (64%) werefemale. The age of participants was ranging from 18 to 96, with mean age of 34.63 and standard deviation of 14.48. Prevalence of IPV was 37.4 for current IPV (past 1 year) and 39.7 for the life time. The common type of current IPV was emotional. Being married was found to have less likelihood of self reported experience of IPV, where young age of the participants was found to be associated with high chances of experiencing IPV. Prevalence of depressive symptoms was found to be 59.2%. Low level of education and experiences of IPV was strongly associated with high chances of having depressive symptoms. **Conclusion:** Prevalence of IPV was found to be higher among adult patients attending Mnazi Mmoja Hospital in April, 2018. Being single and young age was found to associate with experiencing IPV. Prevalence of depression was found to be 58.9%, and low level of education and experiencing IPV was found to be highly associated with development of depression. This has also been seen in other countries of Sub Saharan Africa like Ethiopia, Nigeria and the globe. **Recommendations:** Screening for early detection of IPV is of importance so as to prevent development of depressive symptoms. education about IPV and depression by stakeholders to raise awareness is recommended. To use the study findings as a back bone in conducting longitudinal studies which could help in providing causal relationship between IPV and depression at large and lastly conducting qualitative study so as to get in-depth nature of acts of IPV and distribution of subtypes.

178. Osati, E.F.O. (2018). Patient-Reported Health Outcomes Among Hiv-Infected Patients On Anti-Retroviral Therapy (Art) At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: The introduction of ART in the management of HIV/AIDS has dramatically reduced HIV morbidity and mortality; and has now transformed HIV/AIDS into a chronic illness. Patients reported health outcomes (Health-related quality of life (HRQoL), care satisfaction, and adherence) are now a high priority of long-term management of HIV/AIDS individuals. Patient reported health outcomes are as important as clinical and laboratory outcomes in evaluating the wellbeing of HIV patients in care. There are plenty of literatures on

clinical wellbeing of HIV-infected patients in Tanzania. On the other hand, there is paucity of data on patient reported health outcomes of HIV-infected patients in care and treatment in Tanzania. Therefore, this study aimed at assessing patients reported health outcomes among HIV/AIDS patients who were receiving care and treatment at Muhimbili National Hospital (MNH). **Methodology:** This was a hospital based descriptive cross sectional study among People Living with HIV/AIDS (PLWHIV) aged ≥18years and who were on standard ART treatment for more than six months at MNH Care and Treatment Centre (CTC). Socio-demographic data were collected using Swahili structured questionnaires. HRQoL was assessed using the EuroQol 5 Dimension 3 level (EQ-5D-3L) questionnaire. Adherence was assessed retrospectively based on a 7-day recall as used in Adult AIDS Clinical Trials Group (AACTG) follow up questionnaire. Satisfaction was assessed using patient Satisfaction Questionnaire Short-Form (PSQ-18). Patient's HIV viral load (VL) records which were not older than 6 months at the time of data collection were recorded from their files. Patients whose VL tests were ≥6 months had their blood samples collected and tested for the current VL. **Results:** A total of 800 HIV patients were recruited into the study; majority were female 592/800 (74%) and in the age group 30-59 (680/800, (85%). Overall 606 (75.75%) of participants reported no problem in all 5 dimensions of EQ-5D-3L (mobility, self-care, usual activities, pain/discomfort and anxiety/depression). Detectable VL was associated with problems across all the 5 dimensions. Detectable viral loads predict lower HRQoL {OR 1.7, 95% CI [1.19 - 2.45]}. The overall mean score for general satisfaction was 3.84 ± 0.77, Cronbach's alpha = 0.72 which was satisfactory and acceptable. Satisfaction levels was highest in communication (4.28 ± 0.76 Cronbach's alpha = 0.73 satisfactory and acceptable) and lowest for financial aspects (mean score 3.10 ±0.65 Cronbach's alpha = 0.69, unsatisfactory and questionable). Among those with detectable VL, 119(56.67%) were satisfied with care and 10(4.76%) strongly satisfied. Majority 693/800 (86.6%) reported high antiretroviral drug adherence of ≥95%. Significantly majority of participants with high adherence 522(88.47%) had undetectable VL, P –value < 0.001. Among patients with low adherence, 27(25.2%) simply forgot to take medications, 24 (22.4%) reported a lack of bus fare to attend the clinic, P-value < 0.001. **Conclusion and recommendations:** Majority of study participants reported good quality of life in all aspects assessed. A satisfaction level was highest in communication and lowest for financial aspects. Significantly number f participants with high adherence had undetectable VL. Patients reported health outcome is a

newly emerging technique for assessments of treatment outcomes. These study findings have complemented the clinical markers of HIV disease progression/ well-being and therefore we recommend routine assessment of patient reported outcomes. Patient reported health outcomes are highly recommended to be assessed routinely in determination of the overall patients' wellbeing at Muhimbili National Hospital Care and treatment Centre (CTC) and all other CTCs in Tanzania.

179. Pallangyo, A.E. (2018). Immuno - Expression of P16 in Anal and Anorectal Premalignant and Malignant Mucosal Lesions at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Globally, the prevalence of anal malignancies is increasing with the increasing incidence of squamous cell carcinoma. Anal carcinoma occurs more frequently in blacks as compared to whites and at younger ages with female predominance. High risk HPV have been reported to play an important role in the transformation of normal mucosa to premalignant lesions and later to invasive carcinoma. However, HPV DNA detection requires the use of fresh tissue biopsies and advanced laboratory techniques such as PCR, which may not be readily available for routine application in low and medium income settings. Detection of HPV using paraffin embedded tissue specimens may be done by using p16 antibody, which is considered to act as a surrogate marker for high-risk HPV infection. The findings have been used to develop preventive and treatment guidelines against HPV infection. Furthermore, p16 is a tumor suppressor protein that exerts its effect by controlling cell cycle progression from G1 to S phase. It works by binding to CDK-4, -6 which in turn prevents phosphorylation of Rb protein so that cell cycle doesn't proceed. Various studies have reported an over-expression of p16 in great amounts in epithelial premalignant and malignant lesions of cervix, oropharynx and anogenital region associated with high risk HPV. Nevertheless, there is scant information on immuno-expression of p16 in premalignant and malignant anal and anorectal tumors in Tanzania, a knowledge that may form bases for primary preventionof these lesions.**Objective of the study:** To determine the expression of p16 immunostain in anal and anorectal premalignant and malignant mucosal lesions at Muhimbili National Hospital.Materials and methods: This was a

laboratory based cross-sectional study involving 222 cases diagnosed with anal and anorectal epithelial premalignant and malignant lesions from January 2012 to December 2016 at Histopathology Department of MNH of which demographic as well as histological characterization was established after a review of each case. Using a stratified random sampling method, 73 cases were selected for p16 immunohistochemistry based on percentage of each histological diagnosis of premalignant and malignant anal and anorectal mucosal lesions. p16 immuno-expression was considered positive when tumor cells expressed diffuse staining in the cytoplasm and the nucleus. Positive p16 expression was correlated with histological diagnosis and histological differentiation of the tumor. Data management was done using SPSS computer software version 20. Analysis of demographic data was by frequency and percentages, while association between categories was assessed by chi-square table. A two-tailed p value ≤0.05 was considered significant. **Results:** There were 75 (34%) males and 147 (66%) females with male to female ratio of 1:3. The age ranged from 20 to 98 years with mean age of 50+14 years, median of 50 years and mode of 60 years. In about two thirds of the cases, 142 (64%) of the biopsies were from the anus while 80 (36%) were stated to originate from anal-rectal region. Histologically 113 (51%) patients had squamous cell carcinoma, 105 (47.3%) had adenocarcinoma, 2 (1%) patients had sebaceous carcinoma and 2 (1%) had low grade anal intraepithelial neoplasia (LGAIN). HIV status was reported in 19 out of 222 cases (8.6%) of which all were HIV positive. In regard to p16 immunohistochemistry staining, 32 out of 36 cases (89%) with squamous cell carcinoma were positive, whereas only 3 out of 33 (9%) cases of adenocarcinoma, 1 of the 2 sebaceous carcinomas and 1 of the 2 LGAIN expressed p16 protein positivity. **Conclusion:** Squamous cell carcinoma was the most frequent encountered epithelial tumor of anal and anorectal region and a greater proportion of it expressed p16 protein and hence most probably containing high risk HPV. p16 immuno-expression in one sebaceous carcinoma and in one LGAIN was not statistically significant due to small number of cases obtained. **Recommendation:** Since HPV infection is preventable, assessment of HPV infection in tissues by p16 IHC can be employed to assist in the prevention and management of anal and anorectal mucosal lesions similar to cervical cancer.

180. Ramadhani, J. (2018). The Feasibility and Yield of Hiv Screening Among Adult Trauma Patients Attending Emergency Department at Muhimbili National Hospital Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Human Immunodeficiency Virus (HIV) remains the major global health problem, affecting over 36.7 million people, causing over 1.1 million deaths in 2015. In Tanzania, the prevalence of HIV was estimated to be 4.8% by the end of August 2017. The World Health Organization (WHO) and Tanzanian National Guidelines for HIV and acquired immune deficiency syndrome (AIDS) management, require provider initiated testing and counseling for HIV at the point of contact, however there has been no study done in Tanzania looking the feasibility of routine HIV testing and its yield in among acutely ill patients in the Emergency Department (ED).**Aim of the study:** The objective of the study wasto determine the feasibility and yield of HIV screening among adult trauma patients attending the Emergency Department (ED) at Muhimbili National Hospital (MNH).**Materials and Methods:** This was a prospective cohort study of consecutive adult trauma patients presenting to ED-MNH between March 2017 and September 2017.Eligible patients who consented to be in the study received pre and post HIV testing counseling by a trained research assistant. They were asked if they would undergo point of care (POC) HIV testing. Testing was done as per the current Tanzanian National Guidelines for HIV and AIDS Management.A finger prick blood sample was tested with SD Bioline; a negative result was recorded as free of HIV, and all positive results were confirmed by a positive POC UNIGOLD test. Negative UNIGOLD tests were considered inconclusive and confirmation was done by taking their blood sample to the central laboratory for HIV ELISA testing.Structured case report forms were completed, documenting demographic information, acceptability of the test, test results and readiness to receive test results.The study data was summarized with descriptive statistics, including means and standard deviations, medians and interquartile ranges (IQR), counts, percentages, and 95% confidence intervals, as appropriate.**Results:** We enrolled326 (11.5%)out of 2,848 trauma patients screened for eligibility to participate in study.The median age was 33 (IQR 25-42 years) and 248 (76.0%) patients were male.Of those enrolled in the study, 250 (76.7%) patients agreed to be tested for HIV, and 247 (98.8%) were ready to receive their test results after testing. Out of those tested, 14 (5.6%) tested

positive for HIV at EMD. None of the enrolled patient were tested for HIV by the physician as part of their regular care. Two months post hospital discharge, 6 (42.8%), of the HIV positive patients had attended Care and Treatment Clinics (CTC) for HIV treatment. **Conclusion & Recommendations:** Routine HIV screening among adult trauma patients is feasible, acceptable and results in identification of previously undiagnosed cases of HIV and subsequent follow up in continuous HIV and AIDS care. Future studies should focus on factors affecting the linkage to CTC among HIV positive patients identified at the ED.

181. Ramadhani, I.O. (2018). Analysis Of Bacterial Spectrum Of EmpyemathoracisAmong Patientsadmitted At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Empyema is a localized or free collection of purulent material in the pleural space as a result of combination of pleural dead space, culture medium of pleural fluid, and inoculation of bacteria. Treatment of thoracic empyema in our country has been empirical with some assuming worst case scenario and treating it as extra-pulmonary TB and others treatingit with conventional broad spectrum antibiotics. With antibiotics resistance on the rise globally, this practice will worsen the condition by increasing drug resistanceof TB and other common microbes. **Aim:** To study the patient's characteristics, risk profile and the bacterial spectrum in pleural effusion at MNH **Materials and Methods:** A hospital based prospective analytical study was conducted from March 2017 to December 2017.The study was done at MNH in surgical and medical wards, involving all patients who had pleural effusion. The recruited patients were 86 who met the inclusion criteria. Data was collected using a structured tool and both the patient characteristics and clinical and laboratory diagnosis were recorded. Data analysis was done using SPSS version 22.0. Univariate analysis was used to analyze common causative organisms and the sensitivity pattern of the pleural Using a structured questionnaire. The chi-square test was used to assess association between patterns of pleural empyema by patient characteristics. P-value of less than 0.05 was considered statistically significant. **Results:** In this study 86 patients were recruited during the study period of March to December 2017, Most of the patients were in the age group of 31 -50 years at 43(50%) with patients less than 30 yearsand above the age of 70

years at 11.6% and 9.3% respectively. Isolated microorganism among the 86 patients investigated were found in 29 patients, in which staphylococcal aureus 10(33.3%) was the commonest organism isolated, while streptococcalspecies 2(6.7%) was the least common. Also it was found that 31.7% patients with malignancy contributed to the patient with empyema thoracis and 33% of patients with chronic lung disease found to have empyema thoracis. Penicillin was sensitive to most ofthe bacteriaisolated, in which Staphylococcus aureus 8(80%), streptococcal species 2(100%) and Pseudomonas aeroginosa 2(66.0%). **Conclusion:** Thoracic empyema should be expected to occur in one third of patients with pleural effusion with no identifiable risk factor among our patients. S. aureus and E. coli were the commonest micro-organisms isolated and sensitivity to penicillin was high with resistance reported with cephalosporins (the current most commonly prescribed antibiotic). Clinicians should be on the look for small proportion of patients who will have P aeruginosa and Klebsiellaspp that will need Meropenem antibiotics

182.Remtullah, A. Z. (2018). Quality Of Healthcare In Acute Paediatric Care Unit In A Tertiary Hospital In Tanzania: A Case Of Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Quality of care provided in critical care unit, is vital in contributing to the outcome of critically ill children. Different studies provide mixed conclusions on the quality of care provided, and its influence on the outcomes. Little is documented especially for the case of children admitted in acute units at tertiary hospitals in Tanzania.**Objective:** To assess the quality of healthcare in Acute Paediatric Care Unit (APCU) at Muhimbili National Hospital between July and September 2017.Methodology: A case study that employed both qualitative and quantitative methods was used to gather information among the caregivers and healthcare providers over a period of three months.It involved a sample size of 107 participants who were consecutively enrolled. Readmissions within seven days of discharge and health care providers who rotated for less than two weeks were excluded from the study. All components of the Donabedian model of quality of care were assessed. **Methods** used in this work included observation, Key Informant Interviews, the use of semi structured questionnaires and document analysis to obtain the information required. **Results:** These were summarized into five categories

of outcome, structure, process, feedback and recommendations as guided by the Donabedian model. The participants included all caregivers whose children were >28 days and <_14 years of age admitted in APCU, 17 Healthcare providers who worked in APCU during the duration of this study and 90 Caregivers who consented. The outcome revealed majority of the children admitted, were between the ages of 1 month-4 years 68(75.6%), 46(51.1%) were males, from within Dar-es-Salaam 70(77.8%). Of the total admissions, 66 (73.3%) survived to discharge, while 24(26.7%) died within APCU. Of those who died, a significant number 10(41.7%) passed away in the first 24 hours of admission. The median age of children admitted was two years (interquartile range 58.5months) and the median duration of stay was five days, with a minimum of 4 hours and a maximum of 32 days. Most of the underlying causes of death, 17(70.8%), were infectious with septicaemia 13(76.5%) being the most common. Septic shock accounted for majority 9(60%) of the immediate causes of death. From the caregivers that consented, most reported to be VERY SATISFIED (37.8%)and SATISFIED (24.4%), collectively, with the quality of services provided. Although, a comparable number34(37.8%) of caregivers refused to comment on this. Structure; based on observations made, the physical setting in APCU had the basic requirements for management of critically ill children but lacked in major areas in terms of infrastructure, qualified healthcare providers trained in critical care, updated treatment guidelines, had a shortage of functional emergency equipment and emergency drugs. Caregivers reported an unsupportive environment during their stay. Process; the admission process was noted to be thorough and consistent for every patient that arrived at APCU. Some setbacks were noted. Delays in thereferral process and HCP training were amongst some matters that required attention. Feedback process had major discrepancies between caregivers and healthcare providers. **Conclusions and Recommendations:** Although majority 66(73.3%) of patients survived to discharge, a significant number of patients died within APCU. Most of the deaths occurred during the night shift indicating theshortage of staff during this time. Also, most of the deaths were a "Transfer in" signifying the delay in decision making process. Median duration of stay was five days. Despite the basic structure that existed, there were several enhancements required for provision of quality services to critically ill children in APCU.The admission process revealed an immediate response time to initial evaluation as well as emergencies. In patient care had some strengths as well as weaknesses and staff knowledge and practices need to be refreshed especially for PBLS.Finally, none of the caregivers noted to be dissatisfied with the

quality of services provided, although a substantial number 34 (37.8%), did not comment. In general, the overall quality of care needs to improve substantially for a standard, acceptable and consistent quality of care in our setting.

183. Restus, V. (2018). Short Term Functional Outcome of Patients with Anterior Cruciate Ligament Tear Treated by Arthroscopic Acl Reconstruction Using Hamstring Tendon Autograft at Muhimbili Orthopaedic Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: The anterior cruciate ligament (ACL) is the most frequently injured knee ligament, accounting for about 50% of all knee ligament injuries. The majority of injuries occur during sports activities, soccer being one of the sports with the highest prevalence of ACL injury. Other causes are motor traffic crush and falling from height. Currently arthroscopic ACL reconstruction is the recommended standard treatment for anterior cruciate ligament deficient knees in most tertiary hospitals worldwide. Arthroscopic ACL reconstruction was first done at Muhimbili Orthopaedic Institute (MOI) in 2011, since then the number of patients treated by this procedure has been growing (total of 624 patients to date) but the surgical outcome has not yet established. Objectives: To determine the short term functional outcome of patients with anterior cruciate ligament tear treated by arthroscopic ACL reconstruction using hamstring tendon autograft at MOI. **Materials and Methods:** A prospective hospital based descriptive study involving adult patients with anterior cruciate ligament tear treated by arthroscopic ACL reconstruction using hamstring tendon autograft, was conducted at MOI for a period of twelve months from May 2017 to June 2018. A total of 47 patients met inclusion criteria and were all enrolled for the study. The patients were assessed and scored using Lysholm Functional Knee Scoring Scale (LFKSS) before treatment, and at 2nd, 6th, 12th and 16th weeks post treatment. Flexion/extension angles was obtained on each visit by using a goniometer. At 2nd week the wound was assessed for infection and stitches removed. Data was collected, guided by structured questionnaire. At 16th week the scores were compared with those before treatment. The data obtained were analyzed using SPSS version 20. **Results:** A total of 47 patients with anterior cruciate ligament tear were enrolled at MOI for the study from May 2017 to December 2017 and

all were followed up for functional outcome. 4 patients were lost to follow up, and only 43 patients were analyzed at 16th week. Among 43 patients, 32 (74.4%) were male and 11(25.6%) were female with male to female ratio of 2.9:1. Out of the 43 patients 38 (88.4%) were below 40years whereas 5 (11.6%) were above 40years; with a mean age of 30.09±6.99SD Majority 35(81.4%) were treated 3months after their injury whereas 8(18.6%) were treated less than 3months after injury. The leading cause of ACL tear was sports-related activities which accounted for 36(83.7%), followed by Road traffic accidents which accounted for 7(16.3%). The mean flexion angle was 78.44±16.22˚SD before treatment and 134.58±4.18˚SD degrees at 16 weeks post treatment. (p value =0.001). The median Lysholm score was 55.98±12.24SD before treatment and 97.19± 3.14 SD at sixteenth week post treatment (p value=0.001). Functional outcome at sixteenth week postoperatively assessed and graded by (LFKS) was excellent in 34(79.1%) patients and good in 9(20.9%) patients. Outcome was not affectedby age (p=0.686), sex (p=0.843) or duration of symptoms (p=0.294). **Conclusion:** Anterior cruciate ligament tear is more common in young males (less than 40years) who are actively engaging in sports-related activities which is actually the leading cause of anterior cruciate ligament tear. Arthroscopic ACL reconstruction has shown good outcome in this study as many participants had good and excellent outcome at 16th week, and knee flexion angle has improved to almost normal. **Recommendations:** Arthroscopic ACL reconstruction has to be promoted more at MOI as the findings of this study has revealed good to excellent outcome. Further prospective studies with large sample size are needed to further discern thefindings of this study

184. Rilla, M.M. (2018). Factors Associated with Healthcare Seeking Behaviour Among Pregnant Women with Complications in Regional Hospitals Dar Es Salaam.Muhimbili Universityof Healthy and Allied Sciences.

Abstract

Background: About 15 per cent of women worldwide develop complications and may end up with fatal conditions during labor and delivery period. Tanzania has unacceptably high MMR of 556/100000 live births. Most of these deaths are preventable. Tanzania's ongoing efforts to improve maternal and child health care include adopting the World Health Organization's focused antenatal care (FANC) program. However, little is known about healthcare seeking

behaviors among pregnant women of which associate with improved maternal health outcome. **Aim:** The main objective of this study was to investigate factors associated with healthcare seeking behavior among pregnant women admitted with complications in Regional hospitals - Dar es Salaam. **Methodology:** The descriptive cross-sectional study design was employed in this study. The study involved 353 pregnant women with obstetric complications. Simple randomly sampling was used through rotary method. Researcher administered structured questionnaire was used for data collection. Ethical clearance was sought from MUHAS Senate Research and publication committee. Approval to conduct the study was obtained from municipal medical officers, then from hospital authorities. Informed consent to participate in the study was sought from study participants. SPSS version 21 software was used for data analysis. Chi square test and Multivariate analysis was used. **Results:** Of the 352 women interviewed, the healthcare seekers were (62.2%) and non-healthcare seekers (37.8%). The association between demographic factors and healthcare seeking behaviors revealed a strong evidence that, education levels and age were associated with Healthcare seeking (P = 0.021) and (P = 0.005), respectively. The association between enabling factors and healthcare seeking: results showed that travelling short distance 64.9% versus long distances 47.3%, quality health services 64.1% versus poor quality services 35.9% and high income 59.8% versus those with low incomes 65.9% produced different results. **Conclusion:** This study has shown that, individual pregnant women and health facility related factors were the main predictors for healthcare seeking. Therefore, proper interventions on these factors are needed to reduce preventable maternal mortality rates. **Recommendation:** Addressing individual patient and health facility related challenges are essential components in increasing healthcare seeking behavior and ultimately reducing maternal morbidity and mortality rates.

185.Rubagumya, F. (2018). Thyroid Function Post Supraclavicular Lymph Node Irradiation in Patients with Breast Cancer.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Breast cancer remains the most common cancer in women worldwide and across Africa in particular. In East Africa, the estimated incidence of breast cancer comes second only

to cervical cancer. Supraclavicular irradiation post modified mastectomy is a crucial component of breast cancer management; it improves local control and overall survival. This is however associated with adverse effects including thyroid dysfunction which is usually under-reported. **Aim:** Toevaluate radiation induced thyroid gland functional changes following treatment of supraclavicular lymph nodes in breast cancer patients. **Methods:** This was a prospective descriptive study of patients with breast cancer who were recruited from May 1, 2017 and subsequently followed up until May 30, 2018 at ORCI. Descriptive statistics were used to report patient demographics, disease characteristics. Pretreatment TSH, fT4 and fT3 values were compared with the corresponding values obtained after treatment by Wilcoxon signed-rank test. **Results:** A total of 42 patients were recruited for this study with a mean age of 55.7 (32-71) years. The mean for baseline TSH level was 2.90($\pm$6.37) while that for T4 and T3 were 15.77($\pm$4.83) and 3.46($\pm$6.22) respectively. A Wilcoxon signed-rank test indicated that there was a statistically significant rise in mean TSH level at baseline compared to those at 3, 6 and 9 months' post treatment with p-values of 0.0047, 0.0002 and less than 0.0001 respectively. The difference between baseline mean levels for T3 and T4 was statistically significant both at month 6(T3, p=0.0028; T4, p=0.0018 and month 9(T3, p=0.009; T4, p=0.0001) of follow up respectively. Subclinical HT was found in 10% of the patients. **Conclusion:** As it was hypothesized, there was a trend towards subclinical HT and these results reflect the necessity to routinely evaluate thyroid function in patients treated with radiation to the supraclavicular reg

186. Rugemalila, M. (2018). The Expression Of P16 Immunohistochemistry In Uterine Cervix In Hysterectomy Specimens At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Cervical intraepithelial neoplasia (CIN) is a premalignant lesion of cervical carcinoma. HR-HPV is well established cause of high grade CIN. The interaction of HR- HPV with cervix epithelium overexpresses p16 Protein. p16 can be detected by IHC methods, hence IHC is one of detection methods of HR-HPV in CIN. Broad objective: To determine Immunohistochemical expression of p16 in uterine cervix from hysterectomy specimens in order to find out the frequency of unsuspected high grade cervical intraepithelial lesions thatare HR-

HPV related**. Materials and methods:** This was a laboratory based longitudinal cross-sectional study of 92 cases, in which hysterectomy specimens received at MNH histopathology over a period of six months from August 2017 to February, 2018 were grossed and the uterine ectocervix was sampled to prepare paraffin embedded blocks. A 3-5 micrometer sections were done on these FFPE blocks and sections were then stained with hematoxylin and eosin for histological diagnosis of reactive squamous metaplasia, low grade squamous intraepithelial lesion and high grade squamous intraepithelial lesion. The staining using p16 monoclonal antibody was used for detection of HR-HPV.**Results:** The age range was22 to 72 years. On H&E morphological diagnosisthe most dominant primary H&E-stain were LSIL (36.96%) and HSIL (32.61%) which were in the age group of 41–50 years with a mean age of 47 years. 54(58.7%) were p16 positive and 38(41.3%) were p16 negative (41.30%). The p16 positivity was simultaneously interpreted as positive for HR-HPV status. The frequency of SIL was 58% after p16 IHC. **Conclusion:** This study demonstrated the usefulness of p16 in the diagnosis of HR-HPV associated high grade lesions. p16 is also useful in justifying the significance of discriminating cervical dysplasia mimics from high grade dysplasia. p16 IHC also clearly discriminates between low grade lesions on the one hand and high-grade lesions on the other. This is important because only high-grade lesions require further intervention and treatment. **Recommendation:** There is need for Tanzania to introduce a cervical cancer screening program that can take effect and can be evaluated alongside with more colposcopy services for perfected biopsy taking.

187. Rweyemamu, S. J. (2018). Prevalence of Human Immunodeficiency Virus, Clinical Presentation and Related Factors Among Adult Patients.With Heart Failure at Jakaya Kikwete Cardiac Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Heart failure is a pathophysiological state in which the heart is unable to pump blood at a rate commensurable with the requirements of the metabolism of the tissues. Patients with heart failure are not exempted from HIV infection. Globally, in the year 2016 HIV was a known indirect cause of heart failure and about 1.0 million people died of HIV related diseases. In Tanzania 5% of all adolescents and middle aged people are positive for HIV infection. The

only one study conducted in South Africa showed that about 10% of hospitalized patients with CVD and heart failure had HIV. The data on the magnitude of HIV among patients with heart failure in most parts of the world including Tanzania are scanty or not available. Also there are no previous scientific studies that have been conducted at JKCI to determine the magnitude of HIV infection in patients with HF. **Aim of the study:** The aim of this study was to determine the prevalence of HIV, clinical presentation and related factors among patients with heart failure attending JKCI. Patients and **Methods:** A cross-sectional hospital based study involving 523 adults with heart failure attending at JKCI was carried out from September 2016 to January 2017. Framingham score of two or more was used to confirm the presence of heart failure. Upon consent by the patient, HIV testing was done on 523 patients by the use of SD Bioline and Unigold cartridges. According to the National algorithm, for a patient to be defined as HIV positive, both Bioline and Unigold tests have to be positive. If the first test which was Bioline was negative, then the individual was considered negative and no further testing was done and patient counseled and instructed to come again after 2-4 weeks for retesting. If, however Bioline test was positive, a second test Unigold was done. If the Unigold test was negative i.e. discordant results hen a confirmatory ELISA test was done. A structured questionnaire was used to extract demographic data and to record blood pressure, serum creatinine, lipid profile, and random blood glucose as well as hemoglobin level. Data management, processing and analysis were done by computer software SPSS version 20. Logistic regression mode was used to determine the associated factors, the Chi square test, Fishers exact test and F test was computed and P value < 0.05 was considered as statistically significant. **Results:** A total of 523 adult patients with heart failure were studied and the prevalence of HIV infection was found to be 5 %. The mean systolic and diastolic blood pressure among HIV positive patients were 128mmHg (SD 26) and 82mmHg (SD 20) respectively. Their mean respiratory rate was 21(SD 4) cycles per minute and their median eGFR was 86 ml/min/1.73m2 (IQR 28-146). HIV infection was more prevalent among patients aged 40-64 years (6.8%), female (6.7%) and those with unstable sexual relationships (11%). The heart failure was found to be significantly advanced among those who tested HIV positive compared to HIV negative individuals (NYHA IV 57.7% vs. 19.9% non-HIV (p<0.001). Furthermore, anemia, dilated cardiomyopathy and pericardial effusion were significantly more prevalent among those with HIV infection than those with no HIV infection. The respective proportions were 61.5% vs. 22.1%, 79.9% vs.41.3%, 53.9% vs.27.2% and 15.4% vs.4.4%

(p<0.001). On an adjusted basis, widow/divorce/separated, anemic patients with heart failure and those with New York Heart Association functional class IV (NYHA IV) had significantly elevated odds of at least 3 for HIV. **Conclusion and recommendations:** The prevalence of HIV infection among patients with heart failure at JKCI was 5%. The patients who were HIV positive were more likely to have an advanced heart failure (NYHA function class IV), have anemia, and were in unstable sexual relationship (Widow/divorce/separate). It is strongly recommended that early HIV counseling and testing be done among cardiac patients who presents with, anemia and to those in unstable sexual relationship as are more likely to develop advanced stages of heart failure.

188. Saidi, Y. H. (2018).Iron Deficiency And Iron Deficiency Anaemia Among Children With Congenital Heart Defects Seen At A Tertiary Hospital In Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Iron deficiency (ID) is the most prevalent nutritional problem worldwide with children being the most vulnerable. It impairs physical growth, intellectual development and body immunity; making children vulnerable to infections. It may lead to iron deficiency anaemia (IDA) which carries poor prognosis among children with congenital heart defects due to exacerbation of left ventricular dysfunction and heart failure.**Objective:** To determine the proportion and factors associated with iron deficiency and iron deficiency anaemia among children with Congenital Heart Disease (CHD) at Muhimbili National Hospital (MNH) and Jakaya Kikwete Cardiac Institute (JKCI).Methods: A descriptive cross-sectional hospital-based study was conducted at inpatient and outpatient Paediatric department of MNH and JKCI among children with echocardiography confirmed CHD. A total of 238 children meeting inclusion criteria were consecutively enrolled into the study until the sample size was accrued. A structured questionnaire was used to collect demographic data and medical history. Anthropometric measurements were done and blood samples for evaluation of complete blood count, serum ferritin and C-reactive protein were collected. **Data analysis:** Descriptive statistics such as frequencies, percentages, median with interquartile range, were used to describe study participants. Comparison of continuous variables was performed using student's t-test or Mann-

Whitney U-test as appropriate and Chi-square (x2) test or Fisher's exact test for categorical variables to determine associations. Odds ratio (OR) with 95% confidence intervals (CI) were estimated to determine risk factors for iron deficiency and iron deficiency anaemia among children with CHD. All analyses were conducted using SPSS version 20 and p-value ≤0.05 was considered statistically significant. **Results:** The overall proportion of anaemia among study participants was 47.5% with mild, moderate and severe anaemia being 21.4%, 21.4% and 4.6% respectively. The proportion of iron deficiency was 26.9% and that of iron deficiency anaemia was 20.2%. Age below 5 years, cyanotic CHD, history of recent illness and less consumption of red meat were associated with iron deficiency (ID) and iron deficiency anaemia (IDA) (all p<0.05). Stunting was associated with iron deficiency among children under 5 years (p=0.05). After controlling for independent variables, age below 5 years, early weaning practices, history of recent illness, less frequent consumption of red meat, family history of CHD, and cyanotic CHD were the most significant determinants of iron deficiency and iron deficiency anaemia among children with CHD.**Conclusions:** Nearly half (47.5%) of the children with CHD in this study had anaemia, more than a quarter (26.9%) had iron deficiency and one-fifth (20.2%) had iron deficiency anaemia. Routine screening and management of both iron deficiency and iron deficiency anemia in children with CHD should start early in childhood. Nutritional and feeding counseling during antenatal and postnatal clinic should emphasize on exclusive breastfeeding for six months and ideal weaning practices that consists of iron rich foods that are easily available and acceptable in our communities.

189. Said, M.A. (2018). Utility Of Chest Radiography In Diagnosis Of Heart Failure In Comparison With Echocardiography At Jakaya Kikwete Cardiac Institute, Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Heart failure is a common complex clinical syndrome that develops when the heart cannot maintain an adequate cardiac output or can do so only at the expense of an elevated filling pressure results in systemic venous and pulmonary vascular congestion. Almost all forms of heart diseases can lead to heart failure. The aim of the study is to compare the findings of echocardiography and those of chest radiography. Chest radiography is readily available and

affordable to majority of patients in our settings. Echocardiography is the gold standard imaging investigation for heart failure; however, it is relatively expensive and not readily available compared to chest radiography.Broad objective:To determine the effectiveness of chest radiographic imaging findings in diagnosis of heart failure in comparison with echocardiography at Jakaya Kikwete Cardiac Institute.**Methodology:** This was a hospital based prospective study, in which findings from two diagnostic tools in similar group of patients was compared. The study was conducted at outpatient and inpatient departments of JKCI and Radiology department, Muhimbili National Hospital from November 2017 to April 2018. Patients 18 years or older who were clinically diagnosed with heart failure by attending physicians/cardiologists were included in the study. Consenting patients were consecutively included in the study. Structured questionnaires were used for recording patients' demographics, clinical information and imaging findings. CXR images were interpreted by radiologist at MNH along with Principal Investigator and Echocardiograms were done by registered cardiologist at JKCI along with PI. Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 23. Statistical Association was done by using cross tabulations. P value of < 0.05 was considered to be statistically significant. **Results:** A total of 110 patients were recruited, of which 59(53.6%) were males and 51(46.4%) females. The patients' median (SD) age was 60 ± 16.5 years old. Age ranged from 18-83 years old. Majority of the patients were age group of 55-64 years old 34(30.9 %%). Most of the young aged patients were females from 25 to 54 years old while above 54 years old the males were more predominant. Among clinically diagnosed heart failure patients, those who have reduced Ejection Fraction (EF) were 63, among these; Moderate Reduced EF (30-44%) were prominent followed with those who had Severe Reduced EF (<30%) while patients with Mild Reduced EF (45-54%) were the least group. There was significance mean differences in left ventricular parameters in the patients with reduced ejection fraction compared to those with normal, these parameters are; Left Ventricular Internal Diameter End Diastole (LVIDd, P=0.0001) Left Ventricular Internal Diameter End Systole (LVIDs, P=0.0001), Left Atrial Diameter (LAD, P=0.009) Interventricular Septum End Systole (IVSs, P=0.017).Concerning chest radiograph findings, the results showed that, majority of the clinically diagnosed heart failure patients had Cardiomegaly 99 (90%) and most prominent chamber to enlarge is LV 98 (89.1%) followed with LA 85 (77.3%) and the least frequent observed chamber to enlarge is RV 57 (51.8%).The results show that, the most prominent pulmonary findings were redistribution of

pulmonary vessels 77 (70%) while the least prominent finding was bilateral pleural effusion 9 (8.2%).On application of Framingham's major clinical criteria, it was shown that, Paroxysmal nocturnal dyspnea 105 (95.5%) was higher among the major criteria followed with Basal crepitation 86(78.2%) and cardiomegaly 84(76.4) and least clinical finding was Hepatojugular reflux 15(13.6%). However, clinical finding of Cardiomegaly was found to be significantly related to increased cardiothoracic ratio 81 (96.4%) P=0.031). Among Framingham's minor clinical criteria used, Dyspnoea on ordinary exertion 106 (96.4%) was the highest finding followed by Bilateral ankle edema 101 (91.8%) and Hepatomegaly was the least frequent finding 15 (13.6%). However, Bilateral ankle edema 96 (95.0% P=0.042) was found to be strongly related to increased cardiothoracic ratio. Framingham's major clinical criteria, Basal crepitations 68 (79.1% P=0.039) was found to be strongly related to the presence of Pulmonary Venous Hypertension (PVH) and in minor clinical criteria, Pleural Effusion 18 (94.7% P=0.026) was found to be strongly related with the presence of Pulmonary Venous Hypertension (PVH).Presence of Basal crepitations was strongly related with Reduced Left Ventricular Ejection Fraction 59 (68.6% P=0.0001) and Pleural Effusion was strongly related with Reduced Left Ventricular Ejection Fraction 16 (84.2% P=0.009).Sensitivity and Specificity of chest radiography were 98.4%and12.8 %(P=0.041) respectively, and the positive predictive value (PPV) and negative predictive value (NPV) were 60.2% and85.7%respectively.**Conclusion:** Postero-Anterior Chest Radiography has a high Sensitivity and relatively high Negative Predictive Value in predicting left ventricular function, however not specific for heart failure diagnosis; hence it can still be used in clinical practice as a screening tool but cannot be used reliably for diagnosis of heart failure.This study revealed that almost half of the patients with clinical diagnosis of heart failure had normal left ventricular function.**Recommendations:** 1. A large prospective community based study at primary level is recommended.2. CXR though not specific for heart failure, but can still be used for diagnosis of all patients with heart failure.

189. Salumu, S.M. (2018). Moral Challenges In Handling Pregnant School Adolescents In Tanga Municipality.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: In Tanzania, about 8,000 girls drop out of school due to pregnancy every year. Unfortunately, this group is reported to face discriminatory acts from the other students, neighbours and some members of their family as result of being pregnant. The aim of this study was to explore the procedures followed and moral challenges encountered by parents/guardian, community leaders and education policy implementers when handling pregnant school adolescents in Tanga municipality. **Methodology:** Aqualitative methodological approach was used in which In-depth interviews and focus group discussions were employed to answer the study objectives. Purposive sampling method was used to obtain study participants which include teachers, parents/guardians, community leaders and religious scholars. Content analysis was conducted to obtain themes. **Results:** A total of twenty-one participants were interviewed. Six major themes emerged from the study findings: the fate of pregnant school adolescents from various perspectives; influence of gender in handling pregnant school adolescents; the influence of religious belief in handling pregnant school adolescents in Tanga; the influence of education policy in handling pregnant school adolescents; moral challenges in implementation of education policy and moral support on pregnant school adolescents. **Conclusion and recommendation:** It is concluded that; there are several moral challenges in handling pregnant school adolescents in Tanga that breach the bioethical principles of autonomy, benefice and justice. The study recommends that, the current Government school regulation number 4 be amended to avoid educational gender discrimination and facilitate educational equity for girls who may fall pregnant during educational activities.

190. Saitoti, S.S. (2018). Magnitude Of Renal Impairment Among Hiv Infected Patients On Tenofovir Containing Antiretroviral Therapy In Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Renal dysfunction has become important comorbidity among HIV-infected persons. The use of combination of Highly Active Antiretroviral Therapy (HAART) has dramatically reduced human immunodeficiency virus (HIV)-related mortality and morbidity, however a significant proportion of patients are developing chronic conditions not traditionally

related to HIV, such as kidney disease. Tenofovir Disoproxil Fumarate (TDF), an acyclic nucleotide analogue reverse-transcriptase inhibitor is an effective antiretroviral agent now widely prescribed along with other Antiretrovirals (ARVs) in the treatment of HIV.Although initial cell culture and clinical trials results supported the renal safety profile of Tenofovir, its clinical use has been associated with a low, albeit significant risk of renal injury.Aim of the study: The aim of this study was to determine the magnitude of renal impairment among patients using Tenofovir containing antiretroviral therapy in Dar es Salaam, Tanzania. **Methodology:** This was a cross sectional study that involved adult HIV patients on Tenofovir containing first line antiretroviral therapy conducted at AmtulabhaiKarimjee Clinic (AKC) in Dar es Salaam, Tanzania. Data on the socio-demographic and clinical characteristics, physical examination,past and present medical and drug history were recorded in a case report form (CRF). A 5ml blood sample was collected for determination of serum creatinine and blood urea nitrogen (BUN) and a urine sample was also collected for a urine-dipstick test and test for microalbuminuria. Results: A total of 132 patients on first line Tenofovir containing antiretroviral therapy were enrolled into the study. It was noted that 7 out of 132 patients(5.3%) had renal impairment(CKD stage 3 defined by eGFR< 60 mL/min/1.73m2).It was noted that 23 patients (17.4%) had a normal eGFR,67 patients (50.8%) had CKD stage 1, whereas 35 patients (26.5%) had CKD stage 2 according to the NKF KDOQI Guideline.It was also observed that there was a significant association between current serum creatinine levels and the weight of the patients with the outcome of interest that's renal dysfunction. Elevated serum creatinine and low body weight were risk factors for renal impairment among the study participants. There was no significant association between sex and renal dysfunction; however, there was a significant difference noted in the serum creatinine levels between the male and female patients. There was no significant association between other variables and renal impairment. **Conclusion:** Tenofovir use is associated with a low, albeit significant risk of renal injury among HIV infected patients on first line Tenofovir based antiretroviral therapy. Risk factors for developing renal impairment include low body weight and high serum creatinine concentrations.

191. Salimu, M.S. (2018). Efficacy Of Focused Assessment With Sonography For Trauma In The Triage Of Blunt Abdominal Trauma At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Twenty-five percent (25%) of abdominal trauma patients need surgical intervention. Abdominal trauma is classified as either blunt or penetrating. Penetrating abdominal trauma is easily diagnosed, while blunt abdominal trauma (BAT) complications can be missed if the clinical signs are not evident. Hence the need for accurate and rapid imaging tool is needed for diagnosis of BAT. Diagnostic peritoneal lavage (DPL), abdominal CT and Focused Assessment Sonography for Trauma (FAST) have all been used to assess the need for exploratory laparotomy.DPL is overly sensitive and lead to high negative laparotomy rates.Abdominal CT is the golden standard but it has its limitations which includes transporting the patient to the CT scan machine from the clinical area, interfering with patient's resuscitation during transportation, its expensiveness and relative contraindication in pregnant women. FAST provides an alternative to both DPL and abdominal CT that can often facilitate a timely diagnosis for patients with BAT. The purpose of this study was to determine the efficacy of FAST when used routinely as the primary screening technique for blunt abdominal trauma. Numerous studies have revealed that FAST is a reliable, fast and safe modality in detecting blunt abdominal trauma with a high degree of specificity, sensitivity and accuracy. There is no local data showing the diagnostic accuracy of FAST at MNH and its utilization in the management of a patient with blunt abdominal trauma. The pitfalls of FAST scan and the means of improvement will also be discussed**. Objectives:** The study aimed to evaluate the efficacy of FAST in the triage of blunt abdominal trauma for exploratory laparotomy at Muhimbili National Hospital **Materials and Methods:** This was a cross-sectional descriptive study that targeted all blunt trauma patients being attended at Muhimbili National Hospital. FAST findings were correlated with laparotomy and follow up findings. Data was coded then entered in SPSS software version 17.0 for data cleaning and analysis. Using laparotomy and follow up findings as gold standard, sensitivity, specificity, positive predictive value, negative predictive value and accuracy of FAST were determined. **Results:** All FAST scan patients were operated by Emergency medical officers/ residents supervised by Emergency Physicians. The sensitivity, specificity, positive predictive value, negative predictive value and accuracy of FAST for all blunt abdominal trauma patients was 86.96%, 94.57%, 66.7%, 98.3% and 93.72% respectively. The sensitivity and specificity of FAST in hemodynamically stable blunt abdominal trauma patients was 75% and 95.06% respectively. The sensitivity and specificity of FAST in hemodynamically unstable blunt

abdominal trauma patients was 100% and 85.71%. The sensitivity and specificity of FAST in blunt abdominal trauma patients 24 hours post injury was 40%. The sensitivity of FAST in blunt abdominal trauma patients who were obese, had chest emphysema, had pelvic fracture and who had urethral catheter in situ during FAST scan was 87.5%, 100%, 100% and 90% respectively. The specificity of FAST in blunt abdominal trauma patients who were obese, had chest emphysema, had pelvic fracture and who had urethral catheter in situ during FAST scan was 91.3%, 84.62%, 92.31% and 62.5% respectively. **Conclusions and Recommendations:** In this study high specificity of 94.57% made the FAST scan a good 'rule in' tool for BAT patients. The FAST scan is also valuable as a screening tool considering its high negative predictive value of 98.3%. Given the study findings, FAST should be performed immediately after the blunt trauma patient arrives in the emergency department regardless of the blood pressure status. Emergency physicians should formalize and accredit training to all medical students, medical officers and residents in order to undertake this technique. For negative FAST scan cases, a period of monitoring, serial FAST scans, or further investigations, such as CT scan or peritoneal lavage is recommended. CT scan should be done for those patients with suspicion of retroperitoneal injury.

192. Samweli, L. (2018). Baseline Needs Assessment For The Establisment Of Guidelines For Registration Of Traditional Medicines In Tanzania.

Abstract

Background: There has been a tremendous increase in the use of Traditional Medicines (TMs) in Tanzania. Many of TMs in the market are of unknown safety, quality and efficacy. This poses risks to consumers and hence exposes the public into great danger. Objective: Baseline needs assessment for establishment of Guidelines for Registration of Traditional medicines in Tanzania. **Methodology:** A qualitative exploratory study design was conducted in Dar es Salaam to assess the needs for establishment of Guidelines for registration of TMs. A total of 15 participants were reached for in depth interview, 12 were from 5 different institutes and authorities that deal with TM and 3 were Traditional Health Practitioners and manufacturers of TMs. With the guidance of the interview guide, participants were interviewed to capture their perception and opinions regarding TM and establishment of Guidelines for registration of TMs

in Tanzania. Information obtained was stored, transcribed verbatim, coded, analyzed and presented by using NVivo 11 to explore the need for establishment of Guidelines for registration of traditional medicine in Tanzania.**Results:** About half of participants were aware of the initiatives and approaches going on for the establishment and development of guidelines for registration of TMs. 47% preferred for the Guidelines to be a tool to guide applicants during registration. All respondents reported that the guideline for registration of TMs are of important and they should be prepared as soon as possible because they are urgently needed for protection of public health. This tool will guide and bind applicants and manufacturers of Traditional Medicine to manufacture products with good quality, safety and efficacy**. Conclusion:** The study revealed a need for establishment of guidelines that will bring regulators and manufacturers to the interface where they will speak the same language on the quality, safety and efficacy of TMs in order to protect public health. The Ministry of Health, Community Development, Gender, Elderly and Children MOHCDGEC and Traditional and Alternative Health Council (TAHPC) should secure fund that will fasten the development and establishment of the guidelines.

193. Samweli, R. (2018). Assessment Of Pain Management And Factors Associated With Its Severity Among Post Surgical Patients Admitted In Intensive Care Units At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Post operative pain is the common stressor for patients admitted to the ICU. Inadequacy of pain management can lead to undesired effects which can increase risk for morbidity and mortality. **Objective:** The aim of the study was to assess pain management and factors associated with its severity among post surgical patients admitted in intensive care unit at MNH. **Material and method:** This was the descriptive cross sectional study conducted from October 2017 to February 2018. A total of 123 post operative patients aged 18 years and above, admitted to the surgical and obstetric intensive care units were involved. Structured questionnaires, patients' files and nurses' charts were used to collect patients and all other perioperative information. Severity of pain was assessed by using the Numerical Rating Scale (NRS). Data was analyzed using SPSS version 23.0. Frequency, percentages, tables and charts were used to summarize the study findings. Bivariate analysis and multivariate logistic

regression were done. P-value of <0.05 was considered significant. **Results:** The prevalence of severe post operative pain within 24 and 72 hours were 32.1% and 41.5% respectively. Pre operative use of analgesia (OR: 2.66, CI: 1.15-6.12, P value=0.02), abdominal surgery (OR: 4.12 CI: 1.12-15.88, P value=0.03) and thoracic surgeries (OR; 7.42, CI: 1.54-35.88, P value=0.01) were significantly associated with severe pain. Age, sex, ASA class, duration of surgery, and level of education did not show significant association with pain severity. Opioids prescribed postoperatively were pethidine (70.7%), morphine (11.4%) and fentanyl (11.4%). Other analgesics used were paracetamol (60.2%) and diclofenac (22%) **Conclusion:** Themagnitude of postoperative pain was high. Preoperative uses of analgesia, abdominal and thoracic surgery were the factors associated with severe pain. Pethidine and paracetamol were the most prescribed drugs.

194. Sanga, A. A. (2018). Plasma Efavirenz Levels Among Patients On Methadone Substitution Therapy Receiving Antiretroviral with or Without Antitubercular Therapy in Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Methadone substitution therapy (MST) is a comprehensive program for management of heroin dependence where abstinence has not proven effective. Often, patients with heroin dependence have other co-morbid conditions such as tuberculosis (TB) and human immunodeficiency virus (HIV) infection. Drugs used for treatment of tuberculosis e.g. rifampicin and for treatment for HIV e.g. efavirenz are known inducers of CYP450 microsomal enzymes and may have potential effect on the serum levels of methadone. Likewise, rifampicin induces the metabolism of efavirenzthus exposing patients to suboptimal level of drugs and higher risk of poor treatment outcomes. There are no studies that have been conducted to evaluate serum levels of efavirenz among heroin dependent patients undergoing treatment for HIV and TB-HIV coinfection in Dar es Salaam, Tanzania. **Objective:** To determine plasma efavirenz levels among patients on methadone substitution therapy receiving antiretroviral with or without antitubercular therapy in Dar es Salaam, Tanzania. **Methodology:** A cross-sectional study that included participants aged 18 years or more on MST, anti-TB and antiretroviral therapy (ART) attending clinics at MNH, Mwananyamala and Temeke Hospital. A clinical record form was used to

collect social-demographic and clinical data. Laboratory assessments included plasma efavirenz quantification using HPLC under Ultra Violet detection and quantification of HIV RNA copies. The collected data was entered into a database and analyzed using SPSS version 23. **Results:** A total of 124 participants were recruited into the study where 108 participants had HIV infection (4 were excluded during analysis because they were taking non-efavirenz based regimen) and 16 had TB-HIV co-infection. Majority of the participants were male (65.8%), and a larger proportion attained primary education as the highest level of education reached (71.7%). Mean duration of heroin use was 12($\pm$6.82 SD) years, with a reported mean age of starting heroin use being 22 years. Participants had been on MST for a mean duration of 25 months. Methadone withdrawal symptoms were reported in 31.7% of the participants and they were significantly associated with a shorter duration on methadone (p=0.027). Majority had therapeutic (1-4µg/mL) plasma efavirenz levels (53.3%) whereas 21.7% had sub-therapeutic (<1µg/mL) plasma concentrations. Self-reported adherence to ART and anti-TB was 98.3% and 93.7% respectively. There were significantly more withdrawal symptoms among participants with TB-HIV co-infection (p=0.001). Significant HIV viral suppression (<20copies/mL) was seen among those with therapeutic and supra-therapeutic efavirenz levels (p=0.014). In multivariate logistic regression analysis, patients with efavirenz levels of <1µg/mL had 3.2 (95%CI: 1.25–8.24) times the odds of having detectable viral loads (>20copies/mL). Also, participants with TB-HIV co-infection had 6.7 (95%CI: 1.91-23.20) times the odds of experiencing withdrawal symptoms. **Conclusion:** Concomitant use of rifampicin, efavirenz and methadone leads to unavoidable drug-drug interactions. These drug-drug interactions result in wide inter-individual variation in plasma efavirenz concentrations, thus being capable of affecting therapeutic and clinical outcomes among treated patients. Clinicians managing patients on methadone substitution therapy and efavirenz based ART with or without TB co-infection must consider drug interactions as potential causes of withdrawal symptoms.

195.Saria, P.F. (2018). Prevalence of Emergence Delirium in Children Recovering from General Anaesthesia, Its Associated Risk Factors and Outcome at Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Emergence delirium is an observed characteristic occurring commonly in children who undergo surgery under general anaesthesia. This condition is associated with the type of surgery, preoperative anxiety, age and type/technique of anaesthesia used.Broad **Objective:** The aim of this study was to find out the prevalence of emergence delirium in children recovering from general anaesthesia and its associated risk factors at Muhimbili National Hospital.**Methodology:** A hospital-based cross-sectional study conducted in 240 children aged 2-12 years ASA I and II, planned for elective general or ENT surgeries under general anaesthesia. Data were collected and analyzed using SPSS statistical computer software version 20. Categorical variables were summarised as frequency and percentages while continuous variables were summarised by median and inter quartile range. Chi-square has been used as statistical test and Multivariate Logistic Regression was used to test for association between dependent and non dependent variables. **Results:** The prevalence of ED was found to 38.3% of the children. Boys were 61(66.3%) and girls were 31(33.7%). Median age was 4(IQR: 3-6) years. Sex, pre-operative anxiety and inhalational maintenance of anaesthesia were significantly associated with the occurrence of ED. **Conclusion:** Factors associated with ED were, sex, preoperative anxiety and maintenance with inhalational anaesthetic agents.

196. Sauli, S. (2018). Accuracy Of Preoperative Computer Tomography Scan Staging Of Gastric And Colorectal Cancer At Muhimbili National Hospital..Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Computed Tomography (CT) has been used in the initial detection, staging and follow-up of malignant tumors regardless of the site of the primary lesion. For patients with gastric and colorectal malignancy, the disese can be detected by CT scan and help in a proper staging and treatment plan . This study aimed at determining the accuracy of preoperative CT scan staging of gastric and colorectal cancer managed at Muhimbili National Hospital (MNH). **Methods:** Cross-sectional study carried out between March 2017 and February 2018.All patients with gastric and colorectal cancer with CT scan, where CT TNM findings were compared to intraoperative ones. Intraoperative staging was considered the gold standard and a 2X2

contingency table was constructed. Specificity, sensitivity, accuracy and predictive values were computed. **Results:** A total of 58 participants were recruited in this study. The CT was found to have sensitivity, specificity, accuracy, positive and negative predictive value of 0.0% to 94.1%, 14.3 to 100%, 54% to 84%, 0.0% to 100% and 47% to 95% respectively in detecting TNM in gastric cancer. Also CT was found to have sensitivity, specificity, accuracy, positive and negative predictive value of 0.0% to 88%, 55% to 100%, 51% to 94%, 0.0% to 100%, and 42% to 94% respectively in detecting TNM in colorectal cancer. **Conclusion:** The CT scan was found to be highly sensitive in detecting the disease confined to the primary organ (gastric or colorectal) and highly specific in detecting disease metastasis to lymphnode, liver and peritoneum. It has good accuracy in staging colorectal cancer and low in staging gastric cancer. Key words: Accuracy, Computer Tomography, Gastric, Colorectal.

197. Shaffi, A.F. (2018). Predictors Of Bacterial Vaginosis Among Pregnant Women Attending Antenatal Care At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Bacterial vaginosis (BV) is one of the most common genital tract infections in pregnancy, characterized by a change in the normal vaginal flora. Bacterial vaginosis is associated with an increased risk of pregnancy losses, maternal and perinatal morbidity and mortality. Bacterial vaginosis is fairly common, with a prevalence ranging from 10% to 30% in a typical obstetric population to more than 60% in some high-risk groups. Different social, behavioral and obstetric factors can contribute to the development of BV. Aim: The aim of this study was to determine the prevalence and predictors of BV among pregnant women attending antenatal care (ANC) at Muhimbili National Hospital (MNH). **Methodology:** Analytical cross-sectional study was conducted among 667 pregnant women attending ANC at MNH between December 2017 and February 2018. Participants were recruited using systematic random sampling. For each consented participant, a pelvic examination was done, a sample was collected, and BV was diagnosed using Nugent's score. Data were analyzed using Statistical Package for Social Scientists (SPSS) version 23. Bivariate and Multivariable logistic regression analysis was done to determine factors that were independently associated with BV. **Results:**

The prevalence of BV was found to be 26.7% using Nugent's scoring system. Bacterial vaginosis was independently associated with women who were aged 21-29 years (AOR = 2.22, 95% CI; 1.42, 3.49), primary education level (AOR = 3.98, 95% CI; 2.64, 5.99), vaginal douching (AOR = 3.69, 95% CI; 2.36, 5.77), Human Immunodeficiency Virus (HIV) infection (AOR = 6.44, 95% CI; 2.61, 15.89), Sexually Transmitted Infections (STI) (AOR = 2.34, 95% CI: 1.25, 4.34), more than one lifetime sexual partners (LTSP) (AOR = 2.70, 95% CI; 1.54, 4.74) and early sexual debut before the age 18 years (AOR = 2.17, 95% CI; 1.42, 3.31).**Conclusion:** The prevalence of BV in pregnant women was found to be high. Age of less than 30 years, primary education level and below, vaginal douching, HIV infection, STI, more than one lifetime sexual partners and early age of sexual debut were found to be significant predictors of BV. Screening of high risk patients is crucial for the prevention and development of BV.

198. Sekei, V.S. (2018). Assessment Of Nurses' Knowledge And Practices On Airway Secretion Removal In Mechanically Ventilated Patients Admitted In Icu At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Breathing is essential to life. Airway secretion removal is the vital procedure done in mechanically ventilated critically ill patients in ICUs. Airway secretion refers to the mucus secreted by the submucosal glands and goblet cells. Althoughsecretion removal is an important nursing intervention in the general care of patients who is critically ill and on mechanical ventilators, there is dearth of information about nurses' knowledge and practices on airway secretion removal in mechanically ventilated patients in Tanzania. There is a need to assess nurse's knowledge and practice on airway secretion removal in mechanically ventilated patients admitted at ICU in Muhimbili National Hospital.**Objective:** The aim of this study was to assess nurse's knowledge and practice on airway secretion removal in mechanically ventilated patients admitted at ICUs in Muhimbili National Hospital.Methods: A quantitative cross-sectional descriptive study was employed to assess nurse's knowledge and practice on airway secretion removal in mechanically ventilated patients. A self-administered questionnaire and observational checklist were used to capture the information concerning knowledge and practices related to airway secretion removal in the mechanically ventilated patient's in ICU the among

111 registered nurses working at MNH, MOI and JKCI in Ilala, Dar es Salaam. Convenience sampling was used to select study participants. Data were analyzed using SPSS version 20. **Results:** We interviewed and observed the practice of a total of 111 ICU nurses working in ICU of MNH, JKCI and MOI hospitals. All nurses who participated in the study had knowledge on neither type of airway secretion removal nor current practices regarding normal saline instillation before airway secretion removal as used in ICUs. Also, about 22.5% of nurses had no knowledge of important areas to start with during airway secretions removal. More than a three quarters (86 =77.5%) of nurses were able to explain the procedure to the patient before airway secretion removal. Most nurses (50.5%) were able to assess patients correctly during airway secretion removal. However, a large proportion (68.5%) of nurses was not able to form collaborative teams of two to suction airway secretions. **Conclusion and Recommendation:** Nurses working in ICUs in MNH, MOI and JKCI hospitals in Ilala Dar es Salaam, have good practical skills but they lack the good theoretical knowledge to back up their skills. Therefore, nursing curriculum needs theoretical reinforcement of the critical care principles. Further studies are needed to explore the best way to update the knowledge of nurses currently working in ICU.

199. Semu, G. (2018). Clinicians' And Other Factors Influencing Quality Of Data On Death Notification Form At Muhimbili National Hospital, Dar Es Salaam, Tanzania.

 Abstract

Introduction: Quality data on medical certificate of causes of death is considered as potential resource and evidence-based decision making and tool for health research and studies. Many studies and assessments made on the quality of data on the causes of death revealed poor quality of data on medical certificate causes of death. Despite of many studies conducted worldwide on quality of data on medical certificate of causes of death, little is known on the clinicians and other factors contributing to data quality on death notification forms/certificates. In Tanzania several studies have been conducted but not specific on clinicians" factors influencing the quality of data on death notification forms/certificates.Study **Objective:** This study aimed at assessing clinicians and other factors influencing quality of data on death notification forms at Muhimbili National Hospital, Dar es Salaam in order to improve quality of medical certificate of causes of death.**Methods:** This was a descriptive cross-sectional study conducted at Muhimbili National

Hospital, Dar es Salaam. The study involved clinicians working at MNH wards, certifying and filling-in death notification forms (DNF) for the deceased person. Study participants were selected by using simple random sampling. A structured questionnaire was used to measure the clinicians" level of confidence in filling death notification forms. Data were collected and analysed by SPSS version 20.0. Ethical clearance was obtained from MUHAS Research and Publication Committee and permission to conduct research granted by MNH. **Results:** A vast majority over 90% of clinicians agreed that not all clinicians have good knowledge on how to fill death notification form. However, over 80% disagree that they rarely filled in death notification form because no one demands it; also they did not fill-in all section because of workload. Over 70% of clinicians agreed that the institution provides death notification forms on time and uses mortality statistics for planning purposes. However, over 80% of clinicians disagreed on the rest of the institutional factors towards clinicians filling-in death notification forms. Majority over 90% of clinicians agreed that it is necessary for the community members to know (to be availed with) the cause of death of their relatives. However, 90% of the clinicians disagreed that the community members were aware about the detailed information in the death notification form and were able to tell when is incomplete. **Conclusion and Recommendation:** The study shows that, not all clinicians at Muhimbili National hospital have good knowledge on how correctly death notification forms should be filled, also majority have negative attitude towards filling-in DNF. This suggests knowledge-practice gap which should be addressed as well as attitude and behaviourchange strategies.

200. Shabani, S. (2018). Exposure To TotalDust And Respiratory Health Effects Among Commercial Motorcyclists In Ubungo Municipality, Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Commercial motorcycles have emerged as a key feature of rural and urban transport services. It is among of occupation in which workers are at high exposure to ambient air pollutants such as road re-suspended dust and prolonged exposure to dust can result inrespiratory problems. **Aim of the study:** The aim was to determine personal total dust exposure and respiratory health effects among commercial motorcyclist in Ubungo

Municipality.**Materials and methods:** The studywas descriptive cross sectional study conducted from March to July 2018. Multistage sampling technique was used to obtain sample of 200 commercial motorcyclists and 100 office attendants. A modified British medical research council questionnaire, EasyOne spirometer and personal sampling pump (SKC Sidekick pump) were used for data collection. Data were analyzed by using Statistical Package for Social Science software. **Results:** commercial motorcyclist had exposed to geometric mean concentration 1.60 mg/m3 (SD=2.12) while office attendants had exposed to geometric mean concentration 0.071 mg/m3 (SD=1.26)   for eight hours which was less than TLV according to the ACGIH. The prevalence of respiratory health symptoms were reported to be higher among commercial motorcyclists compared to office attendants for all symptoms and the differences were statistically significant at P-value <0.001, where morning cough (55.5% vs. 27%); cough last for three months yearly (26% vs 2%); phlegm (53.2% vs 15%), phlegm last for three months yearly (23% vs.0%) wheezing (29% vs 2%) and shortness of breath (47.7% vs. 16%).Prevalence of airflow obstruction (FEV1/FVC<70) for commercial motorcyclists was 10% . Work duration was the most predictor of cough, cough last for three months, phlegm and shortness of breath among commercial motorcyclists. **Conclusion and recommendation:** Prevalence of the respiratory health symptoms was higher among commercial motorcyclists. Commercial motorcyclist should use appropriate PPEs (mouth/nose masks) in the course of their work.

201. Shayo, D. (2018). Knowledge, Attitudes And Practices Towards Compliance Of Helmet Use Among Motorcycle DriversIn Kinondoni, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Motorcycle injuries constitute a major but neglected emerging public health problem in developing countries including Tanzania and are a common cause of road traffic injuries. Prevalence of death and injuries due to motorcycle accidents in Tanzania is a significant public health issue. In Tanzania, death due to motorcycle crash makes 26% among all road users and Dar es Salaam being the mostly affected region where 54% of all motorcycle accidents in Tanzania being reported. The aim of this study was to assessknowledge, attitude and practices towards compliance of helmet use amongmotorcycle drivers at Kinondoni in Dar es

Salaam.**Materials and methods:** Cross sectional study design was used to assess knowledge, attitude and practices towards compliance of helmet use among motorcycle drivers at Kinondoni district in Dar es Salaam region. Social demographic, knowledge, altitude and practices information was collected from 388 motorcycle drivers towards compliance of helmet use in Kinondoni Dar es Salaam. The collected data was descriptively analyzed using SPSS computersoftware package**. Results:** This study shows high level of knowledge, positive? Attitude towards compliance of helmet use among motorcycle drivers at Kinondoni district in Dar es Salaam city. The reported knowledge and attitude is associated with awareness of safety measure, and realizing the benefit of compliance of helmet use which shows p-Value of less than 0.05, suggesting strong association between knowledge, attitudes and compliance of helmet use. **Conclusion:** There is high level of knowledge, positive attitude towards compliance of helmet use amongmotorcycle drivers in Dar es Salaam. The study also revealed high awareness of safety measures and benefits of using helmets among motorcycle drivers. Therefore, continued education is needed among motorcyclists and general population on the importance of using helmet when using motorcycles.

202. Shija, L.S.(2018).Men's Perceptions And Barriers Towards A Comprehensive Approach ToPrevention Of Mother-To Child Transmission In Kigamboni District, Dar - Es – Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract
Background: Men's Prevention of Mother to Child transmission of HIV (PMTCT) clinic attendance is much lower compared to that of women. However, it is unclear how those few men attending the clinic are comprehensively involved into the PMTCT approach. To explore men participation and their perception and barriers towards a comprehensive approach of PMTCT program, a descriptive qualitative study was conducted in Kigamboni District, to find out what men do or do not do within the framework of a comprehensive approach to PMTCT and the reasons why. **Methodology:** This study employed purposive sampling approach, which utilized Focus Group Discussions (FGDs) and in-depth interviews to collect data. Sixteen men participated in the four FGDs and eleven ward leaders participated in the in-depth interviews. Data collected were analyzed using content analysis technique. **Results:** Study participants' ages

ranged from 27 to 60 years. Most of the participants have heard about PMTCT and agreed that it is good to accompany their partners to Antenatal Care services. However, majority of men had perception that ANC is meant for women due to limited understanding on the comprehensiveness of the PMTCT program. Moreover, socio-cultural barriers to men's involvement in a comprehensive PMTCT program included men's gendered role of a being a provider for the family, and long waiting time at PMTCT clinics. Regarding health system factors, most participants thought thatthe structural design and time scheduled for PMTCT clinic are not friendly enough to encourage more men attend clinics with their partners. **Conclusion:** This study has established that, men have a perception that ANC is meant for women. This is due to narrow understanding that men have on the comprehensive approach of the PMTCT program. Therefore, there is a need for appropriate interventions aiming to increase men awareness and participation in the comprehensive PMTCT approach.

203. Shilla, N.Y. (2018). Self Prescription Of Topical Eye Medications Among New Patients Attending The Adulteye Clinic At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract:

Introduction: Self-medication can be harmful to patients, as safety of drug, dosageand duration may not reflect the proper diagnosis. Drugs need special instruction in usage and storage, which is likely to be missed in self-medication practices. In the course of self-medication patients are likely to delay in seeking medical attention as they will go to hospital only when the condition had worsened. **Objective:** To assess the practices self-prescription of topical eye medication among new patient attending the adult eye clinic at MNH.**Methodology:** This was a hospital based cross sectional studywhich employed both quantitative and qualitative methods. New patients attending the adult eye clinic at MNH from July 2017 to January 2018 were recruited in the study. Systematicrandom sampling technique and purposive sampling was done; questionnaire and interviews were used to obtain information. **Results:** Atotal of 377patients were recruited for quantitative data collection, of whom52.8% were male and 47.2% were female. Twelve patients were recruited for focus group discussion. These were6males and 6 females. Twofemale health workers (one ophthalmologist and ophthalmic nurse) were recruited

for in-depth interviews. The magnitude of self-prescription of topical eye(s) medicationswas 168(44.6%). The eye pain (60.1%), eye itching (42.9%) and red eyes (39.3%) were the common ocular symptoms led toself-prescription of topical eyemedications. Long distant from the health facilities (60.7%), advice from a friend/relative (57.8%) and using previous remained prescription (26.8%) were reasons given bythe study subjectsas the factors which lead them to practice self-prescription. Majority of the patients obtained their medicines from pharmacy/shops (58. 9%).Reported reasons for self-medication included saving costs, lack of awareness, long distances to health facilities and saving time was mentioned in qualitative study. **Conclusion:** Self-medication of topical eye medicines is acommon practice among patients with ocular problems in the study participants. Pain was most common eye symptom related to self-prescription. Reasons for self-medication with topical eye medications were long distances to health facilities with eye services, costs, lack of awareness and longwaiting time for services were the reasons mentioned for self-eye medications.

204. Shilugu, L.L. (2018). Feeding Practices and Other Factors Associated with Nutrition Status Among Children Underfive in Rural Bukombe, Tanzania: A Comparison of Families Engaged in Agricultural and Other Economic Activities.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Undernutrition among underfives can be ameliorated through strategies to address the known determinants. However, the levels and determinants of undernutrition among underfives differ across families engaged in farming and other economic activities. This necessitates the need to understand the feeding practices and other factors for nutrition status among under-fives across families engaged in farming as compared to those engaged in other economic activities, to inform tailored interventions. **Objective:** The aim of the study was to assess the feeding practices and other factors associated with under nutrition among underfive in families engaged in farming as compared to families in other economic activities in rural Bukombe.**Methods:** Across-sectional study design using quantitative approach was used. A probability sampling method was used to select 358 pairs of children age $6 - 59$ months and their care givers, data were collected using a questionnaire with standard questions which were

adopted from TDHS-MIS 2015/16 for household factors, asserts possession and a list of foods. Standard questions to measure HFIAS were adopted from Food and Nutrition Technical Assistant (FANTA). **Results:** Majority of the children (61.5%) in the study population had age between 24 – 59 months with mean age29 months ± 15.34 SD. More than half (67.6%) children were from households engaged in farming as main household occupation. About all (97.8%) children were ever breast fed at some point of their life. Only about 68.8% ofchildren had breast feeding initiated within one hour, and 54.6% of children had timely initiation to complementary foods at age six months.Seventy three percent ofchildren had a low feeding frequency, and 65.4% children had low dietary diversityscore.Low dietary diversity was significantly higher (70.6%) among children in peasant households compared to(54.5%) children in other occupations (p =0.003).The prevalence of stunting, underweight and wasting among children age 6 – 59 months was 52.8%, 9.2%, and 2.2% respectively.Stunting was higher (56.2%) in the peasant population compared to others (45.7%, p =0.062). Also, underweight was higher (11.2%) among children in the peasant households compared to others (5.2%, p =0.067). Wasting was only experienced in the peasant population (3.3%) no wasting was in other occupations. Household occupation was associated with child undernutrition, children from peasant households had higher risk of stunting compared to others(AOR =1.96, 95% CI =0.96 to 3.91, p =0.063), also higher risk of underweight was among children in predominantly peasants' households compared to others (AOR =2.33, 95% CI =0.9 to 5.99, p =0.084).Stunting was also significantly associated with age, household food insecurity, and low birth weight.Higher risk of stunting were among children at age 24 – 59 months compared to younger ones at age 6 – 11 months (AOR =2.74, 95% CI =1.47 to 5.13, p =0.003), severe household food insecurity compared to food secure households (AOR =3.34, 95% CI =1.11 to 10.02, p =0.002), and children born with normal birth weight(2.5 Kg – 3.5Kg) had low risk of stunting compared those with lowbirth weight (AOR =0.31, 95% CI =0.12 to 0.83, p =0.02). Underweight was also associated with child sex and illnesses, underweight was more among male children (OR =2.72, 95% CI =1.25 to 5.89, p =0.011), and children who had diarhea illnesses in past one month (OR 2.09, 95% CI =0.99 to 4.40, p =0.051). **Conclusion:** Magnitudes of undernitution were high in Bukombe district. Chronic form of undernutrition was prevalent in among 52.8% of all underfive children sampled into this study, with even higher magnitude among children in peasant population compared to children in other occupations. Wasting and underweight were prevalent

among 2.2% and 9.2% respectively, which were also higher among the children of the predominantly peasants' populations compared to children in other occupations.There was poor feeding practices among children, exclusive breast feeding with timely initiation to complementary foods at age six months was reported among 54.6% of children.Low feeding frequency was among 73.1% of children, and low diertary diversity was among 65.4% children in the sample population. Low dietary diversity was significantly higher among children in peasant households compared to children in other occupations. In addressing undernutrition among children in Bukombe district and others with similar context, tailored interventions should target the first 1000 days of child development, households with food insecurity, children with illnesses such as diarrhea and malaria, and children born with low weight. Efforts should also be streamlined and targeting children and women of predominantly peasants' households to also address this challenge.

205. Shirima, O. D. (2018). Vacuum Assisted Vaginal Delivery: Prevalance, Indications, Maternal And Fetal Outcomes At Temeke Regional Referral Hospital, Dar Es Salaam From June To December 2017.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Vacuum assisted vaginal delivery is instrumental assisted vaginal delivery performed for maternal or fetal reasons. Practitioners prefer to perform it rather than other methods of assisted vaginal deliverybecause it is easy to use, requires less anesthesia/analgesia and is believed to be safer than other methods. Developing countries find it easier to train the non-specialist doctors to use the vacuum extractor. Since 2014, with support from (CCBRT) in Tanzania, training on vacuum-assisted vaginal deliveries has been conducted to health providers at Temeke Regional Referral Hospital and equipment supplied for carrying out the procedure.**Objective:** The study aimed to determine the prevalence and describe maternal and fetal outcomes of vacuum-assisted vaginal deliveries (VAVD) among women delivered at Temeke Referral Hospital in Dar es Salaam, Tanzania.**Methodology:** A descriptive cross-sectional hospital-based study was conducted at Temeke Referral Hospital in Dar-es-salaam, Tanzania. All women who met inclusion criteria were involved in getting 247 women delivered by vacuum-assisted vaginal delivery from June to December 2017. Data on their demographic

characteristics, maternal and fetal outcomes were collected using a checklist. (SPSS) program was used for analysis. Data was summarized using frequency distributions and charts. **Result:** Two hundred forty-seven women, were identified to have undergone vacuum-assisted vaginal delivery during the study period. 78.9% aged between 20 and 35 years. At the time of delivery, (60.7%) of them had reached 39-40 weeks of gestation. Average length of the second stage of labour was less than 1 hour. 96.3% of the newborns weighed 2.5-4.0 kilograms. Apgar score was ranging from 7 to 10 at 5 minutes. Of 5,400 deliveries, the prevalence of vacuum-assisted vaginal deliveries was 4.57%. Successful cases were 97.2% with a failure rate of 2.8% **Conclusion:** Our study shows that vaccuum-assisted vaginal delivery can benefit pregnant women and reduce maternal and neonatal morbidity and mortality if proper training, equipment and facilities are available.

206.Shoo, W. (2018). Prevalence Of Anaemia Among Patients On Maintainance Hemodialysis And AssociatedFactors In Dar Es Salaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Anemia is a common complication among patients who are on maintenance Haemodialysis (MHD) due to end stage renal disease (ESRD), and it is associated with increased morbidity and mortality among these patients. A proper documentation on its magnitude and associated factors in Tanzania remains critical. Between September and October 2017 a cross sectional studies involving three dialysis facilities in Dar es Salaam namely: Muhimbili National Hospital, Access Dialysis centre and TMJ hospital was conducted to determine the magnitude of anaemia and its associated factor among patients with ESRD on MHD. Both the sociodemographic information and clinical data were collected from selected participants aged 18 years and above. Clinical data collected included haemoglobin (HB) level, iron profile, folate and vitamin B12. International standards were used to provide reference ranges and cut-offs for these parameters, in which anaemia defined as HB below 12g/dl for female and 13g/dl for male patients; Iron deficiency defined by transferring saturations of less than 20%; folate and B12 deficiency was respectively defined at values below 5ng/ml 150pg/ml in the blood samples. A total of 233 patients with ESRD on MHD were enrolled in the study, majority of which (78%)

aged 40 years and above. Male comprised of 65% of the study participants. Thirty-seven percent, 34% and 29% of the participants were recruited from MNH, Access Dialysis Centre and TMJ hospital respectively. Prevalence of anaemia among the study population was 69%, also anaemia was found in 101/152(66.4%) male compare to 60/81(74.1%) among female(p=0.26). with mean haemoglobin level of 11.g/dl in male and 11.4g/dl in female. Majority (84%) of the study participants had iron deficiency while prevalence of Folate deficiency was 0.43% and none had Vitamin B12 deficiency. Sex was not the risk factor for anaemia (p=0.26). On the other hand, level of education, duration of dialysis and transferring saturation were significantly associated with anaemia this group of the patients(p=0.006,0.012,0.001) respectively. In conclusion, iron deficiency anaemia is prevalent among patients with ESRD on MHD. Routine haemoglobin level and Iron profile (Iron saturation) screening for anaemia and iron deficiency among patients with ESRD on MHD may be of clinical importance.

207. Shomari, A.SM. (2018). Factors Affecting Satisfaction With Antenatal Care Services Among Pregnant Women Attending Mafiga Health Center In Morogoro Municipality-Tanzania: Evidence From A Cross Sectional Study.

Abstract

Background: Antenatal care (ANC) is the care a pregnant woman received during her pregnancy through a series of consultations with trained health care workers such as midwives and sometimes a doctor who specializes in pregnancy and birth. The importance of ANC is to ensure optimal health outcomes for the mother and her unborn baby. Pregnant women's concerns, desires and views of health care services need to be explored carefully because of their potential impact on the utilization and satisfaction of ANC services. Information through pregnant women's reviews has proven to be a successful way of strategic evaluation and improving the quality of health services. Recently pregnant women's perceptions, views, and satisfaction with ANC services, in addition to the professional judgment, became recognized measures of the quality and innermost element of quality assurance programs. This study intended to assess factors affecting satisfaction with antenatal care services among pregnant women attending Mafiga health centre in Morogoro Municipality.**Method:** The study wasdescriptive cross – sectional study design using quantitative approach. This study included a

total of 262 pregnant women attending ANC clinic at Mafiga health centre in Morogoro Municipal. A semi structured questionnaire consisting of open and closed ended questions was used to collect data. The Statistical Package for Social Sciences (SPSS) version 21 was used to analyze data. Multivariate logistic regression was used to determine the association of independent and the dependentvariables. A p-value less than 0.05 were considered statistically significant. **Results:** A total of 232(88.6%) were satisfied and 30 (11.4%) were dissatisfied with antenatal services. The logistic regression was used to assess socio-demographic factors associated with satisfaction on antenatal service. The age group 20-34years was almost four times likely to be satisfied with antenatal service provided OR 3.83(1.35-10.87) as compared to younger women of age group 17-19 years. On education level, mothers who attended primary, secondary or higher education had higher odds of satisfaction with antenatal service provided OR 5.62(1.74-18.14) P-value<0.01, 7.92(2.25-27.91) P-value<0.01and 3.33(0.53-20.91) P-value=0.20 respectively as compared to mothers who had no formal education. The study showed that, a few number 11.4% of antenatal mothers were not satisfied with care. Moreover, mother completed primary education 50.4%had higher odds of dissatisfaction compared to those ofsecondary education 39.3%. **Conclusion:** The study concludes that onfactors assessed, the level of education andageshowed significant relationship with satisfaction on antenatal care while others were not statistically significant. Therefore, this study concludes that mothers with no formal education were more likely to reportsatisfaction with antenatal care service compared to the mothers with higher education level. On recommendation, the Government in collaboration with District Medical Office should establish a good and service user friendly arrangement so as tofacilitate the antenatal service accessibility.

208. Shukuru, Z. (2018). Effect Of Parental Tooth Brushing Instructions On Children's Tooth Brushing Skills, Oral Hygiene And Gingival Health In Dar-Es-Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Effective tooth brushing skills is the basis for good oral hygiene status. Tooth brushing is the main means to control plaque and a vehicle for fluoride application. The skills are to be imparted and instilled early in children's life. Parents are expected to supervise their

children to brush teeth. Hence, both parents and children need to have proper skills of tooth brushing. Objective: To determinethe effect of parental tooth brushing instructions on their supervision awareness and practice as well as their children's tooth brushing skills, oral hygiene and gingival health in Dar es Salaam.**Methodology:** This was a cluster randomized controlled field trial among primary school pupils aged 8 to 9 years in Kinondoni municipality, Dar es Salaam. This study included 237 pupil-parent pairs from twelve primary schools. A two-stage cluster sampling design was used to select the participants using a school as a sampling unit. An intervention was the provision of tooth brushing instructions to parents via leaflets. Data was collected through questionnaires, clinical examination on dental plaque and gingival health and observing the pupils while brushing to assess their brushing skills. Analysis was done using SPSS version 20, where frequency distribution for proportions and cross tabulations to assess difference between control and intervention groups was performed. To examine for the differences between groups and at two-time points (baseline and follow up) adjusted binary logistic regression was conducted. P-value of less than 0.05 was set as the level of statistical significance. **Results:** A total of 247 pupil-parent pairs participated at baseline and 237 at follow-up. Girls were 146 (59.1%); pupils aged 9 years were 160 (64.8%). More than half of the mothers had primary or less than primary education (64.8%), while 45.3% of fathers had secondary education or higher. Two thirds of the mothers (67.6%) had income generating activities outside their home whereas 55.9% of the fathers were either employed or business men. More than half of families (62.3%) had two or more children below 10 years' old who are to be supervised during tooth brushing. Following intervention, the proportion of parents who were aware of supervised tooth brushing increased from 80.2% to 88.6 % while those who supervise their children during tooth brushing increased from 54.7% to 69.2%. At baseline; the proportion of children with plaque, gingival bleeding and tooth brushing skills were 61.5% (152), 36% (89) and 15.8% (39) respectively. They were respectively, 44.7% (106), 31.6% (75) and % 43.2% (102) at follow up. The difference in children's tooth brushing skills at baseline was insignificant in both arms with a p value 0.253 and odds ratio (95% CI) 1.8 (0.7, 5.1) while at follow up there was statistically significant tooth brushing skills with p value 0.001 and odds ratio (95% CI)11.2 (5.1, 24.4). Oral hygiene in the intervention arm was significant both at baseline and follow up with P value 0.039 an odds ratio (95% CI) 0.4 (0.2, 1.0) and 0.006 odds ratio (95% CI) 3.2 (1.4, 7.4) respectively while improvement in gingival health was not

significant in both groups at baseline and follow up with a P value 0.423 and 0.304 respectively. Conclusion: The findings of this study indicate that involvement of parents on their children's oral health care has a profound impact to their own supervision awareness and practices and their children's tooth brushing skills, oral hygiene and gingival health.

209. Silvatory, S. (2018). Factors Associated With Data Completeness On Electronic Hospital Information System At Muhimbili National Hospital, Dar Es Salaam.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Electronic Hospital Information System is a computerized health records used to capture, store, access and share summary information for a patient between health care organization and providers. Since the inception of Hospital Information System (HIS) in Tanzania, various studies on HIS have been conducted but data completeness on clinical and demographic information in the HIS is largely unexplored. Effective utilization of health system work flow for quality provision of health services through clinical data entry, clinical decision making and integrated communication support is still a challenge in health sector in Tanzania. Study **Objectives:** To assess the factors associated with data completeness in the electronic HIS at MNH and improve data capturing and subsequently enhance provision of quality of service **Methodology:** This explorative cross-sectional study was conducted in Muhimbili National Hospital. The study involved electronic Hospital Information System (HIS) as the tool for capturing patient's information. Also, document review technique was used to examine the magnitude of data completeness in the electronic HIS among clinicians, nurse and health records staff. Pearson chi square test and logistic regression analysis methods were conducted. In analysis frequency measures were used to provide descriptive characteristics of study population. The degree of association between variables was tested by using Pearson chi square test value of $p < 0.05$ at 95% confidence interval was considered to be statistically significant. Fisher's exact test was used when expected number was less than 4. The influencing factors on the completeness of documentation were evaluated in total and by the groups. The influencing factors on the completeness of documentation were evaluated in total and by the groups. Additionally, the analysis to obtain frequency distribution of all variables was performed.

Logistic regression and multiple logistic regression analyses were done to determine the odds ratio and adjusted odds ratio for different predictors of data completeness in the electronic HIS. **Results:** About (90%) of clinical and demographic data of patients were incomplete in the electronic HIS at MNH. Factors associated with incompleteness data included 15(33.80%) of respondents indicated lack of sustainable and sensitization training on HIS, 10(40%) indicated that there is negative attitude towards data capturing in the electronic HIS, 20 (65%) indicated poor knowledge and skills on data capturing process led to incompleteness of data in the electronic HIS, 25(80%) of the respondents indicated that high workload and insufficient computer devices led to incompleteness of data in the electronic HIS. Data incompleteness were found to be higher thirty-two (32) times (AOR=32.14, 95% CI =12.81-80.59), behavior were five (5) times higher (AOR=5.47, 95% CI=2.40-12.43), inadequate training were fifteen (15) times (AOR=15.25, 95% CI=7.32-43.98) and usage in technology and communication were (4) times poor (AOR=3.86, 95% CI =1.55-9.62.) towards data completeness in the electronic HIS. **Conclusion and recommendations:** The rate of incompleteness of patients' information in the electronic HIS in the hospital is high due to poor emphasis by management on the usage of the electronic HIS in capturing patients' information in the system. Therefore, MNH should organize and coordinate sensitization training to improve knowledge and skills on usage electronic HIS and hence address the problem of negative attitude and perception of data capturing in the electronic HIS revealed by the study. On the other hand, strong initiatives and commitment from the top management especially on recruitment of staff and procurement of sufficient number of computer devices is of great importance to reduce the problem of high workload and hence facilitate improvement of staff in capturing patients' information in the HIS system. It is also important to develop strict rules and regulations on the need of capturing all patients' information in the electronic HIS so as to address the problem of negative attitude of staff towards data capturing processes in the electronic HIS.Therefore, strong initiatives and commitment from the top management is of great importance to facilitate improvement of the staff in capturing patients' information in the HIS system. It is also important to develop strict rules and regulations on the need of capturing all patients' information in the electronic HIS so as to improve quality health services delivery at MNH.

210. Simula, F. (2018). Profile and Outcome of Patients Undergoing Finger Guided Tru-Cut Biopsy of the Prostate AtMuhimbili National Hospital.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Finger guided prostate biopsy is a common minor procedure done to patients with suspicious Digital rectal examination (DRE) and or raised Prostate specific antigen (PSA) to diagnose prostate cancer. Though outdated and crude it is the only available option at resource constraints hospitals. The procedure is done at outpatient setting with minimal or no preparation and anaesthesia. The outcome of the specimen obtained and associated complications have not been well studied. This study aimed to assess profile and outcome of finger guided prostate biopsy at Muhimbili National Hospital (MNH) in Dar es Salaam, Tanzania.Objectives: The study: aimed at determining the profile of patients and outcome of finger guided Tru-cut biopsy of the prostate at MNH **Materials and methods** The study was descriptive cross-sectional conducted for a period of ten months. Data were collected using patient clinical files, structured questionnaires, Visual Analog Scale for pain, laboratory results of PSA and biopsy. Participants were followed for 1 week.Data were analyzed using SPSSstatistical software version 20 **Results:** The mean age of the study participants was 71.1 ± 9.5(41-95) years, majority between 60 to 79 years 118(68.6%).Clinical presentations were LUTS 172 (100%), back pain 118(68.6%), lower limb swelling 38(22.1%), macroscopic blood in urine 31(18%) and lower limb paralysis 30(17%). Biopsy revealed mostly adenocarcinoma 95(55.2%), BPH 48(27.9%) and Inadequate sample 28(16.3%). Poorly differentiated adenocarcinoma 59(62.1%) was the most common. Adenocarcinoma detection rate was 70.9% in participants with suspicious DRE and PSA ≥ 4ng/dl. Factors associated with the positive rate of adenocarcinoma were back pain 81(68.6%, P<0.05), Paraplegia 24(80.0%, P<0.05), lower limb swelling 3(81.7%, P<0.05) and Macroscopic blood in urine 21(67.7%, P=0.122). Severe pain (VAS of 7 to 10) 53(30.8%), rectal bleeding 19(11%), hematuria 11(6.4%) were the common complications. **Conclusion:** Prostate cancer is a disease of elderly mostly seen in their 6th decade of life and above. Inadequate biopsy samples were significantly high and most patients had poorly differentiated prostate cancers There was a late presentation of patients to hospital as many patients presented with symptoms and signs of advanced prostate cancer on their initial visit Recommendation: There is a need to have a

guideline on Tru-cut biopsy procedure of the prostate at MNH.The hospital should think of buying TRUS to facilitate TRUS guided prostate biopsy rather than the old type, digit guided prostate biopsy to avoid missing the target tissue.Proper training for registrars and residents on prostate biopsy is needed Community education on prostate cancer awareness is needed

211. Smith, W.L. (2018).The Pattern And Management Of Ovarian Cancers At Muhimbili National Hospital, Dar Es Salaam, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Introduction: Ovarian cancer is one of the most common gynecological malignancies of the female reproductive tract and has a very poor prognosis. Globally the five-year survival is only 15 to 20 percent in patient with clinically advanced disease. The sign and symptoms are often vague, and as such many patients present with the disease when they are already in late stages. When diagnosed early, survival is far better. The treatment is optimal debugging which is followed by chemotherapy depending on the extent of spread of the cancer. At Muhimbili National Hospital, majority of ovarian cancer patients are presenting with advanced stage disease and many of the women delay to commence chemotherapy after surgery. Objective: the aim of this study was to determine the pattern of ovarian cancer patients admitted at MNH and their management. **Methodology:** This was a retrospective descriptive study of ovarian cancer cases over a five years period (2012-2016) admitted and treated at Muhimbili National Hospital, the largest tertiary referral hospital in Dar es Salaam. The source of data was patients' files, medical records retrieved from the Central Pathology Laboratory, admission books, operating theatres, and the gynecology ward round book. Data was collected using a standardized checklist for all cases with confirmed histology and information was obtained from the case file which included socio-demographic profile, parity, histological type of cancer, clinical presentation, treatment options and outcome. Thereafter, the case records were followed up at the Ocean Road Cancer Institute, where these patients are referred for chemotherapy after cytoreduction at Muhimbili National Hospital. Other patient information such as the onset and type of chemotherapy that was given and the outcome were obtained at the Ocean Road Cancer Institute. The data was entered into Statistical Package for Social Sciences SPSS ver. 23, and presented by frequency

tables, proportions and absolute counts**. Results:** Of the total number of 3,401 gynecological cancers admission, ovarian cancers constituted 8.03% of all gynecological cancers admitted and treated at the MNH. Epithelial ovarian cancer constituted 83.1%, while germ cell and sex cord stromal accounted for 4.7% and 3.5% respectively. Serous epithelial cancers accounted for 43.6%, while mucinous epithelium cancer accounted for 21.5%. About Eighty-five percent of patient presented with advanced stages of the disease, with median age of 50 years. Nulliparous women accounted for 22.1% of the cases. The number of women receiving chemotherapy after cytoreduction was 40.9%, and the average number of days from cytoreduction to chemotherapy was 45.1 days (SD 24.8). About Seventeen percent of women were discharged stable after treatment and 33.6% of patients were counsel for palliative care while 18.1% of the women succumb during treatment at both MNH and ORCI.**Conclusion:** Majority of women presented to hospital with advanced stage epithelial ovarian cancer. The main stay of treatment was surgery and chemotherapy, and majority of women delayed in starting chemotherapy after surgery.

212. Sohal, K.S. (2018). Pattern and Management of Oral and Maxillofacial Soft Tissue Injuries at Muhimbili National Hospital, Dar Es Salaam, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Soft tissue injuries, whether isolated or in combination with hard tissue injuries, are amongst the most commonly encountered injuries in the craniofacial region. Injuries of the facial structures occasionally have disastrous consequences on the affected person. The aetiology of oral and maxillofacial injuries varies from one country to another. The diagnosis and treatment of these soft tissue injuries remain a challenge, however, early management of soft tissue injuries is important if scarring is to be minimized'**Objective:** To determine the pattern and management of oral and maxillofacial soft tissue injuries among patients who attended treatment at Muhimbili National Hospital in Dar es Salaam, Tanzania.**Methodology:** This was a hospital based cross-sectional study carried out in Muhimbili National Hospital. A convenient sampling technique was used to select the study participants. Data was collected through questionnaires and pre designed clinical form. Analysis was done using SPSS version 20, where descriptive analysis was performed by comparing means of continuous variables and cross

tabulation for categorical variables. Statistical significance testing was done using Chi –square test (X2), significant level p≤0.05 was considered statistically significant. Logistic regression was used for analysing the type of injuries to determine the relationship between the types of soft tissue injury and underlying hard tissue injuries and results were reported as odds ratio and 95% Confidence Interval.Results: This study included a total of 176 patients who had sustained soft tissue injuries (STI) to the oral and maxillofacial region. Of these, 79.5% were males (n=140,), with a male to female ratio of 3.9: 1. The 21–30 years age group was most frequently affected. Road Traffic Crashes (RTC) were the most common (54.5%, n=96) cause of STI followed by falls (13.1%, n=23) and assault/violence (12.5%, n=22). Majority (81.8%, n=144) of the STI were sustained between 10 am and 12 am, and during the last three days of the week. Most (92.6%, n=163) of the STI in the oral and maxillofacial region affected the extraoral sites, with the orbital regions and the lips being the most commonly affected extraoral sites. Abrasion was the most frequent type of injury observed, followed by lacerations. Associated hard tissue injuries of maxillofacial bones occurred in 63.1% (n=111) of the patients. Haematoma of the cheeks was associated with 6-folds higher odds of fracture to the angle of mandible and the odds of having mandibular parasymphysis fracture in presence of haematoma in the floor of the mouth was 5 times higher. There was a 5-fold higher odd of diagnosing ZMC fractures in patients with non-ending sub-conjunctivalecchymosis. Observation and primary repair of the wound were the common treatment modalities of management. Overall complications within one month of injury occurred in 50% (n=88) of the patients. The commonest complication was scars (53.4%, n=47) followed by hypo-pigmented skin (35.2%, n=31). **Conclusion:** Soft tissue injuries in the oral and maxillofacial region were common in young individuals, with males being affected 4 times more than females. Road traffic crash was the most common aetiological factor for STI. STI were frequently encountered in the orbital regions and the lips. Abrasive injuries and lacerations were the predominant type of STI. STI can predict the type of underlying hard tissue injuries in oral and maxillofacial region. The treatment modalities are dependent on type of injurysustained; and minor complications secondary to STI are common in oral and maxillofacial region.

213.Solile, T.A., (2018). Treatment Outcome Of Trochanteric Fracture TreatedUsing Sign Hip Construct With Versus Without A Highly Versatility Plate At Muhimbili Orthopaedics Institute (Moi). Muhimbili University of Health and Allied Sciences.

Abstract

Introduction: Trochanteric fractures are common in the elderly especially with the increase in the incidence of osteoporosis. The evolution of treatment concepts regarding Pertrochanteric fractures is critical to advancing our treatment modalities. The SIGN Hip Construct (SHC) is an intramedullary device developed to treat both stable and unstable intertrochanteric fractures without the aid of C-arm imaging in resource limited countries (5). HV plates are used with standard or SHC hip nails whenever the fracture involves the greater trochanter especial in highly unstable multifragmentary fractures (31A2 and 31A3). Objective: This study aimed to compare treatment outcome of Trochanteric fractures fixed by SIGN Hip Construct (SHC) with versus without High Versatility (HV) plate at Muhimbili Orthopaedic Institute (MOI), May, 2017 to April, 2018. **Materials and Methods:** This was a Cohort prospective study looking into treatment outcome of patients (aged 18yrs and above) with trochanteric fractures treated by SHC with HV plate versus no HV plate at MOI from May, 2017 to April, 2018. Patients were grouped into two groups (i.e those treated by SHC with HV Plate and those without HV plate). Patients were operated by senior orthopaedics surgeons. The general criteria for applying HV plate with SHC was the presence of proximal femur lateral wall disruption. During admission patients were examined and Anteroposterior (AP) X-Ray of the pelvic was taken and Singh index was used to evaluate degree of osteoporosisImmediate after surgery, the patients were assessed for any limb length discrepancy, malrotation and adequacy of reduction. Physiotherapy was as follows; non-weight bearing with axillary crutches as soon as tolerable, partial weight bearing at 4 weeks postoperatively, full weight bearing after radiological and clinical union. The follow up intervals were 2weeks, 6weeks and 12weeks. In follow up visits, state of the wound, callus formation, varus deformity and length discrepancy were assessed. Data analysis was managed by statistical software (SPSS version 20). Ethical issues pertaining to informed consent, confidentiality and the rights to withdraw from the study were respected by the researcher. **Results:** Forty-five patients were enrolled in the study. Thirty-one patients were in SHC without HV plate group and 14 patients were in SHC with HV plate group. Of the enrolled patients 31.1% (n=14) of study participants were aged 55-64yrs with the mean age of 68 ±15.6 yrs. Male were 60% (n=27). Thirty participants (66.7%) had trochanteric fractures caused by fall from standing height, and two patients (4.4%) were caused by falling from height. The quality of reduction was as follows 11.4% had good reduction 84.1% acceptable reduction and only 4.5% had poor reduction. Varus

collapse was statistically significantly between the cohort groups. At 12th week varus collapse of 5^0-10^0 was observed in 64.3% of patients treated by SHC with HV plate while 96.8% of patients treated with SHC only had varus collapse of same range with p value of 0.008. Affected limb length observed was as follows; eighty percent of patients in both groups have limb shortening of (1-2cm). Limb shortening of > 2cm was observed in 3.2% (n=1) in those fixed with SHC only and 7.1% (n=1) in those fixed by SHC with HV plates. The observed difference was not statistically significant. (p value 0.262) Most of participants, >90% of patients had callus formation at 6 weeks in both groups (p value 0.530).Out of 45 participants, 12 (26.7%) had osteoporosis of grade 3 by Singh index. Only one patient (2.2%) had implant loosening and had grade 4 bone density by Singh index. This shows there no statistical relationship found between osteoporosis and implant loosening (p=0.706), which is against the knowledge that osteoporosis does accelerate implant loosening. This can be explained by short time of study hence few number of implant loosening observed. **Conclusions:** From this study, trochanteric fractures fixed with either SHC only or SHC with HV plate had no difference in terms of callus formation, limb length discrepancy and infection. However, there is statistically difference on varus collapse, patients who had been treated by SHC with HV plate had less varus collapse compared to those treated with SHC only. Alsovarus collapse is associated with unstable fracture pattern, inadequate reduction and implant choice. In this study osteoporosis seemed to have no relation with loosening of implant/ screw cut out this can be due to short time of study.

214.Somosomo, H.B. (2018). Prevalence Of Depression And Anxiety And Associated Factors Among Pregnant Adolescent Girls In Dar Es Salaam, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Introduction: Depressive and anxiety disorders are among the common mental illnesses that can be diagnosed in all ages. These disorders during pregnant seen as a major public health problem with adults displaying high prevalence's. Both disorders have significant physical complications, supplemented with social and occupational dysfunctions in the long run. Depression and Anxiety noted to be the largest proportion of the burden associated of all mental and neurological disorders and leading causes of disability   particularly focused in a majority of the nations. In

Tanzania there is scarce information about depression and anxiety and its impact to the families, societies and communities. Depression and anxiety are the common mental illnesses among pregnant adolescent girls and other women in the world which, if not taken care of, may pose negative consequences to the affected individuals. Aim of the study: To assess the prevalence of depression and anxiety and associated factors among pregnant adolescent girls in Dar Es Salaam.Method: A descriptive a cross - sectional design was conducted between April 2015 and November 2015 in Dar- es - Salaam. It was conducted at Zakhem Antenatal clinic (ANC)because in that area comprise a number of population showed many factors that has relevance with the topic chosen, Also this center is supported by Ministry of Health, Community Development, Gender, Elders and Children (MOHCDGEC). A self − administered structured questionnaire was used for data collection and included information on socio- demographic characteristics and clinical factors. Hopkins Symptoms Checklist the Swahili version scale 25 items was used to collect measures for depression and anxiety among pregnant adolescent girls. The mean score of 1.06 was used as a cut off whereby those who scored higher than 1.06 were considered to have higher depressive and anxiety symptoms. This low cut of points was used because it was validated and provides consistent results in Tanzania context among pregnant women in Dar es Salaam on the study done by (Lee B, et al, 2002). (Data analysis was done using SPSS version 20 and statistical significance level was set at p value of 0.05. Results: A total of 384 participants were included in the study. Among them, 195 (50.8%) were below the age of 18 years, and 189 (49.2%) had 18 -19 years of age. The mean age of participants was 17.2 years (standard deviation 1.63). The pregnant adolescent girls who were employed were found to have higher anxiety score (96.1%, n=319) with p value of 0.03 and those who had first pregnancy (Primigravida) were more likely to have higher anxiety and depressive symptomatology score   (p = 0.01)When controlling for confounders, the multivariate logistic regression model revealed no factor that was independently associated with depressive and/or anxiety symptomatology among pregnant adolescent girls.Conclusion and recommendation: Depression and Anxiety symptoms are prevalent among adolescent pregnant girls in Dar es Salaam, This study pointed out that depressive and/or anxiety symptomatology is more in younger (below age 18) mothers, employed, and those who had first pregnancies (Primigravida). We therefore recommended that education on depression and anxiety symptoms should be provided and implemented to the community to enable early detection and treatment of

this problem. Future research is needed to investigate other psychological factors that may contribute to mental health issues in this vulnerable group.

215. Stephen, E. (2018). Assessing The Effect OfMobile Health (Mhealth) Intervention On Adherence to Four Recommended Antenatal Visits and Facility Births: A Case Study of Muleba District in Kagera Region, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Reduction of maternal, new-born and child deaths has been given a high priority as they substantially contribute to the high burden of mortality worldwide. However, efforts are still lagging in Sub Saharan Africa that still contribute about 66%(1) of all maternal deaths worldwide by 2015. Tanzania being among 10 countries accounting for 60%(1) maternal deaths worldwide has put forward initiatives to reduce the high mortality including Tanzania vision 2025. In the same efforts Tanzania national policy advocate completion of recommended antenatal care and facility births that assist in early management of danger signs as a prerequisite for improved care during pregnancy and at birth. However, a low uptake of Antenatal Care (ANC) and facility births is still reported .Responding to the low uptake of these crucial health services, stakeholders in health have come up with different interventions to improve ANC adherence and proportion of women giving birth at ahealth facility interventions including those of mobile health services in health (mHealth).Use of mHealth in limited resource settings many of which have shortage of health workers but a goodpenetration of mobile technology have shown tremendous potentials in improving healthservice utilization.In 2016 Jhpiego, a Tanzanian international non-profit health organization affiliate of John Hopkins University in collaboration with the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) piloted a mobile phone-based electronic protocol (mHealth) in Kagera and Mara regions to be used by health workers at community and facility level, as a decision support tool and reminder mechanism to improve adherence to ANC visits and facility births.**Objective:** Objective of this study was to assess the effect of mobile health (mHealth) intervention on adherence to the recommended four Antenatal care (ANC) visits and facility births.**Methodology:** A retrospective cohort study was done to compare ANC visits and place of

birth in mHealth exposed and comparison arms in districts of Muleba that have been exposed to mHealth intervention and Kyerwa district not exposed to mHealth intervention. A total sample of 258 (122 in mHealth exposed arm and 136 in comparison arm) was used to assess effect of mHealth for the variable of ANC attendance and a sample of 244(125 in mHealth exposed and 119 in the comparison arm) was used to assess the effect of mHealth for the variable of place of birth. Data was collected using a data extraction tool and entered in Epi Info 7 for aggregation and transferred to STATA for cleaning and analysis. Univariate logistic regression analysis was done for each of the independent variable with the dependent to measure the effect of the independent variables. Controlling for all values with $p \leq 0.2$, multivariable logistic analysis was done to measure the association of the dependant variables when exposed to mHealth. Significant difference between the intervention and comparison arms was used to test the null hypothesis. **Results:** Findings of this study shows pregnant women in mHealth exposed arm were more likely to adhere to minimum of four ANC visits than those in the comparison arm: (AOR, 2.27; 95% CI, (1.32%-3.71%)) (p = 0.02). There was no statistically significant difference in number of women who delivered at a health facility when compared between mHealth exposed and comparison arms. Pregnant women in mHealth exposed arm were more likely to start ANC attendance early, anecdotal findings of this study show (AOR 1.65 95% CI (0.99-2.72)) (p=0.005). **Conclusion and recommendations:** Women were more likely to start ANC visits early and adhere to the recommended ANC visits when exposed to mHealth services during pregnancy than when not exposed, the same improvement was not observed for the variable of facility births. This improvement in health service utilization in region like Kagera where these indicators of health are lagging can have positive impact in the reduction of the high maternal and perinatal mortality and thus advocating for scale up of this intervention into routine practices and for future studies to explore the impact of improved ANC adherence on mortality.

216. Sukunala, O. (2018). Risk Assessment For Prostate Cancer Progression And Recurrence At Time Of Diagnosis Among Patients At Selected Hospitals, Dar Es Salaam.Muhimbili University of Health and Allied Sciences.

Abstract.

Background: Prostate cancer is the most common cancer affecting men and causes deaths second only to lung cancer. Several treatment modalities for prostate cancer exist, currently in developed countries. Before making a decision regarding treatment for prostate cancer, risk stratification to determine and estimate the likelihood that a given tumor will recur after treatment is done. In our setting prostate cancer treatment depends on clinical acumen of the individual surgeon. Based on prognostic factors, tumor grade, local tumor stage, serum PSA, percentage of biopsy cores involved with cancer and age, a validated UCSF-CAPRA score tool has been developed and shows accurate prediction of pathological and biochemical outcomes of the tumor. There is no published study in Tanzania regarding risk stratification. Most of the studies on the subject are from developed countries. Therefore, there was need to assess the practicality of introducing and utilizing the UCSF-CAPRA score tool in risk assessment in our setting. **Methods:** A descriptive cross sectional hospital based study was conducted on 50 patients with clinically localized prostate cancer at MNH, Regency and Tumaini hospitals. CAPRA scores were calculated at diagnosis from the prostate-specific antigen level, Gleason score, and percentage of biopsy cores that were positive for cancer, clinical tumor stage, and age at diagnosis. The recommended treatment modality of each category was assigned and compared with the observed treatment given. Descriptive analysis was done for the cases, using SPSS statistical software version 20 .**Results:** Among 50 patients, 27 (54%) patients had a high risk score of 6-10, followed by 17 (34%) patients with an intermediate risk score of 3-5 and 6(12%) patients belonged to the low risk score of 0-2 CAPRA category. Majority of patients, 32(64%) received androgen deprivation therapy, followed by 18 (36%) patients for both radical prostatectomy and active surveillance group. In the cohort of this study, 6(12%) received standard treatment as recommended by CAPRA scores and 44(88%), received inappropriate treatment. **Conclusions and recommendation:** High proportion (more than half) of patients with clinically localized prostate cancer had a high risk of progression and recurrence following treatment at the time of diagnosis. The majority of patients were treated with primary androgen depravation therapy regardless of the risk category. Comparison of management approach as suggested by the UCSF-CAPRA score to what has been the practice shows only twelve percent of patients received standard treatments. Risk-adapted treatment strategy, using UCSF-CAPRA

score tool must be advocated to reduce over treatment of low-risk disease and under treatment of high-risk disease.

217. Sulle, Z.S. (2018). Factors Contributing To Male Involvement In Pmtct Of Hiv Programme In Arusha Region.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Male partner participation is a crucial component being promoted to optimize antenatal care/prevention of mother to child transmission of HIV programme services. It creates an opportunity to capture pregnant mothers and their male partners to overturn the transmission of HIV during pregnancy, labor and breast feeding. The objective of this study is to determine the factors contributing to male involvement in PMTCT of HIV programme. **Methodology:** A cross sectional study was conducted in Arusha City Council from November 2017 through February 2018. Partners of women who had been counseled and tested for PMTCT and had PMTCT follow up in the last 12 months prior to study and responsible for the current pregnancy were enrolled. All women and their partners were informed of the study and informed consent was sought. A questionnaire containing socio- demographic, knowledge on HIV, and male involvement information was administered. Data were entered, cleaned and analyzed using by Epi info software 3.5.4 and 7. Univariate analysis was done by calculating measure of central tendency, measure of dispersion and proportion. Bivariate and multivariate analysis was done by calculating OR, 95% CI and P value**. Results:** A total of 671 men partners of HIV positive mothers attending ANC/PMTCT were interviewed. The mean age was 36 years and SD 6.07 with a range of 19 years to 59 years. Men age group of 19-29 years (COR 0.51, 95%CI 0.31-0.87) and 30-40 years (COR 07, 95%CI 0.49-1.02) were less likely to be involved in PMTCT compared to those in age of 41years and above. Men with knowledge on HIV transmission during pregnancy (COR 1.61, 95% CI (1.09-2.37), delivery (COR 1.67 95% CI (1.03-2.71) and breastfeeding (COR 1.99, 95% C1 (1.09-3.66) had higher odds of being involved in PMTCT programme. Those men who were aware about PMTCT had high odds to be involved (COR 2.25, 95%CI (0.53-9.5). In multivariate analysis, male involvement was independently associated with having thought that caesarean section reduces the chance of mother to child HIV transmission (AOR. 2.41, 95% CI (1.75-3.31) and having higher education (AOR 1.4, 95% CI

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(1.19-2.42).There were significant differences in proportion of males who were involved in PMTCT and those who were not in terms of their perception on socio-cultural factors affecting male involvement except perception on the statement that women can test HIV without their partners. **Conclusion and Recommendations:** Male partner involvement is associated with various factors. Apart from cultural factors, other reason can be rectified by continuing public education, Male involvement can help the country to attain the 90 90 90 target hence more effort is needed to meet this. Male involvement targeted interventions, apart from other things, should focus on improving males' knowledge and awareness on PMTCT. Qualitative studies involving both males and females should be done on this area.

218. Swallo, A.Y. (2018). Short Term Outcomes And Associated Factors For Relaparotomies At Muhimbili National Hospital.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Relaparotomies contin¬ue to be a challenge since they carry a high morbidity and mortality despite developments in general surgery services. Globally, an incidence of 0.6-24% of relaparotomy rates with its indication and adverse effects have been reported in various studies. At MNH, it has been observed that a significant proportion of abdominal surgery cases due to intestinal obstruction and peritonitis have high likelihood of subsequent relaparotomy. This study will determine the characteristics, magnitude and outcome of relaparotomies among patients attending MNH. **Methods:** A cross sectional, hospital-based study was carried out for a period of 12 months involving 101 patients who underwent relaparotomy within a period of 60 days of the index laparotomy in the department of surgery at MNH. Indications, findings at surgery, surgery done and short-term outcomes were recorded in a data collection tool and analyzed. **Results:** There were 101 relaparotomies done at MNH with repeat laparotomy rate of 7.6%. Patient's mean age was 37 ± 19.7 (0.024 – 86) years. Residents and registrars performed majority of emergency surgery, 68.4%. Bowel repair or anastomosis was the leading procedure done (47. 5%).The common indications for relaparotomy included anastomotic leak (37.6%), abdominal abscess/collection (29.7%), bowel fistula (19.8%) and wound dehiscence (18.8%). Short term outcomes for relaparotomy included electrolyte imbalance (22.9%), anemia (21.5%), wound

infection (18.9%), prolonged hospital stay and death (40%). Septicemia (80%) was the main cause of post-operative deaths. **Conclusion:** Repeat laparotomy at MNH was low compared to other studies but its accompanying mortality rate and complications were both highat 40 %. Bowel leak following emergency bowel surgeries is the most frequent cause for relaparotomies and subsequent fatalities. These surgeries are done at night by junior surgeons, residents and registrars. Key words: Relaparotomy, morbidity, mortality

219. Sylvanus, E.S. (2018). The Clinical Profile, Management, And Outcome Of Patients Presenting With Emergency Complications Of Renal Failure At Emergency Department Of Muhimbili National Hospital. Muhimbili University of Health and Allied Sciences.

Abstract

Background: Renal failure carries high mortality rates even in high-resourced countries, however, early recognition of acute presentations and appropriate interventions including dialysis, is known to reduce mortality and long-term morbidity. In Tanzania, the overall prevalence of renal failure is around 7%. However, little is known about the clinical profile and outcomes of patients with acute complications of renal failure that present to Emergency Medicine Department (ED) in need of dialysis. Aim: The aim of the study was to describe the profile, management strategies and outcome of patients presenting with emergency complications of renal failure at ED of Muhimbili National Hospital (MNH) in need of dialysis. **Material and Methods:** This was a prospective cohort study of adult patients with renal failure presenting to ED-MNH between September 2017 and February 2018. A structured data collection sheet was used to gather demographic information, clinical presentation, management strategies, and outcomes. Data summarized with descriptive statistics including mean, median, and frequencies were reported. Logistic and linear regressions were done to determine factors associated with mortality and access to dialysis respectively. **Results:** Total of775 (5.3%) out of 14,487 patients who presented to ED during the study period had renal disease. We enrolled146/775 (18.8%) patients with acute symptoms of renal failure requiring emergent dialysis. The median age was 49 years (interquartile range 32 to 66 years), and 110 (75.3%) were male. Shortness of breath 67(45.9%) and reduced urine output 58 (39.7%) were the top presenting complications. Majority of patients 85(58%) were managed conservatively while

61(42%) were dialyzed. The overall mortality was 57 (39%). The mortality in non-dialysed patients vs. dialysed patients was 53% (45/85) vs. 20% (12/61) (p<0.0005) respectively. Predictors of mortality were vomiting (OR=6.23), oliguria (OR=3.4), pulmonary edema (OR=4.6), or creatinine levels >1200umol/L (OR=5.02), and not receiving dialysis (OR=8.02). Female sex had lower odds of dying (OR=0.13). The independent predictor of dialysis was having health insurance. 54% of patients with health insurance were dialyzed, compared to 39% who paid out of pocket (OR= 0.3). **Conclusion:** In a cohort of patients with renal disease presenting to ED, acute complications of renal failure necessitate a significant need for emergent dialysis. The overall in-hospital mortality was 39%, and patients who received conservative care had a significantly higher mortality compared to dialyzed patients.

220. Tarimo, O.B. (2018). PrevalenceAnd Clinical Characteristics Of Otitis Externa Among Patients Attending Otorhinolaryngology Services At Muhimbili National Hospital.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Otitis externais amongst the commonest ear disease which affects the outer ear and encountered in medical routine practice. Is commonly caused by infection (usually bacterial, although occasionally fungal and viral), but it may also be associated with a variety of local skin changes or noninfectious systemic conditions. This condition has been reported to be found in all age groups with no gender predilection. Objective: The study aimed at determining prevalence in relation to social demographic profile, clinical types, risk factors and complications of otitis externa among patients attending at otorhinolaryngology services at Muhimbili National Hospital. **Methods and materials:** This study was cross sectional descriptive hospital based study conducted at Muhimbili National Hospital for patients attending services at otorhinolaryngology department from June 2016 to January 2017. A sample size of 1200was taken. Data was collected using structured questionnaires and analyzed using SPSS version 20 for windows. P-value was considered significantly if less than 0.005. **Results:** Out of 1200 patients 599(49.9%) weremales and 601(50.1%) were females. Majority 672(56%) were in age group 0 − 10 years. Among 1200 patients 138(11.5%) were diagnosed with otitis externa. Prevalence of otitis externa in males was76 (12.9%) and females was62 (10.3%). The age range

was 2 - 85 years with a mean of 18.29 ± 1.89 and age group with highest percentage was >60 years 16(24.6%) and the lowest was 0 – 10 years 40(6. 0%).In the study population the largest number of patients were found in diffuse clinical type of otitis externa 120(87%) of which age 0 – 10 years were the most affected group; males were most affected in both clinical types. The commonest risk factor encountered was self-cleansing of the ear comprising of 287(53.7%). Age group with high frequency was 21 – 30 years 108(20.2%) with a male to female frequency ratio of 1:1.4. Only 4(2.9%) of the patients with otitis externa were found with complications. **Conclusion:** The prevalence of otitis externa from this study is noted to be higher. Known risk factors for otitis externa were slightly higher in females but males were found to be more affected compared to females and the most affected age group was >60 years. Very few patients were found with complications.

221. Theophilus, L.V. (2018). Prevalence, Clinical Characteristics And Associated Factors Of Root Caries Among Elderly Patients In Dar Es Salaam, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Root caries is an emerging dental health problem for elderly mostly because of increased life expectancy and life-styles. The improvement in oral health care and higher retention of teeth by the elderly can lead to increased number of exposed root surfaces susceptible to caries. Most patients with root caries seen at dental clinics in Dar es Salaam prefer tooth extraction than the conservative treatment due to lack of awareness about the alternative treatments. There is no data on root caries, its clinical characteristics and associated factors among elderly patients in Dar es Salaam, Tanzanians. This study was intended to document the magnitude of root caries in the Tanzanian elderly that can help to raise awareness and guide clinicians in Tanzania in early detection and evidence-based restorative treatment of root caries in the elderly group.Objective: To determine the prevalence, clinical characteristics and associated factors of root caries among elderly patients attending selected dental clinics in Dar es Salaam during the period from September 2017 to March 2018.**Methods:** This hospital-based cross-sectional study involving the elderly patients aged 60 years and above was conducted at the dental clinics in Muhimbili (Muhimbili University of Health and Allied Sciences and Muhimbili

National Hospital), Amana Regional Referral Hospital, Mwananyamala Regional Referral Hospital, Temeke Regional Referral Hospital. Data was collected by interviewing and examining patients using a structured questionnaire, clinical assessment form and analyzed using Statistical Package for Social Sciences program SPSS version 20.0. Frequency distribution and bivariate analysis using Chi-square test with a p-value of <0.05 (considered statistically significant) were performed. Multiple logistic regression for those variables which showed statistical significant association at bivariate association was performed to adjust the results for confounding effects. **Results:** 348 participants were involved in this study with response rate of 89.5% and female to male ratio 1:0.7. The age of the participants ranged between 60 years and 92 years old (mean age was 76 years with ± 6.2 SD). The 70 years and above age group was most affected by root caries (38.8%). The prevalence of root caries was 39.9 % and the Root Caries index was 24.6%. Root caries was significantly found on maxillary teeth (68.3%) than mandibular teeth (43.9%). 69.1% of the root caries were seen on the buccal surfaces of teeth and 2/3 of these teeth were without cavitations. Gingival recession most commonly affected the maxillary premolars (80.5%), followed by the mandibular incisors and premolars. The least affected teeth were the maxillary and mandibular molars (73.9% and 66.4% respectively) followed by the maxillary incisors (62.4%). 75.3% of the elderly had history of one or more systemic disease and 73.9% were under medications. Those elderly who suffered from dry mouth were 12.4% and 7.2% were elderly who had denture while the majority of the elderly (71.8%) were found to have poor oral hygiene and among this group the prevalence of root caries was high 88.5%. **Conclusion:** It was evident from this study that the prevalence of root caries among the elderly population in Dar es Salaam was high. The maxillary teeth and premolars were most commonly affected by root caries. Increased age, higher level of education and gingival recession were the factors which contributed in the prevalence of root caries among the elderly patients in Dar es Salaam, Tanzania. Poor oral hygiene was a strong predictor associated with the occurrence of root caries in the elderly. **Recommendations:** There is a need to establish an accessible and affordable system for dental care for those aged 60 years and above. Moreover, to provide them with correct methods of tooth brushing to prevent occurrence of root caries. This will motivate visits to dental clinics and promote routine check-ups. Incorporate regular continuous professional education programmes to dentists especially those working in Regional Referral Hospitals to encourage restorative treatment of root caries. Moreover, there is a need to conduct more studies on root

caries, which will cover several regions in Tanzania so as to give country-wide prevalence for root caries in the elderly.

222. Tita, O.B. (2018).Work-Related Ocular Symptoms: The Case OfHairdressers In Kinondoni Municipality Dar Es Salaam, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Hairdressers are frequently exposed to variety of chemicals from the use of shampoos, permanent wave solutions, hair dyes and hair sprays during bleaching, curling and hair cutting. The effects of these chemicals are numerous among hairdressers including ocular diseases. These effects have been of national and international public health concern. The exposure to the chemicals among this group is contributed by inappropriate use or nonuse of personal protective gears, such as eye wear, poor knowledge and lack of training on occupational ocular diseases. Several studies have been done on hairdressers in Tanzania. However, there are limited studies assessing ocular diseases among hairdressers. **Objectives:** This study intended to determine the prevalence of work-related ocular symptoms and associated factors among hairdressers in Kinondoni Municipal, Dar es Salaam.Materials and methods: A descriptive cross - sectional study was conducted among hairdressersin Kinondoni Municipality, Dar es Salaam. A total of 300 hairdressers were recruited in the study. A standardized questionnaire and observation checklist adopted from Ghanaian study was used to collect data on work related ocular symptoms from selected hairdressing salons. All these salons were marked by the Global Positioning System (GPS). Data obtained was analyzed using Statistical Package for Social Sciences (SPSS) version 20. **Results:** About 79% of hairdressers reported work-related ocular symptoms. The commonest work-related ocular symptoms were headache (87.3%) and itching (76.3%). Hairdressers who used to blow dry clients' hair were found to be 17 times more likely to acquire work-related ocular symptoms while hairdressers who were aware of hazards that they could encounter in salon were 0.02 times less likely to acquire work-related ocular symptoms. Also hairdressers who used hair bleach products on their clients were found to be 9 times more likely to acquire work-related ocular symptoms while hairdressers who were trained on the use of chemicals were 0.02 less likely to acquire work-related ocular symptoms. For hairdressers

who used wave solution products on their clients were found to be 6 times more likely to acquire work-related ocular symptoms. Also hairdressers who used to iron client's hair were found to be 2 times more likely to acquire work-related ocular symptoms. **Conclusion:** Nearly all hairdressers of Kinondoni Municipality had one or more forms of work-related ocular symptoms. Work-related ocular symptoms were highly influenced by lack of hazard awareness, lack of training of hairdressers on the use of chemicals, blow drying, hair ironing, the use of hair bleach and wave solution. The hairdresser's behaviour of seeking for medical help towards onset of work-related ocular symptoms was low. **Recommendation:** Hairdressers of Kinondoni Municipality should be provided with health training that focuses on encouraging them to take appropriate protective measures, such as wearing goggles to protect their eyes from any danger. Furthermore, they should also be encouraged to do periodic eye and medical check-ups and take frequent breaks during work since continual exposure to chemicals emanating from various hair products increase their susceptibility to work-related ocular symptoms

223. Thobias, E. M. (2018). Motives and Barriers to Voluntary Blood Donation Amoung Different Occupational Groups in Mbeya, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Introduction: Voluntary blood donation is the type of blood donation that involves one giving blood, plasma or cellular components on his or her own free (WHO, 2010). A study done by (WHO, 2010) identify the blood requirement for countries to be 1% of the country population and this can be attained through 100% voluntary blood donation by 2020. Moreover, the current blood donation intervention approach in Tanzania is based on 90% voluntary blood donors in schools and universities who latterly drop out from voluntary blood donation after finishing their secondary education (NBTS, 2016). So this raised a question on what motivates and hinder different occupational groups who are out of school to voluntary donate blood. **Objective:** The study aimed to explore motives and barriers to voluntary blood donation behavior among different occupational groups in Mbeya. **Material and Methods:** This was a cross - sectional study which was carried out in Mbeya. The study included a total of 20 participants from motorcycle drivers, Health care workers, Farmers and Teachers who were conveniently selected.

Data collection was done using an in depth interview guide and the In-depth interviews were audio taped and notes was taken to capture the facial expression, gestures and other subtle relevant clue (Mack, Woodsong, McQueen, Guest, & Namey, 2011). **Results:** The intrinsic and extrinsic motive that were common to all participants included kindness to a person who needs blood, relative needing blood, seeing national leaders donating blood, and awareness on the importance of voluntary blood donation. Moreover, barriers identified to all included Lack of reminders, corruption and fear of knowing their HIV status. **Conclusion:** Majority of study participants highlighted the feeling of helping others and being kind and happiness after blood donation to be the major intrinsic motives to voluntary blood donation, while information on blood donation, seeing national leaders donating blood, reminders as the major extrinsic motives. Furthermore, majority of them pointed out Time, distance, lack of reminders, corruption, focus on schools, and fear to know their HIV status as the major barriers. **Recommendations:** National blood transfusion services should have continuous awareness on the importance of voluntary blood donation to remind people to donate blood voluntarily.

224. Tumaini, B.B. (2018). Diagnoses Hospital Outcomes and Their Associated Factors Among Elderly Patients Admitted to The Medical Wards of Muhimbili National Hospital and Jakaya Kikwete Cardiac Institute.Muhimbili University of Health and Allied Sciences.

Abstract:

Background: The elderly population has been described as the fastest growing population worldwide. Growth of the elderly population is expected to increase the proportion of elderly patients in health care facilities. The spectrum of diseases in the elderly differs from that in other population groups. **Objective:** To determine diagnoses, hospital outcomes and their associated factors among elderly patients admitted to the medical wards of Muhimbili National Hospital (MNH) and Jakaya Kikwete Cardiac Institute (JKCI). Methodology: A descriptive cross-sectional hospital-based study on patients aged ≥60 years admitted through MNH Emergency Medicine to the medical wards and JKCI. **Results:** A total of 336 participants aged ≥60 years were enrolled. Elderly patients comprised 30.1% of medical admissions. Mean age was 70.6 years; male to female ratio was 1:1. Of the 336 study participants, 73 (21.7%) had single diagnosis while 263 (78.3%) had comorbid conditions with an average of 2.3 diagnoses per study

participant. The leading diagnoses were hypertension (44.9%), stroke (31.5%), heart failure (18.5%), pneumonia (17.9%), diabetes mellitus (17.3%) and chronic kidney disease (16.4%). The median duration of hospital stay was 5 days (range 1 – 49 days) and in-hospital mortality was 25.6% (86/336) and over 65% was due to non-communicable diseases (NCDs). More than half of the deaths (48/86) occurred in the first three days of hospitalization. A modified Barthel ADL score of □20 (total dependence) on admission was associated with fifteen-fold greater odds of death (p<0.001). Conclusions: NCDs formed a greater proportion of the diagnoses among patients aged ≥60 years admitted to the medical wards and were responsible for two-thirds of the deaths. Inhospital mortality was high in the first three days of hospitalization. Mean modified Barthel ADL score on admission was significantly lower among those who died compared to those who were discharged home and hence may be used identify patients who need specialattention.

225. Tungaraza, J.P. (2018). Assessment Of Early Orthodontic Treatment Need And Its Associated Factors Among Tanzanian Children Using Ipion-Index.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Early orthodontic treatment aims to identifying and intervening occlusal conditions occurring in the primary and early mixed dentition. This treatment is effective and desirable when the correction of malocclusions in young patient is requested, where a stable result may be achievable, less extraction of permanent teeth may be needed, the duration of orthodontic treatment in permanent dentition may be reduced and future costly treatment need may be eliminated. Thus, this studyidentified EOT need which is pivotal for organizing and planning preventive orthodontic services and care in Tanzanian children. **Aim:** The aim of this study was to assess early orthodontic treatment need and its associated factors among children in Dar es salaam, Tanzania. **Methodology:** This was an analytical cross sectional study, in which primary and nursery school children aged 6 and 9 years from Kinondoni Municipality, in Dar es Salaam were involved. About 720 school children were expected to participate in the study, after being selected by multistage cluster sampling technique. Data collection was done using a questionnaire for obtaining demographic characteristics. A clinical examination form was used

for recording occlusal traits and other oral health problems in order to obtain the IPION-scores. Data was coded and analyzed using a computer software, SPSS version 20.0.Frequency distributions of demographic characteristics and various clinical variables were generated. Chi-square and logistic regression models were used to test for statistically significant differences between two variables in bivariate analysis of need for EOT (dependent variable) and factors associated with the need for EOT (independent variables e.g. socio-demographic factors) and in multivariate analysis for interactions between multiple variables, respectively. The p-value for statistical significance was set at $p < 0.05$ and the confidence interval (CI) was at 95%. Results: A total of 667 children (59.5% girls; 52.5% 9-year-olds) were able to participate in the study. Most children had carious teeth (age 6 years, 77.9% and age 9 years, 60%). The most common prematurely lost teeth were the lower second primary molars (these were affected in 6% of 6-year-olds and 4.9% of 9-year-olds). The most commonly recorded occlusal anomaly in both ages was an increased overjet (recorded in 18.9% of 6-year-olds and 34.9% of 9-year-olds). Active frenum was the commonest functional characteristic, found in 16.9% of the 9-year-olds. The overall early orthodontic treatment need per IPION index was 41.7%. Regarding the relationship between socio-demographic characteristics and orthodontic treatment need per IPION index, significantly many 9-year-old boys needed treatment than girls in both ages (in the 6-years, boys 78.3% vs girls 66.5%; p-value 0.024 and in the 9-years, boys 70.5% vs girls 58.7%; p-value 0.030). Following logistic regression model; caries (OR 50.5, CI 13.3-192.4; $p < 0.001$), premature loss of primary teeth (OR 4.5; CI 1.8-11.2; $p < 0.001$), anterior crossbite (OR 5.3, CI 1.6-17.5; $p < 0.05$) and anterior open bite (OR 27.2, CI 5.3-139.8; $p < 0.001$), remained as significant determinants for having a definite treatment need in the 6-year-olds. As for the 9-year-olds; caries (OR 319.9, CI 58.1-1763.4; $p < 0.001$), anterior crossbite (OR 67.6, CI 4.3-1053.1; $p < 0.05$), deep bite (OR 10.3, CI 2.1-51.1; $p < 0.05$), anterior open bite (OR 49.1, CI 8.3-289.9; $p < 0.001$) and lips incompetency (OR 6.2, CI 1.5-25.5; $p < 0.05$), remained as significant determinants for having a definite treatment need. **Conclusion:** Early orthodontic treatment need for malocclusions was high in school children of Kinondoni municipality, Dar es Salaam, Tanzania. Whereby, about half of the participants had a definite EOT need according to the IPION-scores. The factors associated with the overall IPION-score were mainly clinical conditions such as having dental caries, premature loss of primary teeth, anterior crossbite, open

bite, deep bite and lip incompetence. The children would thus benefit from preventive and interceptive orthodontic treatment programs.

226. Ulanga,A.J. Mamuya, S.H., Sakwari, G., (2018). Manuscript Respiratory Symptoms And Lung Function Among Workers In Grain Milling Industries InDar Es Salaam, Tanzania.Muhimbili University of Health and Allied Sciences.

Abstract

Background: Workers in grain milling industries are exposed to grain dust released during milling processes. Exposure to grain dust is associated to various respiratory symptoms such as phlegm, breathlessness, cough and wheezing and it also leads reduced lung function. This study aimed at determining grain dust exposure levels and the prevalence of respiratory symptoms and Lung function among grain mill workers Dar es Salaam. **Methodology:** A descriptive cross sectional study was used to collect information on Respiratory symptoms among 264 grain mill workers and 100 controls by using a Questionnaire. Lung function tests were carried out on 180 grain mill workers and 68 controls by using an easy one spirometer while Personal dust exposure was measured on 30 grain mill workers and 5 controls by using PVC filters of 8μm pore size on two-piece filter cassette mounted on Sidekick Casella (SKC) pump. P value of less than 0.05 was used as criteria for significant association. **Results**: Grain workers were exposed to higher levels of total dust with GM 12.15 Mg/m3 (GSD 1.53) than the control GM mg/m3 (GSD). Most of the workers in grain milling industries 66.7% were exposed to dust concentrations above the OEL (10mg/m3). The Prevalence of respiratory symptoms was higher among grain mill workers, (51.1%, 41.3%, 33.7%, 17%and 9.8% for cough, phlegm, breathlessness, tightness and wheezing respectively than in controls (28%, 19%, 21%, 8% and 5% for cough, phlegm, breathlessness, tightness and wheezing respectively. 26% grain mill workers had obstructive lung defect and 21% had restrictive lung defect. There was no significance difference in dust exposure concentration. **Conclusion:** Exposure to grain dust in a working environment causes the increase in work related respiratory symptoms and reduced lung function. This study recommends the use of control measures to decrease dust exposure level among mill workers, also periodic medical examination should be conducted to assess worker's health.

227.Van Christ, A.M., (2018). Comparative Study of Two Different Dose Fractionations for High Dose Rate Brachytherapy in Locally Advanced Cervical Carcinom.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Cervical cancer is the most common and fatal among other gynecologic malignancies encountered in Low and Middle Income Countries.Brachytherapy holds a central part in the treatment of locally advanced cervical carcinoma. It has been suggested that smaller doses per brachytherapy insertions were safer and more efficient as attempts to brachytherapy hypofractionation.This study compares two different dose fractionations of High Dose Rate brachytherapy, kept at the same total Biologically Effective Dose to point A, and to compare the disease control, toxicity and overall survival at 9 months of follow-up.**Materials and Methods:** The study was a comparative study, including two groups of patients who underwent concurrent external beam radiation therapy and weekly cisplatin followed by HDR intracavitary brachytherapy. External Beam Radiation Therapy was delivered by a Co-60 teletherapy unit to a prescribed dose of 50 Gray with 2 Gray per fraction in 25 fractions over 5 weeks, together with weekly intravenous cisplatin at a dose of 40 mg/m2. The patients were allocated into two groups of either HDR-ICBT dose of either a weekly 8.5Gray x 2 insertions (Test Group – Arm A) or a weekly 6.7 Gray x 3 insertions (Control Group – Arm B). Patients were then followed-up every 3 months for 9 months, with regular check for toxicity and abdomino-pelvic ultrasound to monitor disease control. Independent Chi-Square analysis was used to compare local control and toxicity profiles between the two arms. Kaplan-Meier analysis was run to estimate survival. **Results:** Our preliminary findings were for the first 65 patients, enrolled between April and August 2017, then followed up until May 2018. Median follow-up time was 9.1 months. Analysis was run for 47 patients with complete data. Over a half of our patients were aged between 41-50 years, 93.6% were Squamous Cell Carcinoma, and 46.8% of the patients had stage IIB disease.9-months local control was comparable between the two groups of treatment (85.7% Vs 76.9%, p=0.058), and 10.6% patients in the standard arm were found to have grade 2 rectal complications. 9 months' overall survival analysis was similar for the two arms (p>0.05). **Conclusions:** Our study findings highlight the non-superiority of the standard, smaller dose per fraction (6.7 Gray x 3) to a larger

dose (8.5 Gray x 2) per insertion, with a similar Biologically Effective Dose, that can be replicated safelyin resource-limited settings

228. Vuo, D.P. (2018). And Sharp Injuries Blood Splash Management Among Health Care Workers In Kibaha, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Sharp injuries and blood splash are the common occupational exposures among health care workers (HCWs). They are known to increase potential risk to blood borne infections. Under reporting of these incidences, underestimates the magnitude of risk to infections. Workers at Tumbi Hospital and nearby health facilities are at high risk to sharps and blood splashes because of serving road accidents victims and many other patients from different parts of Tanzania. **Objectives:** This study aimed at determining factors influencing sharp injuries and blood splash management among health care workers in Kibaha Town. **Materials and Methods:** A cross-sectional study involving 219 HCWs from Tumbi Hospital and in five health centers at Kibaha Town. Data were collected by using Questionnaires and observational checklists before entered into SPSS version 20 for analysis. Chi-Square test and further regression analyses were used to determine association between variables. Clearance was requested from MUHAS and permission to undertake the study was sought from the Administrative Secretary of Coast Region. **Results:** From a total of 219 HCWs, 69(31.5%) had sharp injuries and 119(54.3%) blood splash. Medical practitioners were the most exposed cadres 15(40.5%) to sharp injuries and blood splash 26(70.3%) followed by nurses 41(35.7%) with sharp injuries and 70(60.9%) blood splash. Out of 139 injured HCWs, 99(71.2%) reported incidents to their supervisors. IPC training and familiarity to reporting systems were noted to impact reporting of incidents among HCWs. Professional level among HCWs showed an association with sharp injuries (OR = (1.469), 95%CI=(1.113-1.939), p = 0.007. The job category was statistically significantly associated with blood splash (OR=(0.711), 95%CI= (0.567-0.892), p = 0.003 and working as laboratory technologist was protective.Conclusion and recommendations: Prevalence of sharp injuries and blood splash are still high among HCWs studied. HCWs with high professional level (degree) were mostly affected with sharp injuries. Lack of reporting of incidents was noted among health care workers and injury records were

poorly maintained. The authorities should implement training programs on sharp injuries and blood splash management systems along with proper documentation of occupational injuries among health care workers.

229. Wakuganda, E. (2018). Clinical Patterns, Risk Factors and Associated Comorbidities in Children with Cerebral Palsy at Muhimbili National Hospitaldar Es Salaaam, Tanzania.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Cerebral palsy (CP) refers to group of neurological disorders that appears in infancy or early childhood and permanently affects body movement and muscle coordination. Population based studies around the world report prevalence estimates of 1.5 to more than 4 per thousand live births. The prevalence ranges from 2.2-3.3 per thousand live births in developed world while those in developing countries range from 2 to 10 per thousand live births. Even though CP is a major cause of permanent disability in children including Tanzania, few studies has been done on the causes and risk factors, common physiologic subtype and associated co morbidities in Tanzania. Objective: The aim of this study was to determine clinical patterns, risk factors and associated co morbidities in children with CP at Muhimbili National Hospital. **Methodology:** A hospital based cross sectional study was conducted in pediatric neurology clinic at Muhimbili National Hospital and a total of 173 children who met the diagnosis of CP were consecutively enrolled into the study. Structured questionnaires were used to collect demographic, baseline characteristics and physical examination. Motor impairment was classified using gross motor function classification system and developmental milestones assessed by Malawi developmental assessment tool. Data collection was done from October 2017 to February 2018. Data analysis: Descriptive statistics was used such as frequencies, percentages, median with interquartile range, to describe study participants. Comparison of continuous variables was performed using student's t-test or Mann-Whitney U-test as appropriate. Chi-square (X2) test or fisher's exact test were used to determine associations for categorical variables. Odds ratio (OR) with 95% confidence intervals (CI) were estimated to determine risk factors for different types of CP. All analyses were conducted using SPSS version 20 and p-value ≤0.05 was considered statistically significant. Results: Spastic CP was the

commonest physiologic type occupying 66% of all children with cerebral palsy, with spastic quadriplegic having 75.5%, diplegia 14% and hemiplegia 10.5%. Other forms of CP were dyskinetic 21%, mixed type 7%, hypotonic 8% and ataxic type 2%. The most common risk factors were birth asphyxia 60.7%, neonatal jaundice 20.2%, neonatal infections 14.4% and prematurity 17.3, low birth weight and maternal infection 14%. The most common co morbidities were, speech impairment 76.3%, cortical blindness 58.9%, malnutrition 57.8%, epilepsy 45%, and hearing impairment 19.1%. More than half of study participants had severe gross motor function impairment level IV-V which was (65%) and majority were also impaired in all the components of developmental milestone gross motor, fine motor, social and language corresponding to age of less than one year. About 36.6% had normal EEG pattern, 31.6% had generalized epileptiform discharges, focal epileptiform discharges were 18.3%, generalized slowing 6.6%, hypsarrythmias 3.3%. **Conclusion:** In this study the most common causes of cerebral palsy were birth asphyxia, neonatal jaundice and neonatal infections, and more than half of the participant had spastic type. Severe forms of different co morbidities have been observed which highlights the need to be addressed early to improve quality of life for children with cerebral palsy. All the predicators of CP in our study can be prevented with strengthening of prenatal, natal and postnatal care.

230. Wangilisasi, S.P. (2018). Throat Colonization And Antibiotic Susceptibility Of Group A B-Hemolytic Streptococci Among Rheumatic Heart Disease Patients Attending Jakaya Kikwete Cardiac Institute.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Rheumatic Heart Disease (RHD), a complication of Acute Rheumatic Fever (ARF) caused by Group A β-hemolytic Streptococci (GAS) is a major cause of cardiovascular morbidity and mortality in young people in developing countries. If not prevented, recurrence of ARF causes worsening of RHD. Therefore, WHO recommends that all patients with confirmed RHD receive secondary prophylaxis against repeated attacks of ARF. The recommended drug is a long-acting penicillin. For patients allergic to penicillin; sulfadiazine, sulfisoxazole or erythromycin is recommended. Implementation of effective secondary prophylaxis is faced with challenges due to inadequate access to healthcare, prevailing threat of antibiotic resistance as

well as physicians' awareness on the importance of secondary prophylaxis to RHD patients. Therefore, there is a need to explore the prevalence and factors causing GAS colonization among RHD patients. Aim: The aim of this study was to assess throat colonization, antibiotic susceptibility and factors associated with GAS colonization among RHD patients attending Jakaya Kikwete Cardiac Institute (JKCI) in Dar es Salaam. **Methodology:** A cross sectional study was conducted at JKCI in which 194 RHD patients aged ≥5 years were enrolled in the study over a period of two months from March to May 2018 to. A structured questionnaire was used to obtain socio-demographic information of the patients as well as factors associated with GAS colonization. In addition, a Morisky drug adherence tool was used to assess the status of penicillin prophylaxis adherence. Throat swabs were taken and cultured to determine the presence of GAS among patients. Isolates of GAS were tested for antibiotic susceptibility by using Kirby-Bauer disk diffusion method according to the Clinical and Laboratory Standards Institute(CLSI) version 2015 standards procedures. Antibiotics of interest were chosen according to the Tanzania Treatment Guidelines and the prescribing patterns of physicians. **Results:** Out of 194 patients, 12.9% had positive cultures for GAS. Prophylaxis status was independently and significantly associated (p = 0.043) with GAS colonization in multivariate logistic regression analysis. Specifically, patients who stopped prophylaxis were 3.26 times more likely (95% CI = 1.04-10.24) to be colonized by GAS when compared to patients on regular prophylaxis. Majority (96%) of GAS isolates were susceptible to Penicillin, Ceftriaxone and Ciprofloxacin. A small proportion (4%) resistance was observed among Erythromycin, Oxacillin and Co-trimoxazole, with 8% resistance observed for chloramphenicol and 20% for Vancomycin. No GAS resistance was observed against Penicillin, Ceftriaxone, Tetracycline, Ciprofloxacin and Clindamycin. **Conclusion and Recommendations:** The throat colonization of GAS among RHD patients suggest inadequate prophylaxis. It is recommended that guidelines should be followed with regard to initiation and duration of prophylaxis. In addition, education on the importance of prophylaxis should be provided to patients and health care providers.

231.Zakaria, N.Y. (2018). Assessment Of Preoperative Fasting Practice Among Children Planned For Elective Surgery At Muhimbili National Hospital.Muhimbili University of Healthy and Allied Sciences.

Abstract

Background: Children like adult undergoing elective surgery are required to be nil per oral for a couple of hours before elective surgery. This is to avoid aspiration of gastric contents during anesthesia and surgery. Children fasted from midnight of the day of surgery until induction of anesthesia may experience many hours of fasting then recommended by the ASA fasting policy. This practice results into prolonged fasting with its side effects during peri operative period. Studies have shown that, factors leading to prolonged fasting among children planned for surgery were absence of formal fasting policy to staff members, inadequate knowledge of staff member pertaining to fasting recommendation, lack of updating training on fasting protocol, attitude of most staff members on traditional midnight fasting and patients inadequate understanding on fasting instruction. **Methodology:** A descriptive hospital based cross sectional study was conducted at Muhimbili National Hospital in Dar es Salaam among 373 children aged between 1yrs to 12 yrs who underwent elective surgery. After taking consent of children's caretakers, they were interviewed by using a questioner in the waiting area in the Peadriatic Theater and main operation theater. After the interview, the blood glucose of these children was taken just before induction. Around 150 health providers consisting of theatre nurses, ward nurses, nurse anesthetists, surgeons and anesthesiologist were all interviewed concerning the practice of preoperative fasting among children by using questioners in their respective areas. **Results:** Among 373 children, male were 63 %(n=235) and female were 37% (n=138). Concerning their last meal before operation some children (63, 16.9%) had taken clear fluid as their last meal, 267 (71.6%) had taken regular meal and few children (43, 11.5%) were breast fed. Most of these children had prolonged fasting, that is the breastfed children (n=43, 11.5%) fasted for 5 to 15 hours and the rest (n=330, 88.5%) who had taken clear fluid and regular meal had fasted between 8 to 23hours.In this study the reasons for such practice of prolonged fasting were deficient understanding and poor complains of the care taker to the fasting instruction (n= 267,70.7%), followed by absence of standard fasting protocol and different practice of prescribing fasting hours by the health care providers. The outcome of prolonged fasting which was seen in this study was hunger, thirst, anxiety and hypoglycemia. Most of the children's care takers (n=187, 67%) ranked hunger and thirst as moderate to severe challenge and anxiety as mild to moderate challenge. Out of 373 children 72 children that are 20.4% had hypoglycemia of blood glucose ranging from 1.2 to 3.3mmol/lt. **Conclusion and recommendation:** Most of the children who

were planned for elective surgery had prolonged fasting from regular meal, clear fluid and breast feeding. The contributing factor resulting into prolonged fasting are poor compliance and understanding of care taker, lack of standard fasting policy for children and lack of knowledge of health providers on standard ASA recommended fasting policy. Till today the practice of preoperative fasting among children is nil per oral from midnight and for breastfeeding is at 4hours in the morning. The outcome of prolonged fasting during preoperative period among children included challenge of hunger, thirst, anxiety and hypoglycemia. It is important to adopt and practice standardized preoperative fasting policy for children undergoing elective surgeries.While advocating the caretakers on fasting instructions, it is important to mention the type of food with their recommended hours of fasting, importance of preoperative fasting and consequence of both prolonged and shorten fasting.Ongoing education about updated and current practice of fasting to health care provider is important in order to avoid prolonged fasting duration among children.The children who are taken in the afternoon should be allowed light meal in the morning which will decrease the adverse effects of prolonged fasting.

232. Zumbula, D.D. (2018). Magnitude Of Use Of Prostheses Among Patients With Unilateral Lower Limb Amputation Due To Peripheral Vascular Disease At Muhimbili Complex.Muhimbili University of Healthy and Allied Sciences.

Abstract

Introduction: Amputation is a surgical operation by which the diseased or the injured limb or part of it is cut off. The disadvantage of amputation over other ablative surgery is that, the effects is immediately visible to a patient and produce a psychological sense of loss even though there is a possibility of restoring functions with prosthesis replacement. The study aimed at assessing the magnitude of the use of prostheses among individuals with unilateral lower limb amputation secondary to peripheral vascular diseases done at Muhimbili complex. **Methodology:** The study was a descriptive prospective hospital based, conducted on 58 patients who underwent unilateral lower limb amputation due to PVD at Muhimbili complex between April 2017 and February 2018. The participants were enrolled by convenience sampling after reaching the inclusion criteria and written consent obtained. The participants were followed up for three months after surgery. A Structured questionnaire were used to collect information, the use of prostheses were

assessed using HOUGHTON SCALE. Data were analyzed using statistical package for social sciences, approval for the study was sought from Muhimbili University of Health and Allied Sciences ethical committee. Permission to conduct the study was granted by the Executive Directors of Muhimbili Orthopaedic Institute and Muhimbili national hospital. Result: A total of 58 participants were recruited in ten months of recruitment, of which they were 31 females (53.45%), 29 participants (50%) resides in Dar es salaam while other half were from other regions within Tanzania. Most study participants fell into age group of 54 years and above, with this age group having the largest proportion (53.45%) among other participants. 52 participants (89.66%) had closed amputation while 6 (10.34%) had open amputation. When inquired about accompanied diseases, 11 participants (18.97%) had no comorbidities, while 47 (81.035 %) had comorbidities such as diabetes, anemia, cardiac and sepsis. The magnitude of prosthetic fitting was 75% with a 95% CI 61.1%-85.5% in the population. The level of amputation was a significant factor in which above knee amputation use of prosthesis was 75.7% while 91.67% participants with below knee did not use prosthesis. Sex predicts the use of prosthesis, in which 22 users were female (59.4%), no other factor that seems to be a barrier to the use of prosthesis. At the end of the study Majority of prosthesis users were household-limited community (43.2%). The magnitude of re-amputation was 8.2% with a 95% CI 3% - 20.4%, while the mortality rate among study participants was 15.5% with a 95% CI 8.1% to 27.6%. **Conclusion:** Majority of amputees were fitted with prosthesis, in which level of amputation was a significant factor to be fitted. Majority of AKA were fitted and used prosthesis, mostly female amputees. Closed amputation was the commonest procedure, predominantly AKA hence the magnitude of re-amputation was low. Mortality among study participants was relatively high, as was realized the age groups of 54 and above were majority of the study participants and most of them had comorbidities, mostly being diabetes. At the end of the study majority of the participants uses prosthesis both in household and limited community areas while very few were household limited user. **Recommendation:** Majority of AKA were fitted with prosthesis for free from donors while majority of BKA were not fitted as there was no free below knee prosthesis. For those who were fitted there was successful use of prosthesis, therefore there should be an effort from the both MNH and MOI to create a means which will make a good access of prosthesis to both amputees. Integrated management of amputees secondary to peripheral vascular diseases is needed including physicians, surgeons, physiotherapist, psychologist, occupation therapist and

orthotic and prosthetic technologist to achieve optimal recovery, as most of them have comorbidities.

CHAPTER THREE: CONFERENCE PROCEEDINGS.

1.Agnes, F.M. (2018). Fear of Childbirth and Depressive Symptoms among Pregnant and Postnatal Women in Kibaha District, Tanzania.
Abstract

Background: Fear of Childbirth (FoB) and depressive symptoms are mental disorders experienced by women during their reproductive time. Fear of childbirth is associated with increased rate of elective caesarean section, pharmacological pain relief, obstetric interventions, labour duration, low maternal satisfaction with care and depressive symptoms which might contribute to poor mother-newborn bonding. Despite the poor outcome very little information is available on FoB and their consequences among Tanzanian women. **Objective:** To assess FoB and depressive symptoms among a cohort of pregnant and postnatal women in selected health facilities in Kibaha district, Tanzania. **Methodology:** A total of 616 pregnant women who will be attending antenatal care with gestation age between 28-32 weeks in the selected health facilities will be assessed on FoB and depressive symptoms. The same women will be assessed again postnatal, between the 4th and 6th week after birth on FoB and depressive symptoms. The Edinburgh antenatal and postpartum depressive scale will be used to measure depressive symptoms, Wijma A and B questionnaire will be used to assess FOB during pregnancy and after delivery respectively. Confirmatory factor analysis will be done to check for contribution of each item in measuring FoB. Also, descriptive and inferential statistics will be computed to determine the prevalence of FoB and depressive symptoms and its association with demographic information. Plan to Follow: A pilot study will be done at the end of May 2018 followed by baseline data collection for three months. After the baseline survey pregnant women will be followed up and interviewed again after childbirth between 4-6 weeks postnatal.

2. Ahmad, K.M., Shayo, G., Mugusi, F. (2018). Metered Dose Inhaler Technique And Asthma Control Among Asthmatic Patients At Muhimbili National Hospital Dar Es Salaam Tanzania.-NCD

Abstract

Background: In Asthma management, sub-optimal inhaler use leads to poor disease control and increased healthcare costs. Sub-optimal inhaler use largely emanates from poor inhaler technique. The burden of poor inhaler technique, associated factors and relation to asthma control among asthmatics in Tanzania is largely unknown. **Objective:** The aim of this study was to evaluate inhaler technique among asthmatic patients in Muhimbili National Hospital (MNH), its associated factors and relationship with asthma control. **Methodology:** In this cross-sectional study patients' demographic, clinical and socioeconomic data were recorded. Technique on using Metered Dose Inhalers (MDI) was assessed by direct observation against a standardized checklist. Patients' asthma control was assessed using the Asthma Control questionnaire (ACQ). Summary statistics were reported as percentages and associations were analyzed using the chi-square test. Logistic regression was used to determine predictors of poor inhaler technique. P value < 0.05 was considered statistically significant. **Results:** A total of 161/275 enrolled patients (58.5%) were female. The prevalence of improper MDI technique was 97.1%. Most common errors were; No full exhalation 269/275 (97.1%), No coordinated inhalation and canister actuation 241/275 (87.6 %,), and No or short breath hold 236/275 (85.8%)). Factors associated with incorrect inhaler technique were never being trained how to use inhaler 24/275 (8.7%, P=0.004); Training time < 5 minutes 196/275 (78.7%, P=0.005); trained at one occasion 185(74.3%, P<0.001) and concomitant use of other asthma drugs 217/275 (78.91%, P=0.015). ACQ showed that 219/275 (80.5%) patients were poorly controlled (P<0.01). **Conclusion:** Incorrect inhaler technique among asthmatic patients at MNH was high and associated with poor asthma control. There is undoubtedly a lack of expertise and consistency in offering correct inhaler use instruction. National guidelines on management of asthma need to be revised to include specific inhaler education tools and methods.

3. Akan, G., Kisenga, P., Sanga, T., Mbugi, E., Janabi, M., Atalar, F (2018). Association of 9p21.3 with the Risk of Coronary Artery Disease in Tanzanian Patients- BS

Abstract

Background: Recent Genome-Wide Association studies (GWAS) have revealed the significant association between common variants on chromosome 9p21.3 and Coronary Artery Disease

(CAD). The 9p21.3 region encompasses multiple SNPs and association of 9p21.3 risk variants with CAD has been confirmed, with replication in multiple white cohorts and populations of different ethnicities. But this association is not documented in Tanzanian cohorts. **Objective:** This study aimed at investigating the common SNPs at the chromosome 9p21.3region in Tanzanian CAD patients and their associations with biochemical parameters. **Methodology:** 135 patients with CAD (age 62.01 ± 10.65) and 140 non-CAD (age 58.21 ± 12.62) patients were enrolled into the study. Further the biochemical analysis, and genomic DNA was isolated by MagnaPure Compact and the genotyping analysis was performed with LightSNiP typing assay using Quantitative Real-Time PCR. The results were examined using Melting Curve analysis program. **Result:** The genotypic and allelic distributions of rs1333049,rs2383207, rs2383206,rs10757274,rs10757278,rs10757278,rs10811656 were significantly different between the groups(p<0.005).Subgroup analysis of CADpatients revealed that rs1333049,rs10757274,rs10757278 and rs10811656were significantly associated with increased risk of CAD in diabetic subpopulation(p<0.05)but not in hypertensive and obese patient groups.The genotype distribution of rs1333049 and rs10811656 polymorphisms were significantly different among patients with one, two, three stenotic vessels(p<0.05).Moreover,glucose,cholesterol,HDL,LDL levels were statistically significantly in rs10811656 CT and TT female carriers(p<0.05),and rs10811656polymorphism was also significantly different among female patients with one,two,three stenotic vessels(p<0.05) **Conclusion:** Our results suggest that chromosome 9p21.3 region might be associated with CAD in Tanzanian patients.

4. Amour, S.M. (2018). Medical evaluation of patients with non-traumatic chest pain presenting at emergency department: a prospective descriptive study-NCDs

Abstract
Background: Non-traumatic chest pain (NTCP) is a common clinical syndrome with broad differential diagnosis including life threatening such as ACS, accounting for significant presentation to the emergency department (ED) Worldwide. The evaluation of NTCP patients in the Emergency Department is challenging and resource consuming. In Lower and Middle-Income Countries (LMICs), there are insufficient published studies on medical evaluation and

hospital outcomes of patients presenting to the ED with NTCP. **Objective:** We aimed at determining prevalence, clinical characteristics, medical evaluation and outcomes of adult patients (≥18 years) presented with NTCP. **Methodology:** This was a prospective descriptive study of all adult patients (≥18yeasr) presented with NTCP complaint from September 2017 to April 2018. Structured questionnaires incorporated into RedCap capturing patients' demographics, investigations, primary ED diagnosis, treatment, disposition and in-hospital mortality was used. The diagnosis was grouped into the systems suffered the pathology. Ethical clearance was obtained from MUHAS institutional review board and the permission to collect data was granted from MNH. **Results:** 142 patients with NTCP were enrolled, the prevalence of NTCP was 0.5%. Of all patients enrolled 36.6% patients were later admitted. Respiratory disease was the most common cause where by pulmonary tuberculosis was the most common (43%) followed by pneumonia (18%). ECG (66.2%) and chest X-ray (86.5%) were the most frequent investigations performed, whereby troponin was performed <30% and 4.9% of enrolled patients died. **Conclusion:** Respiratory disease was found to be the main etiology of NTCP at MNH EMD. Further studies are recommended to assess the cardiac etiology due to the rising of risk factors.

5. Angela E., Shija, A., and Msovela, J. (2018). Highlighting the issue of Anaemia among Children below 2 Years in Tanzania-NCD

Abstract

Background: Children below two years are the most vulnerable group that is affected by anaemia. More than three quarters of children under this age group are affected by the problem in Tanzania. Children of this age group are in critical window period of first 1,000 days which involves fast growth that increases the demand for more nutrients. Iron deficiency is the main contributing factor to anaemia, however diseases such as malaria and deficiency of other nutrients such as vitamin A, folate and Vitamin C amplifies the problem. **Objective:** To review the current situation of anaemia among children below 2 years, existing policies and national efforts in addressing the situation. Methodology: Documentary review of national surveys, technical reports and strategic policy documents. **Results:** Anaemia prevalence among children below two years has remained above 75% for the past 10 years. Iron deficiency anaemia is the

main contributing factors to the problem. Use of iron rich products such as infant formula, fortified products and micronutrient powder is still very poor, to about 1%, 9% and 2% respectively. Coverage of other intervention that addresses the problem such as deworming and vitamin A supplementation among children aged 6-59 declined from 50% to 38% and 61% to 41% respectively. Existing policy guideline, strategic action plans, program interventions, health monitoring system and national surveys do not give special attention to children below two years as a vulnerable group. **Conclusion:** High anaemia prevalence among children below two years in Tanzania is a public health concern that needs immediate action. Revision of strategic national actions and efforts to address the problem are needed since the problem has irreversible effect on the child's development; future learning and earning capability; and to the economy of the country at large.

6. Allan, M., Jasmine, M (2018). Knowledge and awareness on non-communicable diseases among students in secondary schools.

Abstract

Background: In 2015 by WHO data, 56.4 million global deaths in 2015, 39.5million (70%), were due to NCD's. For Tanzania it showed an increase in mortality due to NCD from 2000 which was 93600 (15.4%) deaths out of 607,100 deaths, which raised to 142500 (25.5%) deaths out of 558000 deaths. The increase in the burden of NCD's is being fueled by the socio-demographic transition that has rapidly been occurring in developing countries. **Objective:** To determine the level of knowledge and awareness among secondary school adolescence on NCD. **Methodology:** This was a cross-sectional study. Study population included secondary students with the age range of 14 years to 22 years old, mentally and physically fit. A multistage cluster random sampling technique was employed, and a Swahili questionnaire was given to students for data collection. Data analysis was done by using SPSS 20 program. **Results:** Of 533 students participated 242(43.8%) were males and 311(56.2%) females. Most mentioned NCD was Hypertension (58.8%) of all students; and least mentioned NCD was Stroke (45.8%). Most of students (45.8%) had low awareness on NCD and 40% of boys had low awareness compared to girls whom 51% of them had low awareness. 56.8% students had low awareness on overall risk factors; 45% students had low knowledge on preventive measures against NCD. **Conclusion:**

This study shows that there is average to lower level of awareness and knowledge concerning risk factors of NCD among secondary school students. In addition to this, girls had lower awareness on NCD compared to boys. Also students had fair knowledge on some preventive measures against NCD like avoiding stress and avoiding alcohol & cigarette smoking.

7. Alwy, F. (2018). Effect of Helping Mothers Survive training on postpartum haemorrhage morbidities: A cluster-randomized trial in Tanzania

Abstract

Background: Postpartum haemorrhage (PPH), remains to be leading cause of maternal deaths globally. Training of health providers present during childbirth is an important strategy to reduce such deaths. **Objective:** To assess the effect of a 1-day competency-based training "Helping Mothers Survive:" on PPH related morbidity and mortality. **Methodology:** A cluster-randomized two-arm trial in 20 districts in Tanzania where half of the randomly assigned districts received the training. The World Health Organizations near-miss concept and tool was used to collect information on morbidity and mortality. Data were entered in an electronic application, cleaned and analysed using STATA version 13. We used interrupted time-series analysis to estimate difference in the change of outcomes immediately after the intervention and in the long-term following the intervention, significance level taken at $p < 0.05$. **Results:** There were 120,533 facility-deliveries: 6,519 near-misses and 202 maternal deaths during the trial period. There was a significant reduction of PPH near-misses among women who suffered PPH in facility delivery in intervention districts compared to comparison districts (difference-in-differences of slopes -5.3, 95% CI: -7.8; -2.7, $p<0.001$). No difference observed in reduction of all-cause near misses and PPH near-misses in the two trial arms. Intervention districts had a decreased case-fatality in PPH near-miss cases ($p<0.01$) compared to the comparison districts. **Conclusion:** We saw a positive effect of the training intervention on PPH morbidity and mortality. However, the 1–day training is not sufficient to overcome the broader problems in implementing timely and quality care for mothers experiencing postpartum haemorrhage

8. Arabi, F. E., Lyatuu, D., Gores, I., Munishi, C., Patel, Z., Chilo, O, (2018). Medicines Retailing Solution

Abstract

Background: PharmLink is an innovative strategic solution provider for ordering, receiving and managing stock at different levels of the pharmaceutical supply chain from the wholesale level to the consumer level. The relationship of a wholesaler and a retailer is symbiotic in that the wholesaler needs the pharmacy—its entire business model is sustained by its relationship with the pharmacy—and the pharmacy absolutely needs the services and supply of a wholesaler Problem statement: Procuring Medicines from Wholesalers Can Be Costly, Time Consuming and Unpredictable (Delivery Delays, misplacement of orders etc) Approximately 75% of Tanzanians live in rural and peri-urban communities (where ADDO are the main drug outlets) There are more than 10,000 ADDOs in Tanzania (Source: Management Sciences for Health Report, 2014) Full service pharmacies are located in major urban areas, where 60-70% are in Dar es Salaam alone! **Objective:** of the project: Providing Convenience in Buying and Selling of DRUGS and other Medical Products between Wholesale Pharmacies, Retail Pharmacies and Drug stores (ADDO). **Methods:** (solution): We are bringing PharmLink, a centralized system to link Wholesale Pharmacies to Retail Pharmacies and ADDO Shops. Providing Convenience in Ordering Medical Products, Inventory Management, Tracking of Medicine Outflow Data, tracking authenticity of medicines and Managing Transactions through Digital Payment **Conclusion:** Our e-Pharmacy model will diversify to provide solutions to other problems in the Pharmacy sector as follows: e- Prescription, e- Dispensing, Locating a pharmacy and its stock, Drug monitoring and Drug reminders.

9. Assey, A., Manani, M. A. (2018). Evaluating Quality of Referral Notes of Polytrauma Patients Attended at Muhimbili National Hospital and Muhimbili Orthopaedic Institute.

Abstrac

Background: Referral letter has been a very important document in transferring patients from primary and secondary facility to a tertiary facility. Doctors have always raised issues on the quality of referral letters as per the paucity of information documented and the improvements of the document have been uncertain. **Methodology:** A descriptive prospective study was done in outpatient department of MuhimbiliOrthopaedic Institute and Muhimbili National Hospital. A

sample of 56 referral letters from polytrauma patients were obtained, duration running from June 2017-February 2018.Referral letters were assessed on completion of patients' biodata, clinical information, correctness for reason for referral, investigation done. They were also assessed for completion of referring doctor information. Data were analyzed using spss version 20. **Results:** The only data that was complete in all 56 referral letters when it comes to biodata was gender. 5.4% of the letters didn't have a name, 80.4% had no address, 96.4% had no telephone number and 53.6% had no hospital number documented. Clinical information that is presenting complaints, history of presenting illness, clinical findings and complete investigation were absent in 78.6%, 12.5%, 16.1%, and 55.4% respectively. There was no urgency of referral among 94.6%, no past medical history among 96.4% while 33.9% current or past medical history and 91.1% missed allergies documentation. Social circumstances of the referred patients and detailed information of the practitioner such as email, physical address, mobile number and practitioner's full names were not captured in the referral letters. **Conclusion:** There is need to improve on the referral letters of poly trauma patients to optimize care given to them in tertiary hospitals and reduce time for them to receive care.

10. Atuganile, M., Henry, S., Gilbert, N., Tupokigwe, B., Henry, M (2018). A Rare, Juvenile Granulosa Cell Ovarian Tumour (Jgcot) In A 3 Yrs Old Female.

Abstract

Background: Tumour of the ovary uncommonly occur in children; Juvenile Granulosa cell tumour is the rare ovarian tumour occurring in less than 1% of all ovarian tumour classified under Sex Cord Stromal tumours. They occur in premenarchal girls and young women, mean age of diagnosis being 13 years. It is often functional secreting oestrogen whereby patients present with precocious pseudo puberty with hair in pubic and axillary areas being frequent symptoms. **Objective:** To present a very rare functional juvenile granulose cell tumour in 3 years old child, who was seen at MNH. **Methodology:** A 3 years old female baby was reported at MNH in December 2017, presented with cyclic vaginal bleeding for 7 months which had a repeated cycle at every 3-4 weeks. This was associated with breast enlargement and growth of pubic hair. Physical examination revealed suprapubic mass, and ultrasound confirmed right ovarian tumour. Oopherectomy was done, a well capsulated ovarian tumour measured 8x6 cm was excised and

sent to histopathology laboratory. **Results:** The histology results came out which showed well capsulated tumour forming micro follicle and macro follicle with round cells some with nuclear groove, conclusion was Juvenile Granulosa cell tumour. After recovery, a CT scan was done which showed no residual tumour, this was classified as stage 1 and there was no need of further chemotherapy. A month later vaginal bleeding stopped, there was no further breast enlargement or pubic hair growth, patient was discharge to come for outpatient clinic for follow up. **Conclusion:** Surgery is the mainstay of treatment with the aim of preserving fertility, more than 95% of cases of JGCT are diagnosed with stage 1(disease limited to the ovary), with 90% overall survival after surgical resection alone. Although Juvenile Granulosa cell tumor usually confer good prognosis, follow up of these patients is mandatory, they uncommonly recur especially for the first year.

11. Barabona,G., Mahiti, M., Masoud,S., Mbelele, P., Mgunya, A.S., Minja, L., Sunguya, B., Lyamuya, E (2018). High Prevalence of HIV-1 Drug Resistance Mutations in Dar es Salaam: Implications to the Current Treatment Guidelines-ID

Abstract

Background: Newer antiretroviral treatment (ART) drugs with higher genetic barrier to resistance are not yet available in Tanzania; and therefore, monitoring drug-resistance mutations in circulating HIV-1 strains is highly needed. However, limited data is available on resistance to the standard treatment regimens. **Objective:** We sought to determine currently circulating pretreatment and acquired drug resistance mutations (DRM) in HIV infected adults in Dar es Salaam. **Methodology:** Viral RNAs were isolated from plasma of 47 ART-naïve and 111 treated viremic (plasma viral load >400 copies/ml) HIV-1 infected adults attending care and treatment clinic in Muhimbili National Hospital, between June and October, 2017. Viral genes encoding protease, reverse transcriptase (RT), and integrase (IN) were PCR amplified and directly sequenced. **Results:** Viral genotyping revealed that in ART-naïve subjects, 30% harbored at least one DRM and, particularly, 15% harbored DRMs with markedly reduced sensitivity to the standard first line regimen. In treated viremic subjects, 88% had at least one DRM, and 72% and 5% harbored dual and triple class DRMs, respectively. Indeed, four patients harbored DRMs conferring reduced sensitivity to all available ART regimens in Tanzania. In contrast, no major

DRM was observed against integrase inhibitors. **Conclusion:** Results suggest very high prevalence of DRMs that impact the efficacy of the standard first line regimen and give rise to multidrug-resistant viral strains that are essentially "untreatable" with the currently available ART regimens. To control AIDS and incidence of new HIV infections, introduction of the drug-resistance surveillance program and newer classes of antiretroviral drugs in Tanzania cannot be overstated

12. Bernadette, K., Clara, C., Julius, M., Michael, M., Pratap, K., Makani, J (2018). A template-based m-health approach to digital record keeping from paperdocumentation for sickle cell disease ICT

Abstract

Background: Sickle cell disease (SCD) is a hereditary haemoglobinopathy with high burden in Tanzania. With improved survival more, patients need access to comprehensive care models. The Sickle Cell Programme of Muhimbili University of Health and Allied Sciences created an integrated approach to research, healthcare, advocacy, and training. Efficient management of medical records of chronic care patients is crucial, yet challenges exist due to high costs of conventional computer-based health information systems. **Objectives:** To implement an m-Health solution to 1) register patients, 2) collect clinical data from patients attending sickle cell clinics. **Methodology:** The PaperEMR tool – developed by Health-E-Net Ltd., a social enterprise based in Nairobi – allows digitisation of clinical data from paper using templates. Templates are filled by care providers during regular sickle cell clinics and digitised using a mobile application under a unique patient registration number, creating a mobile phone basedelectronic medical record (EMR) system. Access to patient data is restricted through health worker and facility login. **Results:** Out of five sickle cell clinics, EMRs were used at two sites (Muhimbili National Hospital and Mloganzila Academic Medical Campus). The Sickle Cell Programme uses REDcap, a web-based database, to collect clinical data. These data are collected manually from paper-based documentation (Clinical registration forms and Health passports). **Conclusions:** As paper-based documentation still dominates record keeping across levels of care and smartphones are widely used and accepted in Tanzania, combining paper documentation with mobile

technology is likely to provide a powerful tool to manage clinical data. We are planning a pilot implementation study to evaluate the feasibility of such an approach at three facilities within the Sickle Cell Programme.

13. Bhalia,S.,Janabi,M (2018). Prevalence and Associated Factors of Atrial Fibrilation among Hypertensive Patients At JakayaKikwete Cardiac Institute And Muhimbili National Hospital.

Abstract

Background: Atrial fibrillation (AF) is the most common cardiac arrhythmia, which presents with variety of clinical symptoms. When Atrial fibrillation occurs in presence of hypertension, the risk of morbidity and mortality is doubled. The lifetime risk for development of atrial fibrillation is about one in four for men and women aged 40 years and older. However, this incidence increases five-fold in the presence of hypertension and hypertension related heart diseases. **Objective:** To determine the prevalence of AF and associated factors among hypertensive patients attending JakayaKikwete Cardiac Institute (JKCI) and Muhimbili National Hospital (MNH). **Methodology:** A cross-sectional hospital-based study, involving hypertensive patients, aged ≥18 years, enrolled by consecutive sampling technique from October 2017 to January 2018. Atrial fibrillation was diagnosed by replacement of consistent p waves by rapid oscillation or fibrillation waves that vary in size, shape and timing, associated with an irregular, frequently rapid ventricular response on 12 lead ECG. All data analyzed by SPSS version 20. Demographic, clinical and laboratory data are summarized using frequency distribution tables, proportions and Pearson chi square statistical test were used to compare group difference for categorical variables. Existence of association was determined using regression analysis. **Results:** Total of 391 hypertensive participants were enrolled, 10.23% were diagnosed to have AF upon admission. Majority of the study participants were male, age ≥58 years. Dilated Left atrium, reduced ejection fraction, LVH on ECG and symptoms of heart failure were found to be the significant factors for predicting Atrial fibrillation among hypertensive patients in this study. After applying multivariate model, the variables with an independent effect for predicting AF among hypertensive patients are: dilated left atrium was found to be the significant and the independent factor for predicting AF among hypertensive patients. **Conclusion:** This study

showed the prevalence of AF is high accounting for 10.25% among hypertensive patients at JKCI and MNH.

14. Biita, M. (2018). Prevalence, Management and Outcomes of Pediatric Patients With Respiratory Compromise Presenting To MNH-EMD NCD

Abstract

Introduction: Respiratory compromise is one of the common causes of paediatric emergency department visits and is the leading cause of cardiac arrest among paediatric patients. In Tanzania, little is known about the clinical epidemiology, management and outcomes of paediatric patients with RC in EMD. **Objective:** To describe the clinical epidemiology, management and outcomes of paediatric patients with respiratory compromise presenting to the Emergency Medicine Department at Muhimbili National Hospital (MNH-EMD). **Methodology:** A prospective cohort study of consecutive paediatric patients with respiratory compromise presenting to the MNH EMD from July to November 2017.A Case Report Form (CRF) that was built in online data capture software (RedCap) was used to document demographics, clinical presentation, management, discharge diagnosis and outcomes. Patients who were hospitalised was followed up to hospital discharge or death. The study data was summarized with descriptive statistics, including medians and interquartile ranges, counts and proportions as appropriate. Ethical clearance was received from MUHAS institutional review board and written parental consent was obtained. **Results:** During the study period, 165 paediatric patients with respiratory compromise was enrolled, male were 90(54.5%) and median age was 1 year. On arrival to EMD 92(55.8%) of patients were in respiratory failure. Oxygen therapy was initiated in EMD for the majority of patients 143(86.7%) and 14.7% required assisted ventilation with bag valve mask. In the EMD, 18(10.9%) paediatric with respiratory compromise developed cardiac arrest and only 2(11.1%) of them survived to hospital discharge after CPR in EMD. Fourteen patients (8.5%) died in the EMD and 9(64.3%) of them were infants. Four patients were discharged home from the EMD and 147(89.1%) were hospitalised and 37(25.2%) of them died with the leading cause of death being pneumonia followed by sepsis. **Conclusion and recommendation:** Respiratory compromise is the common presenting complaints to pediatric EMD especially among infants and has poor outcomes as signified by high admission rate 89.1% and high total hospital

mortality 31%. Referral should be made earlier before respiratory failure develops and EMD should improve availability of diagnostic and therapeutic resources. Further studies should focus on predictors of poor outcomes among pediatric patient presenting with RC in EMD

15. Brown, T.E., Maeda, F.G., Mlaga, S.M., Ngimba, C.P., Kimambo, A.H., Pallangyo, A.E., Atuganile, E.M., Vuhahula, E.A (2018). A Rare Epitheliod Sarcoma of the Jaw Mimicking Pleomorphic Rhabdomyosarcoma: Case Report and Literature Review

Abstract

Background: Epithelioid sarcoma is a rare soft tissue malignancy accounting for 1% of all soft tissue tumors. It's clinically aggressive commonly affecting distal extremities. Proximal, fibroma-like and angiomatoid variants are lightly outlined. The proximal variant is the most aggressive, composed of larger cells and rhabdoid features, characteristically captivating one's attention to rhabdomyosarcoma. We present a rare epithelioid sarcoma which histologically mimicked pleomorphic rhabdomyosarcoma of jaw in a 31 years old male. **Objective:** To discuss histopathological features of epithelioid sarcoma of rhabdoid features distinguishing it from other histological mimics like rhabdomyosarcoma. **Methodology:** A 31-year-old male was admitted at Muhimbili National Hospital in October 2017 with 4 months history of slow growing tender ulcer on the lower right jaw and right side facial swelling. Clinical impression was squamous cell carcinoma with differential of adenocarcinoma. Various laboratory investigations, imaging, routine staining and immunohistochemistry were performed. **Results:** CT scan revealed heterogenous mass in right submandibular region. Initial examination from incision biopsy showed large oval pleomorphic tumor cells with enlarged vesicular nuclei and abnormal mitoses. Wide excision biopsy followed after conclusion of poorly differentiated carcinoma. Its examination revealed diffuse, nodular tumor with large, polygonal, round, spindle cells displaying abundant deeply eosinophilic cytoplasm, sometimes showing eccentric vesicular nuclei. Rhabdoid features observed. Immunohistochemistry revealed strong positivity for wide spectrum cytokeratin, vimentin, CD 99 and was negative for EMA and myogenin. **Conclusion:** Morphology by routine stains suggested both epithelial and mesenchymal malignancy. Cells with rhabdoid features suggested pleomorphic rhabdomyosarcoma with cytokeratin, vimentin and CD 99 confirmed the diagnosis of epithelioid sarcoma, proximal variant. This case adds information

on this rare entity emphasizing application of diagnostic immunohistochemistry procedures in the confirmation of diagnosis to assist in proper patient management.

16. Caroline, P.N., Edda, A.V., Isaac, M.M (2018). Diffuse Large B Cell Lymphoma of the Prostate in HIV patient; A case report and literature review-NDC/Pathology

Abstract

Objective: -To describe the clinical presentation and histomorphology of a rare case of Non-Hodgkin's Lymphoma of the prostate. **Methodology:** We report a 39-year-old male patient attending Urology Department at Muhimbili National Hospital, Tanzania. He was HIV positive on anti-retroviral treatment for 4 months prior. He presented with urinary tract symptoms for three months, we found a palpable mass involving the prostate on right lobe. Urethro cystoscopy showed an obstructing mass arising from the prostate extending into urinary bladder. A biopsy was taken where routine and immunohistochemical panel consisting of CD45, CD3, CD20, CHROMOGRANIN, CYTOKERATIN and MYOGENIN were done. **Results:** Renal function tests, serum electrolytes, complete blood count and PSA were normal. Histopathology with routine stains revealed a malignant tumour comprising of diffuse proliferation of discohesive cells, medium to large size with scant to moderate cytoplasm and prominent nucleoli. Moderate mitosis was encountered. Tumor cells were positive to immuhohistochemical markers of CD45, CD20 and CD3 while other markers were negative. The final diagnosis was diffuse Large B cell Lymphoma with T cell rich of the prostate in immunocompromised young patient. **Conclusion:** Though it is rare for prostate to be involved by lymphomas, it should be among differentials when there is high grade malignancy in the prostate. Histomorphology, ancillary studies, clinical presentations and imaging studies should have employed to reach correct diagnosis. Research on factors associated with prostate lymphoma on HIV infected individuals is needed

17. Chande, R., Sukumsi, F., Lwoga, T (2018). Computer literacy skills among undergraduate students at Health University in Tanzania:

Abstract

Background: Competencies in computer literacy is an important tool for undergraduate health students in Muhimbili University of Health and Allied Sciences (MUHAS) in Tanzania. ICT skills facilitate students centred learning and is skill that future employers value. **Objective:** To assess computer literacy skills among first year undergraduate health students before and after information learning technologies (IT) training course. **Methods:** This pre and post assessment employed self-administered questionnaire. The questionnaire was administered to all first-year undergraduate health students at MUHAS during the first session of the IT course and after the completion of the course in the academic year 2018/2019. The questionnaire assessed level of computer skills including file management skills, word processing skills, internet and email skills, spreadsheet skills, presentation skills and web 2.0 technology skills. The descriptive data analysis technique using SPSS software version 20 was used. **Results:** A total number of 476 and 507 students participated in the pre and post assessment respectively. About 70% of the respondents were males, 95.5% were aged 25 and below and about 37% were studying Doctor of Medicine. The proportion of students who owned computers doubled from 9.7% to 18.3%. Ownershipo of tablets and smartphones wa almost the same 48.4% during pre assessment and 48.5% during post assessment. There was a statistically significant increase in confidence in using computers among respondents from 17% to 32.7% (p<0.05). Moreover, 52.9% were somehow confident in using computers during the post assessment. About 98% recommended IT training for undergraduate health students. **Conclusion:** Majority of the first-year students lack confidence in using computers during the pre-assessment although slightly more than one third had attended previously computer training. Interestingly about half of the students had tablets or smartphones thus availing a great potential for eLearning use. IT course significantly increase confidence in computer use. Almost all respondents indicated the need for IT training for all undergraduate health sciences students.

18. Christina, V.M., Lulu, S., Khamza, M., Akoko, L (2018). Survival of the Patients Treated For Head and Neck Cancer in a Low Resource Country - A Retrospective Study

Abstract

Background: Worldwide Head and Neck cancer (HNC) is the 6th most frequent cancer, with an estimated world incidence of over 600,000 new cases per year and 300,000 deaths yearly. Despite successful primary therapy of advanced local and regional disease, 50-60 % of head and neck cancer patients will die from local recurrences, while 20 – 30 % of them will die from distant metastases, and 10 – 40 % will die from secondary malignancy due to treatment. Aim: To determine factors affecting survival of these patients treated for Head and Neck Cancer. in Tanzania. **Methodology:** This was a Retrospective Descriptive study conducted at ORCI, the only Centre for treatment of cancer in Tanzania at the time of the study. A total of 200 random selected files of the patients with diagnosis of Squamous Cell Carcinoma of Head and Neck treated from 1st January, 2009 to 31st December, 2011 were reviewed. A standardized Questionnaire was used to obtain Socio demographic characteristics, clinic pathologic characteristics and different treatment modalities that were used in the treatment of the patients. **Results**: The majority of HNC patients studied were above 56 years 43%, of these males were 76.6%. The Overall survival was 59%, factors seen to be associated with survival in this study were Stage at diagnosis with (P value =0.003), Anatomical site of the tumour (P value =0.038) and Total amount of radiation dose given (P value = 0.043). **Conclusion:** Early stages of Head and Neck disease, Anatomical sites of the disease and Standard high Radiation doses of >40Gy are associated with longer survival in patients with HNC.

19. Clara, C.C. (2018). Limited Exchange Transfusion can be beneficial in Sickle Cell Anemia with Acute Chest syndrome: A Case Report-NCD

Abstract

Background: Acute Chest Syndrome is a life-threatening complication of Sickle Cell Disease with blood transfusion an integral part in its management. Red cell exchange transfusion (RCE) is regarded as preferable to top-up transfusion, because it reduces the proportion of Hemoglobin S without predisposing to circulatory overload. Despite its benefits, RCE is underutilized, particularly in low resource settings mainly due to scarcity of blood products and expertise in carrying out exchange transfusion. Case Study: We report on a young woman with SCD with severe ACS who responded promptly and dramatically to a RCE of only 0.95 L (instead of the

recommended 1.4 L), and had in the end a Hb S level of 48% (instead of the recommended level below 30%). **Results:** Limited RCE resulted in significant clinical improvement. **Conclusion:** We suggest that limited RCE may be of benefit than no RCE in SCD patients with ACS, particularly in settings where RCE is not available.

20. Daima, B., Leonard, M., Siana, N., Karim, M., Columba, M., Julie M. (2018). Planning for Sustainability beyond funding period: Experience from NBS for SCD in Tanzania, stakeholders' perspectives

Abstract

Background: Newborn Screening (NBS) for Sickle Cell Disease (SCD) have shown toreduce under-fives mortality and morbidity associated with the disease, if followed upwith proper prophylactic interventions. Despite the public health significance of NBS forSCD, most countries in Africa were prevalence of the disease is high had yet to establish the services. In places where screening services are provided, implementation depends on donor funds. In 2015, Sickle Cell Program started a pilot project to screen newborns for SCD in Dar es Salaam public hospitals. Until August 2016, only 4002 babies were screened after unexpected termination of funding. Sustainability is a concern when it comes to health programs in limited-resource countries that are predominantly financed by external funding. **Objective:** We aim to examine stakeholders' perspectives on sustainability of NBS for SCD in Tanzania beyond the donors' funding. Methodology: In-depth interviews will be used to explore the question on whether using the limited resources available; the government will be able to sustainably carry out the NBS. Three groups of stakeholders will be included; (1) Policy makers: key officials in the ministry of health (2) Implementers: health care workers from the district hospitals participated in the NBS project and (3) families participated in the NBS project. Expected **Results:** First stage; Results from the In---depth interviews will be used to develop a survey tool aiming to be tested in a more diverse and larger sample of stakeholders. In the second stage; Results from the survey will guide the design of a sustainability plan for donor dependent health programs.

21. Daniel, G., (2018). ICT in Health industry

Abstract

Information: and communication technologies (ICT) are being widely used in healthcare management systems. Rapid advancements in ICT in the last decade or so provide solutions to the problems in healthcare management systems. These include a wide spectrum of issues such as patient safety, dietary management, telemedicine, digital imaging, document management etc. This paper explores the emerging technologies which are being used for the improvement of the healthcare process and identify the problems and their probable solutions specifically in the context of developing countries. Telemedicine offers a way of improving the standard of healthcare especially in the developing world. The developing countries such as Pakistan, can exploit these to give better healthcare services as well health education. This paper highlights the growth of ICT sector in the developing world and explores its possible uses in health sector. These may help healthcare professionals and community health workers to carry out their work in a better way particularly in remote areas.

22. Davis, E.A., Davis, E.A. (2018). Knowledge and attitudes towards gout among adult community members aged 18 years and above in chang'ombe ward – Temeke district.

Abstract

Background: Gout refers to painful inflammatory condition of the joints which is common in elderly men and mostly affects the metatarsal – phalangeal joint of the big toe. It is caused by deposition of urate crystals in joints and its prevalence, morbidity and mortality have been increasing for the past few decades with lifestyle changes being mostly implicated. It commonly coexists with other non-communicable disease and thus posing management challenge. **Objective:** To assess knowledge and attitudes towards gout among adult community members in Temeke district. **Methods:** A descriptive cross – sectional study was conducted at household level among 323 adult community members in Temeke district from 8th - 15th September, 2017 to determine their knowledge and attitudes towards gout using self-administered questionnaires. The data was summarized into graphs and frequency distribution tables. Proportion was used to categorize the knowledge and attitude of the participants. **Results:** Among the 323 participants,

67.8% were females, 41% in the age range of 18 – 28 and most (55.4%) had primary education. Those who knew or had knowledge on etiology, signs and symptoms, risk factors, complications and preventive measures were respectively 3.7%, 18.7%, 12%, 9.9% and 17.1% on average. Furthermore, about 79.2% were undecided or had neutral attitude with regards to different aspects of gout. **Conclusion:** and recommendations: The knowledge about gout among the participants is inadequate and with majority of the participants having a neutral attitude, then, their health seeking behavior may be negatively affected leading to late presentation of patients with a very advanced disease once gout develops.

23. Edna, K., (2018). Awareness and Knowledge of Allergic Conjunctivitis among Primary School Teachers in Ilala District in Dar es Salaam. (Ncd)/Eyes

Abstract

Background: About 40 people out of 100 people of all age groups across the globe are affected by allergy with allergic conjunctivitis being the top most.Untreated allergic conjunctivitis can result into serious complications like refractive errors, corneal thinning, corneal scars and blindness. As well as the long term treatment of AC with anti-allergy drugs and steroids may cause severe complications such as glaucoma, cataract and dry eyes. Therefore, greater awareness of Allergic conjunctivitis (AC), knowledge on symptoms, signs and treatment options is important part in prevention of Allergic conjunctivitis as a synergy to Eye health providers. **Objective:** This study aimed to assess awareness and knowledge of allergic conjunctivitis among primary school teachers in Ilala district in Dar-es-salaam**. Methodology:** A descriptive cross-sectional study was conducted to primary school teachers in Ilala district from 1st October to 1st November, 2017. 283 primary school teachers were included in this study. Multistage sampling technique was used where by a total of 16 primary schools were obtained with the maximum of 4 schools per week. Data collection was done on weekdays starting from 8am to 2pm. Structured Swahili Questionnaire was used for data collection. Data were coded, entered and analyzed with aid of SPSS version 20.0. **Results:** The results showed that 149(52.7%) respondents were aware of the presence of Allergic conjunctivitis. From knowledge score on symptoms of allergic conjunctivitis, majority of them 140(49.5%) had no knowledge about allergic conjunctivitis symptoms, 108(38.2%) had high knowledge and 35(12.4%) had low knowledge on symptoms of

allergic conjunctivitis. **Conclusion:** and recommendations: Level of awareness of allergic conjunctivitis among primary school teachers is generally low with majority being categorized in "no knowledge" score group. Hence, public health measures are recommended in making sure that the primary school teachers are getting knowledge on the prevention and control of allergic conjunctivitis as well as the complications associated with this condition.

24. Eliachim, M.E., Makani, J., Lucio, L., Nkya, S., Florence, U (2018). Prevalence of Hereditary Persistence of Fetal Hemoglobin (Hpfh) In Blood Donors in Dar Es Salaam.

Abstract

Background: Hemoglobin mutations cause a range of hemoglobin abnormalities, some of which produce clinically significant symptoms while others do not. An asymptomatic inherited condition that leads to level of HbF remain above normal adult level (< 1%) is referred to as Hereditary Persistence of Fetal Hemoglobin (HPFH). HPFH individuals are of great scientific interest as they are protected against severity of diseases like Malaria, sickle cell anemia and β-thalassemia. In Tanzania there is no published data for HPFH prevalence. Objective: To determine the prevalence of HPFH in blood donors in Dar es salaam. **Methodology:** The study will be conducted at Muhimbili National Hospital blood donation centre.5000 samples will be collected from volunteers whereby left-over samples from the portion of blood collected from blood donors for screening of importance diseases as part of requirement for blood donation will be transported to MUHAS MPL Hematology and blood transfusion research laboratory for HPLC and isoelectric focusing (IEF). Expected **Results:** Data from this study will provide a platform for further research to discover molecular basis of the protective effect of HPFH against some disease like Malaria, SCD etc. Furthermore, findings from this study will assist in developing further research questions related to HPFH.

25. Erhad, B. (2018). HIV viral suppression among adults on antiretroviral therapy at Temeke regional referral hospital. ID

Abstract

Background: HIV viral load test has been recently rolled out as the standard of care for monitoring patients' response to Antiretroviral Therapy (ART) in Tanzania. Scarce information on HIV viral suppression exists in Tanzania since the adoption of this intervention at public health level and since the introduction of Tenofovir based regimes. **Objectives:** HIV viral suppression rate among patients attending at Temeke regional referral hospital within twelve months of using antiretroviral therapy. **Methodology:** Hospital-based retrospective cohort study was conducted among HIV patients initiated on ART between May and November 2016at Temeke Hospital care and treatment centre, Dar es salaam, Tanzania. Data on social demographic, clinical and laboratory parameters were collected and cross-sectional analysis of factors associated with viral suppression was conducted. Viral load suppression was defined as HIV-DNA count below 50 copies/ml. **Results**: Among 747 patients who started ART between May and November 2016, 484 (64.8%) were retained at Temeke Regional Referral hospital CTC after 12 months, out of these,419 (86.6%) had virological measurements between 6th and 12th month of ART use, among these 318 (75.9%, 95% CI (71.6 – 79.7%) were found to have viral suppression. Having CD4 + T cell count >200 cells/µl at initiation of ART and Adherence to medication were independently associated with viral suppression. **Conclusion**: Properly managed care and treatment clinics can result into a marked improvement on the percentage of patients with viral suppression, retention to treatment sites and the proportion of patients with suppressed viral loads.

26. Faini,D., Baisley, K., Kapinga, S., Hanson, C., Hayee, R. (2018). Sexual behaviour, changes in sexual behaviour and associated factors among women in HIV prevention trials.

Abstract

Background: Risk reduction towards safer behaviours is promoted after enrolment in HIV prevention trials. However, increases in less-safe behaviours are not uncommon. **Objectve:** To evaluate sexual behaviour, changes in sexual behaviours, associated factors and their association with HIV seroconversion in a cohort of women at high HIV risk enrolled in microbicide and vaccine feasibility studies in Northern Tanzania. **Methods:** Secondary analysis of a combined cohort of 1,378 women was performed. McNemar's test was used to compare proportions reporting sexual behaviours at baseline and at 12-months while random-effects logistic

regression estimated odds ratios (OR) for behaviour changes over time. Poisson regression was used to estimate regression coefficients of baseline sexual behaviours with HIV seroconversion as outcome. Baseline, 12-month and change in sexual behaviour risk scores were estimated from these coefficients. Logistic regression was then used to estimate OR for factors associated with sexual behaviour change and Poisson regression determined whether this change was associated with HIV rate. **Results:** 61% of women were ≥25years and 26% were married. At baseline, 22% reported to have two or more partners, 29% consistently used condoms with regular partners and 28% were involved in transactional sex in the past three months. Nearly half of the women (49%) did not change their sexual behaviour practices at 12-months, while 25% reported increased risky behaviour. Overall, HIV rate was 3.7/100pyrs (95%CI 2.8-5.0/100pyrs); and ranged from 3.1/100pyrs in women with increased/no change in sexual behaviour practices to 5.4/100pyrs in those with reduction in risky practices. However, there was no evidence of an effect of these changes on HIV rate after adjusting for other factors (aRR 0.88 95%CI 0.39-2.01, P=0.76). **Conclusion:** There was insufficient evidence to suggest that increases in higher-risk sexual behaviours were associated with higher HIV incidence. Studies with longer follow-up and larger sample may be more informative.

27. Félicité, M., Mosenene, S., Kisimbi, J., Sanyiwa , A.J., Mafwiri, M.M., Mhina, C (2018). Assessment of willingness to donate eyes after death among patients attending eye outpatient department at Muhimbili national Hospital-NCD/EYES

Abstract
Background: Eye donation is an act of high level kindness to humanity and the society which involve the will of a person to consent for removing one's eyes from the body after death. The consent can be signed by the donor before his/her death (pledge eyes), or by close relative of the deceased person. Donated eyes are used to treat patients with blindness caused by corneal diseases (by corneal transplant), but also they are used for research and teaching. **Objective:** The aim of the study was to assess willingness to donate eyes after death among patients attending eye clinics in outpatient department at Muhimbili National Hospital, Tanzania. **Methodology:** Crosssectional hospital based study was done from July 2017 to December 2017. Study participants were selected by systemic random sampling technique. A predesigned pretested

questionnaire was used in face to face interview. **Results:** A total of 434 participants were interviewed, 58.06% were female, 74.19% were from Dar es salaam and 44.93% were in age group between "18-33" years. About one third (32.5%) of all respondents, were aware that eyes eye can be donated, while 47.9% were willing to donate their eyes after death. The main reason for willingness was to help a blind person (64.25%), while the main given reason for unwillingness was need of more information about eye donation (31.7%), followed by religious reasons (22.0%). Willingness to donate eyes was associated with prior awareness (p=0.0001), sex (p=0.007) and religion(p=0.001). **Conclusion:** Factors associated with willingness to donate eyes were similar to previous studies from Africa and Asia. Community education about eye donation and its important is needed to increase willingness to donate eyes.

28. Filbert, F., Candida, M., Jette, M., Hans, Y.B., Hasselberg, M (2018). Spatial-temporal patterns of motorcycle injuries in Dar es Salaam City.

Abstract

Background: Road traffic injuries (RTI) is a serious public health and development concern that increasing the healthcare costs. The increased use of motorcycles has led to a surge in motorcycle crashes and causalities. In Tanzania, motorcycles contribute approximately 25% of all road traffic fatalities. To develop effective and targeted safety programs, the location and time-space influences motorcycle injuries need to be well characterized. **Objective:** The study aimed at assessing spatial-temporal and environmental factors contributing to motorcycle crashes in Dar es Salaam. **Methodology:** We collected data on motorcycle crashes and injuries from case files between 2015 to 2016. Injury categories were classified as fatal, minor or severe based on the type of injuries sustained. The head, loss of consciousness, fractures were classified as severe while bruises, scratches, and dislocation as minor. The effects of risk factors were determined using Multinomial Logistic regression and spatial risk of RTI by Kernel Density. **Results:** A total of 2013 crashes with 2135 victims were observed, (10.8%) were classified as fatal, (23.4%), severe, (45.1%) minor and (20.7%) had no injury. The majority (66.3%) of crashes involved motorcycle with cars and occurred between 12 and 18 hours, (37.6%). The relative risk for crashes leading to severe relative to minor injuries occurred between 00 and 06 hours increased by 46% as compared to 12 and 18 hours (RRR =0.54, 95% CI: 0.32 – 0.92, p=0.023). Hotspots

of crashes were found nearby the border of the three districts of Ilala, Kinondoni, and Temeke towards the city center. **Conclusions:** The findings revealed that the risk of motorcycle and cars collision is remarkably high. The likelihood of RTI was high during "rush hours" when there is high traffic and most crashes occurred at city center. RTI involving motorcycles is a significant health and economic burden that needs attention.

29. Gabriel, M.M. (2018). C-Reactive Protein Levels as A Surrogate Marker for Drug Treatment Adherence Among Heart Failure Patients Attending JakayaKikwete Cardiac Institute in Dar-Es-Salaam, Tanzania. – NCD/BS

Abstract

Background: Evidences show that non-adherence to medication in heart failure (HF) patients highly contributes to preventable re-hospitalization, morbidity and mortality. Recently, conjunction of neuro-hormonal and immune system role in heart muscles remodeling and deterioration of HF has been elucidated, in which   C-reactive protein (CRP) also plays a role. CRP has been shown to decrease when using HF medications. High-sensitivity C-reactive protein (hsCRP) is an immune biomarker which is stable, with standardized assay, easy and fast to get results, long half-life(19hrs), whose plasma level changes with heart failure progress and hence strong predictive value in HF prognosis. However, studies on use of hsCRP as a measure of effectiveness and adherence to treatment are lacking. **Objective:** This study aimed to determine the association between medication adherence status and hsCRP levels among HF patients. **Methodology:** This was a cross-section descriptive-analytical study, conducted at the JakayaKikwete Cardiac Institute (JKCI). Consecutive sampling technique was employed to recruit a total of 210 HF patients attending the JKCI clinics on Doctors schedule. Case report form and the 8-item Morisky medication adherence scale tools were used to collect information on adherence to medication. Data were analyzed using Statistical Package for Social Sciences (SPSS) version 21. **Results:** The mean age of patients was 54(±15.9). Total overweight and obese were 126 (59.9%), 107(51%) had high total cholesterol and 115 (54%) had high LDL-C. A total of 75 patients (35.7%) were HFpEF, 149(71%) had normal pressure and 96 (46%) were in NYHA class 2. Many patients had poor adherence 138 (65.7%), and had high level of hsCRP, with mean range of 7.15 (±4.94) mg/L. There was association between adherence level and

hsCRP (P=0.002). **Conclusion and recommendation:** There seems to be an association between adherence level and hsCRP, in heart failure patients. However, more studies need to be conducted to confirm the association.

30. Gecke, N., (2018). Factors Associated with Home Deliveries Among Women Attending Children Immunization Clinics in Rorya District, Mara Region NCD/HS

Abstract

Background: Maternal and neonatal morbidity and mortality arising from limited access of health care services together with socio-cultural and economic factors are of important global health concern. Some factors that hinder the use of health care facilities available resulting to home deliveries. **Objective:** To identify factors associated with home deliveries among women of reproductive age at health facilities in Rorya district, Mara region. **Methodology:** Facility based cross sectional study was conducted in Rorya district, in Mara region. 427 women who delivered a child in the past two years were enrolled in the study. Informed consent was sought from eligible respondents, Swahili questionnaire was used to collect information. Data was collected on demographic, socio-cultural economic, geographical and facility factors by interviewing the participants and analysed using SPSS software version 23. Bivariate analysis was done to find out factors associated with home delivery and later multivariate analysis was done to find out the predictors for home deliveries. **Results:** A total 42.9% women had delivered at home in their most recent childbirth. Most common reasons for home deliveries were transport cost to facilities, cultural and customs, religious beliefs, husband decision, bad language from health care workers as well as poor roads. The factors associated with home delivery were Husband/partner's age > 50 years (AOR=2.0; 95% CI=1.09-3.88); husband with informal employment (AOR=3.62; 95% CI=2.02-6.49); distance from the health facility > 10km (AOR=2.22; 95% CI=1.07-4.59); no attendance of antenatal care and no history of previous facility delivery (AOR=1.88; 95% CI=1.21-2.93). **Conclusion:** There was high proportion (42.9%) of home deliveries among women of reproductive age, Husband/partner's old age and informal employment; long distance from the health facility, no attendance of antenatal care services and no history of previous delivery in the health facility were major factors associated with home delivery.

31.George, F., Kafwimi, E., Segesela, F., Bahemana, E., Madono, M., Kisengi, O., Abdul, M., Mwakisambwe, Z., Amani, D., Orestes, O., Emmanuel, D., Mlay, T., Obure, J., Khamadi,S., Chintowa, J (2018). Factors associated with HIV infection among children born to mothers on the prevention of mother to child transmission (PMTCT) program in Mbeya and Songwe Regions, 2016. ID

Abstract

Background: In mainland Tanzania, 1.3 million of people were estimated to live with HIV Infection by 2013, out of whom 10% were children. Nearly a fifth of all new HIV infections in Tanzania are due to mother-to-child transmission (MTCT). The transmission of HIV from an HIV-positive mother to her child can happen during pregnancy, labor and delivery or during breastfeeding. In the absence of any intervention, transmission rates range from 15% to 45%. However, this rate can be reduced to below 5% with effective interventions during the periods of pregnancy, labor, delivery and breastfeeding. As Tanzania aims to reduce the MTCT rate to less than 5% by 2017, effective prevention of mother to child transmission (PMTCT) programs are of undue urgency and importance. **Objective:** To understand the main factors influencing infant's HIV status in Mbeya and Songwe PMTCT programs. **Methodology:** Data of mothers and infants in the PMTCT program was extracted from the HIT System database for year 2016 using a random sampling procedure. Mother infant pairs'(n=500) data on demographic characteristics and on factors associated with HIV infection factors such as mother receiving ART antenatal and infant's receiving ART prophylaxis was extracted and analyzed. A logistic regression analysis was done to estimate the measure of association between the dependent variable (infant's HIV status) and the independent variables. The logistic regression model included the following variables: mother's education level, mother's ART status whether she started using ART during antenatal or after delivery, infant's nevirapine status-whether infant received NVP or not, mother's disclosure status, and mother's expense to hospital. All tests were two-sided, with alpha set to 0.05. Data were analyzed using STATA Intercooled Version 13.0 (STATA Corp., College Station, TX, USA). **Results:** In the multivariate analysis, significant protective factors associated with HIV exposed infant infection were mothers receiving antiretroviral prophylaxis during antenatal (OR 0.07, 95% CI 0.04–0.14, p=0.001), infant receiving ART prophylaxis (OR 0.50,

95% CI 0.28–0.88, p=0.017), mother's having some level of education-primary school or more (OR 0.52, 95% CI 0.38–0.72, p < .001), mother disclosing her status to at least one person (OR 0.56, 95% CI 0.42–0.74, p < 0.001) and mother living close to the clinic-using transportation costs of 2000 or less (OR 0.27, 95% CI 0.08–0.84, p=0.02). **Conclusion: and Recommendations:** Mothers receiving antiretroviral prophylaxis during antenatal, infant receiving ART prophylaxis, mother's having some level of education-primary school or more, mother disclosing her status to at least one person and mother living close to the clinic-using transportation costs of 2000 or less were factors significantly associated with lower odds of HIV infection among HIV Exposed infants. Hence, it is crucial to ensure timely initiation of HAART among HIV positive women, and to ensure that HIV exposed infants receive NVP. It is equally important for the health professionals to work closely with Community Based Health Services (CBHS) providers to come up with effective counseling programs that will allow mothers with low level of education to understand the maternal risk factors for HIV infection among children. In addition, for mothers who live far from the clinics, it is crucial to design incentives that will allow them to overcome the travel expense obstacle.

32. George, D.D., Irene, B.K., Hendry, R.S. (2018). Pain Assessment and Management of Adult Trauma Patients Presenting At the Emergency Department. NCD

Abstract

Introduction: In patients with trauma, pain is often the most common symptom, and if improperly managed can contribute to poor compliance to treatment and results in life long disability or death. In Tanzania little is known about the practices of pain assessment and management. This study attempted to assess the practices of pain assessment and management so as to identify areas of improvement. **Methodology:** Prospective descriptive study of consecutive adult trauma patients presenting to Muhimbili National Hospital ED between July 2017 and December 2017. Ethical clearance obtained from Muhimbili University of Health and allied Sciences Institutional Review Board, and permission to collect data was sought from MNH authorities. **Results:** A total of 311 adult trauma patients studied, their median age was 36 years and male were 228 (73.3%). Among these patients about 202 (64.9%) had extremity injuries and 185 (59.4%) were involved in motor vehicle accidents and out of these 87 (28%) involved

motorcycles. Pain assessment at triage was done to 310 patients (99.6%) while in treatment or resuscitation areas it was done to 285 (91.6%) of the trauma patients. The mean pain score was 4.2. Those with a score of 6 to 10 were 113 and among these 92 patients (81.4%) received pain medications. **Conclusion:** There are variations in pain assessment and management in trauma patients presenting at the ED. Some patients who had a low score still received pain medications while others who had a high score did not. Therefore, there should be a protocol and tool in the ED to guide in pain management among trauma patients.

33. Geofrey, F.S., Mselle, T (2018). Renal toxicity in cervical cancer patients on cisplatin-based chemoradiotherapy is associated with uric acid elevation. -NCD

Abstract

Background: Cervical cancer is the leading cause of cancer among women in limited resource countries. Combined treatment with radiotherapy and cisplatin chemotherapy is the treatment of choice in advanced cervical cancer leading to improvement in disease free survival. However, cisplatin treatment is associated with uric acid elevation which can exacerbate nephrotoxicity. **Objective:** To investigate the extent of uric acid elevation and kidney injury in cervical cancer patients treated with radiotherapy and cisplatin. **Methodology:** A total of 61 patients with cervical cancer started on cisplatin and radiotherapy at Ocean Road Cancer Institute between March and June 2016 were enrolled. Serum uric acid and creatinine were determined before and three weeks after initiation of treatment. **Results:** Comparison of uric acid before and after treatment showed significant increase from 254.39 ± 115.11 µmol/L before to 355.05 ± 114.92 µmol/L post-therapy ($p<0.001$). Acute kidney injury (AKI) occurred in 23 patients (37.7%). Elevated pretreatment uric acid and a rise in uric acid of ≥118.96 µmol/L were significantly associated with increased risk of AKI. **Conclusion:** Elevated pretreatment uric acid and rise in uric acid concentration following cisplatin chemoradiotherapy among cervical cancer patients are associated with increased risk of acute kidney injury.

34. Gido,L.M. (2018). Assessment of nursing students' knowledge on assessing and observing Post ICU patients in general ward

Abstract

Background: Post ICU patients are commonly found in the general hospital wards. These patients may require a higher level of care than other patients due to their critical clinical condition. About 19% of post ICU patients are readmitted back to ICU due to deterioration in the general wards. Close observation, assessment and appropriate intervention can reduce this problem of readmission. **Objective:** The aim was to assess nursing students' knowledge on assessing and observing Post ICU patients admitted in the general ward at MNH. **Methodology:** This study employed quantitative descriptive cross-sectional study design and was conducted at MUHAS. Convenient non-probability sampling was used. Self-administered questionnaire with close-ended questions were used for data collection and SPSS version 20 was used to analyse the data. **Results:** A total of 150 clinical nursing students from MUHAS were involved in this study, males were 81 and 69 were females. 81% of the respondents were knowledgeable on observing post ICU patients and 52% on assessment, 18% were knowledgeable on assessing patients with decreased level of consciousness, (96.5%) on the normal adult respiration. Generally, 87% of the respondents were knowledgeable on both assessing and observing post ICU patient in the general ward despite the differences in specific normal values of the vital signs. **Conclusion:** Nursing Students are the potential future medical personnel that we are expecting them to provide care to post ICU patients in the general ward. So there is need to train these students in a way that they will be capable of determining the signs of patient's deterioration and able to provide appropriate intervention.

35. Gift, G.L., Menti, L.N. (2018). Traffic Police Provision of Post-Crash First Aid to Road Traffic Injured Victims in Dar Es Salaam Tanzania: A Cross-Section Survey

Abstract

Background: Pre-hospital trauma care is important in order to reduce the death and disabilities associated with road traffic injuries (RTI). A systematic review and meta-analysis of trauma systems in LMICs found 25% reduction of death risk from trauma in all areas with established pre-hospital trauma care system. Lay-responders such as traffic police officers can play an important role in provision of pre-hospital trauma care to RTI victims, especially where there is no established pre-hospital care system. **Objective:** The objective of this study was to investigate

knowledge, self-reported practice and attitude on post-crash first aid among traffic police officers in Tanzania. **Methodology:** A cross-sectional survey was conducted among traffic police officers in Dar es Salaam Tanzania. Self-administered questionnaires were employed to traffic police officers. Descriptive statistics and Pearson chi- square tests were utilized to analyse the data. **Results:** A total of 340 traffic police officers were surveyed. The majority of traffic police officers (65.3%) reported having previous post-crash first aid on-the-job training and 70.9% had cared for RTI victims in the previous year. Generally, knowledge of traffic police officers on provision of post-crash first aid to RTI victim was low at 2%. Traffic police officers with higher education levels had more knowledge (p=0.015) on provision of post-crash first aid to RTI victim. Only 4.7% of traffic police officers knew the correct way to manage the airway of RTI victims. **Conclusions:** This study recommends improved training of traffic police officers using an updated post-crash first aid competency-based curriculum. Furthermore, user-friendly post-crash first aid leaflets should be provided to traffic police for their reference.

36. Gokce, A., Peter, K., Tulizo, S.S., Erasto, M., Mohammed, J., Fatmahan, A (2018). Polymorphisms in 9p21.3 locus are associated with coronary artery disease in Northern Tanzanian patients

Abstract

Background: Coronary artery disease (CAD)are the main non-communicable conditions in sub-Saharan Africa(SSA)and now 9.2%of total death in the African region are caused by CAD. CAD being the leading cause of deaths in patients aged over 45 with prevalence being higher in the urban than the rural population. The genetic risk factors have not well studied. Despite the importance of 9p21.3region in CAD no genetic research has been conducted in SSA. **Objectives:** This study aimed at conducting the first genetic study evaluating the polymorphisms in9p21.3region in Tanzanian CAD patients from different regions of Tanzania. **Methodology:** 90 patients from Northern region (age 63.10±11.25) and 45 patients from other regions (South, East, West and Central) (age 59.67±9.21) were included in the study. Biochemical measurements and genetic studies were performed. DNA was obtained from peripheral blood with MagnaPure Compact. Genotyping was performed with the Light SNiP typing assay using QRT-PCR method. **Result:** BMI, glucose, cholesterol, HDL, LDL and TG levels were significantly different in

patients from Northern Tanzania compared with the other regions of Tanzania(p<0.05).The genotypic and allelic distributions of rs10757274A/G, rs10757278A/G and rs10811656C/T polymorphisms were significantly different in CAD patients from Northern Tanzania compared with the other regions(p<0.05,respectively).GG and AG genotypes of rs10757274, GG and AG genotypes of rs10757278 and TT and CT genotypes of rs10811656 were significantly associated with CAD in females from northern region(p<0.05). **Conclusion:** rs10757274, rs10757278and rs10811656 in9p21.3region might well be associated with the CAD risk in Northern Tanzania. Our findings also suggest a gender specific association of these polymorphisms with CAD in Northern patients. Further studies on larger samples are needed in order to assess the prevalence and major risk factors for development of CAD in SSA.

37. Grades, S., Evord, K, Eric, M., Jonathan, M. (2018). Promoting utilisation of GIS Technology in Health

Abstract
Background: Geographic information system (GIS) is a powerful tool for capturing, storing, updating, manipulating, analysing, and displaying all forms of geographically referenced data. It can efficiently help health professionals to address a number of significant health issues ranging from disease management to improved services. For some years, NIMR has been making maps for councils' health issues on requests, because they did not have knowledge on map making and GIS analysis. NIMR decided to conduct a GIS training to empower councils to use GIS as a tool for improving efficiency in their work and foster informed decision-making. **Objective:** To equip members of CHMTs (Council Health Management Teams) and RHMTs (Region Health Management Teams) on basic skills of GIS to enhance utilization of this technology in health at regional and district levels. **Methodology:** A five-day classroom training using participatory adult learning methods including small group discussions, demonstrations and interactive lectures was conducted. The training was organized in five different training sessions whereby each group had 30 to 39 participants; comprised of members of RHMT and CHMTs. The software used for training was QGIS application (an open source software). Training outcome: A total of 440 health officials from 31 regions and 195 councils in Tanzania participated. **Conclusion:** The interest expressed by participants has proved the importance and acceptance of

GIS trainings at regional and district levels. The participatory teaching and learning methods used were advantageous as the acquired knowledge was put into practice by development and production of maps.

38. Hamza, M., Agricola, J., Mucho, M.,Victor, M., Fausta, M., Ally, N., Maria, K., Salum, N., Jaffer, S., Angela, S., Mohamed, M., Janeth, M., Yazid, K., Shan, Li., Colin, S., Ahmed, A (2018). Genetic Relatedness and Virulence Factors of Vibrio cholerae Isolated from Different Regions in Tanzania, 2016-2017

Background: Cholera, a watery diarrhea disease caused by V. choleraebacteria. The burden of the cholera is estimated to be 3–5 million cases and 100,000–120,000 deaths occurring annually worldwide. Tanzania experienced frequent cholera outbreak since August 2015. Despites all the interventions cholera outbreaks continued to be reported in some regions with case fatality rate1.6 %. **Objective:** To determine the genetic relatedness and virulence factors of V. cholerae isolates from different regions in Tanzania affected by cholera outbreaks. **Methodology:** A laboratory-based cross-sectional study was conducted using preserved Vibrio cholerae isolates from 11 regions experienced cholera outbreaks from 2016-2017. Ninety-nine isolates conveniently sampled were subcultured on TCBS and TSA medium. Identification was based on colonial morphology and biochemical tests. Serotyping and antimicrobial susceptibility test was performed.DNA extraction was performed using Qiagen-QIAamp DNA Mini-Kit. Molecular typing was done at University of Maryland, Baltimore, USA. **Results:** All 99 isolates were V. cholera O1, 97(98%) Ogawa and 2(2%) Inaba. All isolates (100%) were sensitive to cotrimoxazole, tetracycline, doxycycline, ceftriaxone, and chloramphenicol. Resistance to nalidixic acid, ampicillin, erythromycin and amoxicillin were 100%. The disease attack-rate was high (180/100000) in Morogoro. Molecular analysis showed 42 genotypes that formed two clonal complexes and one singleton. Isolates were genetically related with a small genetic diversity but singleton was genetically unrelated. Biotype El-Tor variant detected was ctxA, tcpA El Tor genes. **Conclusion:** The cholera outbreaks were predominantly caused by V. cholerae O1 serotypes Ogawa. The El-Tor variant detected was the same biotype that has been circulating in various regions in Tanzania during cholera outbreaks since August 2015.Cholera phage typing

study is recommended on biotype El-Tor variants. Continuous surveillance of antimicrobial susceptibility patterns of V. cholerae and proper sanitation measures are highly emphasized.

39. Hilonga, S., Otieno, J.N., Ghorbani, A., Boer, H.D (2018). Determination of informant consensus factor of the ethnomedicinal plants used in local markets of Tanzania.

Abstract

Background: In Tanzania, many previous studies have listed the medicinal plants with their uses and less has been done on the quantitative consensus technique for the analysis of medicinal uses of plants. The technique plays a vital role in determining the species that are most used to treat a particular illness. A useful tool to find a particular species for searching bioactive compounds is the Informant Consensus Factor. **Objective:** This study aims to determine the informant consensus factor (ICF) of the ethnomedicinal plants used in local markets of Tanzania. **Methodology:** Semi-structured interviews were used to record the frequency of trade and uses of wild-harvested medicinal plants in Arusha, Dodoma, Mbeya, Morogoro and Mwanza regions. The research goals were explained before conducting interviews and free and prior informed consent was obtained from the participants. To determine which plants are frequent, the Relative Frequency of Citation (RFC) and the Informant Consensus Factor (ICF) was calculated for each species and mentioned use category. **Results:** Forty vendors were interviewed, and 400 out of 522 collected market samples were identified to 162 species from herbarium deposited collections. The most frequently traded species were Zanthoxylumchalybaeum, Albiziaanthelmintica, Zanhaafricana, Warburgiastuhlmannii and Vachellianilotica. The most popular medicinal plants in the markets are connected to local health problems including malaria (ICF = 0.53), libido disorders (ICF = 0.50), infertility (ICF = 0.41) and psycho-sociological problems (ICF = 0.40). **Conclusion:** The ethnomedicinal information provides the better option for the selection of widely used medicinal plant species for searching bioactive compounds to treat human health problems. The efficacy and safety of medicinal plants with the highest Informant Consensus Factor (ICF) need to be evaluated by the phytochemical, pharmacological, bioassay and toxicity studies for the development of herbal formulations for healthcare management.

40. Humphrey, L.M., Grace, S, Ferdinand, M. (2018). Prevalence of Abnormal Pulmonary Function and Its Associated Factors among Chronic Kidney Disease (CKD) Patients Attending Nephrology Unit at Muhimbili National Hospital

Abstract

Background: Abnormal pulmonary function is very common complication among chronic kidney disease patients and it has been associated with clinical stages, malnutrition, inflammation, serum urea levels and duration of haemodialysis. No studies have been done in Tanzania to determine the prevalence and associated factor for abnormal lung function among CKD patients. **Objective:** The aim of this study was to determine the prevalence of abnormal lung function test and its associated factors among chronic kidney disease patients attending nephrology unit at Muhimbili National Hospital – Dar es Salaam. **Methodology:** This was a cross-sectional descriptive hospital-based study conducted among patients with stage 3, 4, 5 CKD attending nephrology unit at Muhimbili National Hospital for a period of six months. Demographic data, laboratory parameters and spirometry findings were recorded. Data was analyzed using SPSS version 20.0, continuous variables was summarized as means and standard deviation or medians and interquartile range and categorical variables as proportions and compared using chi-square test or Fischer's exact test, logistic regression was used to determine the association. **Results:** A total of 110 patients with chronic kidney diseases were included. Males accounted for the majority (60%). The median age of study population was 48 years. Among the CKD patients 65.5% had hypertension and 31.8% diabetes. The overall prevalence of abnormality of lung function was 50% (55/110). Abnormality in lung function was more prevalent in 70% women. Lung function patterns included, restrictive pattern 24%, mixed pattern 22% and obstructive pattern 4%, with stage V and IV had significant higher risk of developing abnormality in lung function compared to stage III. **Conclusion and recommendations:** This study revealed a high prevalence of abnormality of lung function among chronic kidney disease patient.

41. Ibaso., Mugonzibwa. (2018). Magnitude of Usage of Alternative Oral Health Treatment Modalities before Consulting Contemporary Oral Health Facilities.

Abstract

Background: Alternative treatment modalities used by oral health patients from traditional healers (TH's), self-medication or roadside vendors than consulting oral health professionals in contemporary oral health facilities may have adverse reactions, drug interaction, global emergency of drug resistant and delaying appropriate management of the respective oral health conditions. **Objective:** To investigate the magnitude of usage of alternative treatment modalities among oral health patients before consulting oral health professionals in the contemporary oral health facilities. **Methodology:** This was a cross sectional descriptive hospital based study that was conducted at the MUHAS out-patient oral health facility. The study involved 383 patients attending oral health care out-patient facility. A self-administered closed-ended questionnaire was used to collect information from patients in the waiting room for treatment who agreed to participate in the study. Questionnaire forms were used in data collection. Data processing and analysis was done using statistical package for social sciences (SPSS) version 20.0. **Result:** The study involved 383 oral health out-patient attendants of whom females constituted 50.9% (195) of the respondents. Almost half of the respondents (48%) reported to use alternative treatment modalities before visiting a contemporary oral health facility. Some reported reasons for using alternative treatments before visiting contemporary oral health facilities included influence from other people 35 (19.0%); poor accessibility 33 (17.9%); lack of money 30 (16.3%); fear for dental treatment 27 (14.7%); and lack of awareness 25 (13.6%). Tooth ache 74 (40.2%) was reported to be the commonest reason that hard-pressed respondents to seek for alternative treatment. Use of Pain killers 60 (33.0%); antibiotics 46 (25.3%) and local herbs 26 (14.3%) were reported to be the alternative oral health treatment modalities used before consulting contemporary oral health facility by participants. **Conclusion:** About half of the outpatients at the MUHAS oral health out-patient facility reported to have started with alternative oral health treatment modalities including traditional healers (TH's) before seeing oral health specialists.

42. Iseselo, M.K., Tarimo,E., Kulane,A., Sandstrom,E. (2018). Factors influencing intravenous drug users to participate in HIV vaccine trials: A qualitative descriptive study in Dar es Salaam. (ID)

Abstract

Background: HIV vaccine trials involve the active participation of volunteers who are committed and adhere to the study protocol. Worldwide, various groups of people have participated in HIV vaccine trials. However, there is inadequate information about the motivation and barriers among injecting drug users (IDUs) to participate in HIV vaccine trials in low income countries. **Objective:** To explorefactors explaining participation in HIV vaccine trials among IDUs in Dar es Salaam. **Methodology:** Aqualitative approach was employed. Three focus group discussions (FGDs) and ten in-depth interview (IDs) were conducted. We used purposive sampling to recruit 32 participants. The audio recorded data were transcribed, organized, and analyzed using qualitative content analysis approach. **Results:** Altruism, a desire to benefit from research procedures and decreasing HIV related deaths were reported as motivating factors to participate in HIV vaccine trials. In addition, health screening, individual decisions and influence of significant others were the motivating factors towards recruitment in the HIV vaccine trials. Contrarily, stigma towards participants, fear of effects of vaccine and discouragement from significant others were mentioned as barriers. Most participants insisted the importance of providing education about the HIV vaccine program before participation in HIV vaccine trials. **Conclusions:** Individual decisions and influence of significant others are crucial in HIV vaccine trial participation. In addition, recruitment of IDUs in HIV vaccine trial will also depend on proper information provided to potential participants.

43. Jacob, B., Semali, I., Senga, S, Mziray, S (2018). Evaluation of the Tanzania Medicines' Post Marketing Surveillance (PMS), March 2018.

Abstract

Background: Post Marketing Surveillance (PMS) means practice of monitoring quality, safety, and efficacy of medicines already in the market after they have been registered. In between 2006 and 2013 Tanzania reported 690 cases of medicines adverse events. The PMS 2015/2016 main objective was to determine the quality of selected medicines circulating in Tanzania market. **Objective:** To assess whether PMS programme 2015/2016 met its objective. **Methodology:** The evaluation was guided byCDC MMWR document for evaluation of public health surveillance systems and review of secondary data on Atenolol, Metronidazole, Nifedipine and

Ergonometrine at TFDA head quarter. Pre-set evaluation framework was used to conduct review of PMS plan, 2015/2016 report, 240 selected forms and literature review. **Results:** were presented in frequency tables, bar charts and proportions. **Results:** TFDA sampled 53.8%, 28.6% sampled products had storage condition inappropriate and 16.6% had the Tanzania registration number lacking, 11.1% of 57 samples failed confirmatory test, corresponding batches were withdrawn from market, manufacturers informed and annual report prepared. Sampling and screening form was 100% and 85% complete respectively, information on 14 samples of Atenolol at confirmatory stage and that of actions concerning PIR results was missing, Nifedipine and Metronidazole was incorrectly recorded, Ergonometrine was categorized as antihypertensive and antibiotic. Five selected PMS activities were 100% done late. **Conclusion:** The system is sensitive enough to detect product with poor quality. Information obtained is used for actions. Dissemination is more of TFDA internal communication rather than to public. PMS is acceptable, flexible, simple, representative and stable but with poor data quality and timeliness

44. Jared, B., Emiliana, M., Grades S (2018). Geospatial Analysis of Neglected Tropical Diseases in Southern Tanzania

Abstract

Background: Neglected tropical diseases (NTDs) such as schistosomiasis and soil-transmitted helminthiases (STHs) constitute major public health problems in Tanzania. However, current information on the magnitude and distribution of these diseases at focal level is lacking, particularly for marginal areas, which has been identified as a setback to their control. **Objectives:** Open Source Geographical Information System was used to map risk factors for schistosomiasis and soil-transmitted helminthiases in Mtwara and Lindi Districts. **Methodology:** Stool and urine samples were obtained from 1750 residents of 19 villages between April and October 2016. Filtration technique was used to examine schitsosomes and Kato Katz for soil-transmitted helminths. GPS coordinates for households and water bodies were captured to establish their spatial relationships with human residence and associated risks for schistosomiasis. A questionnaire was used to obtain information on risk behaviour and activities exposing people to infectious diseases. **Results:** Hookworm and Schistosomahaematobium were the most common parasites. T. trichuris and Taenia spp. infections showed no pattern across

study villages. Ngorongoro village had the largest number of people infected with S. haematobium in the wet season and dry season. S. haematobium prevalence differed significantly between villages (p=0.035). Parasite prevalence in relation to participants' sex, education level, presence or absence of rice farming, or whether drinking water was treated or not did not show significance (p > 0.05). **Conclusion:** The risk of acquiring hookworm or urinary schistosomiasis in these areas depended on one's age and place of residence. Infection prevalence aggregated at the village level and visualised as choropleth distribution maps indicated site-related transmissions. This information is useful in guiding control efforts against schistosomiasis and other helminths in these areas through judicial allocation of efforts, time and money.

45. John, D. (2018). Assessment of student nurses' knowledge on observing and assessing acute ill patient at MUHAS - Policy

Abstract

Background: Student nurses need to be conversant in observing and assessing acute ill patients, as it is given that the student nurses are being involved in caring patients during their clinical learning. Close observation, assessment, early and timely documentation of vital signs, interpretation of findings and appropriate management of the condition are crucial. **Objectives:** To assess student nurses' knowledge on observing and assessing acute ill patient in the wards. **Methodology:** A descriptive cross-sectional design was conducted. Non-probability convenience sampling technique used to obtain study participants. **Results:** A total of 162 student nurses were enrolled into the study, whereas 145(89.5%) had cared the acute ill patients and 17(10.5%) had not. The significant findings were as follows; observing respiration rate for an adult which indicate clinical emergency and immediate intervention 64.2%, observing pulse rate for adult which indicate clinical emergency to be activated 52.5% and immediate intervention tools used to assess level of consciousness and GCS score assessment 82.7%. There was no significant relationship between years of study and knowledge on observing and assessing an acute ill patient in the ward. **Conclusion:** The study shown that, student nurses had no knowledge on observing and assessing an acute ill patient. This has implication for quality of

care and patients' safety. The EWS should be implemented in nursing curricula and in health care institution to guide clinical decision-making.

46. Judith, L.Y., Andrew, G.M., Emanuel, L.P., Félicien, M.K., Tolo, C.U., Gbenoudon, J.S., OgwangP.E (2018). Acacia nilotica: A Potential Medicinal Plant against Hepatitis C Infection and its sequelae-ITM

Abstract

Background: Hepatitis C Virus (HCV) infection represents a huge burden in public health, which increased medical expenses Worldwide. The HCV has the ability to escape human immune system, develop mutation and persist for years silently leading to liver cancer. Acacia nilotica, a widely used plant species in folk medicine is known to have antiviral activities including anti-HCV. However, little is known about its mechanism of action for managing HCV. **Objective:** To investigate the use of A. nilotica for HCV management and synthesize underlying mechanism of action. **Methodology:** We searched articles from PubMed, Library of Congress, Cochrane database of systematic reviews, SCOPUS, SCIENCE DIRECT and Google scholar databases. The articles published from inception to 17th January 2018 without language restriction, those investigated antioxidant activity of the plant with DPPH radical scavenging activity and reducing power capacity in their methods were included. **Results:** A total of 36 articles were included. Twenty-nine were invitro while the remaining were invivostudies. From in vitro studies, A. nilotica has antiviral activity against HCV through direct inactivation of HCV and inhibition of HCV NS3 protease. The plant has significant immuno-modulatory activity which promote immune cells proliferation and inhibit immunosuppressive cytokine. A. nilotica extract also inhibit oxidative stress by free radicals scavenging activity and enhancement of antioxidant enzymes. Acacia nilotica showed inhibition of chromosomal aberrations as anti-mutagenic plant. **Conclusion:** Acacia nilotica may be a potent source of anti-HCV drug with ability to prevent its long-term sequelae such as progression to cancer; while promoting immune competence. But studies with HCV strains addressing these pharmacologic effects are needed to strengthen this conclusion.

47. Kaaya, N., Outwater,O (2018). Values of nursing students from different countries regarding the nursing profession

Abstract

Introduction: Determining the professional values in nursing and the affecting factors is very important for professional development in the nursing profession. Caring is best demonstrated by a nurse's ability to embody core values include advocacy, care, ethics, collaboration, and developing evidence-based practice. The competent professional nurse integrates these values into practice. **Objectives:** To determine professional values of nursing students from different countries. **Methodology:** The sample of this study was formed by nursing students studying in countries and universities that have participated in the Online Cultural Exchange Program (OCEP). Tanzanian students participated as part of their competency-based Nursing Research course. The "Student Identification Form" and "Professional Values Scale for Nursing" (NPVS) were prepared online by the researchers for data collection. The 336student respondents filled the questionnaire on-line. **Results:** A statistically significant difference was found between the countries where the students were educated, the places where they lived (city, village, town), marital status, education status, and sex of the father. The professional values of female students, those living in the city and those whose father had a high education level were found higher. The students in Turkey, Tanzania, and Indonesia showed the highest scores in the values of professional nursing. **Conclusion:** In this study, professional values in nursing differed according to familial and social characteristics. It is recommended that initiatives to promote professional values are needed not only for nursing curriculums but also for an exchange of social and familial factors.

48. Kabanangi, F. J., Joachim, A., Manyahi, J., Nkuwi, E., Majigo, M., Moyo, S (2018). Bacteriological profile and antibiogram of aerobic isolates from infected burn wound in Dar es Salaam. -ID

Abstract

Background: Bacterial infection remains the most common cause of morbidity and mortality in patients with burn wounds. Isolates from burn wounds have shown increased resistance to

commonly used antibiotics. Information on local pathogens and sensitivity to antimicrobial agents is crucial for successful treatment of these infections. **Objective:** To determine the bacterial causes of burn wound infections and antibiotic susceptibility patterns of aerobic isolates from burn patients. **Methodology:** A hospital based cross-sectional study that was conducted between May and July 2017 at the tertiary and regional hospitals. Burn wound swabs were collected using sterile cotton swabs from areas that showed signs of infection. Swabs were cultured on blood agar and MacConkey agar, incubated aerobically at 37°C for 18–24 hours. Bacterial identification was done using conventional method and API20E. Antimicrobial susceptibility was determined by Kirby-Bauer disc diffusion method. **Results:** A total number of70 patients were enrolled. 60 (94%) had significant bacterial growth. 131 pathogenic bacteria were isolated, with gram negative organisms 91(69.5%) being prevalent. Frequently isolated bacteria were Pseudomonas aeruginosa (26%), Acinetobacter spp (22%), CoNS (18%), Klebsiella spp (11%) and Staphylococcus aureus (9.9%). Chloramphenicol was found effective towards gram positive bacteria and Klebsiella, imipenem was effective against Acinetobacter. 73% of Enterobacteriaceae were ESBL producers, 3/13 (23%) S. aureus were MRSA, 15/23 (65%) CoNS were methicillin resistant and 71.8% of isolates were MDR. **Conclusions and recommendation:** The most common organisms isolated from burn woundsare P. aeruginosa, and Acinetobacter spp. Most organisms showed high levels of resistance against commonly prescribed antimicrobial agents. Regular surveillance of burn wound organisms and their antimicrobial susceptibility patterns are needed to determine empirical antibiotic therapy.

49. Kafwimi, E.J., Kafwimi, E, Segesela, F (2018). Does mobile phone ownership improve access to EID services in the southern highlands of Tanzania? -ICT

Abstract

Background: Early infant diagnosis (EID) among HIV-exposed infants is a critical component of prevention of mother-to-child transmission (PMTCT) programs. Barriers to early infant diagnosis include poor uptake, low retention at designated re-testing intervals, delayed test results notification, passive systems of communication and poor linkage to treatment. The HIV Infant Tracking System (HIT System), an eHealth intervention has an ability to send reminder messages to HIV+ mothers with cell phones throughout the EID care continuum. **Objective:** To

determine if mobile phone ownership is associated with improved EID outcomes. Methodology: Data of infants who qualified for 18-month long cascade of care of EID was extracted from the HIT System database.EID outcomes of mother-infant dyads without cell phones(n=874) were then compared to those with cell phones(n=551). Asymptotic Pearson's test was used to compare EID outcomes for mothers with cell phones and mothers without cell phones. All tests were two-sided; with alpha set to 0.05. Data were analyzed using IBM SPSS version 20. **Results:** Among 477(86.5%) mothers who had phones received their infants DBS results at less than four weeks in comparison to 670(76.6%) of mothers without cell phones. This difference was significant ($x2= 22.64$, p=0.001). Mobile phone ownership was also correlated with higher ART initiation among positive infants ($x2=4.44$ and p=0.04). 46(93.9%) of positive infants whose mothers had phones were initiated on ART in comparison to 43(79.6%) of positive infants whose mothers did not possess cell phones. Discussion: Mother's cell phone ownership status is significantly associated with faster turnaround time for DBS results and with an increased number of positive infants who are initiated on ART. This suggests that mobile phones along with m-health interventions have the potential to improve EID outcomes. The use of mobile health technology could potentially have wider application in PMTCT and other maternal and child health areas.

50. Kahesa, C.A., Mwaiselage, J.D., Samweli, K (2018). HPV subtypes diversity and cytological abnormalities in HIV positive and negative patient.

Abstract

Background: Tanzania endures adverse impact from HIV-1 and HPV-associated malignancies. To investigate the influence of HIV upon HPV-dependent cervical dysplasia in women from urban and rural areas of Tanzania, we designed a multi-site cross-sectional cervical screening study. With rural catchment clinics in Bagamoyo and Chalinze, and an urban site, Dar es Salaam. **Methodology:** Pap smears were performed and cervical cytobrush collected for HPV genotyping, utilizing HPV multiplex PCR genotyping method. Pap smears were read in quadruplicate. Blood samples were collected for HIV status confirmation and CD4+ T-cell counts. All HPV genotype, cytopathology, and HIV status data were compared to patient demographic factors. Currently, we have recruited and analyzed 1046 patients. **Results:** Variation in HIV positive rates across cohort; ORCI: 12.5%, Bagamoyo: 16% and Chalinze:

25%. Comparing VIA and pap smear efficiency we found VIA fails to reliably detect abnormalities in younger patients (18-24 years). HPV16 was the most common genotype, 16% in Bagamoyo and Chalinze. HIVpositive group had a significant HPV genotype diversity and cytopathology compared to HIV negative group. Multiple HPV infections were associated with higher probability of abnormal cytopathology, compared to HPV negative (OR= 2.7). Participants from Dar es Salaam showed the highest prevalence of any HPV infection and the greatest cytopathology. The rural sites exhibited a greater proportion of HPV naïve and normal cytopathology than the urban site, but also higher rates of multiple HPV infections. Higher rates of multiple HPV infections appearto be influenced by HIV. We found that HPV16, 33, and 39 coinfections was associated with higher grades of cytopathology (p=0.05). **Conclusions:** HIV is associated with greater HPV genotype diversity, greater numbers of HPV confections and higher grades of cytopathology

51. Kamori, D., Hasan, Z., Carlson, J., Maribe, S., Toyoda, M., Tachikawa, A., Gatanaga, H., Oka, S., Ueno, T, (2018). Host HLA class I-associated polymorphisms in HIV-1 accessory proteins correlate with patients' plasma viral load-BS.

Abstract

Background: Accumulation of HLA class I associated polymorphisms that are indicative of CTL escape mutations in vivo in HIV-1 proteins such as, Gag has been shown to influence disease progression by diminishing viral replication capacity. However, to date, the contributions of such HLA-associated polymorphisms in HIV-1 accessory proteins (Vif, Vpu, Vpr and Nef) on disease progression are not completely investigated. **Objective:** To comprehensively analyze HIV-1 accessory proteins sequence polymorphisms and their association with host HLA class I alleles and clinical parameters. **Methodologys:** Viral RNA was extracted from plasma of HIV-1 chronically infected treatment-naïve individuals and were HLA-typed in Japan. Vif, Vpr, Vpu and Nef sequences (n=375) of subtype B were analyzed. Then, firstly, using phylogenetically corrected methods we determined association of viral polymorphisms with host HLA-I genotypes; and thereafter, association of HLA-associated viral polymorphisms with clinical parameters was analyzed. **Results:** Our analysis revealed that a total of 144 polymorphisms in Vif, Vpr, Vpu and Nef were significantly associated with host HLA genotypes (p<0.0007,

q<0.2). In addition, we observed an inverse correlation between the number of adapted HLA-I associated polymorphisms in HIV-1 Nef at positions 120F, 125H and 157N and the plasma viral load (Spearman rank coefficient, R=-0.1985, p=0.0001). **Conclusion:** Our results add further insight on the role of HLA-mediated selection pressure on HIV-1 sequence evolution of accessory proteins; and importantly these data highlight the significance of such HLA-associated polymorphisms in clinical outcome.

52. Katale, U. Z., Mbelele, P.M., Lema, N.A., Rweymamu,M., Campino, S.G., Phelan, J. E., Keyyu, J.D., Mbugi, E.V., Dockrell, H.M., Clark, T.G., Matee, M.I (2018). Whole genome sequencing of Myobacterium tuberculosis isolated from sputum of TB patients in Tanzania-ID

Abstract

Background: Tuberculosis disease (TB), caused by Mycobacterium tuberculosis bacteria, remains a public health threat globally. Drug resistant TB is caused by the accumulation of mutations in genes coding for drug-targets or -converting enzymes and promoters and makes the disease more difficult to control. The availability of whole genome sequencing (WGS) has improved the understanding of mutations associated with drug resistance. **Objective:** To study determined the molecular basis of drug resistance in M. tuberculosis isolates from northern Tanzania. **Methodology:** The study was an unmatched case control study that involved Mycobacteria sourced from 29 patients that were resistant to at least rifampicin (RFP) and isoniazid (INH) (termed multi-drug resistant TB (MDR-TB), and from 10 TB patients who were sensitive to rifampin (RFP) and isoniazid (INH) at Kibong'oto Infectious Diseases Hospital, northern Tanzania. Genomic mycobacterial DNA from culture isolates were whole genome sequenced, and mutations in candidate resistance genes against anti-TB drugs investigated. **Results:** We found mutations in the katG and rpoB genes that code for MDR-TB. The Ser315Thr and Ser450Leu substitutions in the KatG and rpoB genes, respectively, were the most prevalent mutations observed in MDR-TB isolates. We found mutations in other resistance loci associated with first-line treatments, including embB (Ethambutol), rpsL (streptomycin), gid (streptomycin), and pncA (pyrazinamide). Mutations were also observed in gyrB and rrs genes which are known to associate with resistance to flouroquinolones and amikacin drugs,

respectively, indicating extensive drug resistant strains. M. tuberculosis isolates were primarily from lineage 4 (LAM), which is among of the predominant lineage in Tanzania. **Conclusion:** The study revealed a range of mutations that drive resistance to anti-TB drugs, suggesting diversity in the drug resistance of M. tuberculosis isolates in Tanzania. Using such knowledge of the genetic diversity in strains could assist with developing rapid diagnostics for clinical patient management.

53. Katopola, D. (2018). The perception of road safety stakeholders on active commuting in Dar es Salaam

Abstract

Background: Road traffic injuries is the second most common cause of death among the most economically active population group. The nature of the leadership of road safety programs in LMICs is associated with a questionable coalition between stakeholders and have minimal contribution to the existing programs. This bears a direct impact on individuals, families, communities and countries, and together justifies a need for urgent interventions that involve a multi-sectoral approach. **Objective:** To explain the perceptions of road safety stakeholders on active commuting; facilitators and barriers to active commuting in Dar es Salaam. **Methodology:** A qualitative narrative study will purposively choose road safety stakeholders based on their roles and involvement in the prevention of road traffic pre-crash scenarios and handling crash events involving active commuters. All stakeholders will then be distributed across a matrix that maps power, interest, and relation to other stakeholders. About 14 interviews will be conducted assuming that saturation will be reached and four focus group discussions (FGDs) with 8-10 participants. Analysis: Interviews and focus group discussions will be recorded, transcribed verbatim and translated into English. Then, content analysis will be used to organize stakeholders' opinions on or against active commuting. Practically, all interviews will be coded looking for manifest and the latent content of the text. Then, codes that share a commonality will be grouped into categories. Lastly, a higher level of abstraction will be achieved by creating themes. Themes will represent the underlying meaning between categories.

54. Katumba, D.J., Turwa,P.W. (2018). Risk factors associated with stillbirths among women delivered at Muhimbili national hospital: unmatched case-control study. -RCH

Abstract

Background: About 2.6 million stillbirths occur globally each year. The majority of still births occur in developing countries. Tanzania is among the top ten countries with the highest number of stillbirths worldwide. Muhimbili National Hospital (MNH) receives referred women with preeclampsia and antepartum haemorrhage which need immediate delivery. It is not clearly known whether these factors contribute to higher number of stillbirths. This study provides insight on risk factors associated with stillbirths. Objective: To determine the risk factors associated with stillbirth among women delivered at MNH **Methodology:** Unmatched case-control study was conducted in 2017 involving 146 cases and 292 controls of women who delivered stillbirths and live babies respectively. Structured questionnaire and checklist were used to collect socio-demographic, maternal and Obstetric factors respectively. Data was analyzed using SPSS version 23. Bivariate analysis was done using Chi square to determine association between independent and dependent variables. Logistic regression was conducted to find the independent risk factors associated with stillbirths. **Results:** During the study period a total of 2537 newborns were delivered. Of these 153 were stillbirths giving a stillbirth rate of 60 per 1000 total live births. Factors that were independently associated with stillbirth after controlling for potential confounders were gestational hypertension (AOR=2.3; 95%CI: 1.1- 4.6), preeclampsia (AOR=3.0; 95%CI: 1.5- 5.8), previous history of stillbirth (AOR=3.5; 95%CI: 1.7-6.9), intrauterine growth restriction (AOR=3.2; 95%CI: 1.4-7.1), antepartum hemorrhage (AOR=20.5; 95%CI: 7.5-56.0) and fetal distress (AOR=3.3; 95%CI: 1.5-7.6). **Conclusion:** Stillbirth is among the adverse outcome of pregnancy at MNH. Timely and appropriate management of hypertensive disorders in pregnancy and antepartum haemorrhage is very crucial for prevention of stillbirths. Proper intrapartum monitoring of labour using Partograph is important intervention in preventing stillbirths.

55. Kent, J., Tluway, F., Makana, J (2018). Developing Grant Application Skills in a Changing Funding Landscape

Abstract

Background: Grantsmanship is a term that has relatively recently come into usage within the academic research community. Grantsmanship is developing grant applications that meet funders' requirements and are successful in achieving funding. Recently competition for research funds has become more intense and application processes have become more sophisticated with funders often expecting applicants to address a number of priorities simultaneously. **Objective:** By increasing knowledge of grantsmanship, to improve the number and success rate of grant applications. **Methodology:** In the last 12 months the Sickle Cell Programme has been assisting a number of researchers to produce grant applications. Researchers have received one-to-one, group and department level instruction on aspects of grantsmanship. Areas include: how to clearly articulate the novelty of research and how it meets the funder's requirements. As well as scientific excellence, applicants were asked to consider areas including innovation, capacity development, SDGs and impact. **Results:** A number of applications have been submitted to Commonwealth Scholarships, PEER, Thrasher Research Fund, NIH Fogarty Centre and the American Society of Hematology. Applicants have a better appreciation of how their research provides an opportunity for the funder to meet its goals. Other important considerations e.g. the type of grant for which they might be competitive, leaving sufficient time to fully develop and refine ideas, checking eligibility and proofreading applications were considered. **Conclusion:** An effective way to develop grantsmanship skills is to develop applications with support from a grants specialist. Only by completing applications and receiving feedback will researchers develop grantsmanship skills. The funding landscape has become more complex with international funders opening up opportunities to direct applications from Tanzania. In order to be competitive for funds grantsmanship skills must be further developed.

56. Kihaga,Y. (2018). Title: Knowledge, Attitude and Practices of Eye Safety Measures Among Industrial Workers at MufindiDistrict

Abstract

Background: There is an increase in the incidences of eye injuries. When compared to the developed countries, the incidence and severity of work related eye injuries is higher in developing countries. This may be attributed to lower level of priority assigned for occupational

health and workplace safety. Many occupational eye injuries occur because employees are not wearing any eye protection while others result from wearing improper or poorly fitting eye protection **Objective:** To describe the knowledge, attitude and the patterns of eye safety measures among industrial workers at Mufindi district, Iringa region. **Methodology:** This was a cross-sectional descriptive study. Mufindi district has many A lottery method was used to select the 3 industries to be sampled. These industries include Mufindi paper mills, Lugoda tea estate and Sao-hill timber industry. The workers found in these industries were enrolled into the study after consenting. A structured Swahili questionnaire was used to collect data followed by observation schedule. **Results:** A total of 197 participants were interviewed. Among these 59.9% of the study respondents had low knowledge on the risk activities for eye injuries. 51.3% of the study respondents had low level of knowledge on eye protective devices. 54.3% of the study respondent use eye protective devices while at work.95.9% of the participants had good attitude towards eye safety measures. The most common challenges on preventing occupational eye injuries were scarcity of resources (41.7%) and lack of proper training on the use of eye protective devices (38.7%). **Conclusion:** most workershad low knowledge on risk activities for eye injuries, low knowledge on eye protective device and eye safety strategies. Majority had good attitude towards eye safety measure. Employers should always make sure that the eye protective equipments are available at work places.

57. Kilalo, M.M. (2018). Clinical epidemiology, management and outcomes of adult patients with non-traumatic acute abdomen presenting at EMD-MNH-NCDs

Abstract
Background: Abdominal pain in adults brings out versatility in diagnosis and outcome ranging from the most benign to life threatening conditions. Poses a unique challenge to emergency care providers particularly in low income countries where there is general paucity of data for patients presenting to acute intake areas. Evolution of Emergency medicine as a new specialty provides an opportunity of early recognition and provision of appropriate treatment. **Objective:** To describe the clinical profiles, management and outcomes of adult patients presenting with non-traumatic abdominal pain to the EMD-MNH. **Methodology:** This was a prospective cohort study of adult patients presenting to the EMD-MNH with non-traumatic acute abdomen. A case report

form (CRF) built in an online data capture software REDCAP version 7.2.2 Vanderbilt, Nashville, TN, USA was used and included demographics, clinical presentation, management, ED diagnoses, disposition, 24-hour and seven-day outcomes. Data was summarized using descriptive statistics and outcomes, risk stratification was tested through Chi Square and linear progressions. **Results:** A total of 288 patients presented with abdominal pain and 199 met the study inclusion criteria. The mean age was 47.99yrs, 126 (63.3%) were female with 118 (59.3%) being referral cases. Top EMD diagnoses were intra-abdominal malignancies, intestinal obstruction and Upper Gastrointestinal Bleeding. Most common interventions were intravenous fluids, analgesia and antibiotics. A total of 160 (80.4%) were admitted of which 73 (45.6%) were admitted to surgical ward. 15 (7.5%) underwent surgery. **Conclusion and Recommendations:** Abdominal pain is a common amongst adult patients presenting at EMD-MNH as evidenced by high admission rates, the need for surgical intervention and increasing mortality rate post-surgery. Further studies and quality improvement efforts should focus in identifying aetiologies, risk stratification, and appropriate interventions to optimize outcomes.

58. Kilonzi, M., Omsi, M., Kamuhabwa,A, Philip, S., Aklilli, E., (2018) Early Parasite Clearance following Treatment with Generic Anti-malarial Artefan® for Uncomplicated Malaria among Tanzanian Children.

Abstract

Background: Emergence of resistance against different anti-malarial drugs such as chloroquine and sulphonamides containing anti-malarial necessitate WHO in year 2000 to approve the uses of Artemisinin-based combination therapy (ACT). In 2006, artemether-lumefantrine specifically CoartemTM was approved as first line for treatment of all uncomplicated malaria for all age group in Tanzania. Due to poor availability and affordability of the innovator's product the government of Tanzania in 2013 prequalified the uses of generic anti-malarial drug and Artefan® was the first to be approved. However, there is limited data on the therapeutic effectiveness of this generic anti-malarial especially parasite clearance in Tanzanian children with uncomplicated malaria. **Objective:** To determine effectiveness of Generic Anti-malarial Artefan® for Uncomplicated Malaria among Tanzanian Children. **Methodology:** This was a two-arm prospective study that compared the effectiveness of anti-malarial generic Artefan® and

the innovator's product Coartem®. Patients aged 6 to 59 months with uncomplicated malaria were recruited and randomized to either receive Artefan® (generic anti-malarial) or innovator's product Coartem® as a control. Participants were required to revisit clinic five times as follow up as per WHO recommendations. On each visit thick and thin blood smear, haemoglobin concentrations and auxiliary temperature were performed and documented. **Results:** A total of 200 children were included, 100 in the Artefan® arm and 100 to receive Coartem® arm. The prevalence of peripheral parasitaemia on days 3, 72 hours following initiation of the anti-malarial medication was 0% in both Artefan® and Coartem® arms of treatment. Those presented with febrile condition (temperature above ≥380C) on day 0, before admission of anti-malarial drug were 58 (67.4%) under Artefan® arm and 58 (66.7%) under Coartem® arm, p value 1. On day 3 after completion of treatment none presented with febrile condition under Artefan arm® and only one patient presented with febrile condition (temperature ≥ 38oC) on Coartem arm®, p value 0.970. **Conclusion:** The Generic anti-malarial Artefan® and Coartem® have similar malaria parasite clearance ability among children with malaria aged 6 months to 59 months.

59. Kimambo, S.H., Philipo, G.S., Mushi, B.P., Mmbaga, E.P., Loon, K.V., Nyeriga, M.S., Ronald – B., Li – Zhang., Britt Marie L., Larry A., Mark M., Julius M., Edda A.M, Vuhahula, D (2018). Validation of the GeneXpert® assay for Rapid Analysis of Breast Cancer Biomarkers from cytological materials

Abstract

Background: Breast cancer is the leading cause of cancer-related mortality among women in Tanzania, with most patient present with advanced disease. Breast cancer hormone receptor status, including estrogen receptor (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER2), is critical in determining patient prognosis and treatment. Reagent shortages, lack of trained staff and long processing time limit their assessment in Tanzania. **Objective:** To compare GeneXpert® Breast Cancer STRAT4 assay using fine needle aspiration specimens, to immunohistochemistry on corresponding mastectomy specimens. **Methodology:** Adult patients presenting to FNA Clinic at Muhimbili National Hospital (MNH) with a malignant breast mass based on rapid on-site evaluation (ROSE) were recruited prospectively. Patients with a history of breast cancer, bilateral breast tumors, and women who

were pregnant or lactating were excluded. STRAT4 was performed on air-dried FNA specimens at MUHAS and compared with ER, PR, and HER2 IHC results on corresponding surgical specimens. **Results:** 20 patients have been recruited to date (age 25-75, mean age 48.8 years). All cases determined to be adenocarcinoma by ROSE were confirmed to be adenocarcinoma on final report. STRAT4 assay showed 4 triple negative, 6 ER+ PR+HER2+, 2 ER+ PR+ HER2-, 5 ER+ PR- HER2+, 2 ER+ PR- HER2- and 1 ER-PR- HER2+. Four cases have IHC results from MNH and the rates of misclassification were 0% for ER, 50% for PR, and 50% for HER. **Conclusion:** STRAT4 assay can be implemented with fewer resources and accelerated timeline as compared to IHC at MNH. ER has a low rate of misclassification. Implementation of STRAT4 technology has the potential to transform breast cancer diagnosis and treatment in low-resource settings.

60. Komba, B.E. (2018). Factors Associated with Poor Outcome of Obstetric Vesicovaginal Fistula Repair at Comprehensive Community Based Rehabilitation and Disability Hospital in Tanzania-RCH

Abstract

Background: Obstetric fistula is a serious injury resulting from obstructed labor causing significant maternal morbidity in women in developing countries. **Objective:** To determine factors associated with poor outcome among women who underwent obstetric VVF repair at Comprehensive Community Based Rehabilitation and Disability Hospital (CCBRT DH), Dar es Salaam. **Methodology:** Case notes of 702 women who underwent obstetric VVF repair from 1st January 2015 to 31st December 2016; were reviewed. Information extracted were age at current fistula occurrence, parity, current marital status, site of the fistula, number of prior repair attempts, route of repair, status of vaginal, residual bladder size and urethral involvement. Poor outcome was defined as failure of fistula closure evaluated by dye test; or presence of urinary incontinence at hospital discharge. Categorical variables were summarized as proportion and continuous data were summarized as mean (standard deviation) and median (range). Chi square test was used to test for association and p –value less than 0.05 was considered significant. Bivariate and multivariate analyses were done for predictors of poor outcome. **Results:** Seventeen percent of women who underwent repair had poor outcome. Six percent had failed

closure, whereas 11% had urinary incontinence. Predictors of poor outcome were presence of moderate and severe vaginal scarring (OR=1.9; 95% CI= 1.0-3.5) and (OR=2.5; 95% CI= 1.3-4.6) respectively; involvement of urethra (OR=3.8; 95% CI= 2.3-6.3); small residual bladder size (OR= 2.3; 95% CI= 1.3, 4.1); juxtaurethral fistula (OR=2.6; 95% CI= 1.2, 5.4) and having two or more previous repair attempt (OR= 8.4; 95% CI= 1.3, 19.8). **Conclusion:** This study has shown that poor outcome after obstetric VVF repair is common. Early detection of obstructed labor as well as prompt institution of urethral catheter is vital in order to prevent occurrence and severity of obstetric fistula.

61. Liberata, M. (2018). Building Bioinformatics capacity: the experience from the MUHAS- H3ABioNet Node Accreditation for GWAS Analysis-Biomedical

Abstract

Background: H3ABioNet is a Pan African Bioinformatics Network which supports the development of bioinformatics capacity in Africa. Sickle Cell Programme (SCP) at the Department of Haematology and Blood Transfusion at MUHAS is one of H3ABioNet nodes. SCP has been conducting a Genome Wide Association Studies (GWAS) analysis. The analysis focuses at identifying variations in the genome of the patients and link them to several Sickle Cell disease traits, example: haemolysis, anaemia. **Objective:** To acquire H3ABioNet accreditation for GWAS analysis so that the node can benefit from the expertise built. **Methodology:** Set of exercises (Standard Operating Procedure and Affymetrix SNP6 microarray data) were downloaded from H3ABioNet website (https://h3abionet.org/tools-and-resources/sops/gwas). The exercises are conducted by a team of scientist. APT tools and PLINK software were used for quality control and SNP genotyping. When the team is confident, a request for assessment will be sent to H3ABioNet. Assessment examination will be conducted for a specific time, then the node will be assessed for accreditation. **Results:** (i) Required software have been installed, (ii) quality control of the data and (iii)SNP genotyping: to measure genetic variations of SNP's between individuals have been conducted. The details of the first three steps will be presented. We have established a pipeline that will be used to conduct future analysis. Conclusion: The accreditation will enable the node to be officially recognized for doing

GWAS analysis, hence open opportunities to conduct analysis from any part of the world and enhance collaboration.

62. Likinderaki, W.B., Gibson,J., Mizinduko, M (2018). Loss-to-Follow-Up (LTFU) of HIV Infected Adults on Antiretroviral treatment in two District Hospitals in Dodoma Region, 2014-2016- ID

Abstract

Background: HIV client's retention in care is the big task to governments in order to prevent drugs interruption, maintain immunological benefits, prevent drug resistance, monitor the effects of therapy, and reduce deaths, which are HIV/AIDS related. In Tanzania, the LTFU rate increases time to time at different parts of the country. **Objective:** To identify the determinants of loss to follow-up amongHIV Infected Adults on Antiretroviral Treatment **Methodology:** A clinic based retrospective cohort study design was employed among the total of 551 records using secondary data of HIV positive clients enrolled in two CTC clinics in Dodoma region between July 2014 and March 2016. The Kaplan-Meier survival analysis technique and Cox proportional hazards regression model used to identify independent predictors of lost to follow up as outcome of interest on ART. STATA statistical software was used for analysis. **Results:** A total 6,820 HIV positive clients were enrolled in CTC between July 2014 to march 2016 of which 551 clients were enrolled in the study. The mean age of the study participants was 38.4 years, majority were females (68.6%) and married (52.4%). A total of 187 clients (33.9%) were lost to follow up during the study period. Controlling for age, gender, distance from the facility, and marital status, male gender (aHR=1.43, 95%CI:1.00–2.08) and being referred to CTC from a VCT center (aHR=1.87, 95%CI:1.16–3.02) were independent determinants of loss to follow up from care. Being married (aHR=0.64, 95%CI: 0.40–1.00) and WHO stage III (aHR=0.26, 95%CI:0.09–0.74) and WHO stage IV (aHR=0.29, 95%CI: 0.10 –0.85) were protective. **Conclusion:** Loss to follow up among HIV positive initiating ART in the two districts is high. VCT as the point of entry to CTC and male gender were independent predictor of loss to follow up. Advanced disease stages (WHO stage III and IV) and being married as compared to being single, were found to be protective of loss to follow up.

63. Longombe, A.N.I., Achille, M.V., Rubagumya, F.I., Nyagabona, S.I., Maniragaba, S.I., Msami, K., Dharsee, N.I. (2018). Clinical characteristics and treatment modalities of prostate cancer patients at Ocean Road Cancer Institute- NCD

Abstract

Background: Prostate cancer is one of the most frequently diagnosed cancers of men with 913.000 new cases worldwide every year and the number one diagnosed cancer in men living in developed countries. Despite increasing prevalence of prostate cancer patients in Africa in general and in East African countries in particular, there are not enough studies that properly describe clinical characteristics and treatment modalities of prostate cancer patients in Tanzania. **Objective:** Description of clinical characteristics and treatment modalities of prostate cancer patients at Ocean Road Cancer Institute between 2014 and 2016. **Methodology:** The study was a retrospective study assessing patients treated for prostate cancer at ORCI from January 1st 2014 to December 31st 2016. For each patient, a data collection sheet was completed and was transferred in Excel data base to be analyzed with the Statistical Package for Social Scientists (SPSS v. 20.0) computer program. A 95% Confidence Interval and p-value of 0.05 were used for statistical significance. **Results:** A total of 106 cases were included. The mean age of the cohort was 71 years [50-95]. The histology of all patients was adenocarcinoma. Majority had stage IV disease (67.6%). Almost all patients (91%) were treated with palliative intent and this was strongly associated with stage of disease at presentation (p value < .001). Furthermore, 61% of patients reported presented with wide spread metastasis; 35% received   radiotherapy and 90% ADT respectively. The one-year overall survival rate was 85% in this cohort. **Conclusion:** This study showed that the majority of prostate cancer reporting at Ocean Road Cancer Institute have stage IV cancer with widespread metastasis.

64. Lunogelo, S.L. (2018). Patients' Experience Of Radioiodine Therapy In The Management Of Differentiated Thyroid Cancer In A Low Resource Country; A Case Of Tanzania.

Abstract

Background: Differentiated thyroid cancer is the commonest occurring endocrine malignancy, with its incidence increasing worldwide over the past three decades. Despite of good prognosis, patients experience different degree of impaired health related quality of life due to long term follow up schedules, side effects of surgery, radioiodine (RAI) ablation, hypothyroidism induced by thyroxine withdrawal prior to RAI therapy or diagnostic procedures. **Objective:** To explore patients' experience with thyroid cancer diagnosis and radioiodine therapy. **Methods:** Exploratory deceptive design was used. Purposeful sampling strategy was used to recruit 10 participants who had differentiated thyroid cancer follicular, papillary or hurthle cell thyroid cancers, undergone thyroidectomy and had received at least one dose of radioiodine (RAI). Data was collected through semi-structured in-depth interviews and thematic analysis guided analysis process. **Results:** Four (4) major themes emerged from patients' experience with diagnosis and treatment of thyroid cancer. These included; 1) Being diagnosed with differentiated thyroid cancer; 2) Receiving thyroid cancer treatment and management; 3) receiving support; 4) hoping for normal life again. Despite all these, patients had strong caregivers support throughout the diagnosis and treatment process which gave them hope for the future, being living with thyroid cancer. **Conclusion:** Patients with differentiated thyroid cancer experiences physical and psychological impairment. These experiences seem to have negative impact on their wellbeing and quality of life.

65. Lupenza, E.T., Gasarasi, D.B, Omary, M.M. (2018). Effect of Ivermectin on Development of Wuchereria bancrofti Microfilaria in Anopheles gambiae and Culex quinquefasciatus and its Implication on Continued Transmission of Lymphatic Filariasis in Tanzania

Abstract

Background: Lymphatic filariasis (LF) caused by Wuchereria bancrofti is the second leading cause of disability worldwide. In Tanzania, LF elimination is based on annual Mass Drug Administration(MDA) with Ivermectin (150-200 µg/kg) and albendazole (400 µg/kg). Despite more than 10 rounds of MDA, LF transmission still persists in some regions. Factors such as compliance and coverage have been incriminated; however, the effectiveness of Ivermectin used

in the programme and its effect on the parasite, and filarial vectors has not been fully assessed. Furthermore, although the drugs used in the MDA programme are produced by World renown drug companies, the handling and storage in the implementing countries may not meet the optimal standards compromising the drug quality. **Objective:** This study aims to further explore the factors affecting continued transmission of LF, focusing on the quality of Ivermectin used in the MDA program and its effects on Anopheles gambiae and Culex quinquefasciatus anddevelopment of Wuchereria bancrofti microfilariae in these vectors. **Methodology:** Cross sectional and Experimental studies will be conducted in Mvomero district. A total of 206 individuals will be recruited randomly and assessed for CFA before next treatment cycle. The CFA positive individuals will be tested for microfilariae and followed-up for microfilariae clearance after Ivermectin annual MDA. Field and laboratory based entomological studies to assess vector competence will be conducted, and Ivermectin tablets used for MDA will be analysed for contents, dissolution and disintegration rates. Statistical analysis will be done using SPSS, the proportions and means will be compared by Pearson's chi-square and t-tests respectively.

66. Magodi, R., Lyimo, D., Mphuru, A., Abade, A.M., Mmbaga, E.J (2018). Factors associated with Non-Uptake of Measles-Rubella Vaccine Second Dose among Children Under Five Years in Mtwara, 2017

Abstract

Background: In 2014, Tanzania introduced the combined Measles-Rubella vaccine in the routine immunization schedule. Two doses of Measles-Rubella vaccine (MR1 and MR2) are recommended at 9 and 18 months. In 2015, MR2 coverage among eligible 18-month-old children in Tanzania was only 57%, lower than the WHO-recommended coverage (95%). During the same period Mtwara District Council (MDC) reported a coverage of 52%. **Objective:** We determined factors associated with non-uptake of MR2 among children in MDC Tanzania. **Methodology:** A community based cross-sectional survey using cluster sampling was conducted during January-April, 2017 in MDC. Parents/caretakers of children born during January 2014-2015 and residing in the district for the past three years were randomly selected. Parents/caretakers of children were interviewed using questionnaire. Vaccination cards were

reviewed to obtain vaccination information on non-uptake of MR2. Logistic regression modelling was employed to identify independent factors associated with non-uptake of MR2. **Results:** A total of 1,000 mothers of children aged below 5 years were interviewed. The median age of children was 2.50 years [Interquartile range 2.17–2.92 years], 558(55.8%) were unvaccinated with MR2. Non-uptake of MR2 was associated with the caretaker being unaware of the ages for MR1 and MR2 administration [AOR=3.50; 95%CI 1.98–6.21;], having MR2 vaccination services offered at the local vaccination station <3 days/week [AOR=2.82; 95%CI 1.42-5.59], unavailability of vaccine during vaccination days [AOR=3.38; 95%CI 1.08–10.61], unwillingness of health workers to open multi-dose vaccine vials for a single child [AOR=3.80; 95%CI 2.12-6.79], and long waiting times for vaccination services [AOR=1.80; 95%CI 1.08-3.00]. **Conclusion and recommendation:** More than half the children under five years in MDC were not vaccinated with MR2. Lack of caretaker knowledge and unavailability of vaccination were the major reason for non-uptake of MR2. We recommend for education provision to the community and screening of children's vaccination status at each clinic visit and provision of vaccine whenever possible.

67. Mahimilawa, L. E., (2018). Prolonging the therapeutic life span of artemisinin combination therapies with primaquine in the era of imminent P. falciparum resistance

Abstract

Background: Artemisinin combination therapy (ACT) for treatment of uncomplicated Plasmodium falciparum malaria in endemic areas has improved case management. In Bagamoyo District, Tanzania, a 2015 study found 44% PCR determined P. falciparum positivity rate at day 3, where supervised artemether-lumefantrine (ALU) treatment was given. These parasite sub-populations need to be further studied to understand artemisinin survival strategies among the Tanzanian P. falciparum parasite population. **Objective:** To study the utility of new strategies with old tools to protect/prolong the therapeutic lifespan of artemisinin combination therapy (ACT) in Tanzania in an era of imminent P. falciparum resistance. **Methodologys**: A randomized controlled, single-blinded clinical trial (n=280), aged >1yrs, with uncomplicated P. falciparum malaria, attending Yombo and Fukayosi dispensary, Bagamoyo. Control arm, received ALU standard treatment and intervention arm received ALU 20/120mg/kg bd for 6/7;

with a single low dose of primaquine (0.25 mg/kg) at the sixth day of treatment. Follow-up was 42 days. Clinical and laboratory assessments performed every scheduled visit and on any day of recurrent illness. Blood was collected on microscopy slide and filter paper for PCR determined parasite clearance, molecular genotyping. Preliminary results: Each arm enrolled 140 patients, overall lost to follow up was 35(11%) patients. Day 3 parasite clearance by microscopy was 277 (100%) in both arms, with no adverse events. However, preliminary molecular data show a day 3 positivity rate of 84% Thirty-five patients, 21 (17.5%) and 14 (11.0%) in control versus intervention arm, had microscopy confirmed recurrent parasitaemia during follow up. **Conclusion:** Our preliminary data shows rapid parasite clearance microscopically. However, the high molecular day 3 positivity needs to be further studied in subsequent analysis with qPCR. PCR determined parasite clearance from samples collected from days 0,1,2,3,4,5,6,7,14,21,28,35 and 42 will be done together with molecular genotyping of the subpopulation with delayed clearance, to examine markers of resistance.

68. Makuri, C., Mlinzi,O., Ruggajo, P (2018). Factors that Prolong Bleeding Time at Fistula Puncture Sites Among Hemodialysis Patients in Dar-es-Salaam, Tanzania. -RCH

Abstract

Background: There are many factors (heparin-dose, body-weight, monocytes-counts and uremic) that can affect prolonged bleeding at fistula sites after needles removal with hemodialysis termination**. Objective:** This study determined bleeding tendency and the factors that prolong bleeding time in hemodialysis patients receiving a fixed dose of heparin. **Methodology:** This was a cross-sectional study conducted in Dar es salaam, Tanzania. Convenient sampling procedure was employed during recruitment of study participants. Prolonged bleeding time was assessed by measuring aPTT and compression time after hemodialysis termination. Demographics and laboratory values were determined. Analysis was done by SPSS version 20. **Results:** The results (n=115) revealed that, about 70% of participants had elevated aPTT, 42.6% had poor compression time, mean aPTT of 42.1 seconds and mean compression time of 5.7 minutes. Patients with body weight≤66 kgs had poor compression time (>5minutes) compared to patients with body weight ≥65kgs(OR = 2.778, 95%C.I (1.063-7.256) p<0.001). Patients with body weight≤66kgs had elevated aPTT (aPTT>30.4seconds) compared

to patients with body weight≥65kgs(OR = 2.778, 95%C.I (0.535-14.429 p = 0.278). Linear regression model revealed that r=-0.55 and r2=0.302 with negative correlation. Furthermore, patients with blood urea level (>7.4mmol/L) were associated with elevated aPTT four times when compared to patients with low urea levels (OR=4.143, 95%C.I (1.021-16.810), p=0.047). Patients with low monocytes counts (<10%) were associated with poor compression time (OR=0.576, 95%C.I (0.244-1.361) p=0.208). **Conclusion:** Prolonged bleeding time and bleeding tendency is associated with body weight, heparin dose, monocyte counts and uremia in ESRD patients with regard to these findings.

69. Mallya, B.P., Omary, M., Ferdinand, M. (2018). Prevalence of occupational asthma and use of protective gears among car painters in Dar es Salaam. NCD

Abstract

Background: Car painting industry has offered employment to large number of people in our country especially young adults who couldn't go to school. The spray paint used is a mixture of solvents including isocyanates which affects human pulmonary system and it's the most common cause of asthma or painters' lung disease. Little is known on occupational associated respiratory problems in Tanzania. **Objective:** The main objective was to assess prevalence of occupational asthma and use protective gears among car painters in Dar es Salaam. **Methodology:** A cross-sectional study was conducted between February- August 2017 among car painters from 35 car garages of Ilala, Kinondoni and Temeke municipalities of Dar es Salaam region, 480 participants were interviewed through a structured questionnaire. Pulmonary function tests were done by means of spirometer. Peak flow meter was used to measure variation of airway obstruction at work and away from working places. Data entry and analysis was done by Epi info software version-3.5.4. **Results:** Out of 480 participants who were enrolled in the study 11% were asthmatics and 4% had occupational asthma. Occupational asthma diagnosis was made by symptoms in 2.5% participants and Peak Expiratory Flow Rates (PEFR) in 1.5% participants. A proportion of 56.1% used protective masks to prevent inhalation of noxious agents at working place; out of this only 10.4% were using high efficient nose masks. Most frequent mentioned medications by asthmatics were cough syrups 26.2%, antibiotics 23.8% and herbal remedies 21.4%. **Conclusion:** This study demonstrated a high prevalence rate of asthma among car

painters in Dar es Salaam, considerable prevalence of asthma attributable to working environments and inappropriate use of asthma medications. It also revealed that there is low rate of use of protective measure to prevent inhalation of noxious agents at working places.

70. Manyahi, J.R. (2018). Severe maternal outcome among patients with severe pre-eclampsia and eclampsia at Muhimbili National Hospital. -RCH

Abstract

Background: Hypertensive disorders in pregnancy (HDP) is the second most common direct cause of maternal deaths accounting for 14% of maternal death worldwide. Severe pre-eclampsia and eclampsia are among the HDP which cause significant morbidity and mortality, hence categorized as Maternal Near Miss (MNM). Severe pre-eclampsia and eclampsia areamong the leading causes of maternal deaths accounting at Muhimbili National hospital. **Objective:** To determine the proportion of severe maternal outcome among patients with severe pre-eclampsia and eclampsia and to determine MNM indices at MNH. **Methodology:** A descriptive cross-sectional study was conducted at MNH. A total of 320 women with severe pre-eclampsia and eclampsia were recruited for the study. Data was extracted from patient files after admission and followed up until discharge or death. After discharge they were categorised as either MNM or maternal death. The information was analysed using SPSS, Version 22. Frequencies proportions and outcome indicators were calculated. **Results:** Majority 62.2% of women had severe pre-eclampsia,37.8% had eclampsia, 96.5% women had been referred from other health facilities. 22.1% were found to have severe maternal outcome whereby 63 out of 230 had MNM with organ dysfunction and they were eight maternal deaths. Case specific MNMR was 87.4 per1000 live births. Case specific SMOR was 19.4 per 1000 live births. Mortality index was 11%, Case fatality rate was 2.5%. **Conclusion:** There is high proportion of women with severe maternal outcome attributable to severe pre-eclampsia and eclampsia at MNH. We recommend more efforts be done to reduce maternal mortality to the recommended standards.

71. Massawe, A.G. (2018). Assessment of knowledge and practice of Breast Self-Examination among female undergraduate Student at MUHAS, Dar es Salaam, Tanzania.

Abstract

Background: Early detection of breast cancer by population based screening program can be potentially useful approach for controlling breast cancer and reducing mortality rate. Breast Self-Examination has become one of the best way of preventing mortality rate associated with Breast cancer as it enables early detection and treatment. **Objective:** To asses knowledge and practice of Breast Self-Examination among female undergraduate students at Muhimbili University of Health and allied Sciences. **Methodology:** Descriptive quantitative cross sectional study was conducted between December, 2017 and March 2018 among 101 female undergraduate students at Muhimbili University of Health and Allied Sciences in Dar es salaam, Tanzania. Self-administered questionnaire with 15 closed ended questions was used for collection of demographic, knowledge and practice data. Also, Practice observation checklist was used to ass's participants while practicing Breast Self-Examination. **Results:** A total of 101 participants were involved in the study. Majority 67(66.3%) of participants had high knowledge, 28(27.7%)had moderate knowledge and 6(5.9%) had low knowledge regarding Breast Self-Examination. Only 5(5%)had good practice, 46(45.5%) had moderate and 50(49.5%) had poor practice of Breast Self-Examination. There was no significant association between knowledge level and practice of Breast Self-Examination as evidenced by Fishers exact test with P-value 0.287 at 95% confidence interval. **Conclusion:** To improve practice of Breast Self-Examination, it's important to ensure that health care providers in collaboration with Non-Governmental Organization (NGO's) improve the quality of services in health facilities. This may improve the practice of Breast Self-Examination and hence early detection and prevention of breast cancer among women in the country.

72. Matata, D.Z., Ngassapa, O.D., Machumi, F., Moshi, M.J (2018). Brine shrimp's toxicity and phytochemicals in plants used by Traditional Practitioners for treatment of cancer-ITM

Abstract

Background: Cancer is among recently growing non-communicable diseases which is a worldwide burden to both developed and developing countries. In Tanzania, most cancer cases are diagnosed late due to ignorance, poverty and inadequate cancer specialized hospitals. The

majority of cancer patients are first seen by Traditional Health Practitioners (THPs) before they access specialized cancer services. **Objective:** To evaluate 24 plant species claimed by some THPs of Mkuranga and Same districts in Tanzania as potential anticancer agents. **Methodology:** Ethnopharmacological information was obtained through interviews and questionnaires administered to selected seven THPs to assess the potentials of plants traditionally used for treatment of tumors and cancer. Brine shrimp toxicity and phytochemical profiling of methanol: dichloromethane (1:1) extracts from parts of plant species were used as preliminary evaluation of the potentials as a source of anti-cancer drugs. **Results:** Information from the literature indicated that, (33 %) of plants have activity against cancer cell lines. The brine shrimp test results were strongly supporting the THPs claims with 13 of 24 species showing high toxicity. Croton dichogamus, Dalbergiamelanoxylon, Loranthusmicranthus and Ochnamossambicensis revealed toxicity with LC50 <10 μg/ml, and thus comparable to Catharanthus roseus (LC50 6.7 μg/ml); an established source of anticancer compounds. Phytochemical profiling indicated the presence of chemical classes that have been reported with anticancer compounds. **Conclusion:** Information from the literature, brine shrimp lethality testing and phytochemical profiling has demonstrated the potential of claimed plants. Further and more specific studies such as screening of anticancer agent by use of cell lines are recommended to yield active anticancer drugs.

73. Mathias, E., Minzi, O., Kamuhabwa, A.R., Aklillu, E (2018). Prevalence of Asymptomatic Malaria Infection and Anaemia at First Antenatal Visit Among Pregnant Women in Kibiti, Tanzania

Abstract

Background: While symptomatic malaria is timely diagnosed and treated, asymptomatic infections become increasingly challenging among pregnant women because it does not only interrupt transmission but also have substantial negative pregnant outcomes. Anaemia in pregnancy increases the risk of adverse pregnancy outcomes. Data on the prevalence of asymptomatic malaria infection, as well as the prevalence and predictors of anaemia in pregnancy is scarce in sub-Sahara Africans. This study was conducted to assess the prevalence of asymptomatic malaria and anaemia among pregnant women at first antenatal visit in Kibiti District Tanzania. **Methodology:** A health facility based cross-sectional study was conducted

among 800 HIV negative and 80 HIV infected pregnant women at first antennal visit in Kibiti. Malaria Pf/PAN (HRP2/PLDH) Ag Combo RDT (Care start, ACCESS BIO Somerset, NJ 08873 U.S.A) was used to screen malaria. Blood sample from each woman was used to measure their haemoglobin level using Hemocue Hb 201+ analyzer (Hemocue AB Angelholm Sweden). Descriptive statistics were used to identify the prevalence asymptomatic malaria and anaemia. Linear logistic regression and binary regressions were used to identify the predictors of anaemia. **Results:** Prevalence of asymptomatic malaria was higher among HIV negative pregnant women (15.4%) than in HIV infected pregnant women (10%). Prevalence of anaemia was higher in HIV infected cohort (79%) than in HIV negative cohort (67%). Malaria infection was significantly higher among primigravidae that in multgravidae P<0.001. HIV negative pregnant women with malaria and mulgravidae had 2.93 and 1.35 folds higher risk of becoming anaemic compared to those without malaria with and primigravidae [OR 2.93 (95% CI 1.901, 4.521)] P<0.001and [OR1.35 (95% CI 0.856, 2.14)] P< 0.001 respectively. **Conclusion:** Although HIV infection is considered to be a risk factor for malaria the prevalence of asymptomatic malaria was higher among HIV negative than in HIV-infected pregnant women. This may be due to malaria protective effect of co-trimoxazole since all HIV participants were taking co-trimoxazole prio recruitment. Prevalence of anaemia and likely negative birth outcomes are more prevalent in HIV-infected and multgravidae pregnant women.

74. Mboka, J., Dawn, S., Jamie, K, Magda, A., Bruno, M., Julie, M., Fenella, K. (2018). Cerebral infarcts and cerebrovascular disease in neurologically intact Tanzanian children with Sickle Cell Anaemia. -NCD

Abstract

Background: Children and adolescents with sickle cell anaemia (SCA) without neurological manifestation benefit less from stroke prevention interventions. There are very few studies on cerebral infarcts and cerebrovascular disease in this study population worldwide and far worse in Africa, which raises the risk of stroke. **Obective:** In this study we determined the prevalence of cerebral infarcts using Magnetic Resonance Imaging (MRI) scans and explored its association with age, sex, and cerebral blood flow velocities, cerebrovascular disease, clinical and haematological factors. **Methodology:** A cross sectional hospital-based study was conducted at

Muhimbili National Hospital for a period of 12 months. We studied prospectively a cohort of 238 children with SCA (mean age 13.98±3.77 years; range limits 6-19 years; 120(50.4%). All underwent Trans cranial Doppler (TCD), 127 underwent brain MRI and 122 MR angiography. We used 1.5 Tesla scanner. SPSS version 24 was used for data analysis. **Results:** Fifteen children (6.3%) had abnormal cerebral blood flow velocity. We found 48 (37.8%) with silent cerebral infarction (SCI) and 21(17.2%) with cerebrovascular disease mainly in the intracranial carotid arteries. The presence of cerebral infarcts was increasing with age, 43.8% and 60% in the age group of 6-9 and 18 -19 years respectively. Patients with abnormal cerebral blood flow velocity (CBFv) had higher frequency 5(62.5%) of cerebral infarcts. Fifteen (71.4%) patients had cerebral infarcts among those with vasculopathy. There was no significant relationship between cerebral infarcts and clinical or haematological factors. **Conclusions:** Neurologically intact children and adolescents with SCA also have abnormal cerebral velocities, cerebral vasculopathy and cerebral infarcts. There was a relationship between cerebral infarcts and cerebrovascular disease.

75. Mbugi,V. (2018). Mapping of Mycobacterium tuberculosis complex genetic diversity profiles in Tanzania and Implication for SACIDS-EAIDSNet Collaboration-ID

Abstract

Background: Although various TB studies have been conducted in Tanzania, none has given detailed information on all the major phylogenetic lineages of tubercle bacilli and their distribution. In addition, none of the studies compared Tanzanian strain patterns with those prevailing in neighbouring countries and sub-regions to underline differences relating to the presence of specific lineages**. Objective:** To assess and characterize Mycobacterium tuberculosis complex (MTBC) genotypic diversity in Tanzania, neighbouring East and other several African Countries **Methodology:** We used spoligotyping to identify a total of 293 M. tuberculosis clinical isolates (one isolate per patient) collected in the Bunda, Dar es Salaam, Ngorongoro and Serengeti areas in Tanzania. The results were compared with results in the SITVIT2 international database of the Pasteur Institute of Guadeloupe. **Results:** Genotyping and phylogeographical analyses highlighted the predominance of the CAS, T, EAI, and LAM MTBC lineages in Tanzania. The three most frequent Spoligotype International Types (SITs) were: SIT21/CAS1-

Kili (n=76; 25.94%), SIT59/LAM11-ZWE (n=22; 7.51%), and SIT126/EAI5 tentatively reclassified as EAI3-TZA (n=18; 6.14%). Furthermore, three SITs were newly created in this study (SIT4056/EAI5 n=2, SIT4057/T1 n=1, and SIT4058/EAI5 n=1). We noted variability in predominance of TB prevailing strains in Tanzania with no statistically significant differences when comparing HIV status of patients vs. major lineages (p-value=0.103). **Conclusions &** **Lessons Learned:** The mapping of MTBC genetic diversity in Tanzania and neighbouring East African countries pinpoints potential for cross-border transmission highlighting the differences in MTBC genotypic distribution between Tanzania and other African countries and possible shared risk of TB strains from Asian region. This work underlined spoligotype patterns tentatively grouped within newly designated EAI3-TZA lineage which seems to be specific to Tanzania.

76. Meshi, E.B., Rusibamayila, M., Kishinhi, S., Mamuya, S. (2018). Thermal Exposure and Heat Illness Symptoms among workers in Mara Goldmine, Tanzania

Abstract

Background: Production in mining industry is accompanied with risks to the health and safety of workers, heat stress being among them (1). Working in humid and hot environment expresses challenges to occupational health and safety in tropical countries (2,3). Being in the region, Tanzania can experience more than 30°C ambient temperature that expose miners to heat related injury and illness. **Methodology:** A cross-sectional study was conducted among 60 gold miners from four Similar Exposure Groups based on risk to extreme heat environment. The Wet Bulb Globe Temperature (WBGT) index was used to assess the heat load while the miners' physiological condition explained the heat strain indicator. Data were analyzed using SPSS 20. Chi-square was used to differentiate proportion of miners with heat illness symptoms in different categories. Pearson correlation was used to determine association between environmental measures and change in physiological conditions of the miners. Independent t-test and ANOVA were used to assess differences between numerical data among groups. A $p < 0.05$ at 95% confidence was considered to be statistically significant. **Results:** Average WBGT at the mining site was within the ACGIH TLV of 28.5°C however, 78.4% of underground miners and 69.6% of open cut miners reported to have moderate heat illness. High body temperature and hot and dry skin were the more reported heat illness symptoms. The mean core body temperatures of

miners in open cut and underground were 38.4 ± 0.5°C and 37.3 ± 0.5°C respectively. Approximately 80 percent of miners in open cut indicated higher core body temperature above ISO 7933 threshold of 38.0°C for safety (4,5). **Conclusion:** Many miners in Mara Goldmine, Tanzania are exposed to high core body temperature above ISO 7933 threshold of 38.0°C for safety.

77. Mgaya, J., Nkya, S., Makani, J., Fitzhugh, C (2018). Evaluation of Markers That Predict Early Response of Hydroxyurea in Individuals with Sickle Cell Disease.

Abstract

Background: Sickle Cell Disease (SCD) is the most common severe haemoglobinopathy worldwide, inherited recessively and characterised by the formation of abnormal adult haemoglobin which is rigid and sickled (HbS). Red blood cells that contain foetal hemoglobin (HbF), known as F-cells are known to survive longer and experience less sickling than red blood cells without HbF. However, the survival of F-cells has been reported to be proportional to the amount of HbF they contain. It is postulated that HbF of 10pg or more per F-cell is required for an effective amelioration of SCD severity. Hydroxyurea (HU), FDA-approved drug for individuals with SCD has been proven to induce HbF. The response is much better when the correct dosage is used and monitoring of the toxicity is performed. **Objectives:** Evaluation of markers for early prediction of HU response including HbF, F-cell and gamma globin mRNA expression. **Methodology:** This was a longitudinal descriptive study. 10 SCD patients were recruited from Clinical Center research studies at National Heart, Lung and Blood Institute, (NIH), Bethesda, Maryland, USA. Laboratory procedures: measurements of haematology parameters, haemoglobin quantification and the concentration of HbF within F-cell before and after therapy (baseline, 4, 8, 12 months after starting HU) were performed on EDTA whole blood samples. Gamma globin mRNA expression was measured at baseline and after 2 weeks of starting HU. **Results:** Increment varied in time points per individual patient with regards to HbF (Median 7.2 at baseline and 24.9 at months 12), also amount of HbF per F-cell (Median 7.26 at baseline and 13.22 at months 12) when HU dosage was increased within individual patient as expected. Other hematology parameters also showed a correlation with the increase or decrease of the therapy. The experiment that was done with Beta Microglobulin and also in the calculation

using overall HouseKeeping Genes showing that two weeks does not appear to be a sufficient amount of time to detect a significant increase in gamma globin expression when using whole blood. Conclusion: HbF has been validated as potential marker of HU response. Since HbF/F-cell ≥10pg has been reported as a cut-off associated with amelioration of disease. HU has been shown to be able to induce HbF for patient with HbSS much better when the correct dosage and monitoring the toxicity is use.

78. Mlimba,A.K. (2018). Knowledge On Home Management of Diarrhoea Among Care-Givers' Of Children Under-Five Attending Mwananyamala Hospital.

Abstract

Background: Diarrheal diseases are one of the most common causes of infant deaths in the developing countries. Appropriate management of dehydration using oral rehydration solution (ORS) and the use of paediatric zinc have been shown to be the most effective strategy in preventing diarrheal deaths in children. **Objective:** To assess factors associated with the knowledge on the home management of diarrhoea among care-givers of children under-five attending Mwananyamala Hospital. **Methodology:** A hospital based descriptive cross-sectional study was conducted at Mwananyamala regional hospital amongst 270 consecutively recruited care-givers. Data concerning the knowledge on home management of diarrhoea were collected using a self-administered questionnaire and analyzed using SPSS version 20. Frequency distribution and two-way tables were used to summarize data. The association between factors influencing the level of knowledge on home management of diarrhoea were analyzed using chi-square test. A p value of less than 0.05 was considered significant. **Results:** Most of the caregivers 53.3% were aged 20-29 years, majority 75.2% were married and more than two thirds 67.4% were housewives. About 58.5% had attained primary education. More than 85.1% of the respondents had low knowledge on signs of dehydration. Most of the respondents 79.3% had heard about ORS and 74.1% reported that it is used for management of diarrhoea at home. Half of the respondents mentioned that ORS consists of salt, sugar and water. Sixty-three had high knowledge regarding correct preparation and appropriate use of ORS. The knowledge on the use of zinc was low 84. 8%. Out of 270 caregivers 65.6% reported to use health personnel as their source of information. There was significant association between the level of knowledge on

correct preparation and ORS use and source of information about ORS (p=0.001). **Conclusion:** The level of knowledge on correct preparation and appropriate use of ORS was high. However, knowledge on detection of signs of dehydration and use of paediatric zinc was poor. Heath personnel were most reported source of information.

79. Mikomangwa, W., Minzi, O., Kamuhabwa, A (2018). Impact of The Number of Doses of Sulphadoxine-Pyrimethamine On Maternal and Fetal Birth Outcomes Among Pregnant Women in Low Malaria Endemic Region

Abstract

Background: Intermittent Preventive Treatment in pregnancy (IPTp) using Sulphadoxine-Pyrimethamine (IPTp-SP) is highly recommended in moderate to high malaria transmission regions with widespread of resistant strains of Plasmodium falciparum to SP. In these regions the use of ≥3 doses of IPTp-SP is associated with better maternal and fetal outcomes than 2 doses of IPTp-SP. Evidence on the impact of the number of IPTp-SP doses on maternal and fetal birth outcomes in low malaria transmission region is scarce. **Objective:** This study aims to measure associations between number of IPTp-SP doses and the risk of adverse outcomes including low birth weight, placental malaria, maternal parasitemia, maternal and fetal anemia. **Methodology:** This study started in April 2018 and is expected to be completed in July, 2018. It is a facility cross-sectional study involving 410 HIV-negative pregnant women admitted at Mwananyamala hospital labor wards in Dar-es-Salaam. Demographic information for the study includes obstetric history, IPTp-SP use, uptake of iron and folic acid supplements (FEFO), sleeping under insecticide treated nets (ITN) and history of malaria during pregnancy. Birth weights are measured soon after delivery. Cord, placenta, and maternal blood are examined for parasitemia and hemoglobin concentrations. Dried blood spot and placenta biopsy are prepared from all blood samples collected. Maternal and fetal parasitemia is measured using rapid malaria diagnostic tests (MRDT) Pf/PAN (HRP2/pLDH) confirmed by microscopy. Determination of plasma concentration of SP at delivery is used to measure adherence among pregnant women. Placental malaria is confirmed using placenta histology and PCR to determine submicroscopic malaria and resistance markers. Preliminary results: Thirty-five (35) pregnant women out of 410 were recruited between April and May, 2018. One of them developed obstructed labor and was

referred to National Hospital. All participants reported to have used ITN and FEFO during pregnancy. Primigravida, secondgravida and multigravida are 14, 10 and 10 respectively. Four (4) newborns had low birth weight and fetal anemia found in two cord blood samples. Three (3) participants had severe anemia, 6 moderate and 7 had mild anemia. Participants who reported to have had taken 0, 1,2,3,4 and 5 doses of IPTp-SP were 1, 4, 7, 18, 3, and 1, respectively. Blood samples from all participants tested negative for malaria using MRDT and microscopy. **Conclusion:** The impact of the number of doses of IPTp-SP on maternal and fetal birth outcomes will be known after completion of recruitment of all 410 pregnant women and analysis of the collected data.

80. Mnkugwe,R.H., Kinunghi,S., Minzi,O., Kamuhabwa,A., Aklillu,E (2018). Prevalence of Intestinal schistosomiasis and malaria among school children in a rural setting along the shores of Lake Victoria, Tanzania-ID

Abastract

Background: Parasitic infections such as schistosomiasis and malaria are still a challenge in Sub Saharan Africa. Infected children have poor attendance and concentration in school due to the illness and associated morbidities such as anaemia, poor growth and cognitive development. This situation necessitates regular assessment of the prevalence of the diseases and performance of disease control programs. **Objective:** To investigated the prevalence of intestinal schistosomiasis and malaria among school children residing in rural areas along the shores of Lake Victoria in Busega district, Tanzania. **Methodology:** A cross sectional study was conducted among 830 school children in Nyamikoma village along the shores of Lake Victoria. A pre tested structured questionnaire was administered to collect socio-demographic characteristics, history of drug use and clinical data. Two fecal samples collected on two consecutive days were analysed using the Kato Katz technique for detection of intestinal schistosomiasis a. A finger prick blood was used to assess the presence of malaria (malaria rapid diagnostic test) and hemoglobin concentration. Nutritional status was assessed by anthropometric measurements **Results:** The mean age of the participants was 11.7 (±1.9) years. Nearly half of the participants (49.8%) were male. Of the 830 screened children, 752 (90.6%) were infected with intestinal schistosomiasis. The distribution of infection intensity in the studied

population was as follows, 24.1% (n=200), 38.4% (n=319) and 28.1% (n=233) had light, moderate and heavy infections, respectively. Pre adolescent (≤12years) were more infected with intestinal schistosomiasis than adolescent (>12 years) ($\chi2$ = 15.03, P <0.001). There was no significant difference in the prevalence of infection between males and females ($\chi2$ = 0.27, P =0.603). Malaria and schistosomiasis malaria co infection were 1.7% (14/824) and 1.6% (13/824), respectively. Overall anaemia was found in 24.6% (203/824) of the screened children. Mild, moderate and severe anaemia were diagnosed in 10.1% (83/824), 12.3% (101/824) and 2.3% (19/824) of the children, respectively. **Conclusion:** We have found that intestinal schistosomiasis is still highly prevalent among school children despite ongoing mass praziquantel treatments. Thesituationnecessitates further research and control measures to address the problem.

81. Moremi, N., Seni,J., Felgenhauer,L., Claus, H., Matee, M., Vogel, U., Imirzalioglu,C., Chakaraborty, T., Mshana, S.E (2018). Antimicrobial co-resistance in ESBL-producing E. coli from humans, animals, environment and food in Mwanza, Tanzania

Abstaract

Background: Co-resistance of other classes of antimicrobials including fluoroquinolones and aminoglycosides among extended-spectrum beta-lactamases (ESBL)-producing Enterobacteriaceae (EPE) further complicates the management of infections due to limited treatment options. Moreover, the spread of EPE clones or ESBL-encoding plasmids in different compartments such as humans, livestock, the food chain and the environment has been documented. **Objective:** To investigate the presence of ESBL-producing E. coli (ESBL-PE) in different compartments in Mwanza, the co-resistance and clonality of genotypes**. Methodology:** In total, 123 ESBL-PEfrom hospitalized patients, hospital surfaces, healthy people (including street children), animals (livestock and companion animals), fish, sewage system and environmental samples were investigated. Identification and antimicrobial susceptibility testing was done by VITEK-MS and VITEK-2, respectively. Whole genome sequencing was performed to 65 selected isolates with multilocus sequence types analysis to all isolates. The presence of ESBL-genes and their location (chromosome, plasmid) were analyzed. **Results:** Among 123 ESBL-PE isolates, co-resistance to gentamicin, ciprofloxacin and trimethoprim sulfamethoxazole

was detected in 70 (56.9%), 81 (65.9%) and 114 (92.7%), respectively. The isolates displayed 32 different sequence types (STs) with the commonest being ST131 (n=20), ST617 (n=14), ST38 (n=11) and ST2852 (n=10). E. coli ST38 were found in six sources with exception of the hospital surfaces. The blaCTX-M-15 and blaCTX-M-55 were detected in 89.5% and 6.5% of the 123 isolates, respectively. Of interest, five isolates from street children belonged to CTX-M-group 9. Of the 65 WG sequenced isolates, 30% harboured the ESBL gene on chromosome whereas 26% depicted additionally the plasmid-encoded quinolone resistance gene qnrS1. **Conclusion:** High antimicrobial co-resistance rates could be linked to the circulating of a common plasmid carrying multiple resistance genes among E. coli isolates from different compartments. Further studies to characterize the genetic structure of circulating plasmids are warranted.

82. Mrina, E. L., (2018). Knowledge of preeclampsia among pregnant women attending at MnaziMmoja hospital, Ilala, Dar-es-salaam, Tanzania - RH

Abstract

Background: Preeclampsia is a hypertensive disorder which is unique to pregnant women after 20 gestation weeks. It is mostly significant cause of maternal mortality rate estimated to be 12%. Lack of knowledge regarding preeclampsia among pregnant women may result in delay seeking of medical care. **Objective:** Assessment of knowledge of preeclampsia among pregnant women at MnaziMmoja RCH Clinic, Ilala, Dar-es-salaam, Tanzania **Methodology:** A quantitative cross sectional study was conducted among 129 pregnant women at MnaziMmoja hospital in Ilala, Dar es Salaam, Tanzania; by using convenience sampling method. A questionnaire with close ended questions was used to collect information on demographic characteristics and knowledge of preeclampsia. Data analysis was carried out by using SPSS version 20.0. **Result:** Total of 129 pregnant women were participated in this study whereby the mean age was 27.17, the study findings revealed that most of them had moderate knowledge 60.5%, less had high knowledge 13.2% and those remain had low knowledge 26.4%. **Conclusion:** Still there is number of pregnant women who had low knowledge regarding preeclampsia. More efforts are needed to improve understanding of preeclampsia among pregnant women, promotion of maternal and child health, increase awareness and responsibility among pregnant women in Tanzania.

83. Mringo, B. B. (2018). Weight Pattern Among Infants In-Relation To Early Introduction Of Complementary Feeding, Dar Es Salaam-RCH

Abstract

Background: Exclusive breastfeeding is the best practice in achieving infant's growth and development. Appropriate feeding practices are the most cost-effective intervention to reduce child morbidity and mortality. Growth pattern of infants who have had an early introduction of complementary feeding differ in terms of growth and development from those who have had exclusive breastfeeding for whole six months. **Objective:** Assessment of the average weight gain pattern between infants who have been exclusively breastfed compared to those who have not. **Methodology:** A cross-sectional retrospective study has been carried out at Kambangwa Reproductive and child Health Clinic. Total of 372 children were randomly selected. They were interviewed by predesigned structured questionnaire and the weight for age was taken from the Reproductive and child Health Card 1(RCH1 Card). Information regarding the breastfeeding pattern in comparison of gender and the associated factors with regards to early initiation of mixed feeding were obtained**. Results:** The results had no statistical significance but it had clinical significance. Exclusive Breast-Feeding rate declined progressively from the first months to sixth month. At sixth month, Exclusively Breastfed infants achieved a better and more rapid weight gain when compared with those in Non-exclusively breastfed group. Maternal occupation and gender of the child had significant effect on the breastfeeding pattern within six months of life with regards to several reasons for early initiation of complementary feeding. **Conclusion:** This study showed that exclusive breastfeeding supported weight gain of the study infants during the first 6 months of life.EBF infants got a rapid and significant increase in weight when compared to NEBF infants from the first month to the sixth month of life. Technology and resources that will enable women to express their breast-milk with counselling is crucial

84. Msafiri, F., Joachim,A., Aboud,S., Munseri, P.M, Biberfeld, G., Lyamuya, E.,Nilsson,C. (2018). Frequent anti-V1V2 Responses Induced by HIV-DNA Followed by HIV-MVA with or without CN54rgp140/GLA-AF in Healthy AfricanVolunteers - ID

Abstract

Background: V1V2 specific antibody responses and antibody-dependent cellular cytotoxicity (ADCC) mediating antibodies were associated with reduced risk of HIV acquisition in the RV144 trial. **Objectives:** We evaluated the impact of co-administration of CN54rgp140/GLA-AF with HIV-MVA on anti-V1V2 responses and ADCC mediating antibodies in healthy volunteers primed by HIV-DNA vaccine. **Methodology:** Healthy volunteers in the TaMoVaC II phase IIa trial were primed three times using 600μg HIV-DNA (subtypes A B C) intradermally, with a needle-free device. They were thereafter randomized into two groups, to receive two boosts of 10^8 pfuHIV-MVA (CRF01_AE) with or without subtype C CN54rgp140/GLA-AF intramuscularly. Plasma was collected four weeks after the final vaccination (n=145),and a subset(n=57) was tested for binding antibodies to gp70V1V2 proteins of CRF01_AE (A244) and subtype C (CN54) using ELISA. ADCC activity was measuredin145 samplesusing a luciferase assay. **Results:** Highanti-V1V2 IgG response rates toA244and CN54 were detected, 25/31(81%) and 20/31 (65%) in vaccinees boosted with HIV-MVA alone and18/25 (72%) and 15/25 (60%) in HIV-MVA+rgp140 recipients. Anti-V1V2 A244 responses were predominantly IgG1 inbothgroups,25/32 (78%) and 19/25 (76%). IgG1 V1V2 responses to CN54 were infrequent, only observed in recipients of HIV-MVA+rgp140, 2/25 (8%).Anti-V1V2IgG3 to A244was significantly more frequent in participants boosted by HIV-MVA alone (12/32, 38%), than inHIV-MVA+rgp140recipients, 2/25 (8%), p=0.01. Only onevaccineehadanti-V1V2 IgG3 to CN54, a recipient of HIV-MVA+rgp140.The magnitude of anti-V1V2 responses to A244 and CN54was not significantly different between the two boost groups. The frequency ofADCC-mediating antibodies waslow,16/76 (21%) in vaccinees receiving HIV-MVA alone and 10/66 (15%) in HIV-MVA+rgp140 recipients. **Conclusion:** Anti-V1V2 responses were frequently detected after HIV-DNA prime followed by HIV-MVA boosting. Co-administration of CN54rgp140/GLA-AF with HIV-MVA did not increase the frequencies of anti-V1V2 or ADCC-mediating antibodies.

85. Msiba, S., Mmbaga, E., Mushi, B.P., Mwanga, A., Akoko, L., Greer, J., Loon, K.V., Banz, S., Newton, Y., Vaske, C., Sanborn, Z., Sedgwick, A.J., Mosha, I., Mwaiselege, J., Bullman, S., Collison, E (2018). Molecular Determinants of Esophageal Cancer in Tanzania

Abstract

Background: Esophageal cancer (EC) is characterized by wide geographical variations in incidence. The eastern corridor of Africa has been identified as a region with disproportionately high incidence of EC. We hypothesized that there is a unique etiology of EC impacting East Africa. **Objective:** We aimed to utilize tumor specimens from Tanzanian patients with EC to evaluate possible genetic, molecular, and infectious determinants. **Methodology:** Patients with suspected EC were consented prior to diagnostic endoscopic evaluation. Questionnaire data and sputum specimens for normal DNA were obtained. For patients with endoscopic findings consistent with EC, tumor biopsies were collected using PAXgene and RNAlater fixation media. All specimens were shipped at ambient temperature from Dar es Salaam to San Francisco where DNA and RNA extraction was performed. Whole-genome and whole-transcriptome sequencing was performed by NantOmics. PathSeq software was utilized to identify microbes by deep sequencing of human tissue. **Results:** Specimen transport RNA later fixation medium yielded higher quality RNA. Of the first 61 cases with a confirmed histologic diagnosis of squamous cell carcinoma, all were of African ethnicity, 69% (n=43) were male, and 56% (n=35) were current or former smokers. Median age at diagnosis was 61 (range 26-86), with 13% of cases (n=8) ≤40 years. The most commonly mutated genes included: TP53, MUC12, HRCT1, TBP, and CDKN2A. Preliminary data from PathSeq analysis yielded abundant non-human sequences. **Conclusions:** Genomic evaluation of specimens transported using low-cost, flexible transport mediums to facilitate high-quality RNA extraction is feasible. Preliminarily, p53 mutation and gene expression signatures from Tanzanian specimens are within expected parameters of a squamous cell carcinoma. Non-human sequences detected in the PathSeq analysis are of unclear significance and merit further evaluation to determine if pathogenic versus benign cohabitating biota.

86. Mtali, Y.S., Lyimo, M.A., Massawe, S.N. (2018). Hematological and cytokine parameters changes in Hypertensive disorders of pregnancy: A comparative cross sectional study among pregnant women and their newborns at Amana regional referral Hospital and Muhimbili National Hospital. – RH

Abstract

Background: Hypertensive disorders of pregnancy (HDP) are among the most common problems encountered during pregnancy. Studies have shown that patient with HDP may have hematological parameters changes. These changes may cause adverse maternal and neonatal complications such as HELLP syndrome, disseminated intravascular coagulation, post partum hemorrhage, anemia, pre term delivery and low birth weight. **Objectives:** To determine the hematological coagulation and cytokine profiles of pregnant women with (HDP) and compare them with those of normotensive women. **Methodologs:** This was a hospital based comparative cross-sectional study done at Muhimbili National Hospital Structured questionnaire was used to collect social-demographic and clinical data. Determination of complete blood count was done using cell dyne 3700 hematological analyzer and determination of PT/ INR and PTT test results was done using sysmex. ANOVA was used to assess the significance of comparing means of outcome variable between the study groups. **Results:** There were no significance difference between mean age and mean gestational age of the two comparative groups. The mean systolic and diastolic pressure were significantly different between the comparative groups (131/81 and 113/66) mm/hg (P=0.000). Among the hematological parameters mean platelets counts were significantly (P=0.007) low in HDP compared to normotensive 196 and 231 K/uL respectively. Also mean neutrophils count was observed to be significantly (P=0.000) raised in HDP group compared to normotensive 9.8 and 6 K/uL respectively. Hemoglobin counts 2(2.7%), 6(8.1%), 7(43.2%) 11(14.9%) of HDP group had life threatening, severe, moderate and mild anemia respectively while in normotensive group 1(1.3%), 7(9.3%), 28(37.3%) had severe, moderate and mild anemia respectively. **Conclusion:** These study findings indicate hematological parameters especially platelets count and hemoglobin count tend to be reduced in pregnant women with HDP. To ensure the mortality and morbidity are reduced in women with HDP both clinician and laboratory personnel need to be vigilant of these parameters as they provide

healthcare services to these individuals as by themselves may add to mortality and morbidity in HDP.

87. Mules, E.M., Sawe, H.R., Mwafongo, V. (2018). Weekend Effect Among Trauma Patients Presenting to The Emergency Department: Prospective Comparative Study-NCD Injuries

Abstract

Background: Trauma constitutes a significant public health burden, accounting for ten percent of all global deaths. Disproportionately Low-Income Countries (LIC) have higher trauma burden than Higher Income Countries (HIC) and relatively poor outcomes. Timing of presentation to the hospital has been shown to impact outcomes in trauma in HIC. In Tanzania the timing of presentation in trauma has never been investigated. **Objective:** We aimed at comparing proportion, clinical characteristics, care and outcomes of adult trauma patients (≥18 years) presenting at Emergency Department(ED) during different working hours. **Methodology:** This was a prospective comparative descriptive study of adult trauma patients (≥18years) presented at ED of Muhimbili National Hospital from September 2017 to April 2018. Structured questionnaires incorporated into online data capture for patients' demographics, clinical characteristics, management and outcomes. Primary outcome was ED, 24h mortality and secondary outcome was ED length of stay. Data was summarized with descriptive statistics including mean, standard deviation, median and interquartile range. Descriptive categorical data was analyzed using Chi-square (x^2) with SPSS version 21.0**. Results:** 1395 patients were enrolled with 818 (58.6%) presenting during off hours. The median age of presentation was 33 (interquartile range 26-44) and overall 1069 (76.6%) were male. Overall 34 (2.6%) had higher Injury Severity Score (1SS≥15) with 3(0.6%) presenting during regular hours versus 31(4.0%) during off-hours (p< 0.001).40(2.9%) patients had used alcohol, 35(4.3%) presented during off hours versus 5(0.9%) during regular hours (p<0.000). Overall 24h mortality was 2(0.1%), with 2(0.2%) presenting during off-hours and none during regular hours, p<0.235. **Conclusion:** Off-hour presentation was associated with high male proportion, major trauma and under alcohol influence. Even though these factors did not seem to impact on the outcome clinicians are to be

keener due to understaffing in off-hours in LIC. Further bigger studies are recommended for further follow up and generalization assessing the due to the rising of risk factor.

88. Mungish, VT., Mhina,C., Sanyiwa, AJ., Mafwiri, M.M (2018). Pattern of ocular findings among students with albinism in coastal zone of Tanzania

Abstract

Background: Albinism is a group of inherited disorders in which melanin biosynthesis is reduced or absent. Clinically, albinism presents as a pigmentation abnormality of the skin, the hair and the eyes. **Objective:** The aim was to assess the pattern of ocular manifestations among people with albinism in coastal zone of Tanzania. Methodology: It was a school based cross sectional study conducted among students with albinism in coastal zone of Tanzania. From 7th to 12 June 2017, systematic random sampling technique was used to recruit 114 students among 465 students with albinism who attended the Dar es Salaam vision camp organized by Standing Voice UK. Anterior and posterior segment were assessed and recorded. Refraction, low vision and orthoptic assessment were also done. Axial length and corneal curvatures were measured and recorded. **Results:** 61% of 114 participants were female and the mean age of study participants was 18.2 years. The mean visual acuity improved from 1.02 to 0.86 logMAR.Refractive errors were present in 83% of eyes and ranged from -24 to +8D. Myopia and myopic astigmatism comprised 62.7% of all refractive errors. Significant negative correlation was found between axial length and refractive errors (r=-0.848; p=0.001). **Conclusion:** These results indicate a high occurrence of myopia in patients with Albinism in Tanzania that is highly related to axial length and not to corneal curvature. A strong emphasis on accurate spectacle correction should be included in any low vision interventions.

89. Mziray, L.S. (2018). Baseline needs assessment for establishment of guideline for registration of traditional medicine-ITM

Abstract

Background: There has been a tremendous increase in the use of Traditional Medicine (TM) in Tanzania. Many of TMs in the market are of unknown safety, quality and efficacy. This poses

risks to consumers and hence exposes the public into great danger. **Objective:** To assess the need for establishment of Guideline for Registration of Traditional medicines in Tanzania. **Methodology:** Qualitative exploratory study design was conducted in Dar es Salaam to assess the needs for establishment of Guidelines for registration of Traditional Medicine in the country. A total of 15 Participants were reached for in depth interview. Participants were interviewed to capture their perception and opinions regarding Traditional Medicine and establishment of Guideline for their registration. Information obtained was transcribed verbatim and coded, analyzed and presented by using NVivo 11. **Results:** About half of participants were aware of the initiatives and approaches going on for the establishment and development of guidelines for registration of TM. All respondents reported that the guideline for registration of TM is of important and it should be prepared as soon as possible because it is urgently needed for protection of public health. This tool will guide and abide applicants and manufacturers of Traditional Medicine to manufacture products with good quality, safety and efficacy. **Conclusion:** The study revealed a need for establishment of guideline that will bring regulators and manufacturers to the interface where they will speak the same language on the quality, safety and efficacy of TM in order to protect public health. The MOHCDGEC and TAHPC should secure fund that will fasten the development and establishment of the guideline.

90. Naburi, H., Mujinja, P., Kilewo, C.Biberfeld, G., Bärnighausen,T., Manji, K., Lyatuu, G., Urio, R., Orsini, N., Ekstrom,A.M., (2018). Health care costs associated with clinic visits for prevention of mother-to-child transmission of HIV in Dar es Salaam, Tanzania. – NCD/HS

Abstract

Background: The World Health Organization (WHO) recommends starting lifelong antiretroviral treatment (ART) during pregnancy regardless of CD4 cell count (prevention of mother-to-child transmission of HIV (PMTCT) Option B+) to eliminate paediatric HIV infection. The effectiveness of this strategy depends on sustained adherence to PMTCT care, which in turn requires more resources from already strained health systems. **Objective:** To determine the cost-effectiveness of antenatal care (ANC) visits to prevent mother-to-child transmission of HIV (MTCT) **Methodology:** We assessed the cost-effectiveness of antenatal

care (ANC) visits to prevent mother-to-child transmission of HIV (MTCT) in a real-life setting using de-identified routinely collected health systems data from a cohort of pregnant women newly diagnosed with HIV in Dar-es-Salaam, Tanzania, who delivered between August 2014 and May 2016. We measured the number of infant HIV infections averted at 6-12 weeks postnatally in relation to the number of registered ANC visits per patient. Duration of follow-up was defined as the difference between the date of first ANC visit and the date of delivery. Costs were based on empirical data from observed PMTCT service provision in Dar-es-Salaam and the WHO Global Price Reporting Mechanism **Results:** Out of 2 309 eligible pregnant women living with HIV, 89% were in WHO disease stage 1 and 69% had $\geq$ 350 CD4 cells per μL. The average gestational age at the first visit was 22($\pm$7) weeks. On average women made a total of 3.65 (95% CI; 3.57 - 3.73) visits, and 57% had a minimum of 4 visits before delivery. The overall MTCT rate was 2.8% (N=65/2309; 95%CI; 2.2%-3.6%) at 6 weeks of life. The MTCT rate was 4.8% (N=46/949; 95% CI; 3.6%-6.4%), for women with fewer than 4 visits and only 1% (N=13/1275; 95% CI; 0.5%-1.7%) if ANC visits were at least 4.   The total incremental cost (11100 US$) was less thanthe lifetime cost of treating one HIV-infected child. The incremental cost-effectiveness ratio when at least 4 visits relative to less than 4 visits were reported was US$ 336.37 per MTCT averted. No MTCT occurred among women with 7 ANC visits of more. **Conclusion:** Most pregnant women living with HIV do not attend ANC in the first trimester, raising concerns about future treatment costs. Thus, the recommended minimum of 4 ANC visits is a cost-effective investment to prevent MTCT in Tanzania.

91. Nafsa, R.M. (2018). The Performance of Muhimbili National Hospital Triage Tool among Under-Fives Attending Emergency Department: Comparison Study. NCD/EMD

Abstract

Background: Triage is the process of sorting and filtering patients based on medical priority. Worldwide, there are several validated Triage Systems used in emergency departments (ED) such as Canadian Triage and Acuity Scale (CTAS), Australasian Triage Scale (ATS), Manchester Triage Scale (MTS) and South African Triage Scale (SATS). In Tanzania, the triage scale currently used at ED of Muhimbili National Hospital is not validated and its performance remains unknown. **Objective:** We aimed to compare its performance in relation to the validated

triage scales in predicting outcome among pediatric patients. **Methodology:** Prospective descriptive study of consecutive sampling of under-fives with non-traumatic medical complaints presenting to ED-Muhimbili National Hospital (MNH) between November 2017 and February 2018. Patients were assigned, the EMD Local Triage System (LTS) acuity by the triage nurse and then categorized using MTS, ATS, CTAS and SATS by investigator. We compared the distribution of the acuities among the five triage scales, with the ED disposition and 24-hour mortality. **Results:** A total of 384 patients were studied, their median age were 21 months. Males were more (54.9%) than females. All five scales triaged patients differently. Among all patients, 5 died within 24 hours. The MTS, ATS, SATS and CATS identified all deaths as either Level 1 or 2, with MTS being the most accurate in that all 5 patients who died by assigning Level 1. The EMD LTS was the least accurate, assigning "emergency" acuity to 4 (80%) of patients, and 1 patient to "priority." **Conclusion:** There are performance variations among LTS, MTS, CTS, ATS and SATS in predicting urgency to medical care and need for admission for Paediatric populations. While MTS best predicted mortality, LTS was found not to be a good discriminator for admissions, discharges and mortality.

92. Nanyori, J.L. (2018). Documentation and Opportunities for Improvement of Care Provided to Trauma Patients Referred to EMD MNH-NCD/Injuries

Introduction: Trauma is among the leading cause of morbidity and mortality globally. Low and middle-income countries have a disproportionate high burden due to rapid urbanization, poor infrastructure, and poorly resourced trauma care facilities. In High -income countries, timely and well-organized trauma care system, have been shown to significantly improve outcomes. In most Low-income countries, including Tanzania, the pre-referral stabilization and trauma care processes are yet to be well characterized. **Objective:** To describe pre-referral stabilization, referral documentation and opportunities for improvement of pre-referral care provided to adult trauma patient referred to Emergency department Muhimbili National Hospital. **Methodology:** It is a descriptive cross-sectional study of adult trauma patient at Muhimbili National Hospital (MNH) Emergency Medicine Department (EMD). **Results:** A total of 369 patients were enrolled with a male predominance of about 76%. The median age was 34years. The leading cause of injury is shown to be Road Traffic Accidents accounting for 55% of all causes of injury. Head

injury was found to take about 44% of all trauma followed by 36% of extremity injuries. Patient demographics data was well documented (100%). Only 8% of patient records had incomplete data for vital signs and 4% had incomplete data on physical assessment and management done. Health care providers reported that all referral note components to be useful in the continuity of care. **Conclusion:** Head injuries and extremity injuries are major causes of trauma among road traffic injuries seen at EMD. There are good documentation practices at MNH-EMD. I

93. Ndalahwa, K., M. (2018). Questions asked by primary school students on Oral Health in Temeke District, Dar es Salaam, Tanzania-Oral Health

Abstract

Background: The negative impact and burden of oral diseases restrict activities in schools and homes leading to loss of many potential school hours for the children and working hours for parents. In order to improve oral health situation, it is important for the stakeholders to have a good knowledge about oral health. **Objective:** To request for questions about oral health among primary school children in Temeke District, Dar es Salaam, Tanzania. **Methodology:** A community primary school-based cross-section descriptive study was conducted among 447 primary school children in Temeke, District. Data processing and analysis was done using Statistical Package for Social Sciences (SPSS) version 20.0**. Results:** The study involved 447 primary school children among whom females constituted 50.1% of the subjects. Most children raised questions related to tooth decay (89%), followed by oral hygiene (77-81%), teeth discoloration (41%), gums bleeding (40 %), sugary containing food stuffs (29%) and oral ulcers (24%). Proportion of children raising other questions ranged from 2-21%. There were no significant differences between girls and boys. **Conclusion and recommendation:** Questions that were raised by primary school children in Temeke District Dar es Salaam suggest that primary school children in the district may be deficient in oral health education. The oral health curriculum for primary school should be reviewed to cover topics raised by the primary school children on oral health.

94. Ndayisabal, M. C., Mukamana, F., Sanyiwa, A., Trishia, S., Ruhangaza, D., Moshi, E. (2018). Orbital teratoma: Report of two cases from Muhimbili National Hospital and literature review -NCD/Eye

Abstract

Background: Teratoma is a neoplasm that arises from embryonic germ cell layers. Gonads constitute the common sites. Two clinical forms are encountered namely mature teratomathet is benign and immature teratoma which is malignant and aggressive. Orbital involvement is rare with few cases reported in literature. **Objectives:** Describetwo-casesof orbital teratoma and review of the literature. **Methodology:** A retrospective review was conducted. Cases were obtained from the Pathology archives at the Muhimbili National Hospital, Dar es Salaam, Tanzania. Cases with definitive diagnosis confirmed by histopathology were included. Age, gender, clinical presentationwere recorded for both cases. Histopathological diagnosis was confirmed by reviewing hematoxylin and eosin (H&E) sections, showing characteristics of teratoma. **Results:** Two cases of orbital teratoma were identified. A 4-month-old female presented with a large swelling on the face attached to the cornea. Histopathology finds mature tissues: intestinal epithelium, skin with appendages, cartilage, fibrous and adipose tissue. The other patient was 12-year-old female and presented with leukocoria, eye swelling and protrusion. Exenteration was done with clinical diagnosis of retinoblastoma. Histopathology finds undifferentiated neuroectoderm tissue, cartilage, bone, colonic epithelium and skin. The clinico-pathological findings were of mature and immature teratoma respectively. **Conclusion:** Immature orbital teratoma are rare, clinically they can mimic retinoblastoma. Though potentially curable, late presentation is associated with poor cosmetic and overall outcome.

95. Ndekwa, A.G., Ochumbo, A.J, Samweli, L., Matimbwa, H., Kavenuke, R., Ndawi, J (2018). Health Consequences of Intimate Male Partner Violence on Women's Participation in Industrialization Economy

Abstract

Background: Intimate Male Partner Violence is a major threat of women development and entrepreneurship development in the world where Tanzania is inclusive. Unfortunately, despite

remarkable achievements in the field of women's development and bearing a magnanimous history of women's movement, incidences of intimate partner violence against women are still burning issues. **Objective:** This study focused on determining the health consequences of intimate partner violence on women's participation in industrialization in Tanzania. **Methodology:** Data was collected using documentary review of empirical evidence and was analyzed using content analysis technique. **Results:** Content analysis revealed that intimate male partner violence causes depressive symptoms, posttraumatic stress disorder, state anxiety, and suicide which in turn have negative impact on women participation in economic activities. Additionally, long-term physical and mental health consequences resulted from intimate partner violence has negative impact on women's participation in industrialization in Tanzania. These physical, mental and behavioural health consequences can also persist for a long time even after the violence has stopped which can again hinder women creativity and economic innovation in life time. **Conclusion** and recommendation: It is concluded that long term physical and mental health consequences tend to hinder women creativity and participation in industrialization activities. The study recommended that for a government to ensure that women are participating in industrialization activities in Tanzania, It should develop a policy which will help to eradicate all types of violence against women in Tanzania.

96. Ndilanha, D., Shayo, G (2018). Pattern of diagnoses in patients who underwent bronchoscopy at Muhimbili National Hospital January 2013-November 2017

Abstract

Background: Bronchoscopy is an endoscopic procedure that is used in the diagnosis of lung malignancies, lung infections and interstitial lung diseases. For more than a decade since flexible bronchoscopy was first used at Muhimbili National Hospital in routine diagnosis of pulmonary conditions. Despite its use for several years, the pattern of diseases of patients undergoing bronchoscopy at Muhimbili National Hospitals largely unknown. **Objective:** To describe pattern of diagnoses of all patients who underwent bronchoscopy at MNH from January 2013 to November 2017. **Methodology:** A retrospective hospital based cross sectional study was conducted among 451 patients. Data collected included demographic and clinical variables. Descriptive statistics were used to summarize the study findings. **Results:** A total of 451 patients

were studied. Samples studied included lung biopsies 38.6% (174/451) and cytological samples 64.5% (291/451). Adenocarcinoma was the commonest lung cancer among others 33.9%(59/174). Generally, 64.4% (112/174) of all lung biopsies were malignant. Among the cytological samples studied, 76 were sent for bacterial culture and sensitivity, 11/76 (11.8%) were culture positive, 49/76 (64.5%) showed no growth, 18/76 (23.7%) isolated normal flora. A total of 56 samples were screened for M. tuberculosisusing GeneXpert MTB/RIF technology and 6 (10.7%) tested positive. **Conclusion:** Malignancies were the leading indication for bronchoscopy, adenocarcinoma being the most common malignancy. Bronchoscopy made it possible to diagnose 10.7% of tuberculosis in TB suspected patients which was not picked up through other diagnostic means.

97. Nganga, M. U., Pembe, A.B. (2018). Contraceptive use and its associated factors among grand multiparous women attending Reproductive and Child Health services in Mbeya city-RCH

Abstract

Background: Grand multiparity is common in Sub-Saharan Africa and is among the contributors of bad obstetric performance indicators in the region. The use of highly effective modern contraceptives to prevent pregnancy in grand multiparous women is crucial. **Objective:** To determine proportion of contraceptive use and its associated factors among grand multiparous women attending Reproductive and Child Health services in Mbeya city. **Methodology:** Analytical cross-sectional study was conducted among 607 grand multiparous women attending RCH services for child growth monitoring in Mbeya city. Data were collected on socio-demographic and socio-cultural economic characteristics, contraceptive use and other factors that are associated with contraceptive use using a structured Swahili questionnaire. Analysis was done using SPSS version 23. Bivariate and multivariate analysis was done to identify factors associated with modern contraceptives utilization. **Results:** Majority (63.3%) of grand multiparous women were current modern contraceptive users. Contraceptive use was associated with age of 40 years or more (AOR=7.0; 95% CI=3.9-12.4); being employed (AOR=3.5; 95% CI, 1.5-8.1); and Christian (AOR=5.4; 95% CI, 1.6-18.3); five or more surviving children (AOR=2.5; 95 % CI, 1.5-4.2); joint decision making (AOR=2.4; 95% CI, 1.2-5.0); high family

income (AOR=2.7; 95% CI, 1.1-6.2); high knowledge of modern contraceptives (AOR=4.7; 95% CI, 1.5-15.2); and previous contraceptive use (AOR=3.0; 95% CI, 1.7-5.4). **Conclusions:** Modern contraceptive use was high among grand multiparous women. The use was associated advanced age, cohabiting, employed, higher number of living children, small family size preference, joint decision making for contraception, high monthly income, high knowledge of contraceptives and previous use. Programmes to prevent grand multiparity, reduce unemployment/poverty, improve child survival and couple's communication for contraception is paramount. Male involvement in contraceptive use is very crucial as well as all reproductive health services.

98. Nyaga, P.D., Mafwiri, M.M., Mosenene, S., Sanyiwa, A.J., Mhina, C (2018). Magnitude of Amblyopia among Children Attending the Paediatric Eye Clinic at Muhimbili National Hospital.

Abstract

Background: Amblyopia is a visual development disorder whose onset is in childhood. It becomes resistant to treatment after the critical period of 7 – 8 years when the visual system is estimated to have matured. Therefore, early diagnosis is vital to the prevention of visual impairment caused by amblyopia. **Objective:** To determine the magnitude of amblyopia among children attending the pediatric eye clinic at Muhimbili National Hospital. **Methodology:** A descriptive hospital based cross sectional study was done between August 2017 to February 2018. A consecutive sampling was used to obtain participants with amblyopia. A detailed history related to the age of onset, presentation to the Hospital were inquired. Slit lamp examination for assessment of any anterior segment pathology was performed. A detailed fundus examination to rule out any posterior segment pathology was done. **Results:** Among 140 amblyopic children 55.7% (n=78) were males and 44.3% (n=62) were females. Refractive amblyopia (42.1%) was the most common type. Most of amblyopic patients presented early in the age group of <=5 years. Hypermetropia was the most common refractive status (52.5%) in eyes with amblyopia. Severe amblyopia 60.7 %(170/280) was more common than moderate amblyopia 39.3% (110/280) and was predominantly due to refractive errors. **Conclusion and recommendations:** Refractive amblyopia was the most common type. Severe amblyopia is more common than

moderate amblyopia and is predominantly due to refractive errors which could be avoided simply by detecting and correcting error on time through early screening of children.

99. Ngogo, F., Manyahi, J, Joachim, A., Nyanga, S., Mchunguzi, V., Urio, L., Abade,A (2018). Quality Check Performance and Characterization of V. Cholera Cases at National Health Laboratory-Tanzania, August 2017. BS

Abstract

Background: The National Health Laboratory, Quality Assurance and Training Centre (NHLQATC) perform microbiology results verification from different Regional laboratories in Tanzania mainland. The Regional laboratories send sample(s) or bacteria isolates with request forms having preliminary results for verification at NHLQATC. The system basically controls externally the equipment, environment, reagents, SOPs and personnel in order to verify and maintain quality of results produced by Regional laboratories. **Objective:** To assess the quality check performance and social demographic characteristics of patients who their sample was sent to NHLQATC. **Methodology:** We conducted descriptive cross sectional study using secondary data at NHLQATC Microbiology department from January to July 2017. The data were extracted from Laboratory Information System(LIS) and reviewed laboratory request forms to retrieve the social demographic information and preliminary results. Data was collected and analysed using excel sheet by use of the standardized collection tool. **Results:** Total of 94 cases was collected. Males contributed 63.8% and mean age was 27.1 years. Regions which utilized the quality check system was Dar es salaam, Moshi, Pwani, Morogoro, Singida, Moshi, Kigoma and Musoma. No discrepancy was observed among 31 cases that had preliminary results. Of all samples 52 (65%) revealed V. cholera O1 Ogawa while 26 (32.5%) showed Shigella spp. All (45/52) V. cholera isolates were 100% sensitive to Cotrimoxazole, Tetracycline and Chloramphenical, Ceftriaxone while 85% isolates showed resistance to Ampicillin. **Conclusion:** Performance of Regional laboratories is good but quality check system utilization is poor. Cholera outbreaks currently occurring in Tanzania is caused by the Serogroup O1, Biotype El Tor and Serotype Ogawa. V. Cholera has developed antimicrobial resistance to some of routinely used antibiotics therefore AST should be performed routinely in order to ensure proper disease management.

100. Ngogo, F., Garimo,I., Abade,A., Lyimo,C., Ganja,E., Mpoto,A., Cosmas,G., Kishimba, R (2018). An Outbreak of Food Poisoning in Chamwino BoardingSecondary School, Tanzania, November 2017.

Abstract

Background: On 4th November 2017, 16 admitted patients with similar clinical presentation were reported to the Ministry of Health. All patients were students of Chamwino Secondary School presenting with fever, headache, abdominal pain, diarrhea and vomiting. **Objective:** We conducted investigation to identify possible cause(s) of the outbreak and risk factors in order to set appropriate preventive measures. **Methodology:** We conducted patient interview and clinical records review, environmental assessment and active case search. We performed full blood count using Sysmex and liver enzymes (AST/ALT) using Erba. Fourteen rectal swabs were taken for culture. Blood samples from 26 patients were subjected to TaqMan RT-PCR assay. Four samples of maize flour and water were screened for mycotoxins and fecal contamination respectively. **Results:** Twenty-nine patients were identified, majority (69%) being males. Main complaints were headache and abdominal pain, 89.7% cases drank water from at least one of water sources and 93% of the cases had self-recovery. No pathogenic bacterium was isolated, 28% patients had thrombocytopenia and 10% had AST/ALT elevated. Only Plasmodium spp was detected in 2(7%) patients by RT-PCR. Aflatoxin and Fumonisin were within acceptable levels and 75% water samples had fecal coliform contamination. Unhygienic student's kitchen facilities and toilets were observed. **Conclusion:** Potentially, cause of the illness was food poisoning through contaminated water with E. coli. Adequate supply of clean and safe water, maintaining personal hygiene and clean environment were recommended.

101. Ngonyani, C., Mafwiri, M., Mhina, C., Sanyiwa, A., Kisimbi, J., Mosenene, S (2018). Surgical outcome of Manual Small Incision Cataract Surgery among adult patients at Muhimbili National Hospital from May 2017 to January 2018. – NCD/EYES

Abstract

Background: Cataract is the opacification of the crystalline lens of the eye, which causes progressive decrease in visual acuity, eventually leading to blindness. The precise treatment of

cataract is surgical extraction of the opacified lens. Cataract extraction is the most common procedure performed worldwide; poor surgical outcome results in poor vision there by contributing to failure to reduce cataract blindness. In order to achieve better visual outcomes, monitoring systems of cataract surgery is important to be established. **Objective:** To assess the post –operative surgical outcome and factors related to poor visual outcome among adult patients operated for small incision cataract surgery at Muhimbili National Hospital (MNH). **Methodology:** A hospital based descriptive study of consecutive patients undergoing cataract surgery at Muhimblili National Hospital from May 2017 to January 2018. A total of 190 patients who met the inclusion criteria were recruited to the study. The patients were examined 1st day post-operative, 7th day post-operative and 6th weeks post operatively. **Results:** The mean age of male and female patients was 63.6 and 65.0years respectively. The best corrected visual acuity at 6th week post-operative was good in 110(65.1%), borderline 30(17.8%) and poor in 29(17.2%). The leading intra-operative complication was posterior capsule tear in 23 patients. The leading early post-operative complications were elevated IOP and corneal edema, and the leading late complication was posterior capsule opacification. The residual refractive error was astigmatism in 57 patients, myopia 48, and hyperopia 22 patients. Intra-operative complications (9), post-op complications (8), residual refraction (3) and comorbidity (9) were among the cause of poor visual outcome. **Conclusion and recommendation:** The cataract surgical outcome inMuhimbili National Hospital are below the WHO required standards. More attention should be addressed towards ensuring successful surgical outcomes is achieved, by including prompt refraction to all patients after surgery and detection of early and late post-op complications through monitoring of post-operative visual outcomes

102. Ngowi, R., Kiss, N. (2018). Review literature of the Impact of AIDS on Tanzania Health Care system NCD/HS

Abstract

Background: HIV/AIDS is a great concern for East Africa as well as Tanzania which is the home of about 17 million people living with HIV/AIDS which poses a humanitarian and developmental crisis to these countries. Exacerbating the aforesaid, the costs for diagnostic treatment and other care services, including HIV/AIDS interventions, have skyrocketed well

beyond the means and capacity of Governments of EAC member states, thus making policy choices critical to issues of equity, access, efficiency and effectiveness **Objective:** The aim of this paper was to evaluate the impact of HIV/AIDS on health care system in East Africa EAC with special empasis on Tanzania. **Methodology:** About one hundred and fifty scientifc articles and documents were retrieved from different data bases including Medline, Google scholar, and Pubmed to get information on the impacts. Combination of words used during the search was: Socio - Economic Impact of + HIV/AIDS +health sector/-East Africa, Economic Impact of HIV/AIDS+Health workers, HIV/AIDS+ resources needed for control, Online health data Analysis, UNAIDS+Reports and Economic impact of HIV/AIDS+ Global trends. **Results:** The impacts were found to be, on health services which include poor economy and reduced GDP pa capita, increased government expenditure on health, increased demand and pressure on health services, increased ARCs and shortage of Hospital beds, increased funeral costs and reduced life expectancy, as well as increased infant and maternal mortalities. Others include deaths of health workers, as well as shortage of health professionals and increased workloads. **Conclusions** and implications to future industrial Tanzania: All these impacts have in turn led to increased total government costs and expenditure on health as well as money which could have been used in other sectors like industries and poverty reduction. Unless these problems are addressed the consequences will be grave.

103. Ngulubay,F.J., Sabasaba,A., Urio, L., Lyamuya,E (2018). Viral Load Suppression Among HIV-Infected Individual using Antiretroviral Treatment, Dar es Salaam and Pwani2016-ID

Abstract

Background: Viral load (VL) testing is most important indicator of initial and sustained response to antiretroviral treatment (ART) through viral suppression. It is reliable in monitoring disease progression. The molecular laboratory at National Health Laboratory Quality Assurance Training Center (NHLQATC) performs testing for HIV-infected patients on ART from all regions in Tanzania. **Objective:** To determine the viral suppression level among HIV-infected patients on ART using data from NHLQATC. **Methodology:** Retrospective VL data was analyzed from January to December2016.Data set used contained participants age, sex and clinic

site information. Microsoft excel and Epi info version 3.4.5 were used to determine the proportions of VL suppression in patients on ART for six months or more. **Results:** A total of 2755 records from 10 different sites in Dar es Salaam and Pwani were analyzed. About 147(3.4%), 121(2.8%) and 1169(26.8%) of data records lacked information about sex, age and site-names respectively, while 162(3.7%) had no VL test-results. About 23.4% failed to suppress the viral load as per WHO guide. Age 35-39 years had participants with high VL-suppression (53.3%), 10-14 (44.6%) and 0-4 years (38%). Female had high VL-suppression rate (71.8%) than males (28.2%).NHQATC-site had high (100%) suppression while Mnazi-mmoja and Upendano sites had high VL. **Conclusion:** The overall VL suppression is below the required goal by the UNAIDS of 90 90 90 goal, and therefore a study to find reasons for this should be undertaken.

104. Nkaya, S., Mwita, L., Kumburu, H., Zwetselaar, M., Chinusa, E., Kazamunu, G., Sangeda, R., Menzel, S., Makani, J, (2018) Investigation of genetic variants in Sickle Cell Disease (SCD) individuals with extreme Fetal haemoglobin (HbF)- Biomedical sciences.

Abstract

Background: Up to 11,000 children are born with SCD in Tanzanian annually. HbF is known to reduce disease severity, however it is genetically influenced. Most approaches have been mainly on determination of common genetic variants, which do not fully account for HbF variation. This work aimed at investigating additional, both, rare and common genetic variants that influence HbF levels in SCD patients in Dar es Salaam Tanzania with extreme HbF levels. **Objective:** To perform a detailed investigation of genetic variants in SCD patients with extreme HbF levels. **Methodology:** Twenty individuals with SCD with either high or low HbF levels (>7.8%=high HbF) and (<2.6%=low HbF). Targeted next generation sequencing (Illumina_Miseq) which interrogates single nucleotide polymorphisms (SNPs), Insertions-deletions (INDELs) and copy number variations (CNVs) was performed. Analysis was aimed at i) Describing multiple variations identified across targeted genomic regions. (ii) Comparing between variations found in those with high HbF versus those with low HbF levels. **Results:** The sequence regions covered exon and full regions for validated and unvalidated fetal hemoglobin associated loci including B-cell lymphoma/leukemia 11A (BCL11A), proto-oncogene, transcription factor (MYB), Homeobox A9 (HOXA9), hemoglobin subunit gamma 2 (HBG2), chromodomain helicase DNA

binding protein 4 (CHD4), Kruppel like factor 1(KLF1), methyl-CpG binding domain protein 3 (MBD3), zinc finger and BTB domain containing 7A (ZBTB7A) in chromosomes 2, 6, 7, 11, 12 and 19, respectively. Analysis: Preliminary data indicate significant inter-individual variation across the sequenced regions. **Conclusion:** This will be the first study in Tanzania to interrogate multiple human genomic variants associated with SCD using next generation sequencing approach. The findings from this study will inform us on both common and rare genetic variants associated with HbF in SCD and highlight on regions that can be used for development of SCD interventions.

105. Nkuwi, E.J., Kabanangi,F., Joachim,A., Rugarabamu,S., Majigo, M (2018). Methicillin-resistant Staphylococcus aureus contamination and distribution in patient's care environment at Muhimbili National hospital, Tanzania-ID

Abstract

Background: Environmental contamination with Methicillin-resistant Staphylococcus aureus (MRSA) in routine medical care settings poses an increased risk of health care associated infections through cross- transmission. The cross-transmission is generally associated with healthcare-associated infections with increased length of stays in hospitals, healthcare costs, and mortality. Less is reported on both magnitudes and distribution of environment contamination by these pathogens in hospitals in Tanzania. **Objective:** To determine the magnitude and distribution of MRSA contamination among various items in patients' care surroundings at Muhimbili National Hospital. **Methodology:** A cross sectional study was conducted where specimens from various parts of patients' care surroundings at MNH were processed for detection of MRSAusing MRSA selective agar. Antimicrobial resistance pattern of the confirmed MRSA isolates was determined by Kirby Bauer disc diffusion method. Data was analyzed using SPSS software version 20.0, p values of < 0.05 were considered statistically significant. **Results:** A total of 200 environmental samples from high touch items were processed and out of these MRSA was 19.5 % with significantly higher contamination in general wards. Patients' beds surfaces were the most contaminated among studied items (43.7%), whilst the surgical trolleys were least contaminated (7.7%). Presence of 10 or more patients in a room was an important significant correlate for MRSA contamination by bivariate logistic regression

model (Odds ratio: 4.75, 95% Confidence interval: 1.624-13.895, p value: = 0.004). **Conclusion:** Areas of hospital environment presents underestimated important reservoir for HAI's associated pathogens even in non-outbreak settings where by patients load and nature of sites can be important predictors. Routine surveillance of hospital environment contamination and larger prospective studies are warranted to assess the correlation between environmental MRSA and the acquisition of MRSA by patients or the vice versa.

106. Nkya, S., Mtei, L., Malasa, L., Soka, D., Mdai, V., Mwakale, P., Mrosso, P., Mchoropa, I., Soka, J., Rwezaula, S., Meda, E., Azayo, M., Ulenga, N., Ngido, M., Cox,S.E.,Masanja, H., Kabadi, G., Mbuya, F., Streetly, A., Tluway, F., Killewo, J., Chamba, C Tluway, F.C., Lyimo, M., Makani, J. (2018). Newborn Screening for Sickle Cell Disease in Dar es Salaam, Tanzania. -NCD

Abstract

Background: Sickle cell disease (SCD) is a recognized cause of childhood mortality; Tanzania is one of 5 countries with highest numbers of annual births of SCD (11,000) worldwide. Newborn screening (NBS) for SCD and provision of comprehensive healthcare reduces U5 mortality by 70% in high-income countries, yet in Africa no country has introduced and maintained NBS for SCD. NBS aimed to determine the prevalence of SCD and its feasibility in Tanzania. **Objective:** The overall objective was to establish new born screening for SCD and comprehensive care in Dar es Salaam health facilities. **Methodology:** Muhimbili University of Health and Allied Sciences (MUHAS) conducted NBS for SCD, from January 2015 through November 2016. Dried blood spot (DBS) were collected and tested for SCD using Isoelectric focusing (IEF). **Results:** Screening was conducted on 3981 newborns from Muhimbili National and Temeke hospitals. Thirty-one, 31 (0.8%) had SCD, 505 (12.6%) had sickle cell trait, and 26 (0.7%) with other haemoglobinopathies. Twenty-eight (90.3%) of the 31 newborns with SCD have been enrolled for comprehensive healthcare. **Conclusion:** The SCD birth prevalence is of public health significance, 8 per 1000 births. Birth prevalence is eight per 1000 birth. Therefore, it is important to conduct NBS for CCT with the aim of enrolling them early into comprehensive care programme.

107. Omole, R.A., Malebo, H.M., Nondo, R., Midiwo, J., Moshi, M (2018). In vivo anti-plasmodial activity of three medicinal plants used in malaria treatment in Kenya-ITM

Abstract

Background: Malaria still remains a killer disease worldwide and its control has been a challenge due to resistance of malaria parasite to available drugs. Rhamnusprinoides, Rubuskeniensis and Garcinia buchananii have been used to treat malaria by indigenous communities in Kenya. The use of medicinal plants to cure malaria might play a very crucial role in discovery of active anti-malarial drugs. **Objective:** To determine the antimalarial potential of R. prinoides, R. keniensis and G. buchananiiusing in vivo testing**. Methodology:** Plasmodiumberghei(ANKA) was used for the in vivo study. The mice were infected by the parasites using tail vein. The extracts were given orally daily, continuously for a period of four days. The plant extracts were prepared at a dosage of 200mg/kg, 400mg/kg and 800 mg/kg. Chloroquine was used as positive control while 1% CMC was used as negative control. **Results:** The three medicinal plants suppressed the growth of parasite in infected white albino mice. Hydro-methanolic extract of R. prinoides exhibited significant ($p<0.01$) parasite suppression at doses 200mg/kg, 400mg/kg and 800 mg/kg with percentage suppression of 44.82, 57.74 and 66.36, respectively. G. buchananii showed a percentage suppression of 38.28, 54.62 and 64.51 at 200mg/kg, 400mg/kg and 800 mg/kg, respectively. R. keniensis exhibited % parasite suppression of 21.06, 44.12 and 56.88 at 200mg/kg, 400mg/kg and 800 mg/kg, respectively. **Conclusion:** The three medicinal plants showed anti-malarial activity in Swiss albino mice. This supports the use of these plants in the treatment of malaria.

108. Osatil, E., Rugemalila, J., Mmbando, B., Sangeda, R., Safari, O., Shayo, G (2018). Patient-Reported Health Outcomes among HIV-infected patients on ART at Muhimbili National Hospital (MNH).

Abstract

Background: The introduction of Highly Active Antiretroviral Therapy (HAART) in the management of Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome (HIV/AIDS) has transformed the disease into a chronic illness. Health-related quality of life

(HRQoL), care satisfaction, adherence to medication and stigma are patient reported health outcomes (PRHO) that are now a high priority of long-term management of HIV/AIDS. **Objective:** To determine patient reported health outcomes among HIV patients on HAART at MNH. **Methodology:** This was a cross sectional study which enrolled adults who were on HAART for >6 months. HRQoL was assessed using EuroQol 5-Dimension 3-level (EQ-5D-3L) questionnaire. Adherence was assessed retrospectively based on a 7-day recall as used in Adult AIDS Clinical Trials Group (AACTG) follow-up questionnaire. Satisfaction was assessed using patient Satisfaction Questionnaire Short-Form (PSQ-18). Stigma was assessed using a structured questionnaire. Patients' current HIV viral loads (VL) were documented. **Results:** Of the 800 enrolled patient's majority 592(74%) were female and in the age group 30-59 [680/800, (85%)]. Overall 606/800 (75.75%) reported no problem in all dimensions of EQ-5D-3L i.e. mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Detectable VL was associated with problems across all the 5-dimensions. The overall mean score for general satisfaction was 3.84 ± 0.77, Cronbach's alpha = 0.68 meaning not satisfactory and questionable. Satisfaction levels was highest in communication (4.28 ± 0.76 Cronbach's alpha = 0.73 satisfactory and acceptable) and lowest for financial aspects (mean score 3.10 ± 0.65 Cronbach's alpha = 0.69, unsatisfactory and questionable). Majority 693/800 (86.6%) reported high HAART adherence of ≥95%. Significantly majority of participants with high adherence 522/590(88.47%) had undetectable VL, P =value < 0.001. Only 22/800 (2.75%) participants reported to experience any form of stigma. **Conclusion and recommendations:** Majority of study participants reported good quality of life and high adherence to HAART. High adherence was significantly associated with undetectable VL. Participants were highly satisfied with communication but dissatisfied with cost of care. HIV stigma seems to be on disappearance. We recommend routine assessment of patient reported outcomes for correlation with laboratory and clinical outcomes.

109. Outwater, A.H. (2018). Decreasing Violence at the Human-Environment Interface: the case of Beekeeping-NCDs

Abstract
Background: A pilot study in preparation for an intervention trial to decrease violence by and against young men, explored an intervention based on entrepreneurship and beekeeping.

Objective: This report focuses on the beekeeping training, comparing pre and post harvesting techniques. **Methodology:** Pre- and post-intervention In-depth Interviews and a post-intervention Focus Group Discussion were conducted with traditional beekeepers from 2 villages in Masasi. Intervention was a 5-day training about honey harvesting and packaging at African Beekeeping Training Institute. Each village beekeeping group was given 2 top bar hives and 2 bee suits. **Results:** Traditional honey harvesters use fire and destructive techniques. In preliminary interviews, the traditional beekeepers expressed sorrow at killing so many bees. Hives were used once. After training, honey harvesting practices dramatically improved. Protected in bee suits, bee keepers were using smoke instead of fire. They were able to differentiate between combs with larvae, and with honey. At the last harvest, when they saw mostly brood, instead of harvesting as they would have previously – they decided to wait till the next season. **Conclusion:** "All the bees' lives will be saved, and, my life will be saved, because of them." Traditional beekeepers wished to engage in non-destructive harvesting techniques. Wearing a beekeeping suit and using smoke while harvesting top bar hives increased safety of the beekeepers. Decreased violence will increase long-term honey production.

110. Pallangyo, A., Moshi, E (2018). Thyroid Papillary Carcinoma Metastasis to Skull in Adult Female: Case Report

Abstract

Background: Papillary thyroid carcinoma is common well differentiated tumor of thyroid in women of reproductive age. It normally presents as painless nodule or mass on anterior neck, or cervical node. Cold on scan diagnosed by FNA and confirmed by histological features of tissue biopsy. Rarely will papillary carcinoma of thyroid present in postmenopausal woman with skull and brain metastasis. **Objectives:** To present a rare case and literature review of metastatic papillary carcinoma of thyroid to skull**. Methodology:** We present a 73 years old female patient with three months' history of left ear pain and swelling. Radiological investigations showed left temporal mass eroding the left temporal bone, extending toward the left temporal mandibular joint. Intraoperative she had a highly vascularized tumor, bleeding on touch, eroding distal part of the zygomatic process and eroding the dura mater on medial aspect. Biopsy was taken for histopathology. **Results:** T3, T4 and TSH were normal, elevated cholesterol, HIV negative, CT

scan of chest showed features suggestive of thyroid gland mass with mid-retrosternal extension. There were no features of lung metastasis. Histology examination showed a non -capsulated thyroid tumor with features of papillary carcinoma of thyroid (follicular pattern). **Conclusion:** In patients presenting with symptoms of ear pain, and headache, a number of differentials should be considered and ruled out by thorough investigations especially in elderly patients with many different exposures.

111. Paul, L. (2018). Intimate Partner Violence: Causes, Perceptions and Levels of Help Seeking Behaviour Among Victims in Kilimanjaro, Tanzania.

Abstract

Background: Intimate partner violence is a secret disaster in Tanzania. Many women have reported of being victims and most have incurred detrimental effects on their reproductive, mental and physical health. In order to combat IPV, an effective intervention should focus on alleviating the roots of the problem which involves the causes and the societal perception regarding IPV.Assessinglevels of help seeking behaviour among victims will help to evaluate current interventions. **Objectives:** To identify causes, perceptions and levels of help seeking behaviour towards intimate partner violence among women in Kilimanjaro **Methodology:** A cross-sectional study conducted in Kilimanjaro Region. Data was obtained through literature review and in-depth face to face interviews with various stakeholders including legal officers, police, religious leaders, NGO'S and researchers. A stakeholder specific interview guide was prepared with the list of questions concerning IPV in general focusing more on causes, perception and help seeking behaviour among victims. The language used was English and Swahili depending on the interviewee preference. **Results:** The commonestIPV causesidentified were; -Alcohol abuse, men neglecting their families, unfaithfulness, unsettled issues between couples, improper use of mobile phones, economic dependence and lack of education on human rights. IPV was perceived as a secret matter to be discussed only within family grounds. Societal culturally ingrained perceptions were prominent and violence was sometimes considered normal disciplining. Help seeking behaviour was more to the informal sector than the formal sectors. Most reported cases were those of physical violence. **Conclusion:** Combating IPV would require collaborative efforts from individual level to government level. The government together with

other stakeholders should cooperate to ensure that enough knowledge aboutIPV is provided and the resources to support victims are available. Through focused actions, the cultural norms and wrong perceptions in which IPV is embedded within the society can be successfully changed.

112. Ponela, F.K. (2018). Knowledge of Rearing Mothers, About Danger Signs of Pneumonia in Temeke District, Dar Es Salaam

Abstract

Background: Pneumonia is an inflammation of the lung parenchyma caused by various microorganisms, including bacteria, mycobacteria, fungi, and viruses. This is the severe form of acute lower respiratory infection that specifically affects the lungs.). Mansoura University did the research which revealed that Klebsiella species are predominant cause of nosocomial and ventilator associated pneumonia in which by 2014 had incidence of 21.4% or 14 infection per 1000 bed days in Sub-Saharan Africa (Green &Kolberg, 2016). **Objective:** The study aimed to assess rearing mothers' knowledge on dangers signs for pneumonia, severe pneumonia and perceived initial interventions for pneumonia. **Methodology:** A cross sectional study was conducted in Temeke district. Rearing Mothers were randomly selected. **Results:** A total of 99 mothers were interviewed. The study findings revealed that, about 60.6%, 76.8%, 82.8% and 79.85% of rearing mothers had knowledge on cough, fever, chest pain and difficulty in breathing as danger signs for pneumonia respectively. Also, about 29.3% of rearing mothers had knowledge on chest wall indrawing as the danger sign for severe pneumonia. With regards to knowledge for initial intervention for pneumonia, 77.78% respondents took their child to health facilities for medical help from health provider or a doctor. Around 40.4% respondents sought medical help immediately after observing abnormal behaviour like coughing, fever, difficulty in breathing and chest pain. **Conclusion:** Based on the findings, majority of rearing mothers have some knowledge on danger signs for pneumonia though most of them are unaware of danger sign for severe pneumonia.

113. Rajab, S.K., Jared, S.B (2018). Prevalence, intensity and risk factors for urogenital schistosomiasis in Pujini Shehia, Pemba, Tanzania

Abstract

Background: Urogenital schistosomiasis is a common disease on Zanzibar islands, Tanzania. It is transmitted by two intermediate host snails B. nasutus and B. globosus. In general, the prevalence and intensity of schistosomiasis and its risk factors vary across regions and intervention programmes. Therefore, understanding of risk factors for its transmission is fundamental for formulating effective preventive and control measures against the disease. **Objective:** This study was conducted to examine the prevalence and associated risk factors for urogenital schistosomiasis in Pujini Shehia, Pemba. **Methodology:** A cross-sectional study was carried out from August to November 2016 whereby urine samples were collected from 367 residents of Pujini shehia in northern Pemba. The samples were examined for Schistosomahaematobium using the urine filtration method. Data on risk factors were collected using questionnaires. The data were analyzed using SPSS version 19 (2010). Chi square test was used to assess the association of risk factors parameters. **Results:** The overall infection prevalence of S. haematobium was 9.0%. The prevalence was significantly highest (20.9%) among individuals aged 7-8 years compared to other age groups (p = 0.002). Schistosome egg count was highest in 7-8 age group compared to others (p = 0.002). The majority of participants (72.0%) had household toilets. Fetching water was the dominant activity (35.5%) in Pujini. The rate of water contact was significantly higher in 9-13 and 49-59 age groups (p = 0.000). **Conclusions:** The low infection prevalence of S. haematobium observed among participants indicates an overall low risk for schistosomiasis in this community. Improving sanitation by encouraging owning appropriate toilets for each householder is very important. Therefore, sanitation intervention, clean water supply and provision of education on knowledge, attitudes and practices are required for sustainable control and elimination on schistosomiasis.

114. Rajab, S.K., Bakuza, J.S (2018). Community's Knowledge, Attitudes and Practices (KAP) on Schistosomiasis in PujiniShehia, Pemba Zanzibar-ID

Abstract

Background: Despite intensive control efforts by governments and the international community, schistosomiasis is still a life-threatening public health problem in Zanzibar. The lack of understanding on community knowledge, attitude and practice (KAP) on parasitic infections is one of the major challenges hampering control efforts for schistosomiasis and other diseases. Communities' KAP is useful in designing and implementing appropriate disease control measures. **Objective:** The present study was conducted in order to assess community's knowledge, attitude and practice on schistosomiasis in Pujini Shehia, Pemba. **Methodology:** A cross-sectional study involving 244 school children and 123 adults was carried out in Pujini shehia, Chake-Chake District, Northern Pemba, from August to November 2016. Data collection was conducted using in-depth interview and questionnaires. The data were entered into and analyzed with SPSS version 19 (2010). Chi-square test was used to assess for the significance association of KAP parameters. P-value < 0.05 at 95% CI was considered as statistically significant. **Results:** Most participants had reasonable knowledge on schistosomiasis, including its transmission (77%), signs and symptoms (70%) and preventive measures (76%). About 61% of respondents had heard about schistosomiasis before although none of them could differentiate between urogenital and intestinal schistosomiasis. In addition, 90% of the participants considered schistosomiasis harmful while more than half of them (59.1%) thought that the disease cannot re-occur after first treatment. Most people (97.3%) were willing to be treated against schistosomiasis and visited the hospital when sick. **Conclusions:** The study has revealed that the community in Pujini Pemba has a wide range of appropriate knowledge, positive attitudes and good practices on schistosomiasis. These features, if integrated in disease control plans can enhance the implementation and realization of preventive and control measures for schistosomiasis and other infections. Correct knowledge always leads to correct attitudes and practices.

115. Rashidi, H., Sebalda, L., Mats, M. (2018). Improving Quality of Maternal and New Born Care Using Group Model of Antenatal Care in Tanzania – RH

Abstract

Background: Tanzania has used various efforts and interventions to reduce maternal and infant mortality but there is no evidence that the deaths are decreasing. Innovative interventions on Antenatal Care may help to improve maternal and newborns outcomes. Group antenatal care is one of the emerging and promising models of care that may be used to improve antenatal care. We are proposing to compare the outcome of women in group antenatal care and those on usual care. **Objective:** To determine the effectiveness of group antenatal care model compared to usual care on quality of care and evaluate its implementation process. **Methodology:** A two-armquasi-experimental design will be employed using a mixedmethod approach involving145 pregnant women in Kibaha District as the intervention arm and 145 pregnant women from Bagamoyo District as the control arm. The intervention will be group antenatal care model adopted in the context of focused antenatal (FANC) and the control will be usual antenatal care. Participants in both arms will complete assessments, including psychosocial measures (Perceived Quality of Antenatal Care, Satisfaction with care, and nutrition knowledge and practice) and biomedical measures (weight gain during pregnancy, the weight of newborn, prematurity, and stillbirth). Discussion: Data will be collected at baseline (during recruitment) at last antenatal visit and first postnatal visit for all 290 women in both arms. For quantitative data, the study is powered (power of 80%, the two-sided confidence level of 95% and Ratio of unexposed and exposed of 1) to detect difference in Perceived quality of antenatal care, Pregnant women nutrition knowledge, Satisfaction with Antenatal care, ANC visits 4 or more and Delivery at health facilities. Qualitative data will be analyzed using thematic and content analysis.

Conclusion: This study will provide evidence concerning the effectiveness of Group Antenatal Care in improving the quality of antenatal care in Tanzania and it will evaluate it implementation challenges and recommend some improvement for further scale-up of the intervention.

116. Restituta, M., Manoj, M (2018). The influence of Information and Communications Technologies (ICTs) to improve health provision in Tanzania.

Abstract

Background: The proper use of Information and Communication Technologies (ICTs) has been proven to play a decisive role in socio-economic development in various aspects of health provision. ICTs provide cost effective means of enhancing people's living standards, especially the disadvantaged and rural. This paper articulates the contribution that ICTs have made in health service delivery in Tanzania since the country's adoption of the Millennium Development Goals (MDGs). **Methodology:** Using qualitative and quantitative techniques, 132 health professionals were surveyed. The Cronbach's Alpha statistic was used to test for validity and reliability of the data, yielding results that were all greater than 0.7. The collected data were analysed quantitatively using SPSS® 20. The paper explores the future prospects for ICTs in helping Tanzanian government to achieve health MDGs. Finally, paper outlines challenges while offering practical recommendations to mitigate challenges and maximize deployment of existing ICTs to uplift the health of the majority of Tanzanians.

117. Richard, T.M., Albert, M.K., Obadia, V.N (2018). The Complementary role of Digital Rectal Examination and Prostate Specific Antigen for prostate cancer detection as seen Dar es Salaam -Tanzania.

Abstract

Background: Prostate cancer(Pca) is a significant public health problem. It is the most common malignancy and the second most common cause of cancer deaths among American men. In most of African countries its incidence is said to be unknown, probably because of poor quality of the medical care systems and registries which may have a substantial impact on the completeness and accuracy of the reported incidence rates. Digital rectal examination(DRE), serum Prostate Specific Antigen(PSA), Trans Rectal Ultrasound and needle biopsy remain standard tools for diagnosis of Prostate carcinoma worldwide. **Objective:** This study aimed to establish the diagnostic value of DRE and PSA among males suspected to have Pca at two Hospitals Dar es Salaam. **Methodology:** This was a cross sectional study which involved males suspected for Pca

recruited by convenient sampling at Muhimbili national Hospital and Tumaini hospital. Data was collected by using structured questions. Each participating patient gave an informed consent. DRE findings and PSA values were sought from patient's notes. Histopathology results were sought from Central Pathology Laboratory. Analysis was done with the aid of SPSS version 20 software. **Results:** Three hundred and seventy-three patients were enrolled in the study with mean age 70.72 years and range from 45 to 102 years with a peak age of 61-70 years. The sensitivity, specificity and positive predictive value of DRE was 76.8%,82.3% and 0.82 respectively; while for PSA respective values were 100%,29% and 0.47. Combination of DRE and PSA had a positive predictive value of 0.87making diagnosis accuracy of 87% when the two tests were combined. **Conclusion:** Digital rectal examination and Prostate Specific Antigen provide good detection rate of prostate cancer when these two tests combined. So as per WHO recommendations, these two tests should be used together since they complement each other if Trucut needle biopsy cannot be performed for any reason(s).

118. Sangeda,R.Z., Lwoga, E.T, (2018). Visualization of co-authorship and global collaboration patterns of MUHAS scholars using social networks. – ICT

Abstract

Background: Collaboration in scientific research is increasingly becoming an important agenda in academics, where researchers work in team to complement skills and tackle problems using multidisciplinary approach. Social network analysis enables visualization of leading scientists, institutions and countries. In this analysis we performed co-authorship network analysis in health to reveal authors, institutions MUHAS and countries that collaborate with the Muhimbili University of Health and Allied Sciences (). **Objective:** To identify and map health research networks in Tanzania and their partners abroad to using MUHAS as index institution. **Methodology:** A SCOPUS database search for research, review or conference articles with MUHAS author affiliations that were published between 1990 and 2017 was conducted. Visualization and analysis of co-authorship networks was done using open-source software Gephi 0.9. 2. The size of the node on the network depicts the unweighted degree (i.e. the number of neighbours of the institution by co-publication connection) of an entity (author, institution or country). This metric is then used to rank important collaborations. **Results:** Important co-

countries outside Tanzania according to degree of collaboration were United States, South Africa, Kenya, Nigeria, and Uganda. Top co-authors were identified. Top Institutions Muhimbili University of Health and Allied Sciences-Tanzania, London School of Hygiene and Tropical Medicine-UK, Makerere University-Uganda, University of California-USA, University of Cape Town-South Africa, National Institute for Medical Research-Tanzania, University of Nairobi-Kenya, Muhimbili National Hospital-Tanzania, Harvard School of Public Health-USA, University of Khartoum-Sudan. **Conclusion:** The strong ties in the network need to be maintained in order to continue future collaboration driven research. MUHAS need to strategically maintain it collaborations with partners abroad to support decisions to strengthen research capacity. Identifying knowledge hubs within individual researcher networks complements traditional scientometric indicators that are used to identify opportunities for collaboration.

19. Shaffi, A.F. (2018).Predictors of bacterial vaginosis among pregnant women attending antenatal care at Muhimbili national hospital

Abstract

Background: Bacterial vaginosis is one of the most common genital tract infections in pregnancy. It is a polymicrobial disorder characterized by a decrease in the number of lactobacilli and an overgrowth of anaerobic bacteria. Bacterial vaginosis is associated with an increased risk pregnancy loss, maternal and perinatal morbidity and mortality. **Objective:** To determine the prevalence and predictors of BV among pregnant women attending ANC at MNH. **Methodology:** Analytical cross-sectional study was conducted among 667 pregnant women attending ANC at MNH between November 2017 to March 2018. Participants were recruited using non-probability convenient sampling, for each consented participant, pelvic examination was done and a sample collected, and BV diagnosed using Nugent's score. Data was analyzed using SPSS version 23. Frequencies and proportions were calculated, bivariate analysis and Multivariable analysis to check the association of possible factors with the BV by adjusting for potential confounders. **Results:** The prevalence of BV was found to be 26.7% using Nugent's scoring system. Bacterial vaginosis was independently associated with women who were aged 21-29 years (AOR = 2.156, 95% CI; 1.223, 3.804), vaginal douching (AOR = 2.486, 95%; 1.361,

4.541), HIV infection (AOR = 7.143, CI; 1.901, 26.837), more than one lifetime sexual partners (AOR = 8.493, CI; 2.870, 25.017) and early sexual debut before the age 18 years (AOR = 2.795, CI; 1.582, 4.937). **Conclusion:** The prevalence of BV in our population is high and is associated with factors such as age of less than 30 years, vaginal douching, HIV infection, more than one lifetime sexual partners and early age of sexual debut. Early screening of high risk patients is crucial for the prevention and development of BV.

120. Shamsherali N.E, Lutale, J.J., Ruggajo, P (2018). Glycaemic Control and Its Associated Factors in Patients with Chronic Kidney Disease Attending Muhimbili National Hospital.

Abstract
Background: Chronic kidney disease (CKD), a non-communicable disease (NCD) with global impact and importance, is a known cause of significant morbidity and mortality as well as an economic burden. CKD has been associated with NCDs like hypertension and diabetes mellitus. It has also been found that CKD has an impact on the control of blood glucose levels resulting in glycaemic dysregulation through various mechanisms; causing either hypoglycaemia or hyperglycaemia. **Objective:** The aim of this study was to determine the level of glycaemic control in CKD patients attending Muhimbili National Hospital. **Methodology:** This was a cross-sectional hospital-based study involving 328 sampled CKD patients attending the MNH renal unit. An OGTT was done and their level of glycaemic control assessed. The data was analyzed by the SPSS software version 20.0. The study duration was from July 2017 – January 2018. **Results:** 328 participants were recruited. 128 (39%) were known to be diabetic. The remaining were screened and 7/328 (2.1%) were newly diagnosed diabetics and 17/328 (5.2%) had impaired glucose tolerance. 7/128 (5.5%) and 20/128 (15.6%) of the 128 known diabetics hadhypoglycaemia and burnt-out diabetes respectively. Age >50 years (OR 2.5, P=0.001), hypertension (OR 3.1, P=0.01), family history of diabetes (OR 8.0, P=<0.001) and stage 3 and 4 CKD (OR 1.9, P=0.044) were independent factors significantly associated with poor glycaemic control. **Conclusions:** Diabetes is a frequent comorbid condition occurring among CKD patients attending MNH. Impaired glucose tolerance is also found to have a substantial magnitude in this population. Age above 50 years, a positive family history of diabetes, presence of hypertension

and mild to moderate renal insufficiency were independent factors associated with poor glycaemic control among CKD patients attending MNH.

121. Shirima, O.D. (2018). Vacuum assisted vaginal delivery: prevalence, indication, fetal, maternal outcomes at Temeke hospital Dar es Salaam-RCH

Abstract

Background: Vacuum extraction delivery is instrumental assisted vaginal delivery performed for maternal or fetal reasons. Practitioners prefer to perform it rather than other methods of assisted vaginal delivery because it is easy to use, requires less anesthesia/analgesia and safer than other methods. A support from (CCBRT) in Tanzania, training on vacuum-assisted deliveries has been conducted to health providers at Temeke Regional Referral Hospital and equipment supplied for carrying out the procedure. **Objective:** To determine the prevalence and describe maternal and fetal outcomes of vacuum-assisted vaginal deliveries (VAVD) at Temeke Hospital in Tanzania **Methodology:** A descriptive cross-sectional hospital-based study was conducted at Temeke Referral Hospital in Dar-es-salaam, Tanzania. All women who met inclusion criteria were involved in getting 247 women delivered by vacuum-assisted vaginal delivery from June to December 2017. Data on demographic characteristics, maternal and fetal outcomes were collected by registered nursing officers/midwives using a checklist, analyzed by SPSS, and summarized using frequency distributions and charts. **Result:** Two hundred forty-seven women, were identified to have undergone vacuum-assisted vaginal delivery during the study period, (60.7%) of them had reached 39-40 weeks of gestation. Maternal exhaustion, followed by delayed second stage of labor was an indication of VAVD at 42.1% and 25.5% respectively. 96.3% of the newborns weighed 2.5-4.0 kilograms. Apgar score was 7 to 10 at 5 minutes. Of 5,400 deliveries, the prevalence of the vacuum-assisted deliveries was 4.57%. Successful cases were 97.2% with failure rate of 2.8%. **Conclusion:** Vacuum-assisted deliveries if properly supervised and conducted, can benefit pregnant women and reduce maternal, neonatal morbidity and mortality.

122. Simeon, M., Raphael, Z.S (2018). Modeling Drug Resistance Mutations among HIV Patients in Tanzania using Bayesian Network.

Abstract

Objectives: This study is intended to identify HIV mutations that confer resistance to ARV in HIV isolates among HIV patients during the therapy. The resistant mutations are caused by drugs but sometimes they can be transmitted from one person to another. HIV drug resistance is a problem which Bayesian methods for machine learning are used to study the mutation pathways. Bayesian Network (BN) was used to identify the cause-effect relationship between the drugs and the mutations. It is a probabilistic model that represents conditional independence in holding information in the domain. The model validation was done by using cross-validation. We applied the Bayesian Network (BN) to the data which were obtained from HIV patients after a follow up for one year. The data were loaded to the Stanford university HIV drug resistance database to identify the resistant mutations and thereafter each drug was interacted with the resistant mutations to check their cause-effect relationship. We explored the resistance mutations and their corresponding drugs by investigating their cause-effect relation. Zidovudine (AZT) one of the drugs used in the therapy has been identified as one of the causes of HIV resistance mutations. On the other hand, the network has indicated that the interaction between the mutations is not directly influenced by TDF(tenofovir). The study has pointed out that some of the resistance mutations found among HIV patients were caused by drugs and some mutations were acquired through the transmission. In some cases, the model identified mutations influenced by other resistant mutations. Bayesian Network is a useful technique for understanding the information from the data in the study of the study of mutations pathways.

123. Sirili, N.S., Msofe, G.F., Kiwara, A.D., Mwangu,A.A., Goicolea,I., Hurtig,A.K, (2018). Public Private Partnership in health workforce development in low and middle-income countries after the 1990s health sector reforms; a case of Tanzania

Abstract

Background: Public Private Partnership (PPP) in training of health workforce has gained popularity since the launch of the 1990s health sector reforms in low and middle-income

countries. PPP in training aims to contribute in addressing the critical shortage of health workforce in these countries. More than twenty years since the launching of these reforms, different researchers seem to draw conclusions suggestive of mixed results on some components of the reforms. **Objective:** To assess outcomes of Public Private Partnership on the training of doctors in Tanzania following the 1990s health sector reforms **Methods:** We conducted a policy analysis on PPP on health workforce development in low and middle-income countries two decades following the 1990s health sector reforms with training of doctors in Tanzania as a case. We reviewed documents and conducted key informant's interviews with trainers and employers of doctors in both the public and private sector. Hybrid thematic analysis guided by the policy analysis cycle was used to analyse the gathered data. **Results:** Twenty years post the reforms, the number of doctors graduating annually in Tanzania has increased from 50 to above 350. However, the following challenges have arisen: fragmented planning in training and employment leading to unemployment of doctors; a challenged universities autonomy; shortage of trainers and inadequate teaching infrastructure that does not match the increased number of students. This inadequacy adversely affects the quality of graduates**. Conclusion:** Low and middle-income countries should revisit their PPP approaches and ensure that the health workforce crisis is addressed in totality through a comprehensive plan. The plan should address issues inclusive of training, deployment, retention and succession.

124. Skums, F., Mlay, C. (2018). An assessment of the use of electronic medicines inventory management systems in public and private hospitals in Dar es Salaam Region, Tanzania-IT.

Abstract

Background: The electronic medicines inventory management systems (eMIMS) have a great potential to improve medication management. In Tanzania, there is lack of literature on the use of the eMIMS. **Objective:** To assess the use of electronic medicines inventory management system in public and private hospitals in Dar es Salaam Region. **Methodology:** A descriptive cross-sectional study was conducted in all private and public hospitals in Dar es Salaam. Healthcare workers in the study sites who were involved in medicines inventory management were interviewed using the self-administered structured questionnaires between October 2017

and January 2018. **Results:** A total of 34 public and private hospitals were visited and 132 respondents were interviewed. Majority of respondents (78%) were pharmacists and pharmaceutical technicians. 107 respondents (81.1%) had used eMIMS. The level of use of eMIMS was found to be moderate (46.7%). Majority of the respondents (87.8%) were satisfied with the eMIMS. However, significant proportion (58.9%) needed more time to learn how to use it. Challenges hindering the use of eMIMS included unreliable electricity, inadequate ICT skilled personnel, and Internet and network problems. **Conclusion:** Majority of the hospitals were using eMIMS but with limited features as expressed by majority of the respondent who wanted eMIMS to be improved. Majority of the respondents were generally satisfied with eMIMS but indicated a need for adequate training on the use of eMIMS.

125. Sylvester, B., Gasarasi, D.B, Tarimo, D., Massawe, S., Mpembeni, R., Swedberg, G (2018). Prenatal Exposure to P. falciparum is associated with low PfMSP119 and PfMSP II Specific Immunoglobulin M and Total IgG responses in Clinical malaria episodes in the first two years of life – ID

Abstract

Background: Prenatal exposure to Plasmodium falciparum infection affects the development of fetal immune cells in utero through immunotolerance or immunosensitization of fetal immune cells to P. falciparum antigens. However, knowledge on the effect of prenatal exposure to P. falciparum on subsequent humoral responses in the first two years of life during clinical malaria episodes is limited. This study aimed at determining the effect of prenatal exposure to P. falciparum on specific humoral responses, with a focus on immunoglobulin M (IgM) and total IgG against blood stage P. falciparum(Pf) merozoite surface protein I (PfMSP1-19) and PfMSP2 during clinical malaria episodes in the first 24 months of life. **Methodology:** A cohort study was conducted in Rufiji district, between January 2013 and June 2017. Infants (n=215) aged 0-24 months were recruited after delivery from mothers who were diagnosed of placental malaria (pm+) and without placental malaria (pm-). Total IgG and IgM in peripheral blood against PfMSP119 and MSPII were determined using enzyme linked immunosorbent assay (ELISA) while levels of maternal antibodies and in utero sensitization were determined in cord blood. Placental malaria status was established using standard histological methods. The mean

difference of IgM and total IgG responses between exposed and unexposed infants were assessed using independent samples t-test and significance of difference was judged at P<0.05. **Results:** Total IgG against P. fMSP2 in infants' peripheral blood in exposed and unexposed infants were 49.4 (95% CI 43.5-55.4) and 64.6 (95% CI 61.1-68.2) arbitrary units respectively, and the difference was significant<0.01. The infant peripheral blood total IgG against P. falciparum MSP1-19 in exposed and unexposed infants were 44.9 (38.8-47.9) and 53.5 (49.1-57.8) arbitrary units respectively and the difference was significant (P= 0.02). The levels of IgM against PfMSP1-19 in exposed and unexposed infants during clinical malaria episodes were 49.5 (42.5-54.4) and 60.5 (56.5-64.6) respectively, P=0.003. The levels of IgM against PfMSP2 in exposed and unexposed infants during clinical malaria episodes were 47.9 (42.8-52.9) and 58.8 (56.1-61.6) respectively, P<0.01 Levels of IgG in cord blood against MSP2 in exposed and unexposed infants were 45.6 (95% CI 39.9-48.3),) and 53.09 (95% CI: 49.1-57.1), respectively and the difference was significantly different (p=0.029). The cord levels of total IgG against MSP1-19 in exposed and unexposed infants were 39.25 (95% CI 36.3-42.2) and 58.8 (95% CI:54.01-63.75) respectively and the difference was significantly different (P<0.01**). Conclusions:** Prenatal exposure to Plasmodium falciparum suppresses humoral immune response to specific Pf MSP1-19 and PfMSP2   with characteristically low total IgG and IgM in infants aged 0-2 years' episodes

126. Theodora, M. (2018). Participation of youth and members of community in HIV vaccine trials in Dar es Salaam.

Abstract

Background: HIV burden is disproportionately high among young people in Sub Saharan Africa hence effective vaccine remains a cornerstone for HIV prevention despite existing combination prevention tools. It is critical to involve youth in HIV vaccine trials due to need to reduce HIV burden among youth. Participation of young people in the trials has challenges because youth have poor HIV risk perception, risky behaviors, stigma and poor health seeking behavior. **Objective:** To investigate reasons for willingness to participate in HIV vaccine trials among youth and support of members of the community. **Methodology:** Study employed qualitative and quantitative methods to establish factors for willingness of youth to participate and elucidate

opinions of members of the community on participation of youth in HIV vaccine trials. The qualitative study used focus group discussions, then analyzed transcripts of discussions by content analysis. Furthermore, a cross section study using questionnaires was employed to establish among other things reasons for willingness of youth to participate in the trial. **Results:** Slightly more than half of the youth from general population and more than thirds of young female sex workers expressed willingness to participate. Altruism was major reason for participation. A need to know HIV vaccine research, medical and health insurance benefits were some of the reasons to stay in the trial. Participants in focus group discussions described willingness of members of the community to support youth during the trial because youth might have misconceptions concerning the vaccine and trial process. **Conclusion:** Young people had expressed moderate to high levels of willingness to participate in HIV vaccine trials. Together with willingness of community members to support youth in participation of the HIV vaccine clinical trials, retention of youth in the trials would be feasible and successful in our settings.

127. Theophilus, B.S., Lembariti., M., (2018). Prevalence, Clinical Characteristics and Associated Factors of Root Caries Among Elderly Tanzanian Patients OH.

Abstract

Background: Root caries is emerging as a dental health problem for elderly mostly because of increased life expectancy and life styles. The improvement in oral health care and higher retention of teeth by the elderly lead to increased number of exposed root surfaces susceptible to caries. Information on root caries among the elderly is important in raising awareness and in guiding clinicians in early detection and evidence-based restorative treatment. There is no data on root caries, its clinical characteristics and associated factors in elderly Tanzanians. **Objective:** To determine the prevalence, clinical characteristics and associated factors of root caries among elderly patients attending sampled Dar es Salaam hospitals in the period between August 2017 to April 2018. **Methodology:** This hospital-based, cross sectional study involving the elderly aged 60 years and above was conducted at dental clinics in Muhimbili (MUHAS and MNH), Amana Regional Referral Hospital, Mwananyamala Regional Referral Hospital and Temeke Regional Referral Hospital. Data was collected by interviewing and examining patients using a structured questionnaire and clinical assessment form. Teeth were examined for root caries, gingival

recession and the mucosal plaque scores. Statistical Package for Social Sciences program SPSS version 20.0 was used for data analysis and p-value of < 0.05 was considered to be statistically significant. **Results:** 348 participants were involved with the female to male ratio of 1:0.7. The age of the participants ranged between 60 years and 92 years old (mean age was 76 years with ± 6.2 SD). The age group 70years and above was most affected by root caries (38.8%). The prevalence of root caries was 39.9 % and the Root Caries index was 24.6%). Root caries was significantly found on maxillary teeth (68.3%) than mandibular teeth (43.9%). The majority of the elderly (71.8%) were found to have poor oral hygiene among which 88.5% had root caries. **Conclusion:** and recommendation: The prevalence of root caries was high among the elderly Tanzanians. Poor oral hygiene was a strong predictor together with old age, high level of education and gingival recession associated with the development of root caries in the elderly. Establishment of an accessible and affordable system for dental care for those aged 60 years and above to motivate them to visit Dental clinics and promote routine check-ups. There is need to conduct another study on root caries, that will cover several regions in Tanzania and give country-wide prevalence for root caries in the elderly.

128. Tolo, C., Ogwang, P.E (2018). Efficacy of Momordica charantia in Type 2 Diabetes Mellitus patients: Systematic review and Meta-analysis

Abstract

Background: Type 2 Diabetes Mellitus (T2DM) is the common form of diabetes, accounts for more than 90% of DM. Oral anti-hyperglycemic agents used for its treatment have side effects, high cost and increased failure rate. Momordica charantia has been traditionally used as nutritional food and as herbal medicine for T2DM. In vitro and in vivo studies suggest its glycemic control potential. However, clinical trials showed conflicting results. **Objective:** To evaluate the glycemic control of M. charantia in pre-diabetes and patients with T2DM. **Methodology:** Search of the Cochrane library, MEDLINE/PubMed, CINAHL and SCOPUS databases up to April 30, 2018 was done without language restriction. Randomized controlled trials and prospective comparative cohort studies, with at least 4 weeks follow up and reported glycosylated hemoglobin A1c or Fasting Plasma Glucose were included. The risk of bias was evaluated using Cochrane risk of bias assessment tool. Revman var. 5.3 software was used for

data synthesis in meta-analysis. **Results:** Fifteen studies were included in a systematic review. Followed up duration was between 4 to 16 weeks. Overall risk of bias was high. Two subgroups; M. charantia monotherapy and M. charantia combined with other herbs were identified. With moderate certainty, M. charantiamonotherapy reduces FPG, PPG and HbA1c% with effect size of (n = 231, -0.72, CI= -1.33 to -0.12, I2 = 14 %.), (n = 153, -1.43, CI= -2.18 to 0.67, I2 = 0), (n = 243, -0.26, CI=-0.49 to -0.03, I2 = 0) respectively. **Conclusion:** M. charantia could be beneficial to T2DM patients. However, poor methodological quality of included study limits our ability to draw a definitive conclusion of its potential glycemic control. Future research on development of standardized M. charantia formulation and its rigorous clinical evaluation with adequate sample size and design is recommended.

129. Tumain, B., Pallangyo, K (2018). Diagnoses, hospital outcomes and their associated factors among elderly patients admitted to the medical wards at Muhimbili National Hospital and JakayaKikwete Cardiac Institute.

Abstract

Background: The elderly population has been described as the fastest growing population worldwide. Increase in the elderly population is expected to increase the proportion of elderly patients in health care facilities. The spectrum of diseases in the elderly differs from that in other population groups. **Objective:** To determine diagnoses, hospital outcomes and their associated factors among elderly patients admitted to the medical wards of Muhimbili National Hospital (MNH) and JakayaKikwete Cardiac Institute (JKCI). **Methodology:** A descriptive cross-sectional hospital-based study on patients aged 60 years or above admitted through MNH Emergency Medicine to the medical wards and JKCI. **Results:** A total of 336 participants aged 60 years or above were enrolled. Elderly patients comprised 30.1% of medical admissions. Mean age was 70.6years; male to female ratio was 1:1. The leading diagnoses were hypertension (45.5% of cases), stroke (33.0%), heart failure (18.8%), pneumonia (17.9%), diabetes mellitus (17.3%) and chronic kidney disease (16.1%). The median duration of hospital stay was 5 days and in-hospital mortality were 25.6% (86/336). NCDs caused at least 65.1% of the deaths. More than half of the deaths (48/86) occurred in the first three days of hospitalization. A modified Barthel ADL score of □20 (total dependence) on admission was associated with thirteen-fold

greater odds of death (p<0.001). **Conclusions:** NCDs formed a greater proportion of the diagnoses among elderly patients admitted to the medical wards and were responsible for most deaths.

130. Tungu, A.M., Nyarubeli, I. P., Bratveit, M., Sunde, E., Kayumba,A., Ngowi, A.V., Mamuya, S., Moen, B.E. (2018). Occupational noise induced hearing loss among Tanzanian metal industry workers NCD/OC.

Abstract

Introduction: Noise induced hearing loss (NIHL) at workplaces is a preventable disease. However, the global burden of NIHL is increasing particularly in developing countries despite the existing control measures. Furthermore, the prevalence of NIHL among metal industry workers in Sub Saharan countries including Tanzania is not well documented. **Objective:** To determine prevalence of noise induced hearing loss in Tanzania industry metal workers. **Methodology:** This cross-sectional study was conducted among male metal industry workers (Exposed, N=221) and Public Primary School teachers (Controls, N=107) between June 2016 and June 2017, in Dar es Salaam. The exposed workers were from four metal industries producing iron and steel. Audiometric tests were performed at 0.5, 1, 2, 3, 4, 6 and 8 KHz using Interacoustic AD 226 audiometer. NIHL was defined as hearing threshold levels >25dB in either ear at 3, 4 and 6 KHz. The WHO classification of severity of hearing loss was used. **Results:** The overall prevalence of NIHL among exposed workers was significantly higher than that among controls (50% and 30%, respectively, p<0.001). The highest prevalence among exposed was found in factory B (71%), followed by D (48%), A (48%), and the lowest in factory C (37%). A large proportion of exposed workers with NIHL had mild NIHL (80%), followed by moderate (20%), severe (2%). None of the exposed workers had profound hearing loss. **Conclusion:** and recommendation: A high prevalence of NIHL in an early stage was found among Tanzanian metal industry workers. Further studies on noise exposure and the determinants for reduced hearing are needed.

131. Urio, F., Makene, T., Makani, J., Luzzato, L (2018). Continuous culture of Plasmodium falciparum at Muhimbili University of Health and Allied Sciences (MUHAS)-Biomedical sciences.

Abstract

Background: Malaria remains a major cause of death in most developing countries, the causative being plasmodium falciparum, malariae, ovale and vivax. In Africa, Plasmodium falciparum infections account for the majority of malaria mortality and morbidity. Despite various efforts to address the problem, Tanzania is still far from eradicating malaria: hence the need to understand the biology of the parasite and of parasite-host cell interactions. In vitro cultivation of Plasmodium falciparum has been of great importance in the control, and for the cellular and molecular understanding of such interactions. **Objective:** The objective is to establish in-vitro continuous cultures of P. falciparum at MUHAS and making this experimental system available/accessible to the entire MUHAS community for any study in malaria research or malaria control. **Methodology:** The Trager & Jensen (1976) candle-jar method was used to culture the Plasmodium falciparum (laboratory strains 3D7, FCR3, NFS4 and field isolates) whereby Rosewell Park Memorial Institute (RPMI 1640) culture medium, red cells and serum were necessary for growth of parasite, vacuum desiccator and incubator were used to provide the necessary environment for the growth of parasite. Media change was done after every 2 days and addition of fresh red cells was done whenever the parasitaemia was above 5%. Synchronization of parasites which selects for early stages of parasite was done using refrigeration and sorbitol methods. For sorbitol method the culture had to have 5% parasitemia and for refrigeration method, the culture had to have a higher proportion of rings. **Results:** Despite the above challenges, we were able to successfully have a continuous culture of 3 laboratory strains (NFS4, 3D7 and FCR3) for a period of one month. Of the three strains, FCR 3 had the highest parasitemia (10%) followed by NFS4 and 3D7. Differential parasitemia count for refrigeration method was 70% rings, 20% trophozoites and 10% schizonts and for sorbitol method was 90% rings, 5% trophozoites and 5% schizonts. **Conclusion:** In vitro cultivation of Plasmodium falciparum has been shown to be possible using this quick and easy method. Availability of p. falciparum laboratory strains at MUHAS will boost in vitro malaria studies.

132. Uwizeye, D. (2018). Prevalence of Teenage Pregnancy in Rwanda and Associated Household Socioeconomic Factors-RCH

Abstract

Background: Teenage pregnancy poses restrictions to socioeconomic opportunities for young women and girls, their children and families. Children born to teen mothers are most vulnerable with greater risk of illnesses and deaths, and teenage mothers are more likely to be exposed to greater risk of maternal risks and mortality and to psychological problems. However, the current knowledge on the household determinants of teenage pregnancies is limited. **Objective:** The present study aims to analyze household socio-economic factors associated with teenage pregnancies in Rwanda. **Methodology:** The study used secondary data from the recent Rwanda Demographic and Health Survey (RDHS-V 2014-2015). In addition to descriptive analysis, Pearson's Chi Square and Binary Logistic Regression were used in the analysis. **Results:** Marital status and age of household-head, number of members in a household, number of rooms used for sleeping, and educational level of the household-head are significantly associated with teenage pregnancy in Rwanda ($p < 0.05$). Further, household composition correlates with the probability of teenage pregnancy ($p < 0.05$) with teenagers from households with less number of members being more vulnerable. However, teenage pregnancy was not significantly associated with physical violence among parents ($p = 0.65$) and sex of household-heads ($p = 0.52$) when the head is adult.

Conclusion: The government, parents and other stakeholders need to implement interventions that will minimize teenage pregnancies through community sex education, policies and effective parental guided strategies.

AUTHOR INDEX

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