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

RESEARCH BULLETIN

Volume 16 **March 2017**

2017 Journal articles, 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 Editorial

The current volume (Volume 20 No.1) contains total of 343 abstracts (139 Journal articles and 204 Dissertation) in 2017.

Trends of Publications at MUHAS for 2017

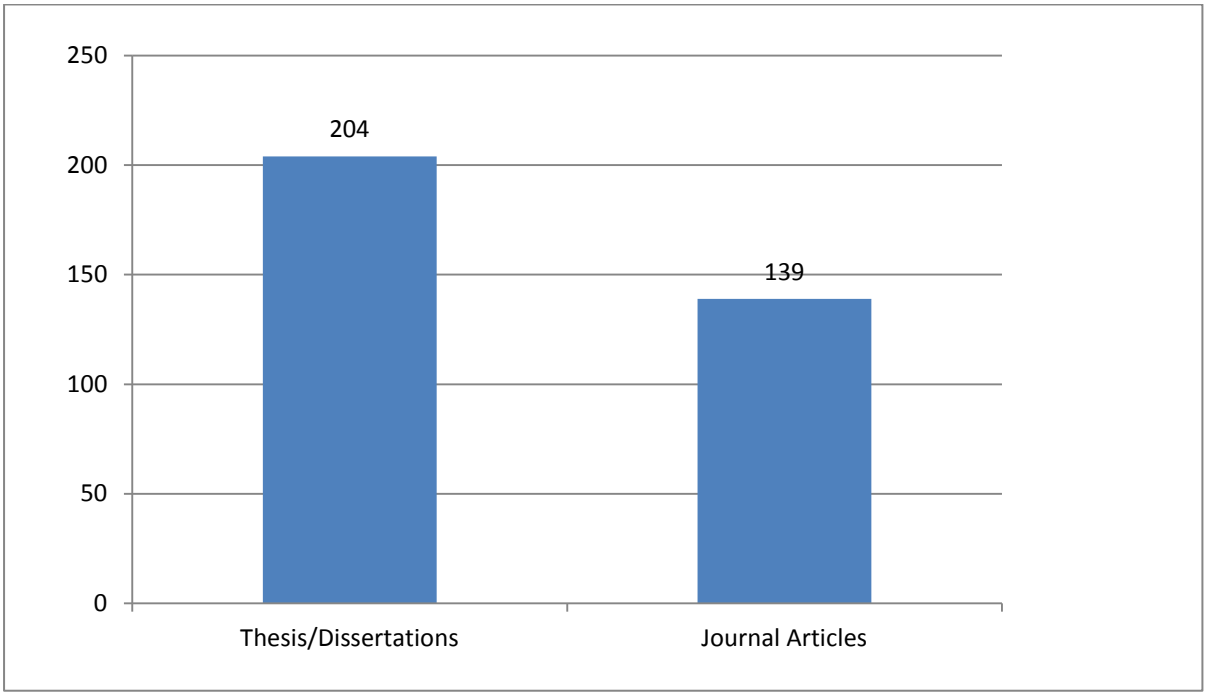


Table 1.Trends of Publications at MUHAS for 2017-2018

No.	2017	2018	Increment
Journal article	139	147	8
Thesis/dissertation	204	232	28
Conference proceding	None	132	132

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Chapter One: Journal Articles.

1. Abera, K., Samson, W., Magne, B., Wakgari, D., Simon, M., Betelihem, T., Bente, E. M. (2018). Dust exposure levels among treet sweepers in Bole Sub-City, Addis Ababa, Ethiopia.

Abstract

Background: Intensive manual street sweeping has been performed over the last three years in Addis Ababa to optimize the cleanliness of the surface of the street and make it convenient for public use. Street sweeping is a job, but it is a job that also has a direct link with the health of the sweepers. Street sweepers are severely exposed to street dust. Yet, the level of dust exposure among the sweepers has not been documented in Ethiopia. Objective: The aim of this study was to assess the level of exposure of dust to street sweepers in Addis Ababa city. Methods: An exposure study was conducted among 10 street sweepers, measuring exposure levels for four working days. The measurements were performed by total dust samplers (37 mm Millipore plastic cassette with a PVC filter) attached to the breathing zone of the workers. Gravimetric analysis of the filters was done using a Mettler Toledo XPE105 micro-balance (detection limit 0.01mg). The sampling cassettes with filter were conditioned in desiccators for 24 hours before weighing. A survey data sheet and an observational checklist were used to record exposure attributes. Data were analyzed using SPSS Version 20. The exposure levels were compared with the threshold limit value for total dust recommended by the American Conference of Governmental Industrial Hygienists of 10 mg/m3.Results: The study participants covered a total of 1km, and were sweeping from 6:00-9:00 am. The participants were assumed to constitute one similar exposure group as all sweepers covered four operations in performing the street sweeping: sweeping the street surface, collecting dust and litter in one place, putting it in a container and then disposing it at a disposal site designated for this purpose. The median dust exposure level (n=19 samples) was 10.71 mg/m3 (IQR=7.43). This is above the threshold limit value of 10 mg/m3. Eleven of the samples exceeded the occupational exposure level. The exposure level did not vary significantly between sampling days. This indicates that the exposure variability is consistent across the four sampling days. Conclusion: The studied street sweepers were exposed to dust levels that exceeded the recommended exposure level. Additional comprehensive research in a larger exposed population is suggested to further identify the most important determinants

for high exposure levels among street sweepers. Studying characteristics of the street dust is another suggested area for future research.

2. Agatha, Fabian N., Switbert, R.K., Steven, K., Ainory, G., Theodora, B. (2017). Women's determinant factors for preferred place of delivery in Dodoma region Tanzania: a cross sectional study.
https://doi.org/10.1186/s12978-017-0373-7

Abstract

Background: Skilled birth attendance is one of the key factors in improving maternal health but less than 50% of women in sub-Saharan African countries do not have the opportunity to be attended to by skilled personnel during childbirth. The aim of the study was to assess the factors determining women's preference for a place to give birth in Dodoma Region, Tanzania. **Methods:** This study employed a cross-sectional survey design using quantitative data collection and analysis methods. Data were collected using structured questionnaire administered to 800 women obtained through multistage random sampling. Multivariable logistic regression model was applied to determine the predictors of place of delivery. **Results:** More than three quarters 629(78.6%) respondents had their last delivery in the health facilities while 171(21.4%) had their last delivery at home/on the way to hospital. Reasons for delivering at home include: abrupt occurrence of labour pain, long distance to the health facilities, and lack of money to pay for transport and unfriendly experience with the health care providers. Simple logistic regression model indicates that mothers' education level, number of children, cost of transport the estimated distance to the nearby health facility and occupation were strong predictors of the preferred place of delivery. However, after controlling the potential confounder, the multivariable logistic regression model demonstrated a significant association between delivery at the health facility and the number of children and transport cost. **Conclusion:** Our findings suggest a need for health care providers to enhance health education to women and their spouses about birth preparedness and the importance of delivering at the health facility. There is also a need for the government to increase the number of health facilities including maternity waiting homes and well trained health workers in both rural and urban areas.

3. Agricola, J., Moyo, S.J., Nkinda, L., Majigo, M., Mmbaga, E., Mbembati, N., Aboud, S. and Lyamuya, E.F. (2017). Prevalence of methicillin-resistant Staphylococcus aureus carriage on admission among patients attending regional hospitals in Dar es Salaam, Tanzania. BMC Research Notes 10:417.
https://doi.org/10.1186/s13104-017-2668-8

Abstract

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a major pathogen responsible for hospital and community acquired infection. Colonization with MRSA is associated with a high risk of developing infection. This study aimed to determine the rate of MRSA carriage on admission and the associated risk factors among patients attending regional hospitals, in Dar es Salaam, Tanzania. **Results**: A total of 258 patients were included in this study. Nasal swabs were collected on admission to the hospital and after 48 h of hospital stay for detection of MRSA. Of 258 patients enrolled, 89 (34.5%) were colonized with *S. aureus* and out them 22 (24.7%) were carriers of MRSA, giving an overall MRSA nasal carriage rate of 8.5% (22/258). One patient acquired MRSA while admitted in the hospital. Most of the *S. aureus* isolates 85 (95.5%) were resistant to penicillin. Resistance to gentamycin, ciprofloxacin, kanamycin, linezolid and mupirocin were 14.6, 11.2, 11.2, 3.4 and 1.1%, respectively. The prevalence of inducible clindamycin resistance, constitutive clindamycin resistance, MS phenotype (resistance to erythromycin alone), and multidrug resistance was 21.3, 3.4, 12.4, and 16.9%, respectively. We observed a statistically significant association between MRSA and multiple drugs resistance among *S. aureus* isolates ($p = 0.001$). Of the risk factors investigated none were statistically significant associated with MRSA. **Conclusion:** There is a high prevalence of MRSA among patients on admission at the two municipal hospitals in Dar es Salaam. The high prevalence of MRSA and the increased rates of resistance to commonly used antimicrobials among MRSA isolates call for attention to the importance of including the screening of MRSA in our hospitals setting in order to prevent further spread of MRSA strains to other patients and to the communities. Control and prevention strategies should be emphasized including decolonization.

4. Afadhali, D. R. (2017). Preperitoneal pelvic kidney: Revisiting the significance of variant anatomy to the clinician of the future.

Abstract

The kidneys are retroperitoneal organs applied to the posterior abdominal wall. Renal ectopia and structural alterations are of clinical significance. Most renal ectopia occurs in the pelvis and has a strong association with genitourinary pathologies. I the present study we report a rare case of bilateral pre-peritoneal pelvic renal ectopia with aberrant size, structure and renal vasculature. The ectopic kidneys displaced the pelvic viscera inferiorly. This pre-peritoneal

position of the kidney is rarely reported. The aberrant kidneys bore an atypical internal structure with renal pelvis deeply situated into the parenchyma. These anatomical variations are not mentioned in the common standard anatomy text books for medical students and surgical residents. Due to their common occurrence, however, renal ectopia should be emphasized in normal anatomy class for medical students and surgical residents. Routine clinical guidelines should take into considerations these variations.

5. Afadhali, D. R., Flora, M. F. *(2017).* A unique quadrifurcation of the sciatic nerve in the lower leg.

Abstract

Sciatic nerve is the largest nerve of the body supplying the entire posterior aspect of the lower limb. Taking its origin from the lumbosacral plexus, the nerve divides into its terminal branches at the superior angle of the popliteal fossa. Variant division patterns of the nerve especially those occurring in the thigh and the popliteal fossa are common. Divisions of the nerve occurring in the leg are rare. Even much rarer are terminations involving multiple branching patterns. Variations in the course and distribution of the sciatic nerve are of great importance in neurology, orthopedics, rehabilitation, anesthesia and many other clinical procedures. In the present study, we report a unique quadrifurcation termination of the sciatic nerve occurring deep in the distal half of the leg as observed during routine dissection by the medical students. Due to its variant muscular innervations, quadrifurcation and low divisions of the sciatic nerve may be of great importance in procedures such fracture management of the leg and foot, physiotherapy, limb amputation and in sports medicine. Embryologically, late separation of the common nerve sheath into individual terminal branches may lead to the lower division of the nerve.

6. Afadhali, D. R., Nuru, L. M., Rehema, C. M. *(2017).* Tackling the grassroots: appraisal of career choice and prospects of the students at a medical school in Tanzania.

Abstract

Tanzania has one of the world's worst doctor-to-population ratio. Ironically, the number of medical graduates who do not practice medicine remains very high. Lack of interest and commitment of the young doctors may greatly contribute to the huge number of non-

practicing doctors. We assessed medical students' career views from interest and choice during childhood, their current learning motivations, future career expectations and interest to work in the academia. One hundred and ninety-five students halfway their first year of medical school complete a self-administered questionnaire with a verbal consent sought from each respondent. Four in every ten students had made their decision to become a doctor before or during primary school. Over 5 out of 10 students made their choice during secondary school. Majority chose medicine due to altruistic and humanity reasons and would prefer work in clinical practice in the hospital. Very few would prefer a faculty job. Knowing about the human body, controlling and managing diseases are the main motivating factors. 'Too much to learn' and 'tight schedules' were the most aspect and deterrent factors during the medical school and the medical profession in general. Attaining a higher academic honour such as a professorship would not inspire students into the academia. Majority of students make their medical career choice early in life driven by altruistic reasons. Poor learning environments disenchant them from the passion for the career. More studies are needed to assess and improve the training in medicine.

7. Alex, Z., Richard, Y. M. K., Andrew, A., Moses, M. T., Jackson, M., Naome, J. S., Esther, E. A. (2017). Analysis of Farmer's Choices for Climate Change Adaptation Practices in South-Western Uganda, 1980–2009.

Abstract

Climate change is a serious threat to the livelihoods of rural communities, particularly in mountainous areas because they are very sensitive to such changes. In this study, we assessed the household determinants to climate change adaptation drawing from a case study of agricultural adaptation in the Mount Rwenzori area of South Western Uganda. The study identified the major adaptation practices that are adopted by farmers to cope with the impacts of climate change and using available on-farm technologies. A total of 143 smallholder farmers were sampled and interviewed using field based questionnaires, field observations, and key informant interviews. Data was cleaned, entered and analysed using SPSS and Stata software for descriptive statistics. Thereafter, a Multinomial logistic regression model was used to assess the drivers of farmers' choice for adaptation practices, factors influencing the choice of adaptation, and barriers. The major adaptation practices that were identified included; use of different crop varieties, tree planting, soil and water conservation, early and late planting, and furrow irrigation. Discrete choice model results indicated the age of the

household head, experience in farming, household size, climate change shocks, land size, use of agricultural inputs, landscape position (location), and crop yield varied significantly ($p > 0.05$), which influenced farmers' choice of climate change adaptation practices. The main barriers to adaptation included inadequate information on adaptation methods and financial constraints, leading us to conclude that contextual adaptation practices are more desirable for adoption to farmers. Adapting to climate change needs support from government and other stakeholders; however, the implementation is more successful when appropriate and suitable choices are employed.

8.Alfa, J. M., Marina, A. N., Rose, N. M. M., Bikolimana, G. M., Amani, A., Omary, C., Sulende, K., Benjamin, L., Mwanamkuu, M., Davis, N. (2018). Elevated blood pressure among primary school children in Dar es salaam, Tanzania: prevalence and risk factors **https://doi.org/10.1186/s12887-018-1052-8**

Abstract

Background: Whilst the burden of non-communicable diseases is increasing in developing countries, little data is available on blood pressure among Tanzanian children. This study aimed at determining the blood pressure profiles and risk factors associated with elevated blood pressure among primary school children in Dar es Salaam, Tanzania.**Methods:** We conducted a cross sectional survey among 446 children aged 6–17 years from 9 randomly selected primary schools in Dar es Salaam. We measured blood pressure using a standardized digital blood pressure measuring machine (Omron Digital HEM-907, Tokyo, Japan). We used an average of the three blood pressure readings for analysis. Elevated blood pressure was defined as average systolic or diastolic blood pressure $\geq$ 90th percentile for age, gender and height. **Results:** The proportion of children with elevated blood pressure was 15.2% (pre-hypertension 4.4% and hypertension 10.8%). No significant gender differences were observed in the prevalence of elevated BP. Increasing age and overweight/obese children were significantly associated with elevated BP ($p = 0.0029$ and $p < 0.0001$) respectively. Similar associations were observed for age and overweight/obesity with hypertension. ($p = 0.0506$ and $p < 0.0001$) respectively. In multivariate analysis, age above 10 years (adjusted RR = 3.63, 95% CI = 1.03–7.82) was significantly and independently associated with elevated BP in this population of school age children. **Conclusions:** We observed a higher proportion of elevated BP in this population of school age children. Older age and overweight/obesity were associated with elevated BP. Assessment of BP and BMI should be incorporated in

school health program in Tanzania to identify those at risk so that appropriate interventions can be instituted before development of associated complications.

9. Allisyn, C. M., Danielle, C., Supriya, M., Kumudha, A., Marie, D., Fatuma, M., Monica, O., Alfonso, R., Vandana, S., Michael, C., Neal, B., and James, M. S. (2017) Methodology for a mixed-methods multi-country study to assess recognition of and response to maternal and newborn illness.
https://doi.org/10.1186/s41043-017-0119-8

Abstract

Background: Although maternal and newborn mortality have decreased 44 and 46% respectively between 1990 and 2015, achievement of ambitious Sustainable Development Goal targets requires accelerated progress. Mortality reduction requires a renewed focus on the continuum of maternal and newborn care from the household to the health facility. Although barriers to accessing skilled care are documented for specific contexts, there is a lack of systematic evidence on how women and families identify maternal and newborn illness and make decisions and subsequent care-seeking patterns. The focus of this multi-country study was to identify and describe illness recognition, decision-making, and care-seeking patterns across various contexts among women and newborns who survived and died to ultimately inform programmatic priorities moving forward. **Methods:** This study was conducted in seven countries—Ethiopia, Tanzania, Uganda, Nigeria, India, Indonesia, and Nepal. Mixed-methods were utilized including event narratives (group interviews), in-depth interviews (IDIs), focus group discussions (FDGs), rapid facility assessments, and secondary analyses of existing program data. A common protocol and tools were developed in collaboration with study teams and adapted for each site, as needed. Sample size was a minimum of five cases of each type (e.g., perceived postpartum hemorrhage, maternal death, newborn illness, and newborn death) for each study site, with a total of 84 perceived PPH, 45 maternal deaths, 83 newborn illness, 55 newborn deaths, 64 IDIs/FGDs, and 99 health facility assessments across all sites. Analysis included coding within and across cases, identifying broad themes on recognition of illness, decision-making, and patterns of care seeking, and corresponding contextual factors. Technical support was provided throughout the process for capacity building, quality assurance, and consistency across sites. **Conclusion:** This study provides rigorous evidence on how women and families recognize and respond to maternal

and newborn illness. By using a common methodology and tools, findings not only were site-specific but also allow for comparison across contexts.

10. Ambikile, JS., Iseselo, MK.(2017).Mental health care and delivery system at Temeke hospital in Dar es Salaam, Tanzania.
DOI: 10.1186/s12888-017-1271-9

Abstract

Background: Low and middle income countries face many challenges in meeting mental health needs in their regions. Treatment of patients with mental disorders is inadequate in most of these countries and majority of individuals with severe mental disorders remain untreated. The bad news is that mental health problems in these countries are on the rise due to socioeconomic challenges being faced. Regardless of guidelines and directives provided by WHO for organizing mental health services, these countries continue to face many challenges in the effort to cater for mental health needs. Such challenges include lack of human resource for mental health especially at primary health care level, inadequate training of human resource for mental health, misplacement of human resource for mental health, lack of drugs, wrong priorities, problematic insurance coverage for mental disorders, and stigma. This study aimed at exploring mental health care and delivery system at Temeke district hospital, and how services were organized to meet the increasing mental health needs of its *population.* **Methods:** A qualitative study was conducted at Temeke hospital in Dar es Salaam, involving 7 in-depth interviews with mental health care providers, 7 in-depth interviews with mentally ill patients, and 2 focus group discussions with caregivers. A convenient sampling procedure was used to select participants for the study. All interviews were audio-recorded in Kiswahili and transcribed. A qualitative Content Analysis was used to analyze data after translation with the aid of Nvivo 10 *software.* **Results:** Three main themes were identified. These were resource challenges, environmental/system challenges, and satisfaction with mental health services. Temeke health facility faced resource and environmental/system challenges, and there were mixed feelings on satisfaction with services. Funding and priority issues were found to mainly affect delivery of appropriate services to *clients.* **Conclusion:** Health facilities that provide mental health services in the community need to be well equipped with necessary resources to meet the vast needs of people they serve. Having a political will, improving the health systems governance for mental health, and priority setting, are necessary to address the challenges experienced in the delivery of mental health services.

Keywords: Challenges of mental health services; Meeting mental health needs; mental health care; mental health services.

11. Amos, R. M., Nyanda, E. L., Ally, M. (2017). Characterization of hormonal receptors and human epidermal growth factor receptor-2 in tissues of women with breast cancer at Muhimbili National Hospital, Dar es salaam, Tanzania.
https://doi.org/10.1186/s13027-017-0170-5

Abstract

Background: Breast cancer is a leading cause of morbidity and deaths among women worldwide. In Tanzania there is no published data on human epidermal growth receptor-2 (HER2/neu) expression in breast carcinoma. Hormonal receptors and HER2/neu status reportedly influence post-mastectomy adjuvant therapy and predict treatment outcome and prognosis. Here weevaluate hormonal receptors and HER-2 status in biopsies of women with breast cancer at Muhimbili National Hospital (MNH). **Methods:** A cross-sectional study of female breast post-modified radical mastectomy (MRM)/incisional biopsies confirmed to be carcinoma at the Histopathology Unit (January–December 2013). Tissue blocks having poor morphology, without tumor, secondary tumors, cases outside the study period and male patients were excluded. Routine staining was done followed by immunohistochemistry for estrogen (ER), and progesterone (PgR) receptors and HER2. Data analyzed using Statistical Package for Social Sciences (SPSS). Results: A total of 218 cases were confirmed to be carcinoma including 70 meeting inclusion criteria. Age at diagnosis ranged 18–75 years and mean age was 48.36 years. Majority (64.3%) were in the 36–55 years' age-group. Histologically, most (88.6%) women had invasive ductal carcinoma including 43.1% of intermediate grade. A great majority (78%) were stage three. Due to logistical constrains, 75.7% (n = 53/70) cases where immunostained for hormones including 43.4% (ER+), 26.4% (PgR+), and 28% (ER+/PgR+). Furthermore, 65.7% (n = 46/70) cases were immunostained for HER-2 and 15.2% (n = 7/46) were positive, 45.6% were triple negative (ER-,PgR-,HER2-), 23.9% (ER+,PgR+,HER2-) or luminal B, 2.2% (ER+,PgR-,HER2+),13% (ER-,PgR-,HER2+) and 15% (ER+,PgR-,HER2-) with none being triple positive.**Conclusions:**Hormonal receptors and HER2 expression at MNH appears to be comparable to previous Africans/African Americans reports but not with studies among Caucasians and the current proportion of triple negative breast carcinomas (TNBC) is higher than in a previous Tanzanian report and majority are luminal. HER2 over-expression is

relatively common. It is strongly recommended that receptor status assessment be made routine for breast cancer patients at MNH.

12. Andrew, M., Januarius, H., and Hussein, K. (2017). Is time of birth a predictor of adverse perinatal outcome? A hospital-based cross-sectional study in a low-resource setting, Tanzania.

DOI 10.1186/s12884-017-1358-9

Abstract

Background: Inconsistent evidence of a higher risk of adverse perinatal outcomes during off-hours compared to office hours necessitated a search for clear evidence of an association between time of birth and adverse perinataloutcomes. **Methods**: A cross-sectional study conducted at a tertiary referral hospital compared perinatal outcomes across three working shifts over 24 h. A checklist and a questionnaire were used to record parturient' sociodemographic and obstetric characteristics, mode of delivery and perinatal outcomes, including 5th minute Apgar score, and early neonatal mortality. Risks of adverse outcomes included maternal age, parity, referral status and mode of delivery, and were assessed for their association with time of delivery and prevalence of fresh stillbirth as a proxy for poorperinatal outcome at a significance level of p = 0.05.**Results**: Off-hour deliveries were nearly twice as likely to occur during the night shift (odds ratio (OR), 1.62; 95%confidence interval (CI), 1.50–1.72), but were unlikely during the evening shift (OR, 0.58; 95% CI, 0.45–0.71) (all p < 0.001). Neonatal distress (O.R, 1.48, 95% CI; 1.07–2.04, p = 0.02), early neonatal deaths (OR, 1.70; 95% CI, 1.07–2.72, p = 0.03) and fresh stillbirths (OR, 1.95; 95% CI, 1.31–2.90, p = 0.001) were more significantly associated with deliveries occurring during night shifts compared to evening and morning shifts. However, fresh stillbirths occurring during thenight shift were independently associated with antenatal admission from clinics or wards, referral from another hospital, and abnormal breech delivery (OR 1.9; 95% CI, 1.3–2.9, p = 0.001, for fresh stillbirths; OR, 5.0; 95% CI 1.7–8.3,p < 0.001, for antenatal admission; OR, 95% CI, 1.1–2.9, p < 0.001, for referral form another hospital; and OR 1.6; 95% CI1.02–2.6, p = 0.004, for abnormal breech deliveries).**Conclusion**: Off-hours deliveries, particularly during the night shift, were significantly associated with higher proportions of adverse perinatal outcomes, including low Apgar score, early neonatal death and fresh stillbirth, compared to morning and evening shifts. Labour room admissions from

antenatal wards, referrals from another hospital and abnormal breech delivery were independent risk factors for poor perinatal outcome, particularly fresh stillbirths.

13. Anne, M. D., Chloe, R. M., Willy, S. U., Kevin, C. K., Ramadhani, S. M., Wafaie, W. F. (2017). Maternal Dietary L-Arginine and Adverse Birth Outcomes in Dar es Salaam, Tanzania.

https://doi.org/10.1093/aje/kwx080

Abstract

The amino acid arginine is a physiological precursor to nitric oxide, which is a key mediator of embryonic survival, fetal growth, and pregnancy maintenance. We evaluated the association between consumption of the amino acid arginine and the rate of adverse birth outcomes using data from a double-blind, randomized, placebo-controlled micronutrient supplementation trial among pregnant women in Dar es Salaam, Tanzania (2001–2004). Dietary intakes of arginine were assessed using repeated 24-hour recalls that were administered throughout pregnancy. Participants (n = 7,591) were monitored by research midwives throughout follow-up to assess pregnancy outcomes. Cubic-restricted splines and multivariable Log-Poisson regression with empirical standard errors were used to estimate the continuous and categorical associations between arginine intake and adverse birth outcomes. Compared with women within the lowest quintile of arginine intake, those within the highest quintile had 0.79 times the risk of preterm birth before 37 weeks (95% confidence interval: 0.63, 1.00; P = 0.03). The continuous associations of arginine intake with preterm birth before 37 weeks and with preterm birth before 34 weeks were characterized by an initial rapid decrease in risk with increasing intake (P for nonlinearity < 0.01). Arginine intake was not associated with fetal loss or giving birth to infants who were born small for their gestational ages. This data suggests that the association between dietary arginine intake and preterm birth warrants further investigation.

14. Anushka, M.W. J, M.D. (2017). Cacao biotechnology: current status and future prospects.

DOI: 10.1111/pbi.12848

Summary

Theobroma cacao—The Food of the Gods, provides the raw material for the multibillion dollar chocolate industry and is also the main source of income for about 6 million smallholders around the world. Additionally, cocoa beans have a number of other nonfood uses in the pharmaceutical and cosmetic industries. Specifically, the potential health benefits of cocoa have received increasing attention as it is rich in polyphenols, particularly flavonoids. At present, the demand for cocoa and cocoa-based products in Asia is growing particularly rapidly and chocolate manufacturers are increasing investment in this region. However, in many Asian countries, cocoa production is hampered due to many reasons including technological, political and socio-economic issues. This review provides an overview of the present status of global cocoa production and recent advances in biotechnological applications for cacao improvement, with special emphasis on genetics/genomics, *in vitro* embryogenesis and genetic transformation. In addition, in order to obtain an insight into the latest innovations in the commercial sector, a survey was conducted on granted patents relating to *T. cacao* biotechnology.

15. Asli, B., Lilli, P., Philipp, M., Marco, M., Antelmo, H., Lwitiho, S., Charlotta, N., Bahati K., Cornelia, L., Maria, M., Patricia, J. M., Leonard, M., Merlin, L. R., Sodsai, T., Gustavo, K., Mary, M., Sheena, M., Sarah, J., Eligius, L., Britta, W., Eric, S., Gunnel, B., Michael, H., Muhammad, B., Arne, K., Christof, G. (2017). Preferential Targeting of Conserved Gag Regions after Vaccination with a Heterologous DNA Prime-Modified Vaccinia Virus Ankara Boost HIV-1 Vaccine Regimen.

Abstract

Prime-boost vaccination strategies against HIV-1 often include multiple variants for a given immunogen for better coverage of the extensive viral diversity. To study the immunologic effects of this approach, we characterized breadth, phenotype, function, and specificity of Gag-specific T cells induced by a DNA-prime modified vaccinia virus Ankara (MVA)-boost vaccination strategy, which uses mismatched Gag immunogens in the TamoVac 01 phase IIa trial. Healthy Tanzanian volunteers received three injections of the DNA-SMI vaccine encoding a subtype B and AB-recombinant Gagp37 and two vaccinations with MVA-CMDR encoding subtype A Gagp55. Gag-specific T-cell responses were studied in 42 vaccinees using fresh peripheral blood mononuclear cells. After the first MVA-CMDR boost, vaccine-

induced gamma interferon-positive (IFN-γ+) Gag-specific T-cell responses were dominated by CD4+ T cells (P < 0.001 compared to CD8+ T cells) that coexpressed interleukin-2 (IL-2) (66.4%) and/or tumor necrosis factor alpha (TNF-α) (63.7%). A median of 3 antigenic regions were targeted with a higher-magnitude median response to Gagp24 regions, more conserved between prime and boost, compared to those of regions within Gagp15 (not primed) and Gagp17 (less conserved; P < 0.0001 for both). Four regions within Gagp24 each were targeted by 45% to 74% of vaccinees upon restimulation with DNA-SMI-Gag matched peptides. The response rate to individual antigenic regions correlated with the sequence homology between the MVA- and DNA Gag-encoded immunogens (P = 0.04, r2 = 0.47). In summary, after the first MVA-CMDR boost, the sequence-mismatched DNA-prime MVA-boost vaccine strategy induced a Gag-specific T-cell response that was dominated by polyfunctional CD4+ T cells and that targeted multiple antigenic regions within the conserved Gagp24 protein.

16. Ayesha, S., Emily, R. S., Karim, M., Christopher, D., Honorati, M., Rodrick, K., Gernard, M., Willy, U., Wafaie, F. (2018). Neonatal and Infant Mortality Risk Associated with Preterm and Small for Gestational Age Births in Tanzania: Individual Level Pooled Analysis Using the Intergrowth Standard.
DOI: https://doi.org/10.1016/j.jpeds.2017.09.007

Abstract

Objectives: To evaluate the risk of newborn and infant mortality associated with preterm, small for gestational age (SGA), and low birth weight (LBW) stratified by maternal HIV status and the location of birth. Study design: We created a prospective cohort by pooling 5 individually randomized trials. We used Cox proportional hazard models to estimate the risk of mortality for SGA defined using the recently published Intergrowth standard, preterm, LBW, and gestational age and size for gestational age categories (preterm- appropriate for gestational age [AGA], term-SGA, and preterm-SGA). Effect modification by maternal HIV status and place of residence was assessed using the likelihood ratio test. **Results:** Of the 31 988 infants, 15.3% were preterm, 16.6% were SGA, and 7.3% were LBW. The proportion of preterm and SGA births was higher among the HIV-infected cohort than in the uninfected cohort. Compared with term-AGA groups, infants born both preterm and SGA had a greater risk of neonatal mortality (hazard ratio [HR] 5.43, 95% CI 2.01-14.63) than preterm-AGA

infants (HR 2.40, 95% CI 1.89-3.05) and term-SGA infants (HR 2.56, 95% CI 1.96-3.34). Maternal HIV infection modified the risk of infant mortality associated with being born preterm or LBW, with a higher relative risk among those born to HIV-uninfected women. Rural residence significantly modified the risk of neonatal mortality associated with being LBW (P for interaction = .005). **Conclusions:** Preterm and SGA newborns had an increased risk of mortality during the first year of life. Interventions targeting these conditions, especially in HIV-exposed and rural populations, should be integrated into existing maternal and child health programs.

17. **Baker, T., K., Acicbe, O., McGloughlin, S., Amin, P.(2017).Critical care of tropical disease in low income countries: Report from the Task Force on Tropical Diseases by the World Federation of Societies of Intensive and Critical Care Medicine.**
DOI: 10.1016/j.jcrc.2017.11.028

Abstract.

Tropical disease results in a great burden.Of critical illness. The same life-saving and supportive therapies to maintain vital organ functions that comprise critical care are required by these patients as for all other diseases. In low income countries, the little available data points towards high mortality rates and big challenges in the provision of critical care. Improving critical care in low income countries requires a focus on hospital design, training, triage, monitoring & treatment modifications, the basic principles of critical care, hygiene and the involvement of multi-disciplinary teams. As a large proportion of critical illness from tropical disease is in low income countries, the impact and reductions in mortality rates of improved critical care in such settings could be substantial. **Keywords**: Critical care; Developing countries; Neglected diseases; Quality improvement; Quality of health care; Tropical medicine.

18.Bauer, A., Podola, L.,Mann, P., Missanga, M., Haule, A., Sudi, L., Nilsson, C., Kaluwa, B., Lueer, C., Mwakatima, M., Munseri, PJ., Maboko, L., Robb, ML., Tovanabutra, S., Kijak, G., Marovich, M., McCormack, S., Joseph, S., Lyamuya, E., Wahren, B., Sandström, E., Biberfeld, G., Hoelscher, M., Bakari, M., Kroidl, A., Geldmacher,C.(2017).Preferential Targeting of Conserved Gag Regions after Vaccination with a Heterologous DNA Prime-Modified Vaccinia Virus Ankara Boost HIV-1 Vaccine Regimen.

Doi: 10.1128/JVI.00730-17.

Abstract

Prime-boost vaccination strategies against HIV-1 often include multiple variants for a given immunogenic for better coverage of the extensive viral diversity. To study the immunologic effects of this approach, we characterized breadth, phenotype, function, and specificity of Gag-specific T cells induced by a DNA-prime modified vaccinia virus Ankara (MVA)-boost vaccination strategy, which uses mismatched Gag immunogens in the TamoVac 01 phase IIa trial. Healthy Tanzanian volunteers received three injections of the DNA-SMI vaccine encoding a subtype B and AB-recombinant Gag_{p37} and two vaccinations with MVA-CMDR encoding subtype A Gag_{p55} Gag-specific T-cell responses were studied in 42 vaccinees using fresh peripheral blood mononuclear cells. After the first MVA-CMDR boost, vaccine-induced gamma interferon-positive (IFN-γ^+) Gag-specific T-cell responses were dominated by $CD4^+$ T cells ($P< 0.001$ compared to $CD8^+$ T cells) that expressed interleukin-2 (IL-2) (66.4%) and/or tumor necrosis factor alpha (TNF-α) (63.7%). A median of 3 antigenic regions were targeted with a higher-magnitude median response to Gag_{p24} regions, more conserved between prime and boost, compared to those of regions within Gag_{p15} (not primed) and Gag_{p17} (less conserved; $P< 0.0001$ for both). Four regions within Gag_{p24} each were targeted by 45% to 74% of vaccinees upon restimulation with DNA-SMI-Gag matched peptides. The response rate to individual antigenic regions correlated with the sequence homology between the MVA- and DNA Gag-encoded immunogens ($P = 0.04$, $r^2 = 0.47$). In summary, after the first MVA-CMDR boost, the sequence-mismatched DNA-prime MVA-boost vaccine strategy induced a Gag-specific T-cell response that was dominated by polyfunctional $CD4^+$ T cells and that targeted multiple antigenic regions within the conserved Gag_{p24} protein. **Importance** Genetic diversity is a major challenge for the design of vaccines against variable viruses. While including multiple variants for a given immunogenic in

prime-boost vaccination strategies is one approach that aims to improve coverage for global virus variants, the immunologic consequences of this strategy have been poorly defined so far. It is unclear whether inclusion of multiple variants in prime-boost vaccination strategies improves recognition of variant viruses by T cells and by which mechanisms this would be achieved, either by improved cross-recognition of multiple variants for a given antigenic region or through preferential targeting of antigenic regions more conserved between prime and boost. Engineering vaccines to induce adaptive immune responses that preferentially target conserved antigenic regions of viral vulnerability might facilitate better immune control after preventive and therapeutic vaccination for HIV and for other variable viruses**.**
Keywords: Gag; T cells; human immunodeficiency virus; vaccines.

19. Beatrice, M., Gorrette, N., Mike, K., Khadija, M., Lilian, M., and Shigeko, H. (2018). Knowledge of danger signs during pregnancy and subsequent healthcare seeking actions among women in Urban Tanzania: a cross-sectional study.

https://doi.org/10.1186/s12884-017-1628-6

Abstract

Background: Tanzania is among the countries with a high maternal mortality ratio. However, it remains unclear how information and education on danger signs of pregnancy translate into appropriate actions when a woman recognizes danger signs. This study aimed to determine women's knowledge of obstetric danger signs during pregnancy and their subsequent healthcare seeking actions. **Methods:** The study design was a health facility-based cross-sectional study. Quantitative data were collected through interviewer-administered questionnaires. Descriptive and inferential statistics were used to analyze the data. The study enrolled 384 women from two health centers in Kinondoni Municipality, Dar es Salaam, Tanzania. A woman who had not mentioned any danger sign was categorized as having no knowledge, mentioned one to three danger signs as having low knowledge, and mentioned four or more danger signs as having sufficient knowledge. **Results:** Among the 384 participants, 67 (17.4%) had experienced danger signs during their pregnancy and reported their healthcare seeking actions after recognizing the danger signs. Among those who recognized danger signs, 61 (91%) visited a healthcare facility. Among the 384 participants, five (1.3%) had no education, 175 (45.6%) had primary education, 172 (44.8%) had secondary education, and 32 (8.3%) had post-secondary education as their highest

educational levels. When asked to spontaneously mention the danger signs, more than half of the participants (n = 222, 57.8%) were able to mention only one to three danger signs. Only 104 (31%) had correct knowledge of at least four danger signs and nine (2.7%) were not able to mention any item. The most commonly known pregnancy danger signs were vaginal bleeding (81%); swelling of the fingers, face, and legs (46%); and severe headache (44%). Older women were 1.6 times more likely to have knowledge of danger signs than young women (OR 1.61; 95% CI 1.05-2.46)". **Conclusion:** Women took appropriate healthcare seeking action after recognizing danger signs during pregnancy. However, the majority had low knowledge of pregnancy danger signs. Additional studies are warranted to address the knowledge gap and to plan interventions for improving health education under limited resource settings.

20. Beth, M. A. (2017). Integrated Health Care Systems and Indigenous Medicine: Reflections from the Sub-Sahara African Region.
https://doi.org/10.3389/fsoc.2017.00012

Abstract

Indigenous or traditional medicine has, since the 1970s, been widely regarded as a resource likely to contribute to strengthening the health care systems in low income countries. This paper examines the state of traditional medicine using evidence from three case studies in Central Kenya. While the cases are too few to represent the broad diversity of cultures and related healing systems in the Sub-Sahara African Region, the way they seem to refute the main assumptions in the integration discourse is important, also because studies from other countries in the region report perspectives, similar to the case studies in Kenya. It is often argued that people continue to use traditional medicine because it is affordable, available, and culturally familiar. Its integration into the health care system would therefore promote cultural familiarity. The case studies however point to the loss of essential cultural elements central to traditional medicine in this particular area while users travel long distances to reach the healers. In addition, there are significant paradigm differences that may present obstacles to integration of the two systems. More problematic however is that integration is, as in many development interventions, a top-down policy that is rarely based on contextual realities and conditions. Instead, integration is often defined and dominated by biomedical professionals and health planners who may be unfamiliar or even hostile to some aspects of traditional medicine. Furthermore, integration efforts have tended to embrace selected components

mostly herbal medicine. This has led to isolating herbal medicine from spiritualism, which may in turn affect the holistic perspective of traditional medicine. While familiarity and relevance may explain the continued use of traditional medicine, its services may not be as readily available, accessible, or even affordable as is often asserted. Globalization set in motion through colonization and ensuing modernization processes, including urbanization, education, religion, and a neo-liberal economic system, have introduced a social order creating physical as well as social distances between users of traditional medicine and the healers.

21. Boniface, R., Lugazia, ER., Ntungi, AM., Kiloloma, O.(2017).Management and outcome of traumatic brain injury patients at Muhimbili Orthopedic Institute Dar es Salaam, Tanzania.

Doi: 10.11604/pamj.2017.26.140. 10345.

Abstract

Introduction: Traumatic brain Injuries represents a significant cause of morbidity and mortality worldwide and road traffic crashes accounts for a significant proportion of these injuries. However, access to neurosurgical care is poor in low income countries like Tanzania. The aim of this study was to assess the management and outcome of Traumatic brain injury patients at a tertiary level health facility in Tanzania. **Methods:** A retrospective observational study of Traumatic brain injury patients attended at Muhimbili Orthopedic Institute between January 2014 and June 2014.

Results: A total of 627 Traumatic brain injury (TBI) patients were seen, 86% were males. Majority (73%) were between 15 - 45 years age group. Road traffic crashes were the leading cause of injury (59.3%). Majority 401/627 (64%) sustained mild TBI, 114/627 (18.2%) moderate TBI and 112/627 (17.8%) severe TBI. All mild TBI patients had good recovery. Among patients with moderate and severe TBI; 19.1% had good recovery, 50.2% recovered with disabilities and 30.7% died. Independent factors associated with mortality were: Severe TBI (Odds Ratio (OR) 3.16. 95%CI 3.42-10.52) and Systolic blood pressure at referring hospital of more than 90mmHg (Odds Ratio (OR) 0.13, 95%CI 0.04-0.49). **Conclusion:** Traumatic brain injury is a public health problem in Tanzania, mostly due to road traffic crashes. It is therefore important to reinforce preventive measures for road traffic crashes. There is also a need to develop and implement protocols for pre-hospital as well as in-

hospital management of brain trauma in Tanzania. **Keywords:** Tanzania; Traumatic brain injury; road traffic crashes.

22. Bridget, C., Harrington, C., Linda, K., Mutale, W. (2018). HIV/AIDS workplace policy addressing epidemic drivers through workplace programs.

https://doi.org/10.1186/s12889-018-5072

Abstract

Background: HIV workplace policies have become an important tool in addressing the HIV Pandemic in Sub-Saharan Africa. In Zambia, the National AIDS Council has been advocating for establishing of HIV/AIDS workplace policies to interested companies, however no formal evaluation has been done to assess uptake and implementation. The study aimed to establish the existence of HIV/AIDS policies and programs in the private sector and to understand implementation factors and experiences in addressing HIV epidemic drivers through these programs. **Methods:** A mixed method assessment of the availability of policies was conducted in 128 randomly selected member companies of Zambia Federation of Employers in Lusaka. Categorized variables were analysed on Policy and programs using Stata version 12.0 for associations: Concurrently, 28 in-depth interviews were conducted on purposively sampled implementers. Qualitative results were analysed thematically before integrating them with qualitative findings. **Results:** Policies were found in 47/128 (36.72%) workplaces and the private sector accounted for 34/47 (72.34%) of all workplaces with a policy. Programs were available in 56/128 (43.75%) workplaces. The availability of policy was 2.7 times more likely to occur with increased size of a workplace, P value = 0.0001, ($P < 0.05$). Management support was 0.253 times more likely to occur in workplaces with policy, P value = 0.013, ($P < 0.05$) compared to those without. Having a specific budget for programs was 0.23 times more likely to occur in workplaces with a policy ($P < 0.05$) than those without a policy. Implementation was hindered by reduced funding, lack of time, sensitization and lack of monitoring/evaluation systems.HIV awareness (56/56, 100%) and HIV/AIDS/Stigma (47/56, 83.93%) were the most addressed epidemic drivers through programs while Mother to Child Transmission (30/56 53.57%) and Males having sex with males were the least addressed (18/56, 32.14%).**Conclusion:**HIV/AIDS policies exist in the private sector at a very low proportion but policy translation was very high suggesting that workplaces with polices are likely to implement programs. The eradication of HIV/AIDS by 2030 requires addressing

epidemic drivers with a focus on marginalized populations, gender integration, a wellness and rights based approach within the context of the legal framework.

23. Bruno, F. S., Nzovu, K. U., Hellen, S., Sarah, P., Eric, A., Expeditho, M., Edith, T., David, P. U., Wafaie, F., Ferdnand, M. (2017). High magnitude of under nutrition among HIV infected adults who have not started ART in Tanzania--a call to include nutrition care and treatment in the test and treat model.
https://doi.org/10.1186/s40795-017-0180-0

Abstract

Background: Undernutrition among people living with HIV (PLWHIV) can be ameliorated if nutrition specific and sensitive interventions are integrated into their HIV care and treatment centers (CTC). Integrated care is lacking despite expansion of antiretroviral therapy (ART) coverage, representing a substantial missed opportunity. This research aims to examine nutritional status and associated risk factors among HIV-positive adults prior to ART initiation in Tanzania in order to characterize existing gaps and inform early integration of nutrition care into CTC.Methods: We analyzed data from 3993 pre-ART adults living with HIV enrolled in CTCs within the Trial of Vitamin (TOV3) and progression of HIV/AIDS study in Dar es salaam, Tanzania. The primary outcome for this analysis was undernutrition, measured as body mass index (BMI) below 18.5 kg/m2. We conducted descriptive analyses of baseline characteristics and utilized multiple logistic regressions to determine independent factors associated with pre-ART undernutrition. **Results:** Undernutrition was prevalent in about 27.7% of pre-ART adults, with a significantly higher magnitude among males compared to females (30% vs. 26.6%, $p < 0.025$). Severe undernutrition (BMI < 16.0 kg/m2) was prevalent in one in four persons, with a trend toward higher magnitudes among females (26.2% vs. 21.1% $p = 0.123$). Undernutrition was also more prevalent among younger adults ($p < 0.001$), those with lower wealth quintiles ($p = 0.003$), and those with advanced HIV clinical stage ($p < 0.001$). Pre-ART adults presented with poor feeding practices, hallmarked by low dietary diversity scores and infrequent consumption of proteins, vegetables, and fruits. After adjusting for confounders and important co-variates, pre-ART undernutrition was associated with younger age, low wealth indices, advanced clinical stage, and low dietary diversity. **Conclusions:** One in every four pre-ART PLWHIV presented with undernutrition in Dar es salaam, Tanzania. Risk factors for undernourishment included younger age, lower household income, advanced HIV clinical stage, and lower dietary diversity score.

Knowledge of the prevalence and prevailing risk factors for undernutrition among pre-ART PLWHIV should guide targeted, early integration of nutrition interventions into routine HIV care and treatment in high-prevalence, low-income settings such as Tanzania.

24. Bugwesa, Z.K., Robert, D.F., Eblate, E.M., Kuya S., Emmanuel, K.B., Mecky, I.M., Julius, D.K., Justice M., Maulid, M., Erasto, V.M. (2017). Screening for bovine tuberculosis in African buffalo (*syncerus caffer*) in Ngorongoro conservation area, northern Tanzania: implications for public health. Journal of Wildlife Diseases 53(4):711-717.

https://doi.org/10.7589/2016-10-223

Abstract

In the Ngorongoro Conservation Area (NCA), Tanzania, where wildlife and livestock interaction is intense, greater potential for intra- and interspecies disease transmission is expected. We assessed the prevalence of bovine tuberculosis in African buffalo (*Syncerus caffer*) residing on the valley floor of the crater in the NCA. Apparently healthy animals were randomly selected from herds in nine sites of the Ngorongoro Crater. *Syncerus caffer* buffalo herds were located using very high-frequency radio-aided rangers positioned in various observation points around the crater in the NCA. A total of 102 African buffalo from 16 herds were immobilized from the ground using a cocktail of 4–10 mg etorphine hydrochloride (M99) and 60–150 mg azaperone tartrate. The M99 was reversed using 10–25 mg diprenorphine hydrochloride depending on age of animals. An interferon gamma assay was performed on harvested plasma samples using sandwich enzyme linked immunosorbent assay. Of the 102 animals sampled, two (2%) African buffalo tested positive for bovine tuberculosis. These results corroborate those of the skin test done recently in cattle in the NCA. The presence of bovine tuberculosis in livestock and wildlife suggested the possibility of cross-species transmission of the disease, indicating the need for appropriate intervention measures.

25. Catherine R.S., Hendry R.S., Brittany L.M., Victor, G.M., Juma A.M. and Michael S.R. (2017). Emergency blood transfusion practices among anaemic children presenting to an urban emergency department of a tertiary hospital in Tanzania. BMC Hematology.17:19

https://doi.org/10.1186/s12878-017-0091-y

Abstract

Background: Severe anaemia contributes significantly to mortality, especially in children under 5 years of age. Timely blood transfusion is known to improve outcomes. We investigated the magnitude of anaemia and emergency blood transfusion practices amongst children under 5 years presenting to the Emergency Department (ED) of Muhimbili National Hospital (MNH) in Tanzania. **Methods:** This prospective observational study enrolled children under 5 years old with anaemia, over a 7-week period in August and September of 2015. Anaemia was defined as haemoglobin of <11 g/dL. Demographics, anaemia severity, indications for transfusion, receipt of blood, and door to transfusion time were abstracted from the charts using a standardized data entry form. Anaemia was categorized as severe (Hb <7 g/dL), moderate (Hb 7–9.9 g/dL) or mild (Hb 10–10.9 g/dL). **Results**: We screened 777 children, of whom 426 (55%) had haemoglobin testing. Test results were available for 388/426 (91%), 266 (69%) of whom had anaemia. Complete data were available for 257 anaemic children, including 42% ($n = 108$) with severe anaemia, 40% ($n = 102$) with moderate anaemia and 18% ($n = 47$) with mild anaemia. Forty-nine percent of children with anaemia ($n = 125$) had indications for blood transfusion, but only 23% (29/125) were transfused in the ED. Among the non-transfused, the provider did not identify anaemia in 42% ($n = 40$), blood was not ordered in 28% ($n = 27$), and blood was ordered, but not available in 30% ($n = 29$). The median time to transfusion was 7.8 (interquartile range: 1.9) hours. Mortality was higher for the children with severe anemia who were not transfused as compared with those with severe anaemia who were transfused (29% vs 10%, $p = 0.03$). **Conclusion**: The burden of anaemia is high among children under 5 presenting to EMD-MNH. Less than a quarter of children with indications for transfusion receive it in the EMD, the median time to transfusion is nearly 8 h, and those not transfused have nearly a 3-fold higher mortality. Future quality improvement and research efforts should focus on eliminating barriers to timely blood transfusion.

26. Christine, H., Leonard, C., Ondari, D.M., Newton, W., Wanze, K., Eric, H., Jie, L., Caroline, O., Clayton, O., Barry, F., Sayoki, M., Joel, M.M. (2017). A combined syndromic approach to examine viral, bacterial, and parasitic agents among febrile patients: a pilot study in kilombero, Tanzania.

DOI: https://doi.org/10.4269/ajtmh.17-0421

Abstract

The use of fever syndromic surveillance in sub-Saharan Africa is an effective approach to determine the prevalence of both malarial and no malarial infectious agents. We collected both blood and naso/oro-pharyngeal (NP/OP) swabs from consecutive consenting patients ≥ 1 year of age, with an axillary temperature ≥ 37.5°C, and symptom onset of ≤ 5 days. Specimens were analyzed using both acute febrile illness (AFI) and respiratory TaqMan array cards (Resp TAC) for multiagent detection of 56 different bloodstream and respiratory agents. In addition, we collected epidemiologic data to further characterize our patient population. We enrolled 205 febrile patients, including 70 children (1 < 15 years of age; 34%) and 135 adults (≥ 15 years of age; 66%). AFI TAC and Resp TAC were performed on 191 whole blood specimens and 115 NP/OP specimens, respectively. We detected nucleic acid for Plasmodium (57%), Leptospira (2%), and dengue virus (1%) among blood specimens. In addition, we detected 17 different respiratory agents, most notably, Haemophilus influenza (64%), Streptococcus pneumonia (56%), Moraxella catarrhal is (39%), and respiratory syncytial virus (11%) among NP/OP specimens. Overall median cycle threshold was measured at 26.5. This study provides a proof-of-concept for the use of a multiagent diagnostic approach for exploratory research on febrile illness and underscores the utility of quantitative molecular diagnostics in complex epidemiologic settings of sub-Saharan Africa.

27. Christopher R.S., Kaaya, S.,Nilupa S., N.S., Mugusi, F., Fawzi, W.W., S. Aboud, and Smithfawzi, M.C. (2018). Depression at antiretroviral therapy initiation and clinical outcomes among a cohort of Tanzanian women living with HIV.

Doi: 10.1097/QAD.0000000000001323

Abstract

The objective of the study was to assess the relationship of depression at antiretroviral therapy (ART) initiation with mortality and clinical outcomes among Tanzanian women living with HIV. **Design:** We conducted a prospective cohort study of 1,487 women who initiated ART in Dar es Salaam, Tanzania. **Methods:** Symptoms of depression and anxiety were assessed using a Tanzanian adapted and validated version of the Hopkins Symptom Checklist (HSCL-25). Participants attended monthly clinic visits during the first two years of

ART and CD4 T-cell counts were assessed every four months. Proportional hazard models were used to assess the relationship of depression with mortality and clinical outcomes. **Results:** Symptoms consistent with depression were prevalent among 57.8% of women at ART initiation. After multivariate adjustment including social support and stigma, depression at ART initiation was associated with increased risk of mortality (HR: 1.92; 95% CI: 1.15-3.20; p=0.01) and incidence of severe anemia (hemoglobin <8.5 g/dL) (HR: 1.59; 95% CI: 1.07-2.37; p=0.02). Under the assumption of causality, we estimate 36.1% (95% CI: 13.6-55.1%) of deaths among the study cohort were attributable to depression and its consequences. Depression was not significantly associated with trajectory of CD4 T-cell reconstitution or the risk of immunologic failure (p-values >0.05). **Conclusions:** Elimination of depression may reduce mortality during the first two years of ART by one-third in our study cohort. Randomized trials and rigorous implementation studies are needed to evaluate the individual- and population-level effects of integrated mental health interventions and HIV treatment approaches in resouce-limited settings.

28. Christopher, R. S., Karim, P. M., Christopher, P. D., Said, A., Alfa, M., David, M. S., Fadhlun, M. A., Molin, W., Wafaie, W. F. (2017).

https://doi.org/10.1186/s13063-017-2157-3

Abstract

Background: Vitamin D has significant immunomodulatory effects on both adaptive and innate immune responses. Observational studies indicate that adults infected with HIV with low vitamin D status may be at increased risk of mortality, pulmonary tuberculosis, and HIV disease progression. Growing observational evidence also suggests that low vitamin D status in pregnancy may increase the risk of adverse birth and infant health outcomes. As a result, antiretroviral therapy (ART) adjunct vitamin D3 supplementation may improve the health of HIV-infected pregnant women and their children. Methods/design: The Trial of Vitamins-5 (ToV5) is an individually randomized, double-blind, placebo-controlled trial of maternal vitamin D3 (cholecalciferol) supplementation conducted among 2300 HIV-infected pregnant women receiving triple-drug ART under Option B+ in Dar es Salaam, Tanzania. HIV-infected pregnant women of 12–27 weeks' gestation are randomized to either: 1) 3000 IU vitamin D3 taken daily from randomization in pregnancy until trial discharge at 12 months postpartum; or 2) a matching placebo regimen. Maternal participants are followed-up at monthly clinic visits during pregnancy, at delivery, and then with their children at monthly postpartum clinic visits. The primary efficacy outcomes of the trial are: 1) maternal HIV disease progression or death; 2) risk of small-for-gestational age (SGA) births; and 3) risk of infant stunting at 1 year of age. The primary safety outcome of the trial is incident maternal hypercalcemia. Secondary outcomes include a range of clinical and biological maternal and child health outcomes. Discussion: The ToV5 will provide causal evidence on the effect of vitamin D3 supplementation on HIV progression and death, SGA births, and infant stunting

at 1 year of age. The results of the trial are likely generalizable to HIV-infected pregnant women and their children in similar resource-limited settings utilizing the Option B+ approach.

29. Claudia, H., Beatrice, C., Emanuel, F., Macha, I., Gawile, C., Mpangala, S., Ulenga, N., Thio, C., Ammerman, L., Mugusi, F., Fawzi, W., Green, R., Murphy, R. (2017). Brief Report: HIV/HBV coinfection is a significant risk factor for liver fibrosis in Tanzanian HIV-infected adults. JAIDS Journal of Acquired Immune Deficiency Syndromes:

Doi: 10.1097/QAI.0000000000001491

Abstract

Background: In sub-Saharan Africa, the burden of liver disease associated with chronic hepatitis B virus (HBV) and HIV is unknown. We characterized liver disease using aspartate aminotransferase-to-platelet ratio index (APRI) and FIB-4 in patients with HIV, HBV, and HIV/HBV coinfection in Tanzania. **Methods:** Using a cross-sectional design, we compared the prevalence of liver fibrosis in treatment-naive HIV monoinfected, HBV monoinfected, and HIV/HBV-coinfected adults enrolled at Management and Development for Health (MDH)-supported HIV treatment clinics in Dar es Salaam, Tanzania. Risk factors associated with significant fibrosis (APRI >0.5 and FIB-4 >1.45) were examined. **Results:** Two hundred sixty-seven HIV-infected, 165 HBV-infected, and 63 HIV/HBV-coinfected patients were analyzed [44% men, median age 37 (interquartile range 14), body mass index 23 (7)]. APRI and FIB-4 were strongly correlated (r = 0.78, $P< 0.001$, $R^2 = 0.61$). Overall median APRI scores were low {HIV/HBV [0.36 (interquartile range 0.4)], HIV [0.23 (0.17)], HBV [0.29 (0.15)] ($P< 0.01$)}. In multivariate analyses, HIV/HBV coinfection was associated with APRI >0.5 [HIV/HBV vs. HIV: odds ratio (OR) 3.78 (95% confidence interval: 1.91 to 7.50)], [HIV/HBV vs. HBV: OR 2.61 (1.26 to 5.44)]. HIV RNA per 1 $\log_{10}$ copies/mL increase [OR 1.53 (95% confidence interval: 1.04 to 2.26)] and HBV DNA per 1 $\log_{10}$ copies/mL increase [OR 1.36 (1.15, 1.62)] were independently associated with APRI >0.5 in HIV-infected and HBV-infected patients, respectively. **Conclusions:** HIV/HBV coinfection is an important risk factor for significant fibrosis. Higher levels of circulating HIV and HBV virus may play a direct role in liver fibrogenesis. Prompt diagnosis and aggressive monitoring of liver disease in HIV/HBV coinfection is warranted.

30. Claudia, H., Andrea, B.P., Fadhlun, A., Susan, A., Sebalda L., Jessica, M., Frank, K., Gaetano, M. (2017). Evaluating the effect of the Helping Mothers Survive Bleeding after Birth (HMS BAB) training in Tanzania and Uganda: study protocol for a randomized controlled trial.

https://doi.org/10.1186/s13063-017-2056-7

Abstract

Background: Postpartum hemorrhage complicates approximately 10% of all deliveries and contributes to at least a quarter of all maternal deaths worldwide. The competency-based Helping Mothers Survive Bleeding after Birth (HMS BAB) training was developed to support evidence-based management of postpartum hemorrhage. This one-day training includes low-cost Mama Natalie® birthing simulators and addresses both prevention and first-line treatment of hemorrhage. While evidence is accumulating that the training improves health provider's knowledge, skills and confidence, evidence is missing as to whether this translates into improved practices and reduced maternal morbidity and mortality. This cluster-randomized trial aims to assess whether this training package — involving a one-day competency-based HMS BAB in-facility training provided by certified trainers followed by 8 weeks of in-service peer-based practice — has an effect on the occurrence of hemorrhage-related morbidity and mortality. **Methods/design:** In Tanzania and Uganda, we randomize 20 and 18 districts (clusters) respectively, with half receiving the training intervention. We use unblinded matched-pair randomization to balance district health system characteristics and the main outcome, which is in-facility severe morbidity due to hemorrhage defined by the World Health Organization-promoted disease and management-based near-miss criteria. Data are collected continuously in the intervention and comparison districts throughout the 6-month baseline and the 9-month intervention phase, which commences after the training intervention. Trained facility midwives or clinicians review severe maternal complications to identify near misses on a daily basis. They abstract the case information from case notes and enter it onto programmed tablets where it is uploaded. Intention-to-treat analysis will be used, taking the matched design into consideration using paired t test statistics to compare the outcomes between the intervention and comparison districts. We also assess the impact pathway from the effects of the training on the health provider's skills, care and interventions and health system readiness. **Discussion:** This trial aims to generate evidence on the effect and limitations of this well-designed training package supported by birthing simulations. While the lack of blinding of participants and data collectors provides an inevitable limitation of this trial, the additional evaluation along the pathway of implementation will provide solid evidence on the effects of this HMS BAB training package.

31. Colin, M.B., Severin, H., Simon, M., Howard, F., Trevor. C., Honori, M., Hamza, K., Edward, M.K. (2018). Spatial analysis of aerial survey data reveals correlates of elephant carcasses within a heavily poached ecosystem.

https://doi.org/10.1016/j.biocon.

Abstract

Growth of the illegal wildlife trade is a key driver of biodiversity loss, with considerable research focusing on trafficking and trade, but rather less focused on supply. Elephant poaching for ivory has driven a recent population decline in African elephants and is a typical example of illegal wildlife trade. Some of the heaviest poaching has been in Southern

Tanzania's Ruaha-Rungwa ecosystem. Using data from three successive aerial surveys and modern spatial analysis techniques we identify the correlates of elephant carcasses within the ecosystem, from which important information about how poachers operate can be gleaned. Carcass density was highest close to wet-season (but not dry season) waterholes, at higher altitudes and at intermediate travel cost from villages. We found no evidence for an ecosystem-wide impact of ranger patrol locations on carcass abundance, but found strong evidence that different ranger posts showed contrasting patterns in relation to carcasses, some being significantly associated with clusters of carcasses, others showing the expected negative correlation and most showing no pattern at all. Despite a spatial change in elephant carcass locations between years, we find little evidence to suggest poachers have changed their behavior in relation to key modelled covariates. Our maps of poaching activity can feed directly into anti-poaching control measures, but also provide general insights into how illegal harvest of high value wildlife products occurs in the field, and our spatio-temporal analysis provides a valuable analysis framework for aerial survey data from protected areas globally.

32. Crystal, L.P., Carrie, S.K., Alana, D.S., Sebalda, C.L., Heather, P., Kathleen, F.N., (2017). Implementation challenges and outcomes of a randomized controlled pilot study of a group prenatal care model in Malawi and Tanzania.

DOI: 10.1002/ijgo.12324 View/save citation

Abstract

Objective: To identify implementation challenges associated with conducting a randomized controlled trial (RCT) of group prenatal care (PNC) and report outcomes of the pilot. Methods: A multi-site randomized pilot was conducted in Malawi and Tanzania between July 31, 2014, and June 30, 2015. Women aged at least 16 years with a pregnancy of 20–24 weeks were randomly assigned using sealed envelopes (1:1) to individual or group PNC. Structured interviews were conducted at baseline, in the third trimester and 6–8 weeks after delivery. The primary outcomes were attendance at four PNC visits and attendance at the 6-week postnatal visit. Results: The pilot showed that an RCT with individual randomization can be conducted in these two low-resource settings. Significantly more women in group PNC than in individual PNC completed at least four PNC visits (96/102 [94.1%] vs 53/91 [58.2%]) and attended the postnatal visit (76/102 [74.5%] vs 45/90 [50.0%]; both P<0.001). Conclusion**:** Group PNC was feasible and associated with an increase in healthcare utilization and improved outcomes in Malawi and Tanzania. Lessons learned should be considered when designing large RCTs to determine efficacy.

33. Crystal, L.P., Carrie, S.K., Sebalda, C.L., Alana, D.S., Heather, P., Molly, M., and Kathleen F.N. (2017). Randomized controlled pilot of a group antenatal care model and

the sociodemographic factors associated with pregnancy-related empowerment in sub-Saharan Africa.

https://doi.org/10.1186/s12884-017-1493-3

Abstract

Background: The links between empowerment and a number of health-related outcomes in sub-Saharan Africa have been documented, but empowerment related to pregnancy is under-investigated. Antenatal care (ANC) is the entry point into the healthcare system for most women, so it is important to understand how ANC affects aspects of women's sense of control over their pregnancy. We compare pregnancy-related empowerment for women randomly assigned to the standard of care versus Centering Pregnancy-based group ANC (intervention) in two sub-Saharan countries, Malawi and Tanzania**. Methods:** Pregnant women in Malawi (n = 112) and Tanzania (n = 110) were recruited into a pilot study and randomized to individual ANC or group ANC. Retention at late pregnancy was 81% in Malawi and 95% in Tanzania. In both countries, individual ANC, termed focused antenatal care (FANC), is the standard of care. FANC recommends four ANC visits plus a 6-week post-birth visit and is implemented following the country's standard of care. In group ANC, each contact included self- and midwife-assessments in group space and 90 minutes of interactive health promotion. The number of contacts was the same for both study conditions. We measured pregnancy-related empowerment in late pregnancy using the Pregnancy-Related Empowerment Scale (PRES). Independent samples t-tests and multiple linear regressions were employed to assess whether group ANC led to higher PRES scores than individual ANC and to investigate other sociodemographic factors related to pregnancy-related empowerment. **Results:** In Malawi, women in group ANC had higher PRES scores than those in individual ANC. Type of care was a significant predictor of PRES and explained 67% of the variation. This was not so in Tanzania; PRES scores were similar for both types of care. Predictive models including sociodemographic variables showed religion as a potential moderator of treatment effect in Tanzania. Muslim women in group ANC had a higher mean PRES score than those in individual ANC; a difference not observed among Christian women. **Conclusions:** Group ANC empowers pregnant women in some contexts. More research is needed to identify the ways that models of ANC can affect pregnancy-related empowerment in addition to perinatal outcomes globally.

34. Daneau, G., Aboud, S., Prat, I., Urassa, W., Kestens, L. (2017.Performance of FACSPresto Point-of-Care Instrument for CD4-T Cell Enumeration in Human Immunodeficiency Virus (HIV)-Infected Patients Attending Care and Treatment Clinics in Belgium and Tanzania.

DOI: 10.1371/journal.pone.0170248

Abstract

Background: CD4 T-cell counts are widely used to assess treatment eligibility and to follow-up HIV-infected patients. The World Health Organization prequalification of in vitro diagnostics program conducted a performance evaluation of the FACSPresto (BD Biosciences), a new point-of-care instrument to measure absolute CD4-T cell (CD4) counts and percentages in venous and capillary blood samples from HIV-infected patients. **Methods**: Patients were recruited in Belgium (200 patients) and in Tanzania (247 patients). Venous blood samples were analyzed in two nearby reference laboratories. In addition, nurses/technicians collected a capillary blood sample by finger prick directly into a FACSPresto CD4 cartridge. Assay precision was assessed on fresh blood and on external quality control samples. Trueness (bias) was assessed by comparing results from FACSPresto with the reference (single-platform FACSCalibur). Clinical misclassification was measured at 200, 350 and 500 cells/μL thresholds. **Results**: Intra-assay precision was < 6%, and inter-assay < 8%. CD4 results from FACSPresto and reference method resulted in regression slopes of 0.99-1.11 using either venous or capillary blood. Correlation was better for venous than for capillary blood (minimum 0.97 vs 0.93 respectively). Capillary blood resulted in a larger bias than venous blood, with 24 and 83 cells/μL for absolute CD4 counts on capillary blood in Antwerp and Dar es Salaam respectively, vs 12 and 41 cells/μL on venous blood. Bias on CD4% was < 1% on both venous and capillary blood, and was proportionally better than for absolute CD4 counts. Clinical misclassification was in line with the average overestimation, showing a very good specificity, but sensitivity around 70-90%. The rejection rate was 11% on first reading, leading to 6% of all samples without final result after a second reading. **Conclusions**: The FACSPresto performed very well on venous blood samples, and well on capillary blood samples.

35. Deogratius, B., Rose, N. M. M., Ahmed, A. M. (2017). Knowledge of obstetric danger signs among recently-delivered women in Chamwino district, Tanzania: a cross-sectional study.

https://doi.org/10.1186/s12884-017-1469-3

Abstract

Background: Low knowledge of danger signs has been shown to delay seeking obstetric care which leads to high maternal mortality and morbidity worldwide. In Tanzania about half of pregnant women are informed about obstetric danger signs during antenatal care, but the proportion of those who have full knowledge of these obstetric danger signs is not known. This study assessed the knowledge of obstetric danger signs and its associated factors among recently-delivered women in Chamwino District, Tanzania. **Methods:** A community-based cross-sectional study was conducted in January 2014 in Chamwino District, Tanzania. A

woman was considered knowledgeable if she spontaneously mentioned at least five danger signs in any of the three phases of childbirth (pregnancy, childbirth and postpartum) with at least one in each phase. Multistage cluster sampling was used to recruit study participants. Descriptive and bivariate analyses were conducted. Multivariable logistic regression analyses were performed to control for confounding and other important covariates. **Results:** A total of 428 women were interviewed. The median age (IQR) was 26.5 (22–33) years. Only 25.2% of respondents were knowledgeable about obstetric danger signs during pregnancy, childbirth/labour and postpartum. Significant explanatory variables of being knowledgeable about obstetric danger signs were found to be maternal education (AOR = 1.96; 95% CI: 1.01, 3.82), maternal occupation (AOR = 2.23; 95% CI; 1.10, 4.52), spouse occupation (AOR = 2.10; 95% CI: 1.02, 4.32) and counseling on danger signs (AOR = 3.42; 95% CI: 1.36, 8.62) after controlling for the clustering effect, confounding and important covariates.**Conclusion:**A low proportion of women was found to be knowledgeable about obstetric danger signs in Chamwino district. Therefore, we recommend the Ministry of Health to design and distribute the maternal health booklets that highlight the obstetric danger signs, and encourage antenatal care providers and community health workers to provide frequent health education about these danger signs for every pregnant woman in order to increase their level of knowledge about obstetric danger signs.

36. Digvijayini, B., Sillma, R., Daneshwar, P., Rajesh, J. (2018). Dietary intake and lifestyle behaviors of children in Mauritius.

https://doi.org/10.1016/j.heliyon.2018.e00546

Abstract

The purpose of the study was to explore the dietary intake, fruit, vegetable and energy intake and lifestyle behaviors among Mauritian children. A validated questionnaire was used, assessing dietary intake, mean energy intake, mean body mass index (BMI), lifestyle behaviors as well as nutritional knowledge (NK) among males and females. 336 children aged 6–12 years (165 males and 171 females) from 8 public primary schools were recruited. Statistical analyses revealed that children consumed less nutritious foods such as fruits, vegetables and whole grains and more of refined and calorie-laden foods, with no significant differences across genders. Mean energy intake of children was 1522 ± 282.4 kcal per day while mean BMI was 17.5 ± 4.03 kg/m2. Majority of children had a low-to-moderate physical activity level (PAL), with males being more active than females on average (P = 0.021). 88.7% of children watched TV for more than an hour daily, with 84.8% of them reporting to be eating during the process. Females were more likely to be breakfast skippers (P = 0.003). Maximum frequency of snacking was twice daily (72.7%) while consumption of fast food was once or twice weekly (44.0%). Results indicate the need for intervention with aim of improving the dietary and life quality of children in Mauritius.

37. Dotto, A., Tumaini, J. N., John, R., Ewaldo, K. (2017). Hepatitis B vaccination coverage among healthcare workers at national hospital in Tanzania: how much, who and why?

https://doi.org/10.1186/s12879-017-2893-8

Abstract

Background: Hepatitis B vaccination for healthcare workers (HCWs) is a key component of the WHO Hepatitis B Elimination Strategy 2016–2021. Data on current hepatitis B vaccine coverage among health care workers in Sub-Saharan Africa are scarce, but these data are vital for effective programming. We assessed the proportion of HCWs vaccinated for hepatitis B and the factors associated with adequate vaccination coverage at a national hospital in Tanzania. **Methods:** A descriptive cross-sectional study was conducted among consenting healthcare workers between 30th July and 30th September 2015. Vaccination histories were obtained through self-administered questionnaires. Means and proportions were used to summarize the data. Student's t and chi-squared tests were used as appropriate. Logistic regression was used to determine the factors associated with vaccination. **Results:** A total of 348 HCWs were interviewed, of whom 198 (56.9%) had received at least one dose of hepatitis B vaccination, while only 117 (33.6%) were fully vaccinated. About half of the 81 HCWs with partial vaccination (49.4%) had missed their subsequent vaccination appointments. Among unvaccinated HCWs, 14 (9.3%) had either HBVInfection or antibodies against HBV infection upon pre-vaccination screening. However, the remaining participants were not vaccinated and did not know their immune status against HBV.Nearly all respondents (347, 99.3%) had heard about the hepatitis B viral vaccine. The following reasons for non-vaccination were given: 98 (65.3%) reported that they had not been offered the vaccine; 70 (46.7%) observed standard precautions to ensure infection prevention and 60 (41.3%) blamed a low level of awareness regarding the availability of the hepatitis B vaccine. **Conclusion:** The current vaccination coverage among practicing healthcare workers at Muhimbili National Hospital is low, despite a high level of awareness and the acceptance of the vaccine. Expedited and concerted efforts to scale vaccine uptake should include improved access to the vaccine, especially for newly recruited HCWs. The extension of the study to private healthcare settings and lower-level facilities would be useful.

38. Edda, T. L., Felix, S. (2018). Health sciences faculty usage behavior of electronic resources and their information literacy practices.

Abstract

Purpose: This paper aims to assess the usage behavior of electronic resources (e-resources) among health sciences faculty and their level information literacy (IL) practices, and whether individual characteristics and IL skills can influence faculty member's usage of e-resources at Muhimbili University of Health and Allied Sciences (MUHAS).**Design/methodology/approach:** The authors conducted questionnaire surveys using a stratified random sampling technique to 135 faculty members at MUHAS between August and October 2016. The study used regression analysis to determine factors associated with the use of e-resources among faculty members at MUHAS.Findings: In addition to Google search engine, Wikipedia and four scholarly databases and search engines, the level of awareness of other 19 scholarly databases and search engines which are either subscribed or open access resources was less than 50 per cent. In addition to Google search engine, Wikipedia and five scholarly databases and search engines, the self-reported usage of other 18 scholarly databases and search engines was less than 50 per cent on the on "daily" and "weekly" categories. In total, 18 of the 32 IL competencies were rated below 50 per cent in the "good" grade by the faculty members. These IL competencies included information search techniques, reference management, and critical appraisal and Web 2.0 technologies. The IL competencies (ß = 0.223), an experience of using e-resources (ß = 0.222) and some research disciplines [nursing (ß = 0.191) and pharmacy (ß = 0.186)] positively predicted self-reported usage of e-resources among faculty members. **Originality/value:** This is a comprehensive study that assesses the use patterns of e-resources across different health sciences disciplines in a university setting, and the influence of demographic characteristics and IL skills on the usage of e-resources in Tanzania. The results of this study will be useful to academic libraries to inform and review their policies and practices in relation to the IL training programmes and information services in a university setting.

39.Elias, M., Mmbaga, EJ., Mohamed, AA., Kishimba, RS.(2017).Male partner involvement in the prevention of mother to child transmission of HIV infection in Mwanza Region, Tanzania.

Doi: 10.11604/pamj.2017.27.90.8901.

Abstract

Introduction: Globally, there are 3.3 million children < 15 years of age living with HIV infection. About 95% of HIV infected children have acquired infection from their mothers. Although new pediatric HIV infection in Tanzania has declined by 48% and Prevention of Mother to Child Transmission (PMTCT) coverage of highly active anti-retroviral therapy (HAART) has increased to 77%, the MTCT rate remains high (15%). Poor male partner involvement in PMTCT services is one of the factors contributing to reduced effectiveness of the PMTCT and hence failure to achieve the elimination of maternal to child transmission of

HIV. This study examined the predictors of male involvement in PMTCT services in Mwanza Region, Tanzania from perspectives of the mother. **Methods:** A cross sectional study involving selected health facilities was conducted in Mwanza urban from October 2013 through January 2014. HIV positive pregnant women attending ante-natal clinic (ANC) were interviewed using a semi structured questionnaire. Univariate analysis was used to describe the study respondents where bivariate and logistic regression was used to determine predictors of male involvement. **Results:** A total of 300 HIV positive mothers attending ANC with the mean age of 27.5 + 5.6 were interviewed. Few mothers (24.7%) had their male partners involved in PMTCT. Predictors of male partner involvement in PMTCT were mothers being proactive (Adjusted Odds Ratio (AOR) 28.6; Confidence Interval (CI) 7-116), perceived partners knowledge on PMTCT (AOR 24.6, CI 5.9-102.8), exposure to TV/Radio announcements on PMTCT (AOR 4.6, CI 1.5-14) and married status of the mother (AOR 3.7, CI 1.5-9). Mothers who never wanted to be escorted by their male partners and busy partners were associated with reduced odds of male involvement into PMTCT (AOR 0.07, CI 0.007-0.68) and (AOR 0.46 CI 0.21-0.99) respectively. Male partner involvement was associated with 98% reduced odds of violence (Crude Odds Ratio 0.018 CI 0.002-0.14). **Conclusion:** Male partner involvement in PMTCT is still low in Mwanza Region. Proactive mothers, partner's knowledge on PMTCT and announcements from television/radio were the major facilitating factors for male involvement in PMTCT as perceived by mothers. Busy male partners and mothers who did not want to be escorted by their partners were a hindrance to male involvement in PMTCT services. These factors highlight the importance of women role in promotion of PMTCT male involvement. **Keywords**: HIV/AIDS; Male partner involvement; PMTCT; Tanzania; pregnant women.

40. Elikana, L., Aiwerasia, V. N., Leslie, L. (2017). Acute Pesticide Poisoning in Children: Hospital Review in Selected Hospitals of Tanzania.

https://doi.org/10.1155/2017/4208405

Abstract

Background. Acute pesticide poisoning (APP) is a serious problem worldwide. Because the burden of childhood APP is unknown in Tanzania, this study describes the distribution, circumstances, and patterns of APP involving children less than 18 years in Tanzania. Methodology. A 12-month prospective study was conducted in 10 Tanzanian healthcare facilities in 2006 using a data collection tool for surveillance. **Results.** Of 53 childhood poisoning cases identified, 56.6% were female. The most common poisoning circumstances were accidents (49.1%) and suicide (30.2%). The most vulnerable children were 16-17 years old (30.2%). Suicide was significantly more common in females (PRR females/males = 1.66; 95% CI = 1.03–2.68) and accidental cases were more common in children aged 10 years or younger. Suicide was concentrated in children over 10 years, comprising 53% of cases in this age group. Organophosphates (OPs), zinc phosphide, and endosulfan were common amongst

reported poisoning agents. The annual APP incidence rate was 1.61/100,000. **Conclusion.** APP is common among children in this region of Tanzania. Prevention of suicide in older children should address mental health issues and control access to toxic pesticides. Prevention of accidents in younger children requires safer storage and hygiene measures. Diverse interventions are needed to reduce pesticide poisoning among children in Tanzania.

41. Elisha, O., Alice, K., Reuben, M., Peter, M., Merckris, M., Peter, K., Bashir, N., Pedro, P., Delilah, K., and Mohamed, J. (2017). Osteosarcoma of the lower limb metastasized to the septum and right side of the heart: a case report.

DOI 10.1186/s13256-017-1325-0

Abstract

Background: Metastatic cardiac tumors are far more common than primary tumors. Although the hematogenousspread of osteosarcoma is well known, the imaging findings of cardiovascular involvement by osteosarcoma are seldom reported and can be difficult to recognize. **Case presentation**: A 21-year-old man of African descent presented to our center complaining of shortness of breath, awareness of heart beats, easy fatigability, swelling of lower limbs, and left-side chest discomfort for the past6 months getting worse for the last 3 months prior to his third readmission. In 2004 he was admitted with the diagnosis of osteosarcoma of his left calcareous bone confirmed by bone biopsy and treated at an oncology center with several cycles of radiotherapy and chemotherapy; he was declared cured after 5 years of annual clinical andradiological skeletal survey follow-ups. In the current admission, a physical examination revealed bilateral lower limb swelling, pan systolic murmur on the left side of his sternum at fourth intercostals space (tricuspid area) grade three, hepatomegaly with a liver span of 17 cm, and a positive fluid test and shifting dullness. **Conclusions**: This case report presents a 21-year-old man with relapsed osteosarcoma manifesting as metastatic lesions to his right ventricle encroaching on his interventricular septum, which was identified by transthoracic/transesophageal echocardiography computed tomography scan and cardiac magnetic resonance imaging. **Keywords**: Cardiac metastasis, Cardiac osteosarcoma, Echocardiography, CT, MRI.

42.Elinas, J. N., Charles, K., Filemoni, T., Zul, P., and Eliningaya, J. K. (2017). Insecticide use pattern and phenotypic susceptibility of *Anopheles gambiae* sensu lato to commonly used insecticides in Lower Moshi, northern Tanzania.

DOI 10.1186/s13104-017-2793-4

Abstract

Background: Evidence of insecticide resistance has been documented in different malaria endemic areas. Surveillance studies to allow prompt investigation of associated factors to enable effective insecticide resistance management are needed. The objective of this study was to assess insecticide use pattern and phenotypic susceptibility level of *Anopheles gambiae* sensu lato to insecticides commonly used in malaria control in Moshi, northern Tanzania. **Methods**: A cross-sectional survey was conducted to assess insecticide usage pattern. Data was collected was through closed and open ended questionnaires The WHO diagnostic standard kit with doses of 0.1% bendiocarb, 0.05% deltamethrin, 0.75% permethrin and 4% DDT were used to detect knockdown time, mortality and resistance ratio of wild *A. gambiae* sensu lato. The questionnaire survey data was analyzed using descriptive statistics and one-way analysis of variance while susceptibility data was analysed by logistic regression with probit analysis using SPSS program. The WHO criterion was used to evaluate the resistance status of the tested mosquito populations. **Results**: A large proportion of respondents (80.8%) reported to have used insecticide mainly for farming purposes (77.3%). Moreover, 93.3% of household reported usage of long lasting insecticidal nets. The frequently used class of insecticide was organophosphate with chloropyrifos as the main active ingredients and dursban was the brand constantly reported. Very few respondents (24.1%) applied integrated vector control approaches of and this significantlyassociated with level of knowledge of insecticide use ($P < 0.001$). Overall knockdown time for *A. gambiae*s. l was highest in DDT, followed by Pyrethroids (Permethrin and deltamethrin) and lowest in bendiocarb. *Anopheles gambiae*s. l showed susceptibility to bendiocarb, increased tolerance to permethrin and resistant to deltamethrin. The most effective insecticide against the population from tested was bendiocarb, with a resistance ratio ranging between 0.93–2.81. **Conclusion**: Education on integrated vector management should be instituted and a policy change on insecticide of choice for malaria vector control from pyrethroids to carbamates (bendiocarb) is recommended. Furthermore, studies to detect cross resistance between pyrethroids and organophosphates should be carried out.

43. Emanuele, C., Amisa, M., Carlos, F., González, P., Wittung, S. (2017). Copper chaperone ATOX1 regulates pluripotency factor OCT4 in preimplantation mouse embryos.

https://doi.org/10.1016/j.bbrc.2017.07.064

Abstract

Despite of the importance of copper (Cu) during pregnancy, the roles of Cu-binding proteins during early embryonic development are unknown. The Cu chaperone ATOX1 was recently suggested to have additional functions related to transcription and cancer. When we analyzed single-cell RNA transcript data from early mouse embryos, Atox1 transcript levels increased

dramatically at the 8-cell stage and, at 16- and 32-cell embryo stages, matched those of Oct4 which expresses a transcription factor essential for pluripotency in the inner cell mass. To explore this, we probed Atox1 expression during the first week of development of mouse embryos. ATOX1 appeared ubiquitously expressed throughout the cells until compaction; in subsequent embryo stages, ATOX1 delocalized to cytoplasmic perinuclear domains in the inner cell mass. Silencing of Oct4 did not affect Atox1 expression, but silencing of Atox1 at the 2-cell stage strongly diminished Oct4 expression in 16-cell embryos.

44. Emma, J., Milka, M., Joanna, Helena, S. (2017). Integration of eye health into primary care services in Tanzania: a qualitative investigation of experiences in two districts

https://doi.org/10.1186/s12913-017-2787-x

Abstract

Background: Visual impairment is a public health problem in sub-Saharan Africa, affecting nearly 5% of the population. Efforts to combat avoidable causes have been hampered by weak health systems and little evidence exists to suggest what interventions may be effective to improve the situation. Despite this, there are calls to promote some specific interventions, one of which being the closer integration of eye health services into health systems, often focusing on training primary health workers to deliver basic eye health services. This study seeks to understand how eye health services are delivered by primary health workers who have received training and what constraints remain to effective service provision.**Methods:**This was a qualitative investigation into the experiences of 20 primary health workers trained in primary eye care and eight key informants working within specialist eye health services or regional and district health management positions in two districts in Tanzania.**Results:**Despite feeling confident in their own eye care skills, most primary health workers felt constrained in the services they could provide to their communities by insufficient resources needed for diagnosis and treatment, and by lack of systematic supportive supervision to their work. Specialist ophthalmic staff were aware of this issue, although for the most part they felt it was not within their capacity to remedy and that it fell within the remit of general health managers. Many participants discussed the low support to eye health from the national government, evidenced through the lack of dedicated funding to the area and traditional reliance on outside funds including international charities. **Conclusions:** Although training of primary health workers is useful, it is recognized that is not sufficient to address the burden of eye health disease present in rural communities in Tanzania. It is likely that broader engagement with the general health system, and most likely with the private sector, will be necessary to improve the coverage of eye health care to remote and poor communities such as those in Morogoro. Further investment is needed to develop innovative approaches to delivering eye health services, including preventative, curative and rehabilitative services. Effect of maternal vitamin D3 supplementation on

maternal health, birth outcomes, and infant growth among HIV-infected Tanzanian pregnant women: study protocol for a randomized controlled trial

45. Emeria, A.M., Febronia, K.K., Samwel, C.M., and Emil, N. (2018). Current status of nylon teeth myth in Tanzania: a cross sectional study.

https://doi.org/10.1186/s12903-017-0462-6

Abstract

Background: Nylon teeth myth is a belief of associating infant illnesses with bulges on infants' alveolus that mark the positions of underlying developing teeth and that it is necessary to treat the condition mainly by traditional healers to prevent infant death. The traditional treatment often leads to serious complications that may lead to infant death. Although the government instituted educational campaigns against the myth in 1980s to 1990s, to date, repeated unpublished reports from different parts of the country indicate continued existence of the myth. Therefore, this study aimed to assess the current status of the nylon teeth myth in Tanzania. **Methods:** The study population was obtained using the WHO Oral Health pathfinder methodology. A structured questionnaire inquired about socio-demographics as well as experiences with "nylon teeth" myth and its related practices. Odds ratios relating to knowledge and experience of the nylon teeth myth were estimated. Results: A total of 1359 respondents aged 17 to 80 years participated in the study. 614 (45%) have heard of nylon teeth myth, of whom 46.1% believed that nylon teeth are a reality, and 42.7% reported existence of the myth at the time of study. Being residents in regions where nylon teeth myth was known before 1990 (OR = 8.39 (6.50–10.83), $p < 0.001$) and/or hospital worker (OR = 2.97 (1.99–4.42), $p < 0.001$) were associated with having have heard of nylon teeth myth. Proportionately more residents in regions where nylon teeth myth was not known before 1990 ($p < 0.001$), the educated ($p < 0.001$) and hospital workers ($p < 0.001$) believed modern medicine, whereas, proportionately more residents in regions where nylon teeth was known before 1990 ($p < 0.001$), less educated ($p < 0.001$) and non-hospital workers ($p < 0.001$) believed traditional medicine to be the best treatment for symptoms related to nylon teeth myth respectively. **Conclusion:** The "nylon teeth" myth still exists in Tanzania; substantial proportions strongly believe in the myth and consider traditional medicine the best treatment of the myth related conditions.

46. Emily, E., Kearsley, A.S., Nestory, A.M., and Kristin, M. (2017). Qualitative analysis of palliative care for pediatric patients with cancer at Bugando medical center: An evaluation of barriers to providing end-of-life care in a resource-limited setting.

Abstract

Purpose: Palliative care remains an urgent, neglected need in the developing world. Global disparities in end-of-life care for children, such as those with advanced cancers, result from barriers that are complex and largely unstudied. This study describes these barriers at Bugando Medical Center, one of three consultant hospitals in Tanzania, to identify areas for palliative care development suitable to this context. **Methods:** In-depth interviews were conducted with 20 caregivers of pediatric patients with cancer and 14 hospital staff involved in pediatric end-of-life care. This was combined with 1 month of participant observation through direct clinical care of terminally ill pediatric patients. **Results:** Data from interviews as well as participant observation revealed several barriers to palliative care: financial, infrastructure, knowledge and cultural (including perceptions of pediatric pain), and communication challenges. Although this study focused on barriers, what also emerged were the unique advantages of end-of-life care in this setting, including community cohesiveness and strong faith background. **Conclusion:** Thisstudy provides a unique but focused description of barriers to palliative care common in a low-resource setting, extending beyond resource needs. This multidisciplinary qualitative approach combined interviews with participant observation, providing a deeper understanding of the logistical and cultural challenges in this setting. This new understanding will inform the design of more effective—and more appropriate—palliative care policies for young patients with cancer in the developing world.

47. Enoch, O. A., Christian, O., Emmanuel, A., Bright, A., Bright, O. A., Sampson, D., Isaac, H., Juliana, J., Esther, O. (2018). Evaluation of Individual and Combined Markers of Urine Dipstick Parameters and Total Lymphocyte Count as a Substitute for CD4 Count in Low-Resource Communities in Ghana.

https://doi.org/10.1155/2018/7485942

Abstract

We evaluated the individual and combined levels of urine dipstick and total lymphocyte count (TLC) as surrogate markers for CD4 count in a low-resource community in Ghana. This cross-sectional study recruited 200 HIV-infected patients from the Saint Francis Xavier Hospital, Assin Fosu, Ghana. Complete blood count, CD4 count, and urine dipstick analysis were measured for participants. The threshold values were determined as <350 cells/μl for CD4, <1200 cells/μl for TLC, and ≥+ on urine dipstick analysis. The mean age of participants was 43.09 years. Proteinuria ≥ + [aOR = 4.30 (3.0–18.5)], leukocyturia ≥ + [aOR = 2.91 (1.33–12.5)], hematuria ≥ + [aOR = 2.30 (1.08–9.64)], and TLC < 1200 cells/μl [aOR = 3.26 (3.94–15.29)] were significantly associated with increased risk of CD4 count < 350 cells/μl. Using the individual markers, the best substitute marker for predicting CD4 count < 350 cells/μl was proteinuria at a cutoff point ≥ 2++, AUC of 0.973, sensitivity of 97.6%, specificity of 100.0%, PPV of 100.0%, and NPV of 89.1%. A combination of ≤ 1200 TLC + ≥ 2++ (leukocyturia + proteinuria + hematuria) yielded an AUC of 0.980, sensitivity

(72.8%), specificity (100.0%), PPV (100.0%), and NPV (97.9%). Proteinuria could serve as a noninvasive screening tool, but the combination of proteinuria, leukocyturia, hematuria, and TLC serves as a better substitute marker for CD4 count in monitoring the disease progression among HIV patients in low-resource communities.

48. Fabiola, M., Tumaini, N. (2017). Understanding the preference for homebirth; an exploration of key barriers to facility delivery in rural Tanzania.

https://doi.org/10.1186/s12978-017-0397-z

Abstract

Background: There is limited information on the effect of expectant parents' socio-cultural perceptions and practices on the use of skilled birth attendants (SBAs) in rural Tanzania. The purpose of this study was to explore the socio-cultural barriers to health facility birth and SBA among parents choosing home birth in rural Tanzania, specifically in the Rukwa Region. **Methods:** This study used a descriptive exploratory methodology. Purposive sampling was used to recruit study participants for both in-depth interviews (IDIs) and focused group discussions (FGDs). Qualitative research methods, including FGDs and IDIs, were utilized in data collection. The respondents were men and women whose youngest child had been born at home within the prior 12 months. A thematic approach was used for data analysis.**Results:**The main themes that emerged regarding barriers to the use of health facility were 1) limited decision-making by men on place of delivery; 2) low risk perception by men and its interference with health facility birth; 3) men's limited resource mobilization for health facility birth and 4) females' perceptions that pregnancy and childbirth are low-risk events.**Conclusion:**This qualitative study demonstrates that apart from well-documented structural barriers to skilled birth attendance in rural Tanzania, the low risk perception among both men and women plays a substantial role. The low risk perception among both men and women affects the use of SBAs in two ways. First, women become negligent and take risk of delivering at home. Second, male partners do not seriously mobilize resources for health facility childbirth. These findings reinforce the urgent need to implement creative programs to increase genuine male participation in facilitation of health facility childbirth.

49. Frank, S.K., Tumaini, S., Elifuraha, G.S. M. (2017). Periodontal status and treatment needs among cardiac patients at Muhimbili National Hospital, Dar-es-Salaam, Tanzania.

Abstract

Background: Periodontal diseases have been reported to be associated with cardiovascular diseases. Aim the aim of this study was to determine the periodontal status and treatment needs among adult cardiac patients in Dar-es-Salaam, Tanzania. Methodology a hospital based descriptive cross-sectional study was conducted. A self-administered questionnaire was used to obtain socio-demographic information, followed by clinical examination for dental plaque, gingival bleeding, calculus, periodontal pockets (PPT) and gingival recession. To enable determination of periodontal treatment needs, data for periodontal conditions was transformed into Community Periodontal Index and Treatment Needs (CPITN) codes. Chi-square test was used to determine the associations of periodontal conditions with demographic variables studied. Level of significance was set at $p<0.05$. **Results** the prevalence of periodontal conditions was high for gingival bleeding (100%), dental plaque (99.4%) and calculus (99.7%), but very low for periodontal pockets ≥ 3.5 mm (9.4%). Statistically significant higher mean percent site with plaque, calculus and gingival bleeding was seen in posterior teeth (t-tests = -16.07, 12.22, and -4.8; $p< 0.001$ respectively). Gingival recession and loss of attachment was statistically significantly higher in upper teeth (t-test= -3.45, $p< 0.001$), anterior teeth (t-test= 6.3 and 5.5; $p< 0.001$ respectively). Periodontal treatment needs were 100.0%, 99.7%, and 0.9% for oral hygiene instructions (OHI), scaling and root planning (SRP), and periodontal surgery respectively. **Conclusion:** The prevalence of plaque, calculus and gingival bleeding was high among cardiac patients examined, but low for periodontal pocketing, gingival recession and loss attachment. The periodontal treatment needs were mainly oral hygiene instructions, scaling and root planning. Surgical periodontal therapy was limited to the few.

50. Frauke, M., Yoshihiro, S., Febronia, K., Martin, S. (2017). Oral health for an ageing population: the importance of a natural dentition in older adults.

DOI: 10.1111/idj.12329 View/save citation

Abstract

Despite progress in dentistry, tooth loss in old age is still a reality, even more so in long-term-care residents. However, recent trends indicate that natural teeth are lost later in life. Functional decline and age-related pathologies have to be considered in oral health care for this vulnerable population. Retaining and restoring teeth and oral function in elders is important. Tooth loss significantly impairs masticatory performance, which cannot be fully restored by prosthodontic means. Hence an unconscious change in food intake occurs, often involving malnutrition and withdrawal from common meals. Poor oral appearance and bad breath may further impede social activities. Although a chewing activity may be beneficial for cognitive function, natural teeth can present a considerable risk for fragile elders, in whom aspiration of biofilm can lead to pneumonia and death. The presence of natural teeth is also correlated with higher life expectancy, but socio-economic confounding factors have to be considered. When evaluating oral health in the elderly population, standards and priorities

for reporting oral health outcome measures have to be defined. Anatomical indicators such as the number of natural teeth or the presence of prostheses might be one option for reporting. However, functional indicators such as masticatory performance and patient-centred outcome measures may be more relevant. In conclusion, there is an overwhelming body of evidence that maintaining a healthy natural dentition in old age is beneficial from a structural, functional and psycho-social point of view.

51. Fredrick, L., Eliangiringa, K., Vicky, M., Veronica, M. (2017). Development of a qualitative near infrared screening method for quality consistency assessment of virgin sunflower oil.

DOI: 10.4236/sar.2017.53003

Abstract

Near infrared spectroscopy offers advantages in the analysis of vegetable oils such as rapidity, relative cost-effectiveness, and usually no need for sample preparation. Virgin Sunflower oils were used as reference standards to develop spectra library for qualitative identification and validation of the method. This model was validated by correct classification method using positive and negative control samples. Various market samples of virgin sunflower oil were purchased and compared with spectra library. The results of spectral analysis of reference library and market samples were correlated using Mahalanobis distance method. Analysis involved 22 market samples. When these samples were matched against calibration samples, 4 samples out of 22 which are about 18.2% were not matched by the reference model. These market samples had Mahalanobis distance values between 4.2 and 6.7, which are greater than maximum permissible value of 3. Some of adulterants mentioned were Korie oil and pumpkin seeds oil.

52. Fredrick, L. M., Gibson, B. K., Joseph, M., Alphoncina, N., Grace, S., Sarah, M., Ayoub, M., Janneth, M., Mathias, K., Eric, M., Clement, N. M., Ramaiya, K., and Mary, T. M. (2018). Physical Activity and Associated Socioeconomic Determinants in Rural and Urban Tanzania: Results from the 2012 WHO-STEPS Survey.

Background. Physical inactivity contributes to the rising prevalence of no communicable diseases (NCDs). Given the rapidly increasing prevalence ofNCDs in Low-Income Countries (LICs), comprehensive evaluation and documentation of physical activity(PA) status in this setting are crucial. Methods. We examined the demographic and social-economic antecedents of PA among adults (5398) from the 2012 Tanzania STEPS survey data. Statistical significance at the level of 0.05 was used to measure the strength of associations. **Results**.

Majority of study participants attained the WHO-recommended levels of physical activity (96.7%). Levels were higher among those living in rural than in urban settings (98% versus 92%, $p<$ 0.0001) and generally, urban residency, female gender, higher education achievement, and employment were significantly associated with low levels of PA. Participation in the different domains of PA (work, transport, and recreational) varied with living setting, levels of education, and employment status. **Conclusion**. These results describe PA status and associated social-economic determinants among adults in rural and urbanTanzania.The findings contribute to the growing evidence that implicates urbanization as a key driver for the growing prevalence of physical inactivity in LICs and underscore the need for tailored PA interventions based on demography and social-economic factors.

53.Ghaniya S. M., Hendry R. S., Juma A.M., John S., Shankar L., Victor M., Michael S.R., Teri A.R. and Kent R.O. (2017). Patients with acute poisoning presenting to an urban emergency department of a tertiary hospital in Tanzania. BMC Research Notes10:482

https://doi.org/10.1186/s13104-017-2807-2

Abstract

Poisoning is a major public health concern in sub-Saharan Africa, affecting patients of all age groups. Poisoned patients often present to the emergency department (ED) and prompt evaluation and appropriate management are imperative to ensure optimal outcomes. Unfortunately, little is known about the specific presentations of poisoned patients in East Africa. We describe the clinical and epidemiological features of patients presenting to the Muhimbili National Hospital (MNH) ED with suspected toxicological syndromes. **Methods:** this prospective study enrolled a consecutive sample of ED patients who presented with a suspected toxicological syndrome from March 2013 to June 2013. Trained investigators completed a structured case report form (CRF) for each eligible patient, documenting the suspected poison, demographic information, the clinical presentation, and the ED outcome and disposition. The study data were analyzed and summarized with descriptive statistics. **Results:** of 8827 patients, who presented to ED-MNH, 106 (1.2%) met inclusion criteria, and all were enrolled. Among those enrolled, the median age was 28 years (interquartile range [IQR] 16 years), and 81 (76.4%) were male. Overall 55 (52%) were single, and 28 (26.4%) had professional jobs. 60 (56.6%) patients were referred from district hospitals, 86.8% of which were in Dar es Salaam. Only 13 (12.3%) of patients presented to the ED within 2 h of the toxic exposure. The etiology of poisoning included alcohol in 42 (50%), a mixture of different medications in 12 (14.3%), and snakebite in 6 (11.3%). Most exposures were intentional (63 [59.4%]) and were via the oral route (88 [83%]). The most common abnormal physical findings were altered mental status (66 [62.3%]) and tachypnoea (68 [64.2%]). One patient died in the ED and 98 (92.5%) required hospital admission. **Conclusions:** most patients presenting to the ED with a toxicological syndrome were adult males with intentional

exposures. The most common toxic exposure was alcohol (ethanol) intoxication and the most common abnormal findings were altered mental status and tachypnoea. More than three-quarter of patients presented after 2 h of exposure. Almost all patients were admitted to the hospital.

54. Grace, A. S., Dereck, C., Candida, M., Said, A., Muhammad, B., Ferdinand, M. (2017). Cost-Effectiveness of isoniazid preventive therapy among HIV-infected patients clinical screened for latent tuberculosis infection in Dar es Salaam, Tanzania: A prospective Cohort study.

https://doi.org/10.1186/s12889-017-4597-9

Abstract

Background: One of the reasons why Isoniazid preventive therapy (IPT) for Tuberculosis (TB) is not widely used in low income countries is concerns on cost of excluding active TB. We analyzed the cost-effectiveness of IPT provision in Tanzania having ruled out active TB by a symptom-based screening tool. **Methods:** Data on IPT cost-effectiveness was prospectively collected from an observational cohort study of 1283 HIV-infected patients on IPT and 1281 controls; followed up for 24 months. The time horizon for the analysis was 2 years. Number of TB cases prevented and deaths averted were used for effectiveness. A micro costing approach was used from a provider perspective. Cost was estimated on the basis of clinical records, market price or interviews with medical staff. We annualized the cost at a discount of 3%. A univariate sensitivity analysis was done. Results are presented in US$ at an average annual exchange rate for the year 2012 which was Tanzania shillings 1562.4 for 1 US $. **Results:** The number of TB cases prevented was 420/100,000 persons receiving IPT. The number of deaths averted was 979/100,000 persons receiving IPT. Incremental cost due to IPT provision was US$ 170,490. The incremental cost effective ratio was US $ 405.93 per TB case prevented and US $ 174.15 per death averted. These costs were less than 3 times the 768 US $ Gross Domestic Product (GDP) per capita for Tanzania in the year 2014, making IPT provision after ruling out active TB by the symptom-based screening tool cost-effective. The results were robust to changes in laboratory and radiological tests but not to changes in recurrent, personnel, medication and utility costs. **Conclusion:** IPT should be given to HIV-infected patients who screen negative to symptom-based TB screening questionnaire. Its cost-effectiveness supports government policy to integrate IPT to HIV/AIDS care and treatment in the country, given the availability of budget and the capacity of health facilities.

55. Graf, J., Cook, M., Schecter, S., Deveney, K., Hofmann, P., Grey, D., Akoko, L., Mwanga, A., Salum, K., Schecter, W.(2017).Coalition for Global Clinical Surgical Education: The Alliance for Global Clinical Training.

Doi: 10.1016/j.jsurg.2017.08.019.

Abstract

Objective: Assessment of the effect of the collaborative relationship between the high-income country (HIC) surgical educators of the Alliance for Global Clinical Training (Alliance) and the low-income country surgical educators at the Muhimbili University of Health and Allied Sciences/Muhimbili National Hospital (MUHAS/MNH), Dar Es Salaam, Tanzania, on the clinical global surgery training of the HIC surgical residents participating in the program. **Design**: A retrospective qualitative analysis of Alliance volunteer HIC faculty and residents' reports, volunteer case lists and the reports of Alliance academic contributions to MUHAS/MNH from 2012 to 2017. In addition, a survey was circulated in late 2016 to all the residents who participated in the program since its inception. **Results**: Twelve HIC surgical educators provided rotating 1-month teaching coverage at MUHAS/MNH between academic years 2012 and 2017 for a total of 21 months. During the same time period 11 HIC residents accompanied the HIC faculty for 1-month rotations. HIC surgery residents joined the MUHAS/MNH Department of Surgery, made significant teaching contributions, and performed a wide spectrum of "open procedures" including hand-sewn intestinal anastomoses. Most had had either no or limited previous exposure to hand-sewn anastomoses. All of the residents commented that this was a maturing and challenging clinical rotation due to the complexity of the cases, the limited resources available and the ethical and emotional challenges of dealing with preventable complications and death in a resource constrained environment. **Conclusions**: The Alliance provides an effective clinical global surgery rotation at MUHAS/MNH for HIC Surgery Departments wishing to provide such an opportunity for their residents and faculty.

56. Happiness, P. S., Els, D., Siriel, M., Maxwell, A. D., Peter, W., Felix, S., Melkizedeck, L., Antje, B., Rainer, S., Svetla, L. (2017). Cost-effectiveness of an electronic clinical decision support system for improving quality of antenatal and childbirth care in rural Tanzania: an intervention study.

https://doi.org/10.1186/s12913-017-2457-z

Abstract

Background: QUALMAT project aimed at improving quality of maternal and newborn care in selected health care facilities in three African countries. An electronic clinical decision

support system was implemented to support providers comply with established standards in antenatal and childbirth care. Given that health care resources are limited and interventions differ in their potential impact on health and costs (efficiency), this study aimed at assessing cost-effectiveness of the system in Tanzania. **Methods:** This was a quantitative pre- and post-intervention study involving 6 health centres in rural Tanzania. Cost information was collected from health provider's perspective. Outcome information was collected through observation of the process of maternal care. Incremental cost-effectiveness ratios for antenatal and childbirth care were calculated with testing of four models where the system was compared to the conventional paper-based approach to care. One-way sensitivity analysis was conducted to determine whether changes in process quality score and cost would impact on cost-effectiveness ratios. **Results:** Economic cost of implementation was 167,318 USD, equivalent to 27,886 USD per health center and 43 USD per contact. The system improved antenatal process quality by 4.5% and childbirth care process quality by 23.3% however these improvements were not statistically significant. Base-case incremental cost-effectiveness ratios of the system were 2469 USD and 338 USD per 1% change in process quality for antenatal and childbirth care respectively. Cost-effectiveness of the system was sensitive to assumptions made on costs and outcomes. **Conclusions:** Although the system managed to marginally improve individual process quality variables, it did not have significant improvement effect on the overall process quality of care in the short-term. A longer duration of usage of the electronic clinical decision support system and retention of staff are critical to the efficiency of the system and can reduce the invested resources. Realization of gains from the system requires effective implementation and an enabling healthcare system.

57. Heidarzadeh, M., Jabrailzadeh, S., Chookalayi, H., Kohi, F. (2017). Translation and psychometrics of the "behavioral pain scale" in mechanically ventilated patients in medical and surgical intensive care units.

Abstract

Assessment and management of pain in patients undergoing mechanical ventilation can be a major challenge for intensive care nurses. Behavioral pain scale (BPS) is one of the instruments which by using the behavioral indicators, studied pain in these patients. The aim of this study is to translate and determine the psychometric properties of the BPS. **Materials & Methods:** Pain by using BPS at 6 times of before, during, and after nociceptive and no nociceptive procedures in 60 patients hospitalized in medical and surgical critical care units. In re-test 33 patients studied after 8-12 hours. Results: Alpha coefficient, 0/749 and the correlation coefficient between two evaluators in different times were (r = 0/78 – 0/94) was obtained. The correlation coefficient between test-retest was (r = 0/52 – 0/78). Significant differences in pain score between painful and non-painful procedures (p< 0/001), and higher pain scores in patients who confirm the pain (p< 0/001), revealed good discriminant, and criterion validities for BPS respectively. **Conclusion:** Iranian version of BPS has good and

reliable psychometric properties, for pain assessment in patients hospitalized in medical and surgical of intensive care units which do not have able to communicate.

58. Helga, N., Phares, M., Charles, K., Nicola, O., Till, B., Karim, M., Gunnel, B., David, S., Pascal G., Guerino, C., Anna, M. E. (2017). Job satisfaction and turnover intentions among health care staff providing services for prevention of mother-to-child transmission of HIV in Dar es Salaam, Tanzania.

https://doi.org/10.1186/s12960-017-0235-y

Abstract

Background: Option B+ for the prevention of mother-to-child transmission (PMTCT) of HIV (i.e., lifelong antiretroviral treatment for all pregnant and breastfeeding mothers living with HIV) was initiated in Tanzania in 2013. While there is evidence that this policy has benefits for the health of the mother and the child, Option B+ may also increase the workload for health care providers in resource-constrained settings, possibly leading to job dissatisfaction and unwanted workforce turnover.**Methods:**From March to April 2014, a questionnaire asking about job satisfaction and turnover intentions was administered to all nurses at 36 public-sector health facilities offering antenatal and PMTCT services in Dar es Salaam, Tanzania. Multivariable logistic regression models were used to identify factors associated with job dissatisfaction and intention to quit one's job. **Results:** Slightly over half (54%, 114/213) of the providers were dissatisfied with their current job, and 35% (74/213) intended to leave their job. Most of the providers were dissatisfied with low salaries and high workload, but satisfied with workplace harmony and being able to follow their moral values. The odds of reporting to be globally dissatisfied with one's job were high if the provider was dissatisfied with salary (adjusted odds ratio (aOR) 5.6, 95% CI 1.2–26.8), availability of protective gear (aOR 4.0, 95% CI 1.5–10.6), job description (aOR 4.3, 95% CI 1.2–14.7), and working hours (aOR 3.2, 95% CI 1.3–7.6). Perceiving clients to prefer PMTCT Option B+ reduced job dissatisfaction (aOR 0.2, 95% CI 0.1–0.8). The following factors were associated with providers' intention to leave their current job: job stability dissatisfaction (aOR 3.7, 95% CI 1.3–10.5), not being recognized by one's superior (aOR 3.6, 95% CI 1.7–7.6), and poor feedback on the overall unit performance (aOR 2.7, 95% CI 1.3–5.8). **Conclusion:** Job dissatisfaction and turnover intentions are comparatively high among nurses in Dar es Salaam's public-sector maternal care facilities. Providing reasonable salaries and working hours, clearer job descriptions, appropriate safety measures, job stability, and improved supervision and feedback will be key to retaining satisfied PMTCT providers and thus to sustain successful implementation of Option B+ in Tanzania.

59.Helga, N., Anna, M. E., Phares, M., Charles, K., Karim, M., Gunnel, B., David, S., Guerino, C., and Till, B. (2017). The potential of task-shifting in scaling up services for prevention of mother-to-child transmission of HIV: a time and motion study in Dar es Salaam, Tanzania

Abstract

Background: In many African countries, prevention of mother-to-child transmission of HIV (PMTCT) services are predominantly delivered by nurses. Although task-shifting is not yet well established, community health workers (CHWs) are often informally used as part of PMTCT delivery. According to the 2008 World Health Organization (WHO) Task-shifting Guidelines, many PMTCT tasks can be shifted from nurses to CHWs.**Methods**: The aim of this time and motion study in Dar es Salaam, Tanzania, was to estimate the potential of task-

shifting in PMTCT service delivery to reduce nurses' workload and health system costs. The time used by nurses to accomplish PMTCT activities during antenatal care (ANC) and postnatal care (PNC) visits was measured. These data were then used to estimate the costs that could be saved by shifting tasks from nurses to CHWs in the Tanzanian public-sector health system. **Results**: A total of 1121 PMTCT-related tasks carried out by nurses involving 179 patients at ANC and PNC visits were observed at 26 health facilities. The average time of the first ANC visit was the longest, 54 (95% confidence interval (CI) 42–65) min, followed by the first PNC visit this took 29 (95% CI 26–32) minutes on average. ANC and PNC follow-up visits were substantially shorter, 15 (95% CI 14–17) and 13 (95% CI 11–16) minutes, respectively. During both the first and the follow-up ANC visits, 94% of nurses' time could be shifted to CHWs, while 84% spent on the first PNC visit and 100% of the time spent on the follow-up PNC visit could be task-shifted. Depending on CHW salary estimates, the cost savings due to task-shifting in PMTCT ranged from US$ 1.3 to 2.0 (first ANC visit), US$ 0.4 to 0.6 (ANC follow-up visit), US$ 0.7 to 1.0 (first PNC visit), and US$ 0.4 to 0.5 (PNC follow-up visit). **Conclusions**: Nurses working in PMTCT spend large proportions of their time on tasks that could be shifted to CHWs. Such task-shifting could allow nurses to spend more time on specialized PMTCT tasks and can substantially reduce the average cost per PMTCT patient. **Keywords:** Task-shifting, Nurses, Community health workers, Cost, Prevention of mother-to-child transmission, Option B+, Time and motion, Dar es Salaam.

60. Henry, I., Omary, M., Candida, M. (2017).Assessment of Rational Medicines Prescribing in Healthcare Facilities in Four Regions of Tanzania.

http://dx.doi.org/10.5530/jppcm.2017.4.64

Abstract

Objective: The purpose of the study was to measure rational medicines prescribing in healthcare facilities from selected regions in Tanzania with focus on WHO/INRUD core medicines use indicators. Methods: The study is across-sectional and a total 2067 prescriptions were collated and studied from 67 health care facilities in four regions of Tanzania. WHO/INRUD core medicines use indicators were employed and these are; proportions of encounters with an injection prescription, % of prescriptions with an antibiotic, polypharmacy, use of generic name and medicines prescribed from National Essential Medicines List was determined. Collected data were analysed using the Statistical Package for Social Sciences (SPSS) version 16.0, SPSS, Inc; Chicago, USA. Index of Rational Drug Prescribing (IRDP) was used to rank facilities to their level of rational medicines prescribing. Results: The proportion of prescriptions with injections was found to be 18.1% while that containing antibiotics was 67.7% and the average number of medicines per prescription was 2.3. The proportion of medicines prescribed by generic was 95.7%while one that contained medicines in line with the National Essential Medicines List was 96.7%. The overall IRDP for the current study was 3.81with optimal level of 5. Kilimanjaro region scored highest IRDP (3.35) while Mbeya region scored the least (IRDP of 3.11). Rural healthcare facilities scored low IRDP (3.25) while for urban facilities IRDP was higher (3.42). IRDP for public healthcare facilities was higher (3.65) than for private facilities (3.02). Conclusion: Rational drug prescribing in Tanzania is not yet optimal leading to over-prescribing of antibiotics and injections.

61. Hendry, R. S., Juma, A. M., Khalid, R. M., Phillip, M. K., Said, S. K., Michael, S. R., Victor G. Mwafongo, Lee A. Wallis and Teri A. Reynolds. (2017). Trauma burden in Tanzania: a one-day survey of all district and regional public hospitals.

https://doi.org/10.1186/s12873-017-0141-6

Abstract

Background: Trauma contributes significantly to the burden of disease and mortality throughout the world, but particularly in developing countries. In Tanzania, there is an enormous research gap on trauma; the limited data available reflects realities in cities and areas with moderately- to highly-resourced treatment centers. Our aim was to provide a description of the injury epidemiology across all of Tanzania. Our data will serve as a basis for future larger studies. **Methods:** This is a subgroup analysis of a cross-sectional, prospective study of the clinical epidemiology of patients presenting at all public district and regional hospitals in Tanzania. The study was conducted between May 2012 and December 2012. A team of emergency doctors used a purpose-designed data collection sheet to gather the demographic and clinical information of all patients presenting during the day-site visit to each hospital. Descriptive statistics, including means, standard deviations, medians, and

ranges are reported. **Results:** A total of 5227 patients were seen in 24-h period in 105 (100% response rate) district (or designated district) and regional hospitals in mainland Tanzania. Of these patients, 508 (9.7%) presented with trauma-related complaints. Among patients with trauma-related complaints, 286 (56.3%) were male, and the overall median age of 30 (interquartile range of 22–35) years. Road traffic crash was the most common mechanism of injury, accounting for 227 (44.7%) complaints. Open wounds and bone fractures were the two most frequent diagnoses, with a combined 300 (59%) cases. Most of the patients - 325 (64%) - were discharged, 11 (2.2%) went to operating theatres and 4 (0.8%) of patients died while receiving care at the acute intake areas. **Conclusions:** Trauma-related complaints constitute a substantial burden among patients seeking care in acute intake areas of hospitals across Tanzania. There is a need to develop, implement and study systems that can support the improvement of trauma care and optimize outcomes of trauma patients.

62.Hiba,N.,RoubaHage,S.,Batoul,W.,Hussein,F.K.,Salem,H.,Mohamad,T.,Osama,A.A., Wissam,H.F.,Yolla,E.M.(2017).Chemical characterization and cytotoxic activity evaluation of Lebanese propolis.

https://doi.org/10.1016/j.biopha.2017.08.067

Abstract

Chemical composition, anti-proliferative and proapoptotic activity as well as the effect of various fractions of Lebanese propolis on the cell cycle distribution were evaluated on JurkatleukemicT-cells, glioblastoma U251 cells, and breast adenocarcinoma MDA-MB-231 cells using cytotoxic assays, flow cytometry as well as western blot analysis. Liquid chromatography-tandem mass spectrometry (LC–MS/MS) analysis revealed that ferulic acid, chrysin, pinocembrin, galangin are major constituents of the ethanolic crude extract of the Lebanese propolis, while the hexane fraction mostly contains chrysin, pinocembrin, galangin but at similar levels. Furthermore chemical analysis was performed using gas chromatography-mass spectrometry (GC–MS) to identify major compounds in the hexane fraction. Reduction of cell viability was observed in Jurkat cells exposed to the ethanolic crude extract and the hexane fraction, while viability of U251 and MDA-MB-231 cells was only affected upon exposure to the hexane fraction; the other fractions (aqueous phase, methylene chloride, and ethyl acetate) were without effect. Maximum toxic effect was obtained when Jurkat cells were cultivated with 90 μg/ml of both the crude extract and hexane faction. Toxicity started early after 24 h of incubation and remained till 72 h. interestingly, the decrease in cell viability was accompanied by a significant increase in p53 protein expression levels and PARP cleavage. Cell cycle distribution showed an increase in the SubG0 fraction in Jurkat, U251 and MDA-MB-231 cells after 24 h incubation with the hexane fraction. This increase in SubG0 was further investigated in Jurkat cells by annexing/PI and showed an increase in the percentage of cells in early and late apoptosis as well as necrosis. In conclusion, Lebanese propolis exhibited significant cytotoxicity and anti-

proliferative activity promising enough that warrant further investigations on the molecular targets and mechanisms of action of Lebanese propolis.

63. Hussein, L. K., Andrew, H. M., and Birgitta, E. (2017) Intimate partner violence among HIV infected and uninfected pregnant women delivering at a national hospital in Tanzania: Using a modified screening tool.

Abstract

Background: Worldwide Intimate Partner Violence (IPV) is a major public health problem, affecting all women and vulnerable groups such as HIV-infected women. This study aimed to test the applicability of assessment of IPV using a simple screening tool, among women giving birth at Muhimbili National Hospital in Tanzania, to estimate the prevalence and severity of IPV among HIV-infected and uninfected pregnant women, and to assess the odds of IPV among both groups of women. **Methods:** A questionnaire including screening questions was applied to women delivered at Muhimbili National Hospital to identify those that experienced IPV. Demographics, HIV status, male partner's alcohol use and sexual behaviour data were also collected. Mean age and proportions of IPV in different groups were calculated. Odds of IPV were estimated using univariate logistic regression. **Results:** Majority of women (69%) experienced emotional or physical violence, and 31% experienced sexual violence. Sixty-five percent reported a lifetime prevalence of physical, emotional or sexual violence. Majority (82%) of partners of women that experienced IPV were reported as almost solely offenders in sexual violence rather than in emotional or physical violence (44%). Most participants (88%) experienced repeated emotional and physical violence. Regardless of offenders, repeated sexual violence in the preceding year (85%) was more common than physical violence (47%). Experience of IPV in HIV-positive women was comparable to the HIV-negative counterparts. **Conclusion:** A simple proposed tool detected women experienced IPV before and during pregnancy but found comparable rates of violence between HIV positive and negative women.

64.Iweriebor, BC., Mmbaga, EJ., Adegborioye, A., Igwaran, A., Obi, LC., Okoh, AI.(2017).Genetic profiling for Anaplasma and Ehrlichia species in ticks collected in the Eastern Cape Province of South Africa.

Doi: 10.1186/s12866-017-0955-0.

Abstract

Background: Anaplasma and Ehrlichia are emerging tick-borne pathogens that cause anaplasmosis and ehrlichiosis in humans and other animals worldwide. Infections caused by

these pathogens are deadly if left untreated. There has been relatively no systematic survey of these pathogens among ticks in South Africa, thus necessitating this study. The presence of Anaplasma and Ehrlichia species were demonstrated by PCR in ticks collected from domestic ruminants at some selected communities in the Eastern Cape of South Africa. The ticks were identified by morphological characteristics and thereafter processed to extract bacterial DNA, which was analyzed for the presence of genetic materials of Anaplasma and Ehrlichia.**Results**: Three genera of ticks comprising five species were identified. The screening yielded 16 positive genetic materials that were phylogenetically related to Ehrlichia sequences obtained from GenBank, while no positive result was obtained for Anaplasma. The obtained Ehrlichia sequences were closely related to E. chaffeensis, E. canis, E. muris and the incompletely described Ehrlichia sp. UFMG-EV and Ehrlichia sp. UFMT.**Conclusion**: The findings showed that ticks in the studied areas were infected with Ehrlichia spp. and that the possibility of transmission to humans who might be tick infested is high. **Keywords**: Anaplasmosis; Ehrlichiosis; South Africa; Tick-borne.

65. Jahanara, G., Mackenzie, C., Samuel, S., Karen, D., Paul, H., Douglas, G., Larry, A., Ali, M., Kitembo, Salu. William, S. (2017). Coalition for Global Clinical Surgical Education: The Alliance for Global Clinical Training.

https://doi.org/10.1016/j.jsurg.2017.08.019

Objective

Assessment of the effect of the collaborative relationship between the high-income country (HIC) surgical educators of the Alliance for Global Clinical Training (Alliance) and the low-income country surgical educators at the Muhimbili University of Health and Allied Sciences/Muhimbili National Hospital (MUHAS/MNH), Dar Es Salaam, Tanzania, on the clinical global surgery training of the HIC surgical residents participating in the program.**Design:**A retrospective qualitative analysis of Alliance volunteer HIC faculty and residents' reports, volunteer case lists and the reports of Alliance academic contributions to MUHAS/MNH from 2012 to 2017. In addition, a survey was circulated in late 2016 to all the residents who participated in the program since its inception. **Results:** Twelve HIC surgical educators provided rotating 1-month teaching coverage at MUHAS/MNH between academic years 2012 and 2017 for a total of 21 months. During the same time period 11 HIC residents accompanied the HIC faculty for 1-month rotations. HIC surgery residents joined the MUHAS/MNH Department of Surgery, made significant teaching contributions, and performed a wide spectrum of “open procedures” including hand-sewn intestinal anastomoses. Most had had either no or limited previous exposure to hand-sewn anastomoses. All of the residents commented that this was a maturing and challenging clinical rotation due to the complexity of the cases, the limited resources available and the ethical and emotional challenges of dealing with preventable complications and death in a resource constrained environment. **Conclusions:** The Alliance provides an effective clinical

global surgery rotation at MUHAS/MNH for HIC Surgery Departments wishing to provide such an opportunity for their residents and faculty.

66. James, R Y., Hendry, R. S., Juma, A. M., Ernest, N., Ethan, H., Charity, G. M., Michael, S. R., Stacy, L.R. (2018). Sub dissociative intranasal ketamine plus standard pain therapy versus standard pain therapy in the treatment of paediatric sickle cell disease vasoocclusivecrises in resource-limited settings: study protocol for randomized controlled trial.

Abstract

Introduction: Pediatric sickle cell disease, highly prevalent in sub-Saharan Africa, carries great morbidity and mortality risk. Limited resources and monitoring make management of acute vaso-occlusive crises challenging. This study aims to evaluate the efficacy and safety ofsubdissociative intranasal ketamine as a cheap, readily available and easily administered adjunct to standard pain therapy. We hypothesise that sub dissociative, intranasal ketamine may significantly augment current approaches to pain management in resource-limited settings in a safe and cost-effective manner. **Methods and analysis**: This is a multicentred, randomised, double-blind, placebo-controlled trial enrolling children 4–16 years of age with sickle cell disease andpainful vaso-occlusive pain crises. Study sites include two sub-Saharan teaching and referral hospitals with acute intake areas. All patients receive standard analgesic therapy during evaluation. Patients randomised to the treatment arm receive 1 mg/kg intranasal ketamine at onset of therapy, while placebo arm participants receive volume-matched intranasal normal saline. All participants and clinical staff are blinded to the treatment allocation. Data will be analysed on an intention-to-treat basis. Primary endpoints are changes in self-report pain scales (Faces Pain Scale-Revised) at 30, 60 and 120 minutes and rates of adverse events. Secondary endpoints include hospital length of stay, total analgesia use and quality of life assessment 2–3 weeks post intervention. **Ethics and dissemination:** The research methods for this study have been approved by the Cameroon Baptist Convention Health Board Institutional Review Board(IRB2015-07), the Tanzanian National Institute for Medical Research (NIMR/HQ/R.8a/Vol. IX/2299), Muhimbili National Hospital IRB (MNH/IRB/I/2015/14) and the Tanzanian Food and Drugs Authority (TFDA0015/CTR/0015/9). Data reports will be provided to the Data and Safety Monitoring Boar (DSMB) periodically throughout the study as well as a reports of adverse events. All protocol amendments will also be reviewed by the DSMB. Study results, regardless of direction or amplitude, will be submitted for publication irrelevant peer-reviewed journals.

67. Jamila, S. D., Candida, M., Kisali, P. (2018). Unknown HIV Infection Prevalence and Associated Factors: Findings from A University Teaching Hospital in Tanzania.

Abstract

Background: Early detection and effective treatment with antiretroviral drugs would help preserve/improve the immune system, ameliorate quality of life of persons with HIV/AIDS and prevent unintentional spread of the virus. To that end provider initiated HIV counseling and testing (PIHCT) is recommended as standard of care for all patients attending health facilities in HIV endemic countries. This study aimed at determining the prevalence and factors associated with unknown HIV infection among medical admissions at Muhimbili National Hospital (MNH) as an indicator of PIHTC practice in Dares salaam, Tanzania. **Methods:** Patients newly hospitalized into MNH medical wards with unknown HIV sero-status were recruited in this hospital based cross sectional study. Patients were interviewed, examined, counseled and tested for HIV. CD4+ T lymphocytes count was determined for HIV positive and patients were followed up to determine in hospital outcome and duration of stay. **Results:** Of the 505 patients with unknown HIV status, 30 (5.9%) tested positive for HIV and all of them had visited another health facility before being referred to MNH compared to 78.5% among those who tested negative (p=0.004). More than two thirds (66.7%) of the newly diagnosed HIV patients had advanced disease. But, history of chronic diarrhea and/or severe weight loss, severe wasting (Slim disease) common features of AIDS in the 1980s were not apparent despite the late clinical presentation. Patients presenting with fever, oral ulcers, oral candidiasis, altered mental status, generalized lymphadenopathy were more likely to be diagnosed with HIV infection. Age of ≥50 years had a negative correlation towards a new diagnosis of HIV infection. **Conclusion:** Over 85% of medical patients referred to MNH did not know their HIV status. Newly diagnosed HIV sero-positive patients did not present with AIDS defining illnesses although over two thirds of them had advanced disease and in hospital mortality was high.

68. Joachim, A., Munseri, PJ., Nilsson, C., Bakari, M., Aboud, S., Lyamuya, EF., Tecleab, T., Liakina, V., Scarlatti, G., Robb, ML., Earl, PL., Moss, B., Wahren, B., Mhalu, F., Ferrari, G., Sandstrom, E., Biberfeld, G. (2017). Three-Year Durability of Immune Responses Induced by HIV-DNA and HIV-Modified Vaccinia Virus Ankara and Effect of a Late HIV-Modified Vaccinia Virus Ankara Boost in Tanzanian Volunteers.

DOI:10.1089/AID.2016.0251

Abstract

We explored the duration of immune responses and the effect of a late third HIV-modified vaccinia virus Ankara (MVA) boost in HIV-DNA primed and HIV-MVA boosted Tanzanian volunteers. Twenty volunteers who had previously received three HIV-DNA and two HIV-MVA immunizations were given a third HIV-MVA immunization 3 years after the second HIV-MVA boost. At the time of the third HIV-MVA, 90% of the vaccinees had antibodies to

HIV-1 subtype C gp140 (median titer 200) and 85% to subtype B gp160 (median titer 100). The majority of vaccinees had detectable antibody-dependent cellular cytotoxicity (ADCC)-mediating antibodies, 70% against CRF01_AE virus-infected cells (median titer 239) and 84% against CRF01_AE gp120-coated cells (median titer 499). A high proportion (74%) of vaccinees had IFN-γ ELISpot responses, 63% to Gag and 42% to Env, 3 years after the second HIV-MVA boost. After the third HIV-MVA, there was an increase in Env-binding antibodies and ADCC-mediating antibodies relative to the response seen at the time of the third HIV-MVA vaccination, $p < .0001$ and $p < .05$, respectively. The frequency of IFN-γ ELISpot responses increased to 95% against Gag or Env and 90% to both Gag and Env, $p = .064$ and $p = .002$, respectively. In conclusion, the HIV-DNA prime/HIV-MVA boost regimen elicited potent antibody and cellular immune responses with remarkable durability, and a third HIV-MVA immunization significantly boosted both antibody and cellular immune responses relative to the levels detected at the time of the third HIV-MVA, but not to higher levels than after the second HIV-MVA.

69.Joachim, A., Moyo, SJ., Nkinda, L., Majigo, M., Mmbaga, E., Mbembati, N., Aboud, S., Lyamuya, EF.(2017).Prevalence of methicillin-resistant Staphylococcus aureus carriage on admission among patients attending regional hospitals in Dar es Salaam, Tanzania.

Doi: 10.1186/s13104-017-2668-8.

Abstract

Background: Methicillin-resistant Staphylococcus aureus (MRSA) is a major pathogen responsible for hospital and community acquired infection. Colonization with MRSA is associated with a high risk of developing infection. This study aimed to determine the rate of MRSA carriage on admission and the associated risk factors among patients attending regional hospitals, in Dar es Salaam, Tanzania. **Results:** A total of 258 patients were included in this study. Nasal swabs were collected on admission to the hospital and after 48 h of hospital stay for detection of MRSA. Of 258 patients enrolled, 89 (34.5%) were colonized with S. aureus and out them 22 (24.7%) were carriers of MRSA, giving an overall MRSA nasal carriage rate of 8.5% (22/258). One patient acquired MRSA while admitted in the hospital. Most of the S. aureus isolates 85 (95.5%) were resistant to penicillin. Resistance to gentamycin, ciprofloxacin, kanamycin, linezolid and mupirocin were 14.6, 11.2, 11.2, 3.4 and 1.1%, respectively. The prevalence of inducible clindamycin resistance, constitutive clindamycin resistance, MS phenotype (resistance to erythromycin alone), and multidrug resistance was 21.3, 3.4, 12.4, and 16.9%, respectively. We observed a statistically significant association between MRSA and multiple drugs resistance among S. aureus isolates ($p = 0.001$). Of the risk factors investigated none were statistically significant associated with

MRSA.**Conclusion**: There is a high prevalence of MRSA among patients on admission at the two municipal hospitals in Dar es Salaam. The high prevalence of MRSA and the increased rates of resistance to commonly used antimicrobials among MRSA isolates call for attention to the importance of including the screening of MRSA in our hospitals setting in order to prevent further spread of MRSA strains to other patients and to the communities. Control and prevention strategies should be emphasized including decolonization. **Keywords**: Antibiotic resistance; Infection; MRSA nasal carriage.

70. Jofrey, R., Morris, A., Clara, M., Jerman, W. R., Neema, K. (2017). Analysis of nutritional adequacy of local foods for meeting dietary requirements of children aged 6-23 months in rural central Tanzania.

https://doi.org/10.1186/s13690-017-0226-4

Abstract

Background: Under nutrition remains a serious problem among children in Sub-Saharan Africa. Analyzing how diets composed of local foods could achieve nutritional goals for infants and young children in low-income settings is essential. The objective of this study was to analyses how local foods can be used rationally and to what extent these foods can be supplemented to achieve nutrient requirements for children aged 6 – 23 months in resource-poor settings. **Methods:** A cross-sectional study was carried out to estimate dietary intakes of 400 children aged 6-23 months using a 12-h weighed dietary record, 24-h dietary recalls, and 7-days food records. Anthropometric measurements on each subject were also taken. Analyses were done to establish the level of nutrient intake, and nutritional status of the study population using Microsoft Excel 2013 and ProPAN software version 2.0. **Results:** The results showed that the prevalence of stunting, wasting and underweight for children aged 6–23 months was 30–41%, 1.5–3% and 4–9%, respectively. In addition, the results showed that diets that were consumed by the subjects comprised of local foods met vitamin A, vitamin C, protein and energy requirements for children aged 6–23 months. However, the extent of deficit in iron, zinc and calcium in baseline diets was large and difficult to meet under the existing feeding practices. **Conclusions:** The study shows that local foods in the study area have a potential to achieve recommended dietary intakes of some essential nutrients, and that interventions are needed to meet the required amount of iron, zinc and calcium for children aged 6–23 months. The interventions we propose here may encourage changes in traditional feeding habits and practices of the target population. Possible intervention options are (1) supplementation of local foods with nutrient-dense foods that are not normally consumed in the locality (2) providing new avenues for increasing the production and wide consumption of local nutrient-dense foods, or optimizing the way local diets are constituted so as to achieve nutrient recommendations for infants and young children.

71. Joram, D., Maud, de H., Michaël, G., Abdus, S., Reinier, P. van O., Cedric, V., Małgorzata, W., Fausta, M., Raphael, Z. S., Edwin, J. B., Marc, T., Anneleen, K., Saar, B., Jorge, R., Nova, B., Michael, R J., Anne-Mieke, V. (2017). Exploring the value and acceptability of peer support in the process of improving adherence to HIV antiretroviral drugs in Tanzania, Dar-es-Salaam.

https://doi.org/10.11116/TDI2017.1.2

Abstract

Challenge: A way to understand and instruct on best practices for delivering and accepting HIV drug treatments in Africa. This transdisciplinary team focused on the problem of continuously rising levels of HIV drug resistance in Africa that as a result can lead to increased rates of mortality and morbidity. The main source of the HIV drug resistance problem is believed to be insufficient adherence to therapy. The challenge submitter suggested to explore whether improving the relationship between patient and health-care provider would be the next best step to improve adherence. However, after gathering knowledge from different sources, it was found that the burden on local doctors was already very high and would only increase in the coming years. A better relationship with the patient would be an extra burden on the time of health personnel. Instead, the team researched the feasibility of implementing peer support groups in Dar Es Salaam, Tanzania, as a possible way to increase patient adherence. With the creation of a questionnaire, a first step was taken in researching the value and acceptability of peer support groups in combating problems with adherence in regions where time constraints on skilled health workers limit possible interventions.

72. Judith, W., Ben, D. (2017). Reproductive Health and Bodily Integrity in Tanzania

DOI: 10.1111/sifp.12029 View/save citation

Abstract

Several policy initiatives support the empowerment of women to improve their reproductive health. Little is known, however, about the inverse effect that reproductive health might have on women's empowerment. Women are pressured to conform to their reproductive role, and an inability to do so might affect their empowerment, including control over their own body. Using a panel dataset of 504 married women in Northern Tanzania, we find that women who experienced a pregnancy loss show more tolerant views of partner violence and that child mortality lowers their perceived control over the sexual relationship with their spouse. The number of living children did not affect bodily integrity. These results confirm that women's bodily integrity is partly dependent on the ability to fulfill their reproductive role. They strengthen the case for policies and programs that improve women's reproductive health and underline the importance of counselling after pregnancy or child loss.

73. Justin, C., Rehama, C.M. (2018). Social media and professional networking: a case of information professionals in the scecsal region.

Abstract

The purpose of the study was to establish the extent to which library and information professionals in the Standing Conference of Eastern, Central and Southern Africa Library and Information Associations (SCECSAL) region are using social media applications for professional networking. The findings show that although the professionals are adopting social media applications, itsuse is more for social networking than professional networking purposes. Among those using the applications for professional networking, Social Networking Services (i.e. Facebook, LinkedIn, Google+ and MySpace) aretheirfirst choice applications; with Facebook being the most popular. They study also revealed that most of the professionals had taught themselves how to use social media. The major challenge faced in the use of social media was the lack of time in the effective use of the applications. The paper recommends that to enhance the use of social media for professional networking, social media must be integrated into individual networking activities and that library and information professionals and Associations in the regionshouldembrace social media applications.

74. Kana, S., Shigeko, H., Sebalda L., and Yoko, S. (2018). Midwives' respect and disrespect of women during facility-based childbirth in urban Tanzania: a qualitative study.

https://doi.org/10.1186/s12978-017-0447-6

Abstract

Background: Over the last two decades, facility-based childbirths in Tanzania have only minimally increased by 10% partly because of healthcare providers' disrespect and abuse (D&A) of women during childbirth. Although numerous studies have substantiated women's experience of D&A during childbirth by healthcare providers, few have focused on how D&A occurred during the midwives' actual care. This study aimed to describe from actual observations the respectful and disrespectful care received by women from midwives during their labor period in two hospitals in urban Tanzania. **Methods:** This descriptive qualitative study involved naturalistic observation of two health facilities in urban Tanzania. Fourteen midwives were purposively recruited for the one-on-one shadowing of their care of 24 women in labor from admission to the fourth stage of labor. Observations of their midwifery care were analyzed using content analysis. **Results:** All the 14 midwives showed both respectful and disrespectful care and some practices that have not been explicated in previous reports of women's experiences. For respectful care, five categories were identified: 1)

positive interactions between midwives and women, 2) respect for women's privacy, 3) provision of safe and timely midwifery care for delivery, 4) active engagement in women's labor process, and 5) encouragement of the mother-baby relationship. For disrespectful care, five categories were recognized: 1) physical abuse, 2) psychological abuse, 3) non-confidential care, 4) non-consented care, and 5) abandonment of care. Two additional categories emerged from the unprioritized and disorganized nursing and midwifery management: 1) lack of accountability and 2) unethical clinical practices. **Conclusions:** Both respectful care and disrespectful care of midwives were observed in the two health facilities in urban Tanzania. Several types of physical and psychological abuse that have not been reported were observed. Weak nursing and midwifery management was found to be a contributor to the D&A of women. To promote respectful care of women, pre-service and in-service trainings, improvement of working conditions and environment, empowering pregnant women, and strengthening health policies are crucial.

75. Kasusu, K.N., Satu, M.L., and Risto J.T. (2018). Attitudes towards tooth fillings in Tanzanian adults and its association with previous filling experience.

https://doi.org/10.1186/s12903-018-0474-x

Abstract

Background: Tooth filling treatment is utilized at low levels in many low and middle-income countries (LMICs), further, little is known about the prevailing attitudes towards such treatment. This study aimed to assess attitudes towards tooth filling among Tanzanian adults and how previous tooth filling experience is associated with these attitudes. **Methods:** A pretested structured questionnaire was distributed among 1522 out-patients in four regional hospitals in Tanzania in 2015–16. The questionnaire had eight statements on a 6-point Likert scale measuring attitudes towards tooth filling. Responses were analyzed independently and through a constructed attitude sum score. Linear regression analysis was used to assess the association of previous tooth fillings on attitudes towards tooth filling treatment. **Results:** The respondents were mostly female (57.3%), with a mean age of 33.1 years (SD 11.3). About one third of the respondents (36.4%) had primary level of education. Attitudes towards tooth filling treatment were generally negative. Low levels of education and income were associated with more negative attitudes. A small proportion (11.5%) had a previous tooth filling. Having a previous tooth filling was associated with a more positive attitude towards tooth fillings regardless of socioeconomic status. **Conclusions:** This study shows that even in areas with limited resources and availability of services, previous experience of tooth fillings is related to more positive attitudes towards restorative treatment, which should be taken into account when planning oral health care programs.

76.Kayombo, CM., Mumghamba, EG.(2017).Self-Reported Halitosis in relation to Oral Hygiene Practices, Oral Health Status, General Health Problems, and Multifactorial Characteristics among Workers in Ilala and Temeke Municipals, Tanzania.

DOI: 10.1155/2017/8682010

Abstract

Aim. To assess self-reported halitosis, oral hygiene practices, oral health conditions, general health problems, sociodemographic factors, and behavioral and psychological characteristics among workers in Ilala and Temeke municipals**. Materials and Methods**. This was a cross-sectional descriptive study. Four hundred workers were recruited using a self-administered structured questionnaire. **Results.** Self-reported tooth brushing practice was 100%, tongue cleaning 58.5%, dental flossing 4.3%, gum bleeding on tooth brushing 79.3%, presence of hard deposits on teeth 32%, mobile teeth 15.3%, and self-reported halitosis (SRH) 48.5%. Tea users were 95%, coffee users 75.8%, smokers 21%, and alcohol consumers 47%. The SRH was significantly associated with bleeding gums, hard deposits, and mobile and malaligned teeth. Tongue cleaning and regular change of toothbrush were associated with low prevalence of SRH ($P< 0.001$). Higher occurrence of SRH was significantly related to low education and smoking. **Conclusion.**Self-reported halitosis was prevalent among workers and was significantly associated with bleeding gums, hard dental deposits, mobile teeth, and smoking. All participants brushed their teeth and cleaned the tongue regularly but use of dental floss was extremely low. Oral health education and health promotion are recommended.

77. Kevin, C., Deus, S. I., Filbert, F., Julie, M., Mathias, L. K., John, L., Martha, L., Horacio, L., Günther, F., and Bruno, P. M. (2017). Relationships between sickle cell trait, malaria, and educational outcomes in Tanzania.

DOI 10.1186/s12879-017-2644-x

Abstract

Background: Sickle Cell Trait (SCT) has been shown to be protective against malaria. A growing literature suggests that malaria exposure can reduce educational attainment. This study assessed the relationship and interactions between malaria, SCT and educational attainment in north-eastern Tanzania. **Methods**: Seven hundred sixty-seven children were selected from a list of individuals screened for SCT. Febrile illness and malaria incidence were monitored from January 2006 to December 2013 by community health workers. Education outcomes were extracted from the Korogwe Health and Demographic Surveillance system in 2015. The primary independent variables were malaria and SCT. The association

between SCT and the number of fever and malaria episodes from 2006 to 2013 was analyzed. Main outcomes of interest were school enrolment and educational attainment in 2015. **Results**: SCT was not associated with school enrolment (adjusted OR 1.42, 95% CI [0.593, 3.412]) or highest grade attained (adjusted grade difference 0.0597, 95% CI [−0.567, 0.686]). SCT was associated with a 29% reduction in malaria incidence (adjusted IRR 0.71, 95% CI [0.526, 0.959]) but not with fever incidence (adjusted IRR 0.905, 95% CI [0.709-1.154]). In subgroup analysis of individuals with SCT, malaria exposure was associated with reduced school enrollment (adjusted OR 0.431, 95% CI [0.212, 0.877]). **Conclusions**: SCT appears to reduce incidence of malaria. Overall, children with SCT do not appear to attend more years of school; however, children who get malaria despite SCT appear to have lower levels of enrolment in education than their peers.

78. Kristina, L., Method, K., and Festus, K. (2017). Morbidity and mortality of children aged 2–59 months admitted in the Tanzania Lake Zone's public hospitals: a cross-sectional study.

DOI 10.1186/s13104-017-2818-z

Abstract

Background: There is a growing concern about child mortality especially in developing countries. The Governmentof Tanzania and non-governmental organizations are fighting against diseases like malaria, anaemia, diarrhoea andpneumonia that contribute extensively to child mortality. This was a hospital-based, retrospective cohort study involving1130 under-fives (excluding neonates) being either discharged from or died in public hospitals of the Lake Zonein Tanzania. We extracted information on symptoms and signs at admission, major diagnoses and causes of deathfrom the medical records. We applied binary logistic regression models to assess risk factors associated with in-patientunder-five death.**Results**: The major leading morbidities include malaria (49%), anemia (37%), diarrhea (27%), pneumonia (22%) andsevere acute malnutrition (21%). We found the case fatality of 74 deaths per 1000 under-five admissions. Major underlyingcauses of deaths were severe anaemia, severe malaria and severe pneumonia. Factors associated with in-patientdeath were female sex (AOR 1.7; 95% CI 1.0, 2.8) and the odds significantly decreased with increasing level of maternaleducation. **Conclusions**: Malaria remains a leading cause of admissions in hospitals among under-fives. Although the casefatality among children aged between 2 and 59 months admitted in hospitals in Lake Zone is decreasing, efforts areneeded to address major causes of deaths (severe anaemia, severe malaria and severe pneumonia).

79. Lekei, E.,_Ngowi, AV., London, L**.(2017).Acute Pesticide Poisoning in Children: Hospital Review in Selected Hospitals of Tanzania.**

DOI: 10.1155/2017/4208405

Abstract.

Background: Acute pesticide poisoning (APP) is a serious problem worldwide. Because the burden of childhood APP is unknown in Tanzania, this study describes the distribution, circumstances, and patterns of APP involving children under 18 years in Tanzania. Methodology: A 12-month prospective study was conducted in 10 Tanzanian healthcare facilities in 2006 using a data collection tool for surveillance. **Results:** Of 53 childhood poisoning cases identified, 56.6% were female. The most common poisoning circumstances were accidents (49.1%) and suicide (30.2%). The most vulnerable children were 16-17 years old (30.2%). Suicide was significantly more common in females (PRR females/males = 1.66; 95% CI = 1.03-2.68) and accidental cases were more common in children aged 10 years or younger. Suicide was concentrated in children over 10 years, comprising 53% of cases in this age group. Organophosphates (OPs), zinc phosphide, and endosulfan were common amongst reported poisoning agents. The annual APP incidence rate was 1.61/100,000. **Conclusion:** APP is common among children in this region of Tanzania. Prevention of suicide in older children should address mental health issues and control access to toxic pesticides. Prevention of accidents in younger children requires safer storage and hygiene measures. Diverse interventions are needed to reduce pesticide poisoning among children in Tanzania.

80. Lilian, M., Megan, A., Thecla, W.K. (2017). The Challenges of Providing Postpartum Education in Dar es Salaam, Tanzania: Narratives of Nurse-Midwives and Obstetricians.

Abstract

Postpartum education can save lives of mothers and babies in developing countries, and the World Health Organization recommends all mothers receive three postpartum consultations. More information is needed to better understand how postpartum education is delivered and ultimately improves postpartum health outcomes. The purpose of this qualitative study was to examine how postpartum care was delivered in three postnatal hospital clinics in Dar es Salaam, Tanzania. Semi structured interviews with 10 nurse-midwives and three obstetricians were conducted. Feminist post structuralism guided the research process. Postpartum education was seen to be an urgent matter; there was a lack of supportive resources and infrastructure in the hospital clinics, and nurse-midwives and obstetricians had to negotiate conflicting health and traditional discourses using various strategies. Nurse-midwives and obstetricians are well positioned to deliver life-saving postpartum education; however, improvements are required including increased number of nurse-midwives and obstetricians.

81. Lim, A.G., Geduld, H., Checkett, K., Sawe, H.R., Reynolds, T.A. (2017). Pioneering small-group learning in Tanzanian emergency medicine: Investigating acceptability for physician learners. African Journal of Health Professions Education.

Abstract

Background: Emergency medicine (EM) is a relatively new, but growing medical specialty in sub-Saharan Africa. African EM training programmes have used small-group learning (SGL) modalities in their curricula. However, there is little knowledge of whether SGL modalities are perceived to be effective in these African EM training programmes. **Objectives:** To investigate the acceptability of SGL for physicians' training in an academic Tanzanian emergency department using a novel EM curriculum. **Methods:** Using responses to a written questionnaire, we explored the perceived effectiveness of SGL compared with traditional didactic lectures among 38 emergency department physician learners in Dar es Salaam, Tanzania. Perceptions of SGL were identified from qualitative responses, and regression analyses were used to determine strength of association between quantitative outcomes. **Results:** Reported benefits of SGL included team building, simulation training, enhancement of procedural skills, and the opportunity to discuss opinions on clinical management. SGL scored more favourably with regard to improving clinical practice, enjoyment of learning, and building peer-to-peer relations. Lectures scored more favourably at improving medical knowledge. Preference towards SGL over lectures for overall training increased with years of clinical experience (95% confidence interval (CI) 0.16 - 0.62, p=0.002, Spearman's rho 0.51), and the perception that SGL reinforces learner-teacher relationships correlated with seniority within residency training (95% CI 0.14 - 0.86, p=0.007, Spearman's rho 0.47). **Conclusion:** Techniques of SGL were perceived as effective at improving clinical practice in the emergency department setting. These modalities may be more favourably accepted by more experienced physician learners – therefore, new EM teaching programmes in Africa should consider these factors when targeting educational strategies for their respective regions and learner cohorts.

82. Luan, A., Atashroo, D.A., Blackshear, C.P., Raphel, J., Brett, E.A., Flacco, J., Alyono, M.C., Momeni, A., Heilshorn, S., Longaker, M.T., Wan, D.C. (2017). Dynamic Rheology for the Prediction of Surgical Outcomes in Autologous Fat Grafting.

Doi: 10.1097/PRS.0000000000003578

Abstract

Background: Because of the abundance and biocompatibility of fat, lip transfer has become an attractive method for treating soft-tissue deficits. However, it is limited by unpredictable graft survival and retention. Currently, little is known about the viscoelastic properties of fat

after various injection methods. Here, the authors assess the effects of cannula diameter, length, and shape on the viscoelastic properties, structure, and retention of fat. **Methods:** Human lipoaspirate was harvested using suction-assisted liposuction and prepared for grafting. A syringe pump was used to inject fat at a controlled flow rate through cannulas of varying gauges, lengths, and shapes. Processed samples were tested in triplicate on an oscillatory rheometer to measure their viscoelastic properties. Fat grafts from each group were placed into the scalps of immunocompromised mice. After 8 weeks, graft retention was measured using micro–computed tomography and grafts were explanted for histologic analysis. **Results:** Lipoaspirate injected through narrower, longer, and bent cannulas exhibited more shear thinning with diminished quality. The storage modulus (G′) of fat processed with 18-gauge cannulas was significantly lower than when processed with 14-gauge or larger cannulas, which also corresponded with inferior in vivo histologic structure. Similarly, the longer cannula group had a significantly lower storage modulus than the shorter cannula, and was associated with decreased graft retention. **Conclusions:** Discrete modifications in the methods used for fat placement can have a significant impact on immediate graft integrity, and ultimately on graft survival and quality. Respecting these biomechanical influences during the placement phase of lipotransfer may allow surgeons to optimize outcomes.

83. Lucy, R. M., Jessie, M., Samuel, L., and Pedro, P. (2017). Violence and depression among men who have sex with men in Tanzania.

Abstract

Background: Men who have sex with men (MSM) continue to be at an increased risk of Violence, HIV transmissionand Mental Disorders such as depression on top of many other bio-psycho-socio challenges they face as a result oftheir sexual orientation. **Methods:** We recruited 345 MSM using a respondent driven sampling technique. Revised Conflict Tactic Scale, PHQ-9 and questions adapted from the TDHS 2010 were used to assess for violence, depression and HIV-riskbehaviors respectively. Continuous and categorical variables were analyzed with student's t-test and chi-square testrespectively. Logistic regression analyses were performed to assess for predictors of depression and HIV-riskbehaviors. All tests were two sided and $p < 0.05$ was taken as significance level.**Results**: Overall, 325 (94.2%) of participants experienced any form of violence, with emotional violence constitutingthe majority (90.1%), while physical and sexual violence were reported by 254 (73.6%) and 250 (72.5%) ofparticipants respectively. Depressive symptoms were present in 245 (70.0%) and participants who experiencedviolence had a 3 times increased risk of depressive symptoms compared to their violence-free counterparts, $p < 0.001$. On the other hand, participants who experienced any form of violence displayed an over 11 times increasedrate of depressive symptoms compared to their counterparts who were violence free, $p < 0.001$. Violenceexperience was found to be the strongest associated factor for depressive symptoms.**Conclusions**: The rates of violence, depressive symptoms and HIV risk behaviors amongst MSM are astoundinglyhigh thus necessitating extensive interventions. In view of this, deliberate measures to deal with the reported highrates necessitate joint intervention efforts from the policy makers, health providers and community at large.

84. Lwoga, E.T. & Lwoga, N.B. (2017). User acceptance of mobile payment: The effects of user-centric security, system characteristics and gender. The electronic journal of information systems in developing countries. Volume 81, Pages 1–24

DOI: 10.1002/j.1681-4835. 2017. Tb00595.x

Abstract

This paper investigates the effects of user-centric, security, and system characteristics and the moderating effects of gender on behavioural intention to use mobile payments (m-payment) services in Tanzania. The study extended the Technology Acceptance Model (TAM) to better explain and predict the users' intentions to use m-payment services. A questionnaire survey was conducted with 292 m-payment users in Morogoro and Dar es Salaam, Tanzania. The study used structural equation modeling and multi-group analysis for data analysis. The study found that compatibility, social influence, and m-payment knowledge determined perceived usefulness, while m-payment knowledge, trust and compatibility predicted perceived ease of use of m-payment services. Moreover, perceived ease of use determined perceived usefulness, and perceived usefulness and personal innovativeness in turn, had positive effects

on the behavioural intention to use m-payment. There were gender differences on the behavioural intention to use m-payment. The effect of compatibility and personal innovativeness on perceived ease of use, and the influence of ease of use on behavioural intention were moderated by gender such that it is more significant for men more than women. The effects of social influence on perceived usefulness were stronger for female more than their male counterparts. The paper provides empirical findings for mobile service providers to improve their marketing plans, and development of new applications in the Tanzanian culture or other countries with similar conditions.

85. Makani, J., Lyimo, M., Magesa, P., Roberts, DJ. (2017).Strengthening medical education in haematology and blood transfusion: postgraduate programmes in Tanzania.

Doi: 10.1111/bjh.14644.

Abstract

Haematology and blood transfusion, as a clinical and laboratory discipline, has a far-reaching impact on healthcare both through direct patient care as well as provision of laboratory and transfusion services. Improvement of haematology and blood transfusion may therefore be significant in achieving advances in health in Africa. In 2005, Tanzania had one of the lowest distributions of doctors in the world, estimated at 2·3 doctors per 100 000 of population, with only one haematologist, a medical doctor with postgraduate medical education in haematology and blood transfusion. Here, we describe the establishment and impact of a postgraduate programme centred on Master of Medicine and Master of Science programmes to build the capacity of postgraduate training in haematology and blood transfusion. The programme was delivered through Muhimbili University of Health and Allied Sciences (MUHAS) with partnership from visiting medical and laboratory staff from the UK and complemented by short-term visits of trainees from Tanzania to Haematology Departments in the UK. The programme had a significant impact on the development of human resources in haematology and blood transfusion, successfully training 17 specialists with a significant influence on delivery of health services and research. This experience shows how a self-sustaining, specialist medical education programme can be developed at low cost within Lower and Middle Income Countries (LMICs) to rapidly enhance delivery of capacity to provide specialist services.

86. Marina, N., Rose, M., Alfa, M., Nzovu, U., Eric, A., Deodatus, K. (2017). Lipodystrophy among HIV-Infected Patients Attending Care and Treatment Clinics in Dar es Salaam.

https://doi.org/10.1155/2017/3896539

Abstract

Background: HIV infection and long-term HAART use are associated with metabolic and morphological changes. We assessed prevalence, types, and risk factors associated with lipodystrophy among HIV-infected adults attending CTC in Dar es Salaam, Tanzania. **Methods:** Analysis included 466 HIV-infected patients. Study protocol involved administration of structured questionnaire to collect sociodemographic and clinical information. Diagnosis of lipodystrophy was based on physician clinical assessment. **Results:** Lipodystrophy was present in 95 (20.4%) of the study participants, with lipoatrophy being the most common (49.5%) followed by mixed lipodystrophy (37.9%), and lip hypertrophy was the least prevalent (12.6%). Male gender, older age, long duration on HAART, and use of Stavudine containing regimen were associated with lipodystrophy (all). The risk for lipodystrophy was 1.6 times (AOR = 1.66, 95% CI = 1.01–2.72) for male participants and 13.3 times (AOR = 13.3, 95% CI = 6.4–27.7) for those on HAART. Long duration on HAART and use of Stavudine containing regimen were also associated with increased risk for lipodystrophy. Lipodystrophy was associated with poor perception about own body image and decreased social interactions. **Conclusions:** Lipodystrophy is common among HIV-infected patients in Tanzania, especially among male patients and those on HAART. Regular screening, monitoring, and patient awareness are needed for early identification and appropriate management.

87. Mary, N., Shonil, B., Gudrun, B. K. (2017). Contribution of Nutrient Diversity and Food Perceptions to Food and Nutrition Security Among Smallholder Farming Households in Western Kenya: A Case Study.

Abstract

Background: Sub-Saharan Africa is the only region in the world where hunger is prevalent in over one-third of the population, with smallholder farming households, producers of over 80% of Africa's food, facing both calorie and micronutrient deficiencies. With agricultural systems serving as the main source of all nutrients, little is known about the extent to which agricultural diversity in different seasons can meet macro- and micronutrient needs in rural Africa. Objective: Methods: A case study was conducted in Western Kenya to assess the seasonal nutrient diversity, seasonal nutrient accessibility levels, and food perceptions in 30 smallholder farms, 7 markets, and among 97 focus group discussion participants, respectively. All present food plant and animal species were inventoried and assigned to 1 of the 7 major Food and Agriculture Organization–defined food groups. Based on 2 macronutrients and 5 micronutrients, dendrogram-based nutrient functional diversity metrics were calculated. Results: On-farm and market food species offered all 7 macro- and micronutrients under investigation, regardless of seasonal variation in species numbers. Although there were varying seasonal nutrient accessibility levels in markets, farms were especially effective in readily availing 4 of the 7 nutrients. However, the main food shortage

months coincided only with maize shortage, but a diversity of local foods, deemed to be of low cultural and culinary preferences were available. Conclusions: Nutrition education on the importance of a diversity of local foods in meeting dietary needs, thus stimulating the demand side, can contribute to achieving year-round household food security.

88. Matilda, M.M., Mona, M. (2017). Career development plans of dental students at Muhimbili University of Health and Allied Sciences, Tanzania.

DOI: http://dx.doi.org/10.22158/rhs.v2n3p233

Abstract

Examining dental students' career development plans contributes to understanding of their professional expectations and planning of human resource for health within a health system. This study aimed to investigate the career development plans of Dental students at the Muhimbili University of Health and Allied Sciences (MUHAS). A cross-sectional study was performed by utilizing self-administered questionnaires, as data collecting tools. The questionnaires were distributed to all Dental students who participated in the study in 2014 (n=100). In the survey, students were asked about their socio-demographic characteristics, career development plans, future intensions and their areas of choice for their future career. The survey revealed that most students had decisive thoughts and sufficient knowledge about their future career. Majority of the students planned to practice as Dental professionals in Tanzania (39%), particularly in urban areas (chosen by 83%). Also, many students (72%) preferred to become prospective clinical scientists, especially in the fields of "Oral and Maxillofacial Surgery" and "Orthodontics and Dent Facial Orthopedics". In the survey, the role of socio-demographic factors on students' career development plans was also identified. Where, most female students compared to males reported that they prefer to work in urban areas. Additionally, many older students than younger ones favored to pursue clinical sciences in future. Although this study showed various perspectives regarding career development plans of Dental students in Tanzania, Universities need to ascertain professional counseling sessions and mentorship programs so that most students will be able to make informed decisions on their future career. Ultimately, the understanding of Dental students' career development plans will facilitate planning of human resource for oral health and ensure their availability in many areas of Tanzania.

89. Mbarouk, G.S., Sawe, H.R., Mfinanga, J.A., Stein, J., Levin, S., Mwafongo, V., Runyon, M.S., Reynolds, T.A., Olson, K.R. (2017). Patients with acute poisoning presenting to an urban emergency department of a tertiary hospital in Tanzania. BMC Research Notes 10:482.

https://doi.org/10.1186/s13104-017-2807-2

Abstract

Background: Poisoning is a major public health concern in sub-Saharan Africa, affecting patients of all age groups. Poisoned patients often present to the emergency department (ED) and prompt evaluation and appropriate management are imperative to ensure optimal outcomes. Unfortunately, little is known about the specific presentations of poisoned patients in East Africa. We describe the clinical and epidemiological features of patients presenting to the Muhimbili National Hospital (MNH) ED with suspected toxicological syndromes. **Methods:** This prospective study enrolled a consecutive sample of ED patients who presented with a suspected toxicological syndrome from March 2013 to June 2013. Trained investigators completed a structured case report form (CRF) for each eligible patient, documenting the suspected poison, demographic information, the clinical presentation, and the ED outcome and disposition. The study data were analyzed and summarized with descriptive statistics. **Results:** Of 8827 patients, who presented to ED-MNH, 106 (1.2%) met inclusion criteria, and all were enrolled. Among those enrolled, the median age was 28 years (interquartile range [IQR] 16 years), and 81 (76.4%) were male. Overall 55 (52%) were single, and 28 (26.4%) had professional jobs. 60 (56.6%) patients were referred from district hospitals, 86.8% of which were in Dar es Salaam. Only 13 (12.3%) of patients presented to the ED within 2 h of the toxic exposure. The etiology of poisoning included alcohol in 42 (50%), a mixture of different medications in 12 (14.3%), and snakebite in 6 (11.3%). Most exposures were intentional (63 [59.4%]) and were via the oral route (88 [83%]). The most common abnormal physical findings were altered mental status (66 [62.3%]) and tachypnoea (68 [64.2%]). One patient died in the ED and 98 (92.5%) required hospital admission. **Conclusions:** Most patients presenting to the ED with a toxicological syndrome were adult males with intentional exposures. The most common toxic exposure was alcohol (ethanol) intoxication and the most common abnormal findings were altered mental status and tachypnoea. More than three-quarter of patients presented after 2 h of exposure. Almost all patients were admitted to the hospital.

90. Mbugi, E.; Katale, B.Z.; Lupindu, A.M.; Keyyu, J.D.; Kendall, S.I.; Dockrell, H.M.; Michel, A.; D van Helden, P. (2017). Tuberculosis infection: occurrence and risk factors in presumptive tuberculosis patients of the Serengeti ecosystem in Tanzania

Abstract:

Background: Cross-species tuberculosis (TB) transmission between humans and animals has been reported for quite a long time in sub-Saharan Africa. Because humans and animals coexist in the same ecosystem, exploring their potential for cross-species transmission and the impact the disease may have on the health of humans, animals, and their products is critical. **Objectives:** This study aimed to identify risk factors for transmission of TB

(Mycobacterium tuberculosis) and to assess the potential for zoonotic TB (Mycobacterium bovis) transmission in the Serengeti ecosystem where humans and animals are in intense contact. Our aim is to create a base for future implementation of appropriate control strategies to limit infection in both humans and animals. **Methodology:** We administered a semi-structured questionnaire to 421 self-reporting patients to gather information on risk factors and TB occurrence. In a parallel study, researchers screened sputum smears using Ziehl–Neelsen staining and confirmed by mycobacterial culture. We then performed descriptive statistics (Pearson's chi-square test) and logistic regression analysis to establish frequencies, association, and quantification of the risk factors associated with TB cases. Results: Our findings showed 44% (95% confidence interval [CI], 0.40-0.49) of the results were positive from sputum samples collected over a 1-year duration in areas with a high TB burden, particularly the Bunda district, followed by the Serengeti and Ngorongoro districts. Of the culture-positive patients who also had infections other than TB (43/187 patients), 21 (49%) were HIV positive. Contact with livestock products (odds ratio [OR] 6.0; 95% CI, 1.81-19.9), infrequent milk consumption (OR 2.5; 95% CI, 1.42-4.23), cigarette smoking (OR 2.9; 95% CI, 1.19-7.1.2), and alcohol consumption (OR 2.3; 95% CI, 1.22-4.23) were associated with a higher likelihood of TB infection. **Conclusion:** There was no evidence of direct cross-species transmission of either M tuberculosis or M bovis between humans and animals using the study methods. The absence of cross-species TB transmission could be due to limited chances of contact rather than an inability of cross-species disease transmission. In addition, not all people with presumptive TB are infected withTB, and therefore control strategies should emphasise confirming TB status before administering anti-TB drugs. Tuberculosis Infection: Occurrence and Risk Factors in Presumptive Tuberculosis.

91. Michael, E. S., Michael, J. M., Charles, M., Lilian, N., Flora, M., Julia, B., Glory, F. M., Anthon, G. M., Bingileki, F. L., Blandina, T. M., Venance, P. M., John, A.C., Jan, O., Matthew, P. R. (2018). Sociocultural and health system factors associated with mortality among febrile inpatients in Tanzania: a prospective social biopsy cohort study

DOI: 10.1136/bmjgh-2017-000507

Abstract

Introduction: Communicable diseases are the leading causes of death in Tanzania despite the existence of effective treatment tools. We aimed to assess the sociocultural and health system factors associated with mortality from febrile illness in northern Tanzania. Methods:We interviewed febrile inpatients to determine prevalence of barriers in seeking or receiving care and grouped these barriers using the Three Delays model (delays at home, in transport and at healthcare facilities). We assessed 6-week mortality and, after matching on age, gender and severity of illness, measured the association between delays and mortality using conditional logistic regression. Results: We enrolled 475 children, of whom 18 (3.8%) died, and 260 adults, of whom 34 (13.0%) died. For children, home delays were not

associated with mortality. Among adults, a delay in care-seeking due to not recognizing severe symptoms was associated with mortality (OR: 3.01; 95% CI 1.24 to 7.32). For transport delays, taking >1 hour to reach a facility increased odds of death in children (OR: 3.27; 95% CI 1.11 to 9.66) and adults (OR: 3.03; 95% CI 1.32 to 6.99). For health system delays, each additional facility visited was associated with mortality for children (OR: 1.59; 95% CI 1.06 to 2.38) and adults (OR: 2.00; 95% CI 1.17 to 3.41), as was spending >4 days between the first facility visit and reaching tertiary care (OR: 4.39; 95% CI 1.49 to 12.93). Conclusion: Our findings suggest that delays at home, in transport and in accessing tertiary care are risk factors for mortality from febrile illness in northern Tanzania. Interventions that may reduce mortality include community education regarding severe symptoms, expanding transportation infrastructure and streamlining referrals to tertiary care for the sickest patients.

92. Mituro, T., Machibya, F., and Kahabuka, F. (2017). Orthodontic Management of an Intruded Immature Permanent Incisor Following Re-Eruption Stagnation - Literature Review and Case Report.

Abstract

Background: Intrusion is an injury considered one of the most severe luxation injuries to affect permanent teeth, a difficult injury to treat and is associated with several complications. **Aim:** Presentation of management outcome of an intrusive luxation of immature permanent incisor. **The case:** A seven years old girl who presented with severe intrusion of an immature maxillary permanent right central incisor. **Management and outcome:** Initial management of waiting for spontaneous re-eruption resulted into partial re-eruption of the intruded tooth. No further re-eruption six months after injury compared to what was present at the seventh week. Orthodontic extrusion was done using a Nance appliance followed by Orthodontic brackets six weeks later. These resulted into complete re-eruption and proper alignment of the intruded tooth.

Conclusion: Orthodontic repositioning of an intruded maxillary permanent incisor can be successfully achieved using a modified Nance appliance even when commenced at a late time after un-progressive passive re-eruption. **Abbreviations:** MUHAS: Muhimbili University of health and Allied Sciences; IADT: International Association of Dental Traumatology; UK: United Kingdom **Keywords:** Intrusive luxation; Nance appliance; Dental trauma; premature permanent tooth.

93. Mselle, L.T., Aston, M., _Kohi, T.W. (2017). The Challenges of Providing Postpartum Education in Dar es Salaam, Tanzania: Narratives of Nurse-Midwives and Obstetricians.

Abstract

Postpartum education can save lives of mothers and babies in developing countries, and the World Health Organization recommends all mothers receive three postpartum consultations. More information is needed to better understand how postpartum education is delivered and ultimately improves postpartum health outcomes. The purpose of this qualitative study was to examine how postpartum care was delivered in three postnatal hospital clinics in Dar es Salaam, Tanzania. Semistructured interviews with 10 nurse-midwives and three obstetricians were conducted. Feminist poststructuralism guided the research process. Postpartum education was seen to be an urgent matter; there was a lack of supportive resources and infrastructure in the hospital clinics, and nurse-midwives and obstetricians had to negotiate conflicting health and traditional discourses using various strategies. Nurse-midwives and obstetricians are well positioned to deliver life-saving postpartum education; however, improvements are required including increased number of nurse-midwives and obstetricians.

94. Mukwenda, AM., Mbekenga, CK., Pembe, AB., Olsson, P. (2017). Women's experiences of having had, and recovered from, eclampsia at a tertiary hospital in Tanzania.

DOI: 10.1016/j.wombi.2016.09.006

Abstract

Background: Eclampsia is a major cause of maternal and perinatal mortality that requires advanced care and long hospital stays with uncertain outcomes for mother and baby. Care of eclamptic women is particularly challenging in low-income settings. Standards for medical care for eclampsia are established but the psychosocial needs of women are under-researched. **Aim**: To explore and describe women's experiences of having had, and recovered from, eclampsia at a tertiary hospital in Tanzania. **Methods**: Qualitative semi-structured interviews were held with a purposive sample of 10 women recovering from eclampsia. Thematic analysis informed the interpretation of the data. **Findings**: The women had experienced eclamptic seizure as painful and unreal as they were unable to control their body or actions despite sensing what happened. At hospital they felt being cared for and recovered but concerned because they had not been provided with enough information about the disorder. Being separated from the baby during hospitalization was troublesome and they worried about infant feeding and health. The women experienced being connected to God and they were grateful for being alive and having recovered. However, they expressed fears over the possible recurrence of eclampsia in future pregnancies and wanted information about prevention strategies. **Conclusion**: Experiencing eclampsia is painful and gives a sense of bodily disconnectedness. It involves worrisome separation from the newborn, not being adequately informed and concerns over future health. More holistic care would benefit eclamptic women and their newborns.

95. Munda, E., Elia, J. M., Ahmed, A. M., Rogath, S. K. (2017). Male partner involvement in the prevention of mother to child transmission of HIV infection in Mwanza Region, Tanzania.

doi:10.11604/pamj.2017.27.90.8901

Abstract

Introduction: Globally, there are 3.3 million children < 15 years of age living with HIV infection. About 95% of HIV infected children have acquired infection from their mothers. Although new pediatric HIV infection in Tanzania has declined by 48% and Prevention of Mother to Child Transmission (PMTCT) coverage of highly active anti-retroviral therapy (HAART) has increased to 77%, the MTCT rate remains high (15%). Poor male partner involvement in PMTCT services is one of the factors contributing to reduced effectiveness of the PMTCT and hence failure to achieve the elimination of maternal to child transmission of HIV. This study examined the predictors of male involvement in PMTCT services in Mwanza Region, Tanzania from perspectives of the mother. **Methods:** A cross sectional study involving selected health facilities was conducted in Mwanza urban from October 2013 through January 2014. HIV positive pregnant women attending ante-natal clinic (ANC) were interviewed using a semi structured questionnaire. Univariate analysis was used to describe the study respondents where bivariate and logistic regression was used to determine predictors of male involvement. **Results:** A total of 300 HIV positive mothers attending ANC with the mean age of 27.5 + 5.6 were interviewed. Few mothers (24.7%) had their male partners involved in PMTCT. Predictors of male partner involvement in PMTCT were mothers being proactive (Adjusted Odds Ratio (AOR) 28.6; Confidence Interval (CI) 7-116), perceived partners knowledge on PMTCT (AOR 24.6, CI 5.9- 102.8), exposure to TV/Radio announcements on PMTCT (AOR 4.6, CI 1.5-14) and married status of the mother (AOR 3.7, CI 1.5-9). Mothers who never wanted to be escorted by their male partners and busy partners were associated with reduced odds of male involvement into PMTCT (AOR 0.07, CI 0.007-0.68) and (AOR 0.46 CI 0.21-0.99) respectively. Male partner involvement was associated with 98% reduced odds of violence (Crude Odds Ratio 0.018 CI 0.002-0.14). **Conclusion:** Male partner involvement in PMTCT is still low in Mwanza Region. Proactive mothers, partner's knowledge on PMTCT and announcements from television/radio were the major facilitating factors for male involvement in PMTCT as perceived by mothers. Busy male partners and mothers who did not want to be escorted by their partners were a hindrance to male involvement in PMTCT services. These factors highlight the importance of women role in promotion of PMTCT male involvement.

96. Mwiru, R.S., Nagu, T.J, Kaduri, P., Fawzi, W.&Mugusi, F. (2017). Prevalence and factors associated with alcohol drinking among HIV and tuberculosis co-infected patients in Dar es Salaam, Tanzania. AIDS Care .Volume 30, 2018 - Issue 2**.**

https://doi.org/10.1080/09540121.2017.1344183

Abstract

There is scarcity of information on the burden of alcohol use among people living with HIV in Tanzania despite the high burden of HIV. We examined the prevalence and factors associated with alcohol use among HIV and tuberculosis (TB) co-infected patients in fourteen clinics with highest notification of TB in Dar es Salaam, Tanzania, between October 2010 and December 2011. Proportions were used to describe the prevalence and pattern of alcohol use. Logistic regression was used to assess the association of various participant characteristics with alcohol use. Out of the 515 participants, 38 (7.4%) were current alcohol drinkers, 183 (35.5%) were ex-drinkers and the rest, 294 (57.1%) denied ever drinking alcohol. Approximately, 15% of past and current drinkers were classified as heavy drinkers. Patients with normal BMI, cigarette smokers, and those with higher income were more likely to be drinkers. Similarly, compared to civil servants, those in petty trade and other occupations were more likely to be drinkers. We concluded that, the level of current alcohol use among HIV positive people receiving pulmonary TB treatment in this population was low. Nevertheless, alcohol use screening and assessment should be added as an integral part of service provision in HIV clinics given the effect of alcohol on health outcomes among HIV positive patients.

97.Naburi, H., Ekström, AM.,Mujinja, P., Kilewo, C., Manji, K., Biberfeld, G., Sando, D., Chalamila, G., Bärnighausen, T.(2017).The potential of task-shifting in scaling up services for prevention of mother-to-child transmission of HIV: a time and motion study in Dar es Salaam, Tanzania.

Doi: 10.1186/s12960-017-0207-2

Abstract

Background: In many African countries, prevention of mother-to-child transmission of HIV (PMTCT) services are predominantly delivered by nurses. Although task-shifting is not yet well established, community health workers (CHWs) are often informally used as part of PMTCT delivery. According to the 2008 World Health Organization (WHO) Task-shifting Guidelines, many PMTCT tasks can be shifted from nurses to CHWs.**Methods:** The aim of this time and motion study in Dar es Salaam, Tanzania, was to estimate the potential of task-shifting in PMTCT service delivery to reduce nurses' workload and health system costs. The time used by nurses to accomplish PMTCT activities during antenatal care (ANC) and postnatal care (PNC) visits was measured. These data were then used to estimate the costs that could be saved by shifting tasks from nurses to CHWs in the Tanzanian public-sector health system. **Results:** A total of 1121 PMTCT-related tasks carried out by nurses involving

179 patients at ANC and PNC visits were observed at 26 health facilities. The average time of the first ANC visit was the longest, 54 (95% confidence interval (CI) 42-65) min, followed by the first PNC visit which took 29 (95% CI 26-32) minutes on average? ANC and PNC follow-up visits were substantially shorter, 15 (95% CI 14-17) and 13 (95% CI 11-16) minutes, respectively. During both the first and the follow-up ANC visits, 94% of nurses' time could be shifted to CHWs, while 84% spent on the first PNC visit and 100% of the time spent on the follow-up PNC visit could be task-shifted. Depending on CHW salary estimates, the cost savings due to task-shifting in PMTCT ranged from US$ 1.3 to 2.0 (first ANC visit), US$ 0.4 to 0.6 (ANC follow-up visit), US$ 0.7 to 1.0 (first PNC visit), and US$ 0.4 to 0.5 (PNC follow-up visit). **Conclusions:** Nurses working in PMTCT spend large proportions of their time on tasks that could be shifted to CHWs. Such task-shifting could allow nurses to spend more time on specialized PMTCT tasks and can substantially reduce the average cost per PMTCT patient. Keywords: Community health workers; Cost; Dar es Salaam; Nurses; Option B+; Prevention of mother-to-child transmission; Task-shifting; Time and motion

98. Nagu, T., Ray, R., Munseri, P., Moshiro, C., Shayo, G., Kazema, R., Mugusi, F., Pallangyo, K (2017). Tuberculosis among the elderly in Tanzania: disease presentation and initial response to treatment.

DOI: https://doi.org/10.5588/ijtld.17.0161

Abstract

Background: Reports on tuberculosis (TB) presentation among the elderly in sub-Sahara Africa are scarce at a time when the elderly population is increasing. This dearth of information is likely to lead to an increase in the number of undetected TB cases in the region. **Objective**: To describe TB presentation and response to anti-tuberculosis treatment at 2 months among elderly patients. **Methods:** Consecutive patients referred to TB centres in Dar es Salaam, Tanzania, underwent clinical, microbiological and chest X-ray (CXR) evaluations at baseline and after 2 months of anti-tuberculosis treatment. Patients aged □60 years were considered elderly and those aged 18–59 years formed the comparison group. **Results:** Elderly patients with TB were more likely to have smear-negative TB (76.7% vs. 49.3%, *P*< 0.0001) and lower-zone lesions on CXR (41% vs. 17%, *P*< 0.001), but less likely to have cavities on CXR (77.6% vs. 50.4%, *P*< 0.0001) than the comparison group. Hypertension and diabetes mellitus were more common among the elderly than among controls. Mortality at 2 months was respectively 18.6% and 8.1% among the elderly and among controls. Human immunodeficiency virus infection and smoking increased mortality, while hypertension was associated with reduced mortality. **Conclusion:** TB in the elderly was associated with atypical clinical and radiological presentations. A high index of suspicion could minimise delays in diagnosis and treatment.

99. Nagu, T., Aboud, S., Martin, R., Matee,M., Axelsson, R., Valentini,D., Mugusi, F., Zumla, A. (2017). Strong anti-spstein barr virus (EBV) or cytomegalovirus (CMV) cellular immune responses predict survival and a favourable response to anti-tuberculosis therapy.

DOI: https://doi.org/10.1016/j.ijid.2017.01.022

Abstract

Intact immune responses to cytomegalovirus (CMV) and Epstein-Barr virus (EBV) represent a biologically and clinically relevant correlate of 'immunological fitness' in humans. However, there is a lack of knowledge concerning anti-EBV or anti-CMV responses in patients with pulmonary tuberculosis (TB), in whom aberrant immune responses may promote progression of clinical disease. **Methods** Venous blood samples were obtained at the time of (sputum smear positive) pulmonary TB diagnosis. A whole blood assay was performed by exposing PBMCs (peripheral blood mononuclear cells) to a panel of infectious antigens, including CMV, EBV and mycobacterial proteins. Cell culture supernatants were collected after seven days and interferon gamma (IFN-γ) was measured using a sandwich ELISA. Patients received standard first line anti-tuberculosis rifampicin (R)/isoniazid (H)/ethambutol (E)/pyrazinamide (Z) for two months followed by RH for four months. **Results** PBMCs from cured patients (after treatment completion) exhibited significantly stronger IFN-γ responses to CMV (p=0.035), EBV (p=0.006) or Mycobacterium tuberculosis ESAT-6 (p = 0.043) at the time of diagnosis as compared to patients who succumbed to TB during treatment. IFN-γ responses to other viral (H5N1, HSV-1) as well as other mycobacterial (Ag85A, Rv2958c, Rv0447c) antigens were not found to be significantly different among patients who were cured or those who succumbed to TB. **Conclusions** Increased cellular immune responses to CMV and EBV antigens at the time of diagnosis of pulmonary tuberculosis are associated with increased survival after a standard six months anti-TB therapy. CVM and EBV antigens may represent "intrinsic markers for immune fitness" and guide improved TB therapies including host-directed therapies.

100. Nagu, TJ., Aboud, S., Mwiru, R., Matee, MI., Rao, M., Fawzi, WW., Zumla, A., Maeurer, MJ., Mugusi, F.(2017).Tuberculosis associated mortality in a prospective cohort in Sub Saharan Africa: Association with HIV and antiretroviral therapy.

Doi: 10.1016/j.ijid.2017.01.02

Abstract

Objective: Nine out of ten tuberculosis deaths occur in tuberculosis-burdened countries, particularly Sub Saharan Africa. In these setting mortality has not been fully described. We describe the magnitude and pattern of TB mortality in Tanzania. **Methods**: A multicenter prospective cohort study was conducted among HIV infected and uninfected pulmonary tuberculosis patients from time of anti-TB treatment initiation to completion. Patients were censored at the time of treatment completion, or at their last visit for those who did not complete TB treatment. Kaplan-Meier curves were used to estimate time to death; cox proportional hazards model was used to examine risk factors for mortality. **Results**: A total of 58 deaths out of 1696 patients (3.4%) occurred, two thirds (n=39) during the first two months of treatment. Compared to HIV un-infected TB patients, mortality risk for TB/HIV co-

infected patients was least when antiretroviral therapy (ART) was initiated after 14 days of anti-TB (RR=3.55; 95% CI: 1.44, 8.73 p<0.0001) and highest when ART was initiated 90 days or less prior to anti-TB and within the first 14 days of anti-TB therapy (RR=10; 95% CI: 3.28, 30.54; p<0.0001). **Conclusion**: Meticulously planned and supervised antiretroviral therapy reduces mortality among TB/HIV patients. Among patients with TB/HIV naïve of ART, withholding ART until the third week of anti-tuberculosis therapy will likely reduce TB mortality in Tanzania. Patients on ART and later develop tuberculosis should be closely monitored. Keywords: ART; ARV; Antiretroviral therapy; HIV; TB; TB/HIV; death; survival; treatment outcome.

101.Nagu, TJ., Aboud, S., Mwiru, R., Matee, MI., Rao, M., Fawzi, WW., Zumla, A., Maeurer, MJ., Mugusi, F.(2017).Tuberculosis associated mortality in a prospective cohort in Sub Saharan Africa: Association with HIV and antiretroviral therapy.

Doi: 10.1016/j.ijid.2017.01.023

Abstract

Objective: Nine out of ten tuberculosis deaths occur in tuberculosis-burdened countries, particularly Sub Saharan Africa. In these setting mortality has not been fully described. We describe the magnitude and pattern of TB mortality in Tanzania. **Methods**: A multicenter prospective cohort study was conducted among HIV infected and uninfected pulmonary tuberculosis patients from time of anti-TB treatment initiation to completion. Patients were censored at the time of treatment completion, or at their last visit for those who did not complete TB treatment. Kaplan-Meier curves were used to estimate time to death; cox proportional hazards model was used to examine risk factors for mortality. **Results**: A total of 58 deaths out of 1696 patients (3.4%) occurred, two thirds (n=39) during the first two months of treatment. Compared to HIV un-infected TB patients, mortality risk for TB/HIV co-infected patients was least when antiretroviral therapy (ART) was initiated after 14 days of anti-TB (RR=3.55; 95% CI: 1.44, 8.73 p<0.0001) and highest when ART was initiated 90 days or less prior to anti-TB and within the first 14 days of anti-TB therapy (RR=10; 95% CI: 3.28, 30.54; p<0.0001). **Conclusion**: Meticulously planned and supervised antiretroviral therapy reduces mortality among TB/HIV patients. Among patients with TB/HIV naïve of ART, withholding ART until the third week of anti-tuberculosis therapy will likely reduce TB mortality in Tanzania. Patients on ART and later develop tuberculosis should be closely monitored. Keywords: ART; ARV; Antiretroviral therapy; HIV; TB; TB/HIV; death; survival; treatment outcome.

102. Nicholas G. C., Marcia, H.B., Shaohua F., Shanna, L.B., Simon T., YancyL., Susanne P.P., Jeffrey, D.J., Michael C.C., Nyambo T. (2017). Loci associated with skin pigmentation identified in African populations

DOI: 10.1126/science. aan8433

Abstract

Introduction: Variation in pigmentation among human populations may reflect local adaptation to regional light environments, because dark skin is more photoprotective, whereas pale skin aids the production of vitamin D. Although genes associated with skin pigmentation have been identified in European populations, little is known about the genetic basis of skin pigmentation in Africans. **Rationale:** Genetically and phenotypically diverse African populations are informative for mapping genetic variants associated with skin pigmentation. Analysis of the genetics of skin pigmentation in Africans informs upon melanocyte biology and the evolution of skin pigmentation in humans. **Results:** We observe extensive variation in skin pigmentation in Africa, with lowest melanin levels observed in southern African San hunter-gatherers and highest levels in East African Nilo-Saharan pastoralists. A genome-wide association study (GWAS) of 1570 Africans identified variants significantly associated with skin pigmentation, which clustered in four genomic regions that together account for almost 30% of the phenotypic variation. The most significantly associated single-nucleotide polymorphisms were at *SLC24A5*, a gene associated with pigmentation in Europeans. We show that *SLC24A5* was introduced into East Africa >5 thousand years ago (ka) and has risen to high frequency. The second most significantly associated region is near the gene *MFSD12*. Using in vitro and in vivo analyses, we show that *MFSD12* codes for a lysosomal protein that modifies pigmentation in human melanocytes, with decreased *MFSD12* expression associated with darker pigmentation. We also show that genetic knockouts of *MFSD12* orthologs affect pigmentation in both zebrafish and mice. A third highly associated region encompasses a cluster of genes that play a role in ultraviolet (UV) response and DNA damage repair. We find the strongest associations in a regulatory region upstream of *DDB1*, the gene encoding damage-specific DNA binding protein 1, and that these variants are associated with increased expression of *DDB1*. The alleles associated with light pigmentation swept to near fixation outside of Africa due to positive selection, and we show that these lineages coalesce ~60 ka, corresponding with the time of migration of modern humans out of Africa. The fourth significantly associated region encompasses the *OCA2* and *HERC2* loci. We identify previously uncharacterized variants at *HERC2* associated with the expression of *OCA2*. These variants arose independently from eye and skin pigmentation–associated variants in non-Africans. We also identify variants at *OCA2* that are correlated with alternative splicing; alleles associated with light pigmentation are correlated with a shorter transcript, which lacks a transmembrane domain. **Conclusion:** We identify previously uncharacterized genes and variants associated with skin pigmentation in ethnically diverse Africans. These genes have diverse functions, from repairing UV damage to playing important roles in melanocyte biology. We show that both dark and light pigmentation alleles arose before the origin of modern humans and that both light and dark pigmented skin has continued to evolve throughout hominid history. We show that variants associated with dark pigmentation in Africans are identical by descent in South Asian and

Australo-Melanesian populations. This study sheds light on the evolutionary history, and adaptive significance, of skin pigmentation in humans.

103. Nondo, RS., Moshi, MJ,, Erasto, P., Masimba, PJ., Machumi, F., Kidukuli, AW., Heydenreich, M., Zofou, D.(2017). Anti-plasmodial activity of Norcaesalpin D and extracts of four medicinal plants used traditionally for treatment of malaria.

Doi: 10.1186/s12906-017-1673-8

Abstract

Background: Malaria is an old life-threatening parasitic disease that is still affecting many people, mainly children living in sub-Saharan Africa. Availability of effective antimalarial drugs played a significant role in the treatment and control of malaria. However, recent information on the emergence of P. falciparum parasites resistant to one of the artemisinin-based combination therapies suggests the need for discovery of new drug molecules. Therefore, this study aimed to evaluate the antiplasmodial activity of extracts, fractions and isolated compound from medicinal plants traditionally used in the treatment of malaria in Tanzania.**Methods:** Dry powdered plant materials were extracted by cold macerations using different solvents. Norcaesalpin D was isolated by column chromatography from dichloromethane root extract of Caesalpinia bonducella and its structure was assigned based on the spectral data. Crude extracts, fractions and isolated compound were evaluated for antiplasmodial activity against chloroquine-sensitive P. falciparum (3D7), chloroquine-resistant P. falciparum (Dd2, K1) and artemisinin-resistant P. falciparum (IPC 5202 Battambang, IPC 4912 Mondolkiri) strains using the parasite lactate dehydrogenase assay.**Results:**The results indicated that extracts of Erythrina schliebenii, Holarrhena pubescens, Dissotis melleri and C. bonducella exhibited antiplasmodial activity against Dd2 parasites. Ethanolic root extract of E. schliebenii had an IC_{50} of 1.87 μg/mL while methanolic and ethanolic root extracts of H. pubescens exhibited an IC_{50} = 2.05 μg/mL and IC_{50} = 2.43 μg/mL, respectively. Fractions from H. pubescens and C. bonducella roots were found to be highly active against K1, Dd2 and artemisinin-resistant parasites. Norcaesalpin D from C. bonducella root extract was active with IC_{50} of 0.98, 1.85 and 2.13 μg/mL against 3D7, Dd2 and IPC 4912-Mondolkiri parasites, respectively. **Conclusions:** Antiplasmodial activity of norcaesalpin D and extracts of E. schliebenii, H. pubescens, D. melleri and C. bonducella reported in this study requires further attention for the discovery of antimalarial lead compounds for future drug development.

104. Norbert, J. N., Agnes, G. M. (2017). Enhancing households' economic benefits through wetlands friendly investment model: A case of ndembera river valley, Tanzania.

Abstract

The Wetlands Friendly Investments model has been used to conserve wetland resources and improve rural livelihoods in Tanzania since 2003. Nevertheless, studies' linking this model to households' economy is lacking. This paper attempts to examine the households' economic benefits from the implementation of the activities which are part of the model. A total of 174 intervention households in Ndembera Valley were surveyed using questionnaire. The interviews and transect walk complemented household's data. Template, descriptive statistics, t tests and regressions in SPSS ver.20 software were used in the analysis. Results show the difference of annual gross income because of the wetland investment model is about USD 732.0. This study demonstrates that wetland resources could be conserved and utilized using local incentive models. Similar techniques could be applied for related studies elsewhere. Socio-economic factors should be considered for holistic impact of the model on household poverty reduction.

105.Pallangyo, EN., Mbekenga, C., Källestål, C., Rubertsson, C., Olsson, P.(2017)."If really we are committed things can change, starting from us": Healthcare providers' perceptions of postpartum care and its potential for improvement in low-income suburbs in Dar es Salaam, Tanzania.

Doi: 10.1016/j.srhc.2016.09.001.

Abstract

Objective: To explore healthcare providers' perceptions of the current postpartum care (PPC) practice and its potential for improvement at governmental health institutions in low-resource suburbs in Dar es Salaam, Tanzania.**Design**: Qualitative design, using focus group discussions (8) and qualitative content analysis. Setting: Healthcare institutions (8) at three levels of governmental healthcare in Ilala and Temeke suburbs, Dar es Salaam.**Participants**: Registered, enrolled and trained nurse-midwives (42); and medical and clinical officers (13). **Results**: The healthcare providers perceived that PPC was suboptimal and that they could have prevented maternal deaths. PPC was fragmented at understaffed institutions, lacked guidelines and was organized in a top-down structure of leadership. The participants called for improvement of: organization of space, time, resources, communication and referral system; providers' knowledge; and supervision and feedback. Their motivation to enhance PPC quality was high. **Key conclusions**: The HCP awareness of the suboptimal quality of PPC, its potential for promoting health and their willingness to engage in improving care are promising for the implementation of interventions to improve quality of care. Provision of guidelines, sensitization of providers to innovate and maximize utilization of existing resources, and supportive supervision and feedback are likely to contribute to the

sustainability of any improvement. **Keywords**: Focus group; HCP; Postpartum care; Quality of care; Tanzania.

106. R. Colin,C.,Roland, K., Karim, M., Christine, M. M., Said, A., Juergen, G. E., Kerri, G., Rodrick, K., Enju, L., Wafaie, F., and Christopher,D. (2017). Zinc and multivitamin supplementation have contrasting effects on infant iron status: a randomized, double-blind, placebo-controlled clinical trial.

doi:10.1038/ejcn.2017.138.

Abstract

Background—Zinc supplementation adversely affects iron status in animal and adult human studies but few, trials have included young infants.**Objective**—to determine the effects of zinc and multivitamin supplementation on infant hematologic and iron status.**Methods**—In a double-blind RCT, Tanzanian infants were randomized to daily, oral zinc (Zn), multivitamins (MV), Zn and MV, or placebo treatment arms at age 6 wk. HemoglobinUsers may view, print, copy, and download text and data-mine the content in such documents, for the purposes of academic research, subject always to the full Conditions of use: http://www.nature.com/authors/editorial_policies/license.html#terms **Author statement**: All authors have read and approved the submitted version of this manuscript. Authors' contributions all authors have read and approved the submitted version of this manuscript. RCC analyzed the data and wrote the manuscript; KM designed the study, supervised data collection, and provided inputs to the manuscript; SA oversaw all laboratory aspects of the study, and reviewed the manuscript; JE performed iron status assays, assisted with results interpretation, and reviewed the manuscript; KG assisted with study design, sample management, and reviewed the manuscript; RK provided inputs to the study design, oversaw data collection, and reviewed the manuscript; EL assisted with statistical analysis and reviewed the manuscript; WFF designed the study, provided inputs to the statistical analysis, and reviewed the manuscript; CM oversaw data management, provided inputs to the statistical analysis, and reviewed the manuscript; CPD designed the study, oversaw study implementation; contributed to the statistical analysis, and provided inputs to the manuscript.**Conflicts of interest**: Juergen Erhardt is owner of the company VitMin Lab (Willstaett, Germany), where some of the assays performed in this study were conducted. Roland Kupka is a UNICEF staff member. The opinions and statements in this article are those of the author and may not reflect official UNICEF policies. The other authors have no conflicts of interest to disclose. Concentration (Hb) and red blood cell indices were measured at baseline and at 6, 12, and 18 mo of age. Plasma samples from 589 infants were examined for iron deficiency (ID) at 6 mo. **Results—**In logistic regression models, Zn treatment was associated with greater odds of ID (OR 1.8 [95% CI 1.0–3.3]), and MV treatment was associated with lower odds (OR 0.49 [95% CI 0.3–0.9]). In Cox models, MV were associated with a 28% reduction in risk of severe anemia (HR=0.72 [95% Cl 0.56–0.94]) and a 26%

reduction in risk of severe microcytic anemia (HR=0.74 [0.56–0.96]) through 18 months. No effects of Zn on risk of anemia were seen. Infants treated with MV alone had higher mean Hb (9.9 g/dL [95% CI 9.7–10.1]) than those given placebo (9.6 g/dL [9.4–9.8]) or Zn alone (9.6 g/dL [9.4–9.7]). **Conclusions—**MV treatment improved iron status in infancy, whereas Zn worsened iron status but without an associated increase in risk for anemia. Infants in long-term zinc supplementation programs at risk for ID may benefit from screening and/or the addition of a multivitamin supplement.

107. Rafal, S. S., Catherine, M. S., Nuri, K., Isaac, M., Wendy, W., Robert, P. I., Albert, M., LaShaunda, L. M., Keith Chervenak4,7, Noemi B. Hall3, Mecky Matee6, Harriet Mayanja-Kizza7,8, Moses, J., Jason, H. M., William, K. S., Timothy, L., W. Henry B.,Fordham, R., Scott. W., Giorgio, S. (2017). A chromosome 5q31.1 locus associates with tuberculin skin test reactivity in HIV-positive individuals from tuberculosis hyper-endemic regions in east Africa.

https://doi.org/10.1371/journal.pgen.1006710

Abstract

One in three people has been infected with *Mycobacterium tuberculosis* (MTB), and the risk

For MTB infection in HIV-infected individuals is even higher. We hypothesized that HIV-positive individuals living in tuberculosis-endemic regions who do not get infected by *Mycobacterium tuberculosis* are genetically resistant. Using an ªexperiment of natureº design thatProved successful in our previous work, we performed a genome-wide association study of Tuberculin skin test positivity using 469 HIV-positive patients from prospective study cohortsof tuberculosis from Tanzania and Uganda to identify genetic loci associated with MTBInfection in the context of HIV-infection. Among these individuals, 244 tested were tuberculin skin test (TST) positive either at enrollment or during the >8 year follow up, while 225 were not. We identified a genome-wide significant association between dominant models ofrs877356 and binary TST status in the combined cohort (Odds ratio = 0.2671, p = 1.22x10-8). Association was replicated with similar significance when examining TST in duration as a continuous trait. The variant lies in the 5q31.1 region, 57kb downstream from *IL9*. Two-locus analyses of association of variants near rs877356 showed a heliotype comprised of rs877356and an *IL9* missense variant, rs2069885, had the most significant association (p = 1.59x10-12). We also replicated previously linked loci on chromosomes 2, 5, and 11. IL9 is a cytokine produced by mast cells and TH2 cells during inflammatory responses, providing a possible link between airway inflammation and protection from MTB infection. Our results indicate that studying uninfected, HIV-positive participants with extensive exposure increases the power to detect associations in complex infectious disease.

108. Ramadhani, S. M., Tumaini, J. N., Pamela, K., Wafaie, F., Ferdinand, M. (2017). Prevalence and factors associated with alcohol drinking among HIV and tuberculosis co-infected patients in Dar es Salaam, Tanzania.

https://doi.org/10.1080/09540121.2017.1344183

Abstract

There is scarcity of information on the burden of alcohol use among people living with HIV in Tanzania despite the high burden of HIV. We examined the prevalence and factors associated with alcohol use among HIV and tuberculosis (TB) co-infected patients in fourteen clinics with highest notification of TB in Dar es Salaam, Tanzania, between October 2010 and December 2011. Proportions were used to describe the prevalence and pattern of alcohol use. Logistic regression was used to assess the association of various participant characteristics with alcohol use. Out of the 515 participants, 38 (7.4%) were current alcohol drinkers, 183 (35.5%) were ex-drinkers and the rest, 294 (57.1%) denied ever drinking alcohol. Approximately, 15% of past and current drinkers were classified as heavy drinkers. Patients with normal BMI, cigarette smokers, and those with higher income were more likely to be drinkers. Similarly, compared to civil servants, those in petty trade and other occupations were more likely to be drinkers. We concluded that, the level of current alcohol use among HIV positive people receiving pulmonary TB treatment in this population was low. Nevertheless, alcohol use screening and assessment should be added as an integral part of service provision in HIV clinics given the effect of alcohol on health outcomes among HIV positive patients.

109. Raphael, Z. S., and Edda, T. L. (2017). Research growth and citation impact of Tanzanian scholars: A 24 year's scientometric study.

DOI: 10.5897/IJLIS2017.0786

A scientometric analysis was conducted to map the research growth and citation impact of Tanzania scholars over a period of 24 years starting from 1991 to 2015. We analyzed data for research publications of all Tanzania scholars obtained from the SCOPUS database. The study analyzed the year wise distribution of publications, subject-wise distribution of publications, the authorship pattern, degree of collaboration, and the citation impact. A total of 12,379 articles were published from 34academic and research institutions. The top three universities with high cumulative number of publications were Muhimbili University of Health and Allied Sciences, University of Dar es salaam and Sokoine University of Agriculture. The top subject was medicine. The maximum number of citations received in a single publication was 1914. Publications metrics scores varied a lot based on indices chosen to rank the Tanzanian scholars. The study findings call for a need for scholars to collaborate

with external partners within and outside the country, and publish in journals with a higher impact.

110. Reynolds, TA., Stewart, B., Drewett, I., Salerno, S., Sawe, HR., Toroyan, T., Mock, C.(2017).The Impact of Trauma Care Systems in Low- and Middle-Income Countries.

Doi: 10.1146/annurev-publhealth-032315-021412

Abstract

Injury is a leading cause of death globally, and organized trauma care systems have been shown to save lives. However, even though most injuries occur in low- and middle-income countries (LMICs), most trauma care research comes from high-income countries where systems have been implemented with few resource constraints. Little context-relevant guidance exists to help policy makers set priorities in LMICs, where resources are limited and where trauma care may be implemented in distinct ways. We have aimed to review the evidence on the impact of trauma care systems in LMICs through a systematic search of 11 databases. Reports were categorized by intervention and outcome type and summarized. Of 4,284 records retrieved, 71 reports from 32 countries met inclusion criteria. Training, prehospital systems, and overall system organization were the most commonly reported interventions. Quality-improvement, costing, rehabilitation, and legislation and governance were relatively neglected areas. Included reports may inform trauma care system planning in LMICs, and noted gaps may guide research and funding agendas. **Keywords**: emergency care systems; injury; low- and middle-income countries; prehospital care; trauma care; trauma system

111. Ritah, F.M., Appolinary, A.R.K., Omary, M.S.M., Siriel, N.M., Muhammad, A., Manijeh, V.H., Anna, F., and Eleni, A. (2017). Effect of pharmacogenetics on plasma lumefantrine pharmacokinetics and malaria treatment outcome in pregnant women.

https://doi.org/10.1186/s12936-017-1914-9

Abstract

Background: Pregnancy has considerable effects on the pharmacokinetic properties of drugs used to treat uncomplicated Plasmodium falciparum malaria. The role of pharmacogenetic variation on anti-malarial drug disposition and efficacy during pregnancy is not well investigated. The study aimed to examine the effect of pharmacogenetics on lumefantrine (LF) pharmacokinetics and treatment outcome in pregnant women. **Methods:** Pregnant women with uncomplicated falciparum malaria were enrolled and treated with artemether-lumefantrine (ALu) at Mkuranga and Kisarawe district hospitals in Coast Region of Tanzania. Day-7 LF plasma concentration and genotyping forCYP2B6 (c.516G>T,

c.983T>C), CYP3A4*1B, CYP3A5 (*3, *6, *7) and ABCB1 c.4036A4G were determined. Blood smear for parasite quantification by microscopy, and dried blood spot for parasite screening and genotyping using qPCR and nested PCR were collected at enrolment up to day 28 to differentiate between reinfection from recrudescence. Treatment response was recorded following the WHO protocol. **Results:** In total, 92 pregnant women in their second and third trimester were included in the study and 424 samples were screened for presence of P. falciparum. Parasites were detected during the follow up period in 11 (12%) women between day 7 and 28 after treatment and PCR genotyping confirmed recrudescent infection in 7 (63.3%) women. The remaining four (36.4%) pregnant women had reinfection: one on day 14 and three on day 28. The overall PCR-corrected treatment failure rate was 9.0% (95% CI 4.4–17.4). Day 7 LF concentration was not significantly influenced by CYP2B6, CYP3A4*1B and ABCB1 c.4036A>G genotypes. Significant associations between CYP3A5 genotype and day 7 plasma LF concentrations was found, being higher in carriers of CYP3A5 defective variant alleles than CYP3A5*1/*1 genotype. No significant influence of CYP2B6, CYP3A5 and ABCB1 c.4036A>Genotypes on malaria treatment outcome were observed. However, CYP3A4*1B did affect malaria treatment outcome in pregnant women followed up for 28 days (P = 0.018). **Conclusions:** Genetic variations in CYP3A4 and CYP3A5may influence LF pharmacokinetics and treatment outcome in pregnant women.

112. Russell, S.S., John, P.O B. (2017). Direct inhibition of RAS: Quest for the Holy Grail?

https://doi.org/10.1016/j.semcancer.2017.12.005

Abstract

RAS GTPases (H-, K-, and N-RAS) are the most frequently mutated oncoprotein family in human cancer. However, the relatively smooth surface architecture of RAS and its picomolar affinity for nucleotide have given rise to the assumption that RAS is an “undruggable” target. Recent advancements in drug screening, molecular modeling, and a greater understanding of RAS function have led to resurgence in efforts to pharmacologically target this challenging foe. This review focuses on the state of the art of RAS inhibition, the approaches taken to achieve this goal, and the challenges of translating these discoveries into viable therapeutics.

113. Saada, A. S., Thecla, W. k., Candida, S. M. (2017). Caretaker-adolescent communication on sexual and reproductive health: a cross-sectional study in Unguja-Tanzania Zanzibar.

https://doi.org/10.1186/s12889-017-4591-2

Abstract

Background: Caretakers/parents/caregivers/guardians play important roles in improving Sexual and Reproductive Health (SRH) of adolescents. Caretaker-adolescent sexual communication suggested influencing young people's sexual behaviours. Despite this significance, the communication is believed to be low in Unguja due to the increase of risky sexual behaviours among adolescents. This study assessed the pattern of such communication using IMB model as a framework. **Methods:** This is a cross-sectional study targeted caretakers of adolescents aged 15–19. One thousand caretakers of adolescents were interviewed using structured questionnaire. Comparison between male and female caretakers on discussing different SRH topics to both sexes of adolescents was made. The mean-score difference of overall communication was examinedusing Univariate analysis of variance (ANOVA). Bivariate correlation and simple path analysis via regression was conducted to determine the association of IMB variables in relation to communication practice. Results: This study finds 40.7% of caretakers had ever communicated with their adolescents on SRH matters and 9.2% reported to have had communicated in the past 30 days. The weighted topic measure revealed only 26.5% of caretakers communicated with their adolescents. Both caretakers communicated more with their female adolescents. The communication was more common between same sex and between caretakers and their biological adolescents ($p < 0.000$). Both male and female caretakers mostly discussed sexual abstinence to female adolescents while to male adolescents, HIV/STIs was mostly discussed by female caretakers and pregnancy by male caretakers. The least discussed topics to both sexes are safer sex and other contraceptives use. The bivariate correlations suggested that IMB constructs were inter-related and associated with communication practice. **Conclusion**: Caretakers-adolescents' communication on SRH in Unguja is low and it is not comprehensive. Caretakers fail to communicate with their adolescents on sensitive issues but do so on less sensitive ones. The pattern of communication found to vary across gender of caretaker and that of adolescent and depends on the nature of relationship between caretaker and adolescent. There are gender differences in selecting SRH topics of discussion. Interventions programmes have to include strategies that enhance caretaker's information, motivation and skills so as to improve SRH communication between caretakers and adolescent.

114. Sabrina, J. M., Øyvind, K., Bjorn, B., Kurt, H., Marit, G., T., Samuel, Y. M., Nina, L. (2017). Comprehensive Analysis of Prevalence, Epidemiologic Characteristics, and Clinical Characteristics of Monoinfection and Coinfection in Diarrheal Diseases in Children in Tanzania.

https://doi.org/10.1093/aje/kwx173

Abstract

The role of interactions between intestinal pathogens in diarrheal disease is uncertain. From August 2010 to July 2011, we collected stool samples from 723 children admitted with diarrhea (cases) to 3 major hospitals in Dar es Salaam, Tanzania, and from 564 nondiarrheic

children (controls). We analyzed the samples for 17 pathogens and assessed interactions between coinfections in additive and multiplicative models. At least one pathogen was detected in 86.9% of the cases and 62.8%, of the controls. Prevalence of coinfections was 58.1% in cases and 40.4% in controls. Rotavirus, norovirus genogroup II, Cryptosporidium, and Shigella species/enteroinvasive Escherichia coli were significantly associated with diarrhea both as monoinfections and as coinfections. In the multiplicative interaction model, we found 2 significant positive interactions: rotavirus + Giardia (odds ratio (OR) = 23.91, 95% confidence interval (CI): 1.21, 470.14) and norovirus GII + enter aggregative E. coli (OR = 3.06, 95% CI: 1.17, 7.98). One significant negative interaction was found between norovirus GII + typical enteropathogenic E. coli (OR = 0.09, 95% CI: 0.01, 0.95). In multivariate analysis, risk factors for death were presence of blood in stool and severe dehydration. In conclusion, coinfections are frequent, and the pathogenicity of each organism appears to be enhanced by some coinfections and weakened by others. Severity of diarrhea was not affected by coinfections.

115. Saganuwan, A. S. (2017). Ethno veterinary Values of Nigerian Medicinal Plants: An Overview

DOI: 10.9734/EJMP/2017/29321

Abstract

Background: Poor animal health is still a major problem limiting livestock production in sub-Saharan Africa. Poverty and toxic effects of veterinary drugs have compelled poor resourcedfarmers to search for alternative medicine in Nigeria. In view of this literature search was carriedout with a view to compiling medicinal plants that are being used in the treatment of livestockdiseases in Nigeria. **Methods:** The study was carried out in Markurdi Nigeria. Literatures from various journals that areaddressing ethno veterinary medicine and ethnoboatany were critically reviewed in order to identifythe reported traditional medicinal plants used in treating animal diseases. **Results:** More than 200 plants were used in the treatment of animal diseases such as foot - and -mouth disease, mange, tuberculosis, pediculosis, etc. Some of these plants were: Acacia nilotica, Gardenia erubescens, Vernonia amygdalina, Azadirachta indica among others. Some of thesearched plants were given to animals either directly or ground into powder and added to animalfeeds. Others were administered to animals as concoctions, infusions, or decoctions. Theresponsible therapeutic phytochemical were mainly alkaloids, tannins, saponins, glycosides, flavonoids, phenols, minerals and vitamins. Some medicinal plants were given either incombination with sodium chloride or potash. Before use, plants that had toxic or ant nutritionalcompounds, such as oxalates, tannins, saponins, phytates, alkaloids, nitrate/nitrite and others were subjected to soaking, boiling, toasting or fermentation to remove the toxic elements. **Conclusions:** The identification of these plants can complement or supplement the availablemodern veterinary drugs with a view to providing animal protein for 70% malnourished Nigerianpopulace. The

identified plants may also be included in modern veterinary pharmacopoeia. Moreso, phytochemical principles present in the plants can be fractionated, isolated and tested foracclaimed biological activities.

116. Sibtain, M. M., Ewaldo, K. (2017). Risk factors for mortality among patients admitted with upper gastrointestinal bleeding at a tertiary hospital: a prospective cohort study

https://doi.org/10.1186/s12876-017-0712-8

Abstract

Background: Upper gastrointestinal bleeding (UGIB) is a common gastrointestinal emergency, which is potentially fatal. Proper management of UGIB requires risk-stratification of patients which can guide the type and aggressiveness of management. The aim of this was study was identifying the causes of UGIB and factors that increase the risk of mortality in these patients. Methods: This was a prospective cohort study conducted over a period of seven months at a tertiary hospital. Adults admitted with UGIB were included in the study. Demographic data, laboratory parameters and endoscopic findings were recorded. Patients were then followed up for 60 days to identify the occurrence of mortality. Chi-square tests and cox-regression was used to determine association between risk factors and mortality in the bivariate and multivariate analysis, respectively. Results: A total of 170 patients with UGIB were included. Males accounted for the majority (71.2%). Median age of the study population was 40.0 years. Chronic liver disease was present in 30.6% of study patients. The most common cause of UGIB among the 86 patients who underwent endoscopy was oesophageal varices (57%), followed by peptic ulcer disease (18%) and gastritis (10%). Mortality occurred in 57 patients (33.5%) and was significantly higher in patients with high white blood cell count (HR 2.45, p 0.011), raised serum alanine aminotransferase (HR 4.22, p 0.016), raised serum total bilirubin (HR 5.79, p 0.008) and lack of an endoscopic procedure done (HR 4.40, p <0.001). Rebreeding was reported in 12 patients (7.1%) and readmission due to UGIB in 4 patients (2.4%)Conclusions: Oesophageal varices was the most common cause of UGIB. One-third of patients admitted with upper gastrointestinal bleeding died within 60 days of admission, signifying a high burden. Rebreeding and readmission rates were low. A high WBC count, raised serum ALT, raised serum total bilirubin and a lack of endoscopy were independent predictors of mortality. These findings can be used to risk-stratify patients who may benefit from early and more aggressive management.

117. Sawe, R.T., Mining, S.K., Ofulla, A.V., Patel, K., Guyah, B., Chumba, D., Prosperi, J.R., Kerper, Maggie., Shi, Z., Sandoval-Cooper, M., Taylor, K., Badve, S., Stack, M.S. and Littlepage, L.E. (2017). Tumor infiltrating leukocyte density is independent of tumor grade and molecular subtype in aggressive breast cancer of Western Kenya. Tropical Medicine and Health 45:19.

https://doi.org/10.1186/s41182-017-0059-4

Abstract

Background: Tumors commonly are infiltrated by leukocytes, or tumor infiltrating leukocytes (TILs). It remains unclear, however, if the density and type of individual TILs has a direct or simply correlative role in promoting poor prognosis in breast cancer patients. Breast cancer in Kenyan women is aggressive with presentation at a young age, with advanced grade (grade III), large tumor size (>2.0 cm), and poor prognosis. We previously observed that the tumors were predominantly estrogen receptor positive (ER+) but also included both a high percentage of triple negative tumors and also increased immune cell infiltration within the tumors. We used breast tumor tissues from each patient to make tissue microarrays that were then stained for leukocyte and myeloid markers including CD4, CD8, CD20, CD25, CD68, and CD163 using immunohistochemical techniques. The immune cell infiltration into the cancer tissue included increased numbers of macrophages (CD68+), helper T cells (CD4+), and CD25+ lymphocytes compared to benign tissue. **Results:** This study characterized the grade, molecular subtypes, and proliferation index of these tumors and determined if TIL density was enriched across any of these factors. We analyzed 49 malignant patient tissue samples for this study. The patient population had a mean age of 51.9 years. The tumors analyzed were heterogeneous by grade: grade I (6%), grade II (47%), and grade III (39%). Most patients presented with large tumors (>2.0 cm) (69%). We classified the tumors into molecular subtypes based on clinical marker expression. Based on this analysis, the molecular subtype distribution was heterogeneous with luminal B (41%), basal/triple negative (TN) (37%), luminal A (14%) and HER2 (8%) breast cancer subtypes. While the basal/TN subtype had a much higher proliferative index (Ki-67+) than did the other molecular subtypes, we did not see a significant correlation between TIL density and either subtype or tumor grade. Therefore, TIL density is independent of molecular subtype and grade. **Conclusion:** This study identified a Kenyan patient cohort that develops large, high-grade tumors primarily of the luminal B and basal molecular subtypes. After analyzing the TILs within these tumors, we found that immune cell infiltration of these tumors correlated with increased proliferation but not grade or molecular subtype. Future research is required to determine if the aberrant recruitment of TILs to tumors contributes to cancer progression and response to cancer treatments.

118. Sawe, H.R., Mfinanga, J.A., Mbaya, K.R., Koka, M., Kilindimo, S.S., Runyon, M.S., Mwafongo, V.G., Wallis, L.A. and Reynolds, T.A. (2017). Trauma burden in

Tanzania: a one-day survey of all district and regional public hospitals. BMC Emergency MedicineBMC series 17:30.

https://doi.org/10.1186/s12873-017-0141-6

Abstract

Background: Trauma contributes significantly to the burden of disease and mortality throughout the world, but particularly in developing countries. In Tanzania, there is an enormous research gap on trauma; the limited data available reflects realities in cities and areas with moderately- to highly-resourced treatment centers. Our aim was to provide a description of the injury epidemiology across all of Tanzania. Our data will serve as a basis for future larger studies. **Methods:** This is a subgroup analysis of a cross-sectional, prospective study of the clinical epidemiology of patients presenting at all public district and regional hospitals in Tanzania. The study was conducted between May 2012 and December 2012. A team of emergency doctors used a purpose-designed data collection sheet to gather the demographic and clinical information of all patients presenting during the day-site visit to each hospital. Descriptive statistics, including means, standard deviations, medians, and ranges are reported. **Results:** A total of 5227 patients were seen in 24-h period in 105 (100% response rate) district (or designated district) and regional hospitals in mainland Tanzania. Of these patients, 508 (9.7%) presented with trauma-related complaints. Among patients with trauma-related complaints, 286 (56.3%) were male, and the overall median age of 30 (interquartile range of 22–35) years. Road traffic crash was the most common mechanism of injury, accounting for 227 (44.7%) complaints. Open wounds and bone fractures were the two most frequent diagnoses, with a combined 300 (59%) cases. Most of the patients - 325 (64%) - were discharged, 11 (2.2%) went to operating theatres and 4 (0.8%) of patients died while receiving care at the acute intake areas. **Conclusions:** Trauma-related complaints constitute a substantial burden among patients seeking care in acute intake areas of hospitals across Tanzania. There is a need to develop, implement and study systems that can support the improvement of trauma care and optimize outcomes of trauma patients.

119. Seria, M.S., Ernatus, M.M., Sikasunge, C.S., Evance, M. K., Helena, A.N., Isaac, P. (2017). An epidemiological survey of porcine cysticercosis in Nyasa District, Ruvuma Region, Tanzania.

https://doi.org/10.1016/j.parepi.2017.09.002

Abstract

Porcine cysticercosis (PC) caused by Taenia solium larvae is continuing being important zoonotic disease in many developing countries. It poses a serious public health risk and leads

to economic losses to pig production industry. This study was carried out to determine the prevalence and risk factors associated with PC transmission in Nyasa District. To establish the prevalence of PC, a cross-sectional survey was conducted involving 698 pigs by tongue examination, 330 pigs by Ag-ELISA test and 22 pigs by meat inspection. A questionnaire survey was administered to a member of selected households to gather information on pig management and other potential factors that could explain the prevalence of PC in the area. Results showed that 44 pigs were positive by tongue examination (6.3%, 95% C.I. 4.5–8.1%), 110 tested positive for Ag-ELISA (33.3%, 95% C.I. 28.22–38.38%) and meat inspection detected four infected pigs (18.2%, 95% C.I. 2.08–34.32%). Risk factors associated with PC transmission in Nyasa District were free ranging of pigs (p = 0001), sex of pig (p = 0.011), source of pork (p = 0.0001) and outdoor defecation (0.0001). The present findings indicate that PC is endemic in Nyasa District and that free-ranging of pigs in conjunction with limited use of latrines contributes significantly to PC transmission. Therefore, mandatory pig confinement, together with use of latrine/toilets should be considered in controlling PC in Nyasa District.

120. Shayo, G.A., Chitama, D., Moshiro, C., Aboud, S., Bakari, M. and Mugusi, F. (2017). Cost-Effectiveness of isoniazid preventive therapy among HIV-infected patients clinicaly screened for latent tuberculosis infection in Dar es Salaam, Tanzania: A prospective Cohort study. BMC Public Health: 35

https://doi.org/10.1186/s12889-017-4597-9

Abstract

Background: One of the reasons why Isoniazid preventive therapy (IPT) for Tuberculosis (TB) is not widely used in low income countries is concerns on cost of excluding active TB. We analyzed the cost-effectiveness of IPT provision in Tanzania having ruled out active TB by a symptom-based screening tool. **Methods:** Data on IPT cost-effectiveness was prospectively collected from an observational cohort study of 1283 HIV-infected patients on IPT and 1281 controls; followed up for 24 months. The time horizon for the analysis was 2 years. Number of TB cases prevented and deaths averted were used for effectiveness. A micro costing approach was used from a provider perspective. Cost was estimated on the basis of clinical records, market price or interviews with medical staff. We annualized the cost at a discount of 3%. A univariate sensitivity analysis was done. Results are presented in US$ at an average annual exchange rate for the year 2012 which was Tanzania shillings 1562.4 for 1 US $. **Results:** The number of TB cases prevented was 420/100,000 persons receiving IPT. The number of deaths averted was 979/100,000 persons receiving IPT. Incremental cost due to IPT provision was US$ 170,490. The incremental cost effective ratio was US $ 405.93 per TB case prevented and US $ 174.15 per death averted. These costs were less than 3 times the 768 US $ Gross Domestic Product (GDP) per capita for Tanzania in the year 2014, making IPT provision after ruling out active TB by the symptom-based screening

tool cost-effective. The results were robust to changes in laboratory and radiological tests but not to changes in recurrent, personnel, medication and utility costs. **Conclusion:** IPT should be given to HIV-infected patients who screen negative to symptom-based TB screening questionnaire. Its cost-effectiveness supports government policy to integrate IPT to HIV/AIDS care and treatment in the country, given the availability of budget and the capacity of health facilities.

121. Shari, C.R., Sawe, H.R., Murray, B.L., Mwafongo, V.G., Mfinanga, Juma A. and Runyon, Michael S. (2017). Emergency blood transfusion practices among anaemic children presenting to an urban emergency department of a tertiary hospital in Tanzania. BMC 17:19

https://doi.org/10.1186/s12878-017-0091-y

Abstract

Background: Severe anaemia contributes significantly to mortality, especially in children under 5 years of age. Timely blood transfusion is known to improve outcomes. We investigated the magnitude of anaemia and emergency blood transfusion practices amongst children under 5 years presenting to the Emergency Department (ED) of Muhimbili National Hospital (MNH) in Tanzania. **Methods:** This prospective observational study enrolled children under 5 years old with anaemia, over a 7-week period in August and September of 2015. Anaemia was defined as haemoglobin of <11 g/dL. Demographics, anaemia severity, indications for transfusion, receipt of blood, and door to transfusion time were abstracted from the charts using a standardized data entry form. Anaemia was categorized as severe (Hb <7 g/dL), moderate (Hb 7–9.9 g/dL) or mild (Hb 10–10.9 g/dL). **Results:** We screened 777 children, of whom 426 (55%) had haemoglobin testing. Test results were available for 388/426 (91%), 266 (69%) of whom had anaemia. Complete data were available for 257 anaemic children, including 42% ($n = 108$) with severe anaemia, 40% ($n = 102$) with moderate anaemia and 18% ($n = 47$) with mild anaemia. Forty-nine percent of children with anaemia ($n = 125$) had indications for blood transfusion, but only 23% (29/125) were transfused in the ED. Among the non-transfused, the provider did not identify anaemia in 42% ($n = 40$), blood was not ordered in 28% ($n = 27$), and blood was ordered, but not available in 30% ($n = 29$). The median time to transfusion was 7.8 (interquartile range: 1.9) hours. Mortality was higher for the children with severe anemia who were not transfused as compared with those with severe anaemia who were transfused (29% vs 10%, $p = 0.03$). **Conclusion:** The burden of anaemia is high among children under 5 presenting to EMD-MNH. Less than a quarter of children with indications for transfusion receive it in the EMD, the median time to transfusion is nearly 8 h, and those not transfused have nearly a 3-fold higher mortality. Future quality improvement and research efforts should focus on eliminating barriers to timely blood transfusion.

122. Siana, N., Josephine, M., Florence, U., Abel, M., Swee, L. T., Stephan, M., Sharon, E. C., Charles, R. N., Fenella, J. K., Bruno, P. M., Julie, M. (2017). Fetal Hemoglobin is Associated with Peripheral Oxygen Saturation in Sickle Cell Disease in Tanzania.

Abstract

Fetal hemoglobin (HbF) and peripheral hemoglobin oxygen saturation (SpO2) both predict clinical severity insickle cell disease (SCD), while reticulocytosis is associated with vasculopathy, but there are few data on mechanisms.HbF, SpO2 and routine clinical and laboratorymeasureswere available in a Tanzanian cohort of 1175 SCDindividuals aged ≥ 5 years and the association with SpO2 (as response variable transformed to a Poisson distribution)was assessed by negative binomial model with age and sex as covariates. Increase in HbF was associatedwith increased SpO2 (rate ratio, RR = 1.19; 95% confidence intervals [CI] 1.04, 1.37 per natural log unit of HbF;p = 0.0004). In uninvariable analysis, SpO2 was inversely associated with age, reticulocyte count, and log (totalbilirubin) and directly with pulse, SBP, hemoglobin, and log (HbF). In multivariable regression log(HbF) (RR1.191; 95%CI 1.04, 1.37; p = 0.013), pulse (RR 1.01; 95%CI 1.00, 1.01; p = 0.026), SBP (RR 1.008; 95%CI 1.00,1.02; p=0.014), and hemoglobin (1.120; 95%CI 1.05, 1.19; p=0.001) were positively and independently associatedwith SpO2 while reticulocyte count (RR 0.985; 95%CI 0.97, 0.99; p =0.019) was independently inverselyassociated with SpO2. In SCD, improving SpO2, in part through cardiovascular compensation and associated withreduced reticulocytosis, may be a mechanism by which HbF reduces disease severity.

123. Simba, T., Casey, B., Ian, v. L., Margritvon, B., Douglas, L., Shehu, M.A., Aishat, A. (2017). Food contamination as a pathway for lead exposure in children during the 2010–2013 lead poisoning epidemics in Zamfara, Nigeria.

https://doi.org/10.1016/j.jes.2017.09.007

Abstract

In 2010, an estimated 400 to 500 children died of acute lead poisoning associated with artisanal gold mining in Zamfara, Nigeria. Processing of gold ores containing up to 10% lead within residential compounds put residents, especially children, at the highest risk. Principal routes of exposure were incidental ingestion and inhalation of contaminated soil and dusts. Several Nigerian and international health organizations collaborated to reduce lead exposures through environmental remediation and medical treatment. The contribution of contaminated food to total lead exposure was assessed during the environmental health response. Objectives of this investigation were to assess the influence of cultural/dietary habits on lead exposure pathways and estimate the contribution of contaminated food to children's blood lead levels (BLLs). A survey of village dietary practices and staple food lead content was conducted to determine dietary composition, caloric intakes, and lead intake. Potential blood lead increments were estimated using bio-kinetic modeling techniques. Most dietary lead exposure was associated with contamination of staple cereal grains and legumes during post-harvest processing and preparation in contaminated homes. Average post-harvest and processed cereal grain lead levels were 0.32 mg/kg and 0.85 mg/kg dry weight, respectively.

Age-specific food lead intake ranged from 7 to 78 μg/day. Lead ingestion and absorption were likely aggravated by the dusty environment, fasting between meals, and nutritional deficiencies. Contamination of staple cereal grains by highly bioavailable pulverized ores could account for as much as 11%–34% of children's BLLs during the epidemic, and were a continuing source after residential soil remediation until stored grain inventories were exhausted.

124. Siya, R., Veronica, M., Eliangiringa, K., Joseph, S. (2017). Assessment of Medicines Cold Chain Storage Conformity with the World Health Organization Requirements in Health Facilities in Tanzania.

DOI: 10.4236/pp.2017.810024

Abstract

A descriptive study on assessment of medicines cold chain storage conformity with World Health Organization (WHO) requirements in public health facilities was carried out in Dar es Salaam and Dodoma regions. Storage conformity in selected health facilities was assessed by monitoring temperature using temperature data loggers mounted in the refrigerators for a period of 30 days. Results indicated almost half of the health facilities 48.5% visited, did not significantly (P = 0.031) comply with storage temperature (+2°C to +8°C) as per WHO requirement because all recorded Mean Kinetic temperature (MKT) > 8°C. In rural areas, 59.2% of visited health facilities adhered to the WHO recommended storage temperature while in urban areas only 31.6% complied. The study has established electricity failure in urban and lack of gas in rural areas coupled with absence of contingency plan as major challenges to WHO temperature conformity in storage of cold chain medicines in health facilities in Tanzania.

125. Stan, K., Yifeng, W., Heather, G., Adena, B., Omary, U., Tasiana, N., Norman, S., Ayoub, M., and Kevin, P. (2017). Addressing Adolescent Depression in Tanzania: Positive Primary Care Workforce Outcomes Using a Training Cascade Model.

https://doi.org/10.1155/2017/9109086

Background. This is a report on the outcomes of a training program for community clinic healthcare providers in identification, diagnosis, and treatment of adolescent Depression in Tanzania using a training cascade model. **Methods**. Lead trainers adapted Canadian certified adolescent Depression program for use in Tanzania to train clinic healthcare providers in the identification, diagnosis, and treatment of Depression in young people. As part of this training program, the knowledge, attitudes, and a number of other outcomes pertaining to healthcare providers and healthcare practice were assessed. **Results**. The program

significantly, substantially, and sustainably improved provider knowledge and confidence. Further, healthcare providers' personal help-seeking efficacy also significantly increased as well as the clinicians' reported number of adolescent patients identified, diagnosed, and treated for Depression. **Conclusion**. To our knowledge, this is the first study reporting positive outcomes of a training program addressing adolescent Depression in Tanzanian community clinics. These results suggest that the application of this training cascade approach may be a feasible model for developing the capacity of healthcare providers to address youth Depression in a low-income, low-resource setting.

126. Stephen, M. K., Bruno, F. S., Eunice, K., Courtney, S. H. (2018). Health insurance is important in improving maternal health service utilization in Tanzania—analysis of the 2011/2012 Tanzania HIV/AIDS and malaria indicator survey.

https://doi.org/10.1186/s12913-018-2924-1

Abstract

Background: Maternal mortality rates vary significantly from region to region. Interventions such as early and planned antenatal care attendance and facility delivery with skilled health workers can potentially reduce maternal mortality rates. Several factors can be attributed to antenatal care attendance, or lack thereof, including the cost of health care services. The aim of this study was to examine the role of health insurance coverage in utilization of maternal health services in Tanzania. **Methods:** Secondary data analysis was conducted on the nationally representative sample of men and women aged 15–49 years using the 2011/12 Tanzania HIV and Malaria Indicator Survey. It included 4513 women who had one or more live births within three years before the survey. The independent variable was health insurance coverage. Outcome variables included proper timing of the first antenatal care visit, completing the recommended number of antenatal care (ANC) visits, and giving birth under skilled worker. Data were analyzed both descriptively and using regression analyses to examine independent association of health insurance and maternal health services. **Results:** Of 4513 women, only 281 (6.2%) had health insurance. Among all participants, only 16.9%, 7.1%, and 56.5%, respectively, made their first ANC visit as per recommendation, completed the recommended number of ANC visits, and had skilled birth assistance at delivery. A higher proportion of women with health insurance had a proper timing of 1st ANC attendance compared to their counterparts (27.0% vs. 16.0%, $p < 0.001$). Similar trend was for skilled birth attendance (77.6% vs. 55.1%, $p < 0.001$). After adjusting for other confounders and covariates, having health insurance was associated with proper timing of 1st ANC attendance (AOR = 1.89, $p < 0.001$) and skilled birth attendance (AOR = 2.01, $p < 0.01$). **Conclusions:** Health insurance coverage and maternal health services were low in this nationally representative sample in Tanzania. Women covered by health insurance were more likely to have proper timing of the first antenatal visit and receive skilled birth assistance at delivery. To improve maternal health, health insurance alone is however not enough. It is important to improve other pillars of health system to attain and sustain better maternal health in Tanzania and areas with similar contexts.

127. Suluba, H.E., Otieno, E. (2017). Testicular artery arising from an aberrant right renal artery

Abstract

Testicular arteries usually arise from the abdominal Aorta; however, they may rarely arise from other arteries of posterior abdominal wall. Variations of the testicular arteries and renal vessels are common. Awareness of these variations is very important to surgeons to increase their surgical precision and therefore avoiding iatrogenic injuries as well as useful in diagnostic procedures. This case report we discovered the rare variation of the origin of the right testicular artery arising from the right aberrant renal artery with double renal artery irrigating both left and right kidneys. These variations in the testicular arteries and renal arteries have implication to surgical procedures such as orchidopexy repair for undescended testis, renal transplantation and nephrectomy. Thus with the introduction of novel surgical and invasive diagnostic procedures understanding of these rare variations becomes significantly important. Currently these procedures are of increasing in our settings as such the information on variations is of prime importance. Keywords: Testicular artery; renal artery, variation, abdominal aorta.

128. Sunguya, B.F., Ulenga, N.K., Siril, H., Puryear, S., Aris, A., Mtisi, E., Tarimo, E., Urassa, D.P., Fawzi, W. and Mugusi, F. (2017). High magnitude of under nutrition among HIV infected adults who have not started ART in Tanzania--a call to include nutrition care and treatment in the test and treat model. BMC Nutrition 3:58.

https://doi.org/10.1186/s40795-017-0180-0

Abstract

Background: Under nutrition among people living with HIV (PLWHIV) can be ameliorated if nutrition specific and sensitive interventions are integrated into their HIV care and treatment centers (CTC). Integrated care is lacking despite expansion of antiretroviral therapy (ART) coverage, representing a substantial missed opportunity. This research aims to examine nutritional status and associated risk factors among HIV-positive adults prior to ART initiation in Tanzania in order to characterize existing gaps and inform early integration of nutrition care into CTC. **Methods:** We analyzed data from 3993 pre-ART adults living with HIV enrolled in CTCs within the Trial of Vitamin (TOV3) and progression of HIV/AIDS study in Dar es salaam, Tanzania. The primary outcome for this analysis was under nutrition, measured as body mass index (BMI) below 18.5 kg/m2. We conducted descriptive analyses of baseline characteristics and utilized multiple logistic regressions to determine independent factors associated with pre-ART undernutrition. **Results:** Under nutrition was prevalent in about 27.7% of pre-ART adults, with a significantly higher

magnitude among males compared to females (30% vs. 26.6%, p< 0.025). Severe under nutrition (BMI < 16.0 kg/m2) was prevalent in one in four persons, with a trend toward higher magnitudes among females (26.2% vs. 21.1%p= 0.123). Undernutrition was also more prevalent among younger adults (p< 0.001), those with lower wealth quintiles (p=0.003), and those with advanced HIV clinical stage (p< 0.001). Pre-ART adults presented with poor feeding practices, hallmarked by low dietary diversity scores and infrequent consumption of proteins, vegetables, and fruits. After adjusting for confounders and important co-variates, pre-ART under nutrition was associated with younger age, low wealth indices, advanced clinical stage, and low dietary diversity. **Conclusions:** One in every four pre-ART PLWHIV presented with under nutrition in Dar es salaam, Tanzania. Risk factors for undernourishment included younger age, lower household income, advanced HIV clinical stage, and lower dietary diversity score. Knowledge of the prevalence and prevailing risk factors for under nutrition among pre-ART PLWHIV should guide targeted, early integration of nutrition interventions into routine HIV care and treatment in high-prevalence, low-income settings such as Tanzania.

129. Sydney, E. M. (2017). Designing for interaction, thinking and academic Achievement in a Tanzanian undergraduate chemistry course.

DOI 10.1007/s11423-017-9531-4

Abstract

Virtual learning environments are used in higher education around the world topromote student learning. However, in many countries it has not yielded the expectedeffect on student interaction and learning. The purpose of this study was to investigatewhether the use of certain pedagogical approaches would promote student interaction,higher-order thinking and achievement. 102 undergraduate students taking an introductorychemistry course at a Tanzanian university participated in the study, and were randomlyassigned to three groups. Each group first studied one topic using the control design (noninteractivelearning, NIL) to establish a baseline. Then each group studied three furthertopics using different pedagogical approaches (NIL), discussion forums (medium interactivelearning) and podcasts (highly interactive learning). Data included interviews,subject tests, and the content of online discussion forums. All qualitative data were coded,and repeated-measures ANOVA was used to analyze within design and between designeffects; student interaction patterns were analyzed using social network analysis. Resultsshow that social interaction, academic achievement and thinking improved progressivelyover the three topics (iterations) in each design. The changes in instructor pedagogicalstrategies and the actions of students to bring what they had learned from podcasts to thelearning community contributed to the marked improvement. We conclude that effectiveuse of discussion forums in higher education in Tanzania can produce important learningeffects (interaction, thinking, and enhanced

academic achievement) and is a low-bandwidthstrategy, but coupling podcasts with discussion forums may be a powerful way toenhance the effects.

130. Telemu, K., Bruno, P. M., Razack, L., Phares, M. (2017). Perceptions of caretakers with different socioeconomic status about the harmful outcomes of fever in under-five children in Dodoma region, central Tanzania: A cross-sectional study.

Abstract

Background: Socioeconomic status can affect health in childhood through many different pathways. Evidence on how households differ with regard to socioeconomic status and the degree to which this difference is associated with investment in child health is essential to the design of appropriate interventionstrategies. **Aim**: This study examines the impact of caretakers' socio-economic characteristics on perceptions aboutthe harmful outcomes of fever among under-five children. Material and methods: The study used a three-stage cluster sample of households with under-five children in Dodoma region, central Tanzania. Multilevel modeling approach was used to model the relationshipbetween the outcome measure and caretakers' socioeconomic characteristics while controlling forother variables.**Results**: A total of 329 under-five children with fever were studied of which 74.8% were perceived bytheir caretakers to have some chances for harmful effects of fever to occur when they experienced fever.Secondary school education or above of caretakers was significantly associated with decreased beliefsabout the occurrence of harmful effects of fever.**Conclusion**: Many caretakers are concerned about the occurrence of harmful effects of fever for theirunder-five children. Study findings suggest that promoting enrolment in secondary education or aboveand participation in the labour market particularly in non-farm activities of women would be valuableto the health of under-five children in central Tanzania.

131. **Teresa, B.. Hendry R. Sawe.,Brittany Murray.,Wayne Enanoria.,Michael Anthony Matthay and Teri Reynolds. (2017). Clinical Presentation and Outcomes among Children with Sepsis Presenting to a Public Tertiary Hospital in Tanzania.**

https://doi.org/10.3389/fped.2017.00278

Abstract

Background: Pediatric sepsis causes significant global morbidity and mortality and low- and middle-income countries (LMICs) bear the bulk of the burden. International sepsis guidelines may not be relevant in LMICs, especially in sub-Saharan Africa (SSA), due to resource constraints and population differences. There is a critical lack of pediatric sepsis data from SSA, without which accurate risk stratification tools and context-appropriate, evidence-based protocols cannot be developed. The study's objectives were to characterize pediatric sepsis

presentations, interventions, and outcomes in a public Emergency Medicine Department (EMD) in Tanzania. **Methods:** Prospective descriptive study of children (28 days to 14 years) with sepsis [suspected infection with ≥2 clinical systemic inflammatory response syndrome (SIRS) criteria] presenting to a tertiary EMD in Dar es Salaam, Tanzania (July 1 to September 30, 2016). Outcomes included: in-hospital mortality (primary), EMD mortality, and hospital length of stay. We report descriptive statistics using means and SDs, medians and interquartile ranges, and counts and percentages as appropriate. Predictive abilities of SIRS criteria, the Alert-Verbal-Painful-Unresponsive (AVPU) score and the Lambaréné Organ Dysfunction Score (LODS) for in-hospital, early and late mortality were tested. **Results:** Of the 2,232 children screened, 433 (19.4%) met inclusion criteria, and 405 were enrolled. There were 247 (61%) subjects referred from an outside facility. Approximately half (54.1%) received antibiotics in the EMD, and some form of microbiologic culture was collected in 35.8% (n = 145) of subjects. In-hospital and EMD mortality were 14.2 and 1.5%, respectively, median time to death was 3 days (IQR 1–6), and median length of stay was 6 days (IQR 1–12). SIRS criteria, the AVPU score, and the LODS had low positive (17–27.1, 33.3–43.9, 18.3–55.6%, respectively) and high negative predictive values (88.6–89.8, 86.5–91.2, 86.8–90.5%, respectively) for in-hospital mortality. **Conclusion:** This pediatric sepsis cohort had high and early in-hospital mortality. Current criteria and tested clinical scores were inadequate for risk-stratification and mortality prediction in this population and setting. Pediatric sepsis management must take into account the local patient population, etiologies of sepsis, healthcare system, and resource availability. Only through studies such as this that generate regional data in LMICs can accurate risk stratification tools and context-appropriate, evidence-based guidelines be developed.

132. Telemu, K., Bruno, P.M., Razack, L., Phares, M. (2017). Perceptions of caretakers with different socioeconomic status about the harmful outcomes of fever in under-five children in Dodoma region, central Tanzania: A cross-sectional study.

https://doi.org/10.1016/j.ajme.2017.08.004

Abstract

Background: Socioeconomic status can affect health in childhood through many different pathways. Evidence on how households differ with regard to socioeconomic status and the degree to which this difference is associated with investment in child health is essential to the design of appropriate intervention strategies. Aim: This study examines the impact of caretakers' socio-economic characteristics on perceptions about the harmful outcomes of fever among under-five children. Material and methods: The study used a three-stage cluster sample of households with under-five children in Dodoma region, central Tanzania. Multilevel modelling approach was used to model the relationship between the outcome measure and caretakers' socioeconomic characteristics while controlling for other variables. **Results:** A total of 329 under-five children with fever were studied of which 74.8% were perceived by their caretakers to have some chances for harmful effects of fever to occur when they experienced fever. Secondary school education or above of caretakers was significantly associated with decreased beliefs about the occurrence of harmful effects of fever. **Conclusion:** Many caretakers are concerned about the occurrence of harmful effects of fever for their under-five children. Study findings suggest that promoting enrolment in secondary education or above and participation in the labour market particularly in non-farm activities of women would be valuable to the health of under-five children in central Tanzania.

133. Thecla, W.K., Megan, A., Lilian, T.M., Danielle, M., Columba, M., Gail, T., Maureen, W., Shawna, O., Sheri, P., Keisha, J. (2017). Saving lives with caring assessments: How Tanzanian nurse-midwives and obstetricians negotiate postpartum practices.

DOI: 10.1111/jocn.14000 View/save citation

Abstract

Aims and objectives: To explore the nurse-midwives' and obstetricians' experiences delivering postpartum care assessments and how it was constructed through personal, social and institutional discourses. **Introduction:** The Tanzanian Government has prioritized maternal and child health as an urgent healthcare issue. Nurse-midwives and obstetricians are the two main providers of care throughout the prenatal and postpartum periods. Design: A qualitative design guided by a feminist poststructuralist methodology. Methods: Ten nurse-midwives and three obstetricians from three Regional Hospitals in Dar es Salaam participated in individual semi-structured in-depth interviews. **Results:** Assessment emerged as a significant theme with three subthemes. Nurse-midwives shared their beliefs and values about assessments that focused on the safety of mothers and babies. They felt proud working with mothers and babies and shared their frustrations having to deal with inadequate working conditions. Guidelines and practices were part of the institutional discourse that impacted the day-to-day experiences of nurse-midwives and obstetricians. The nurse-midwives held the

belief that it was vital to complete a comprehensive assessment to identify danger signs, keep mothers and babies safe and look for any abnormalities. They were concerned that mothers were being sent home too early. **Conclusions:** Nurse-midwives' experiences in the provision of postpartum care portray that these health providers work heartedly to make sure that the mothers and their newborns receive the best care they can provide. The health system is challenged to address the needed supplies and equipment for reproductive health in particular postpartum care services.

134. Thomas, A.M., Anna, B.E., Simon, A.R. M., Honori, T.M., Howard, F., Hamza, K., Machoke, M., A.R.E. S., Edward, M.K. (2017). Informing aerial total counts with demographic models: Population growth of Serengeti Elephants not explained purely by demography.

DOI: 10.1111/conl.12413 View/save citation

Abstract

Conservation management is strongly shaped by the interpretation of population trends. In the Serengeti ecosystem, Tanzania, aerial total counts indicate a striking increase in elephant abundance compared to all previous censuses. We developed a simple age-structured population model to guide interpretation of this reported increase, focusing on three possible causes: (1) in situ population growth, (2) immigration from Kenya, and (3) differences in counting methodologies over time. No single cause, nor the combination of two causes, adequately explained the observed population growth. Under the assumptions of maximum in situ growth and detection bias of 12.7% in previous censuses, conservative estimates of immigration from Kenya were between 250 and 1,450 individuals. Our results highlight the value of considering demography when drawing conclusions about the causes of population trends. The issues we illustrate apply to other species that have undergone dramatic changes in abundance, as well as many elephant populations.

135. Tsatsop, R.K., Djiobie, K., Regonne, V., Bama, A., Mbawala, M., Ngassoum, C. (2017). Optimization of rheological properties in the formulation of an ointment base from natural ingredients.

Abstract

The purpose of this study was to optimize the formulation of ointment base by using statistical mixture design. Screening of hard thickeners (Palm Stearin, Beef Tallow and Beeswax) was done to choose the best hard thickener or combination of hard thickeners whose nature and proportions would give the best semi-solid and consistent ointment with desired rheological properties (Spread ability, viscosity, hardness). Contour plots of each

response were depicted, based on the equation given by the statistical-fitted models. The optimum area for the ointment base properties, were located and the combination Beeswax: Palmstearin: Beef Tallow was chosen. Other optimization was done to check the contribution of different factors (Hard Thickener, Soft Thickener and Lubricant) on the rheological properties and their correlation. A strong inverse correlation was found to exist between the spread ability and the viscosity of the ointment base (91%). A multi-response optimization was done to obtain a combined optimum proportion of ingredients that gave us 5% HT, 84%ST and 11% L. It can be concluded that the ointment base obtained with optimal rheological and drug release properties can be used for cosmetic and pharmacological applications. The plant extracts can be incorporated in this matrix for herbal ointments.

136. Tumaini, N., Gasto, F., Daudi, S. (2017). Prevention of mother to child transmission of HIV in Tanzania: assessing gender mainstreaming on paper and in practice.

https://doi.org/10.1093/heapol/czx080

Abstract

Although gender mainstreaming has been long recognized as a strategy for addressing gender inequalities and associated negative health outcomes; its implementation has remained a challenge, even in the area of prevention of mother to child transmission of HIV (PMTCT). Despite recognition of gender in Tanzania's political arena and prioritization of PMTCT by the health sector, there is very little information on how well gender has been mainstreamed into National PMTCT guidelines and organizational practices at service delivery level. Using a case study methodology, we combined document review with key informant interviews to assess gender mainstreaming in PMTCT on paper and in practice in Tanzania. We reviewed PMTCT policy/strategy documents using the WHO's Gender Responsive Assessment Scale (GRAS). The scale differentiates between level 1 (gender unequal), 2 (gender blind), 3 (gender sensitive), 4 (gender specific), and 5 (gender transformative). Key informant interviews were also conducted with 26 leaders purposively sampled from three government health facilities in Mwanza city to understand their practices. The gender responsiveness of PMTCT policy/strategy documents varies, with some being at GRAS level 3 (gender sensitive) and others at GRAS level 4 (gender specific). Those which are gender sensitive indicate gender awareness, but no remedial action is developed; while those which are gender specific go beyond indicating how gender may hinder PMTCT to highlighting remedial measures, such as the promotion of couple counselling and testing for HIV. In addition, interviews on organizational processes and practices suggested that there has been little attention to the holistic integration of gender in the delivery of PMTCT services. The study has revealed limited integration of gender concerns in PMTCT policy documents. Similarly, health facility leader responses indicate perspectives and practices that pay little attention to the holistic integration of gender in the delivery PMTCT services.

137. Tumaini, J. N., Said, A., Ramadhani, M., Mecky, I. M., Martin, R., Wafaie, W. F., Alimuddin, Z., Markus, J. M.Tuberculosis associated mortality in a prospective cohort in Sub Saharan Africa: Association with HIV and antiretroviral therapy Tuberculosis associated mortality in a prospective cohort in Sub Saharan Africa: Association with HIV and antiretroviral therapy.

DOI: https://doi.org/10.1016/j.ijid.2017.01.023

Abstract

Objective: Nine out of ten tuberculosis deaths occur in tuberculosis-burdened countries, particularly Sub Saharan Africa. In these setting mortality has not been fully described. We describe the magnitude and pattern of TB mortality in Tanzania**. Methods:** A multicenter prospective cohort study was conducted among HIV infected and uninfected pulmonary tuberculosis patients from time of anti-TB treatment initiation to completion. Patients were censored at the time of treatment completion, or at their last visit for those who did not complete TB treatment. Kaplan-Meier curves were used to estimate time to death; cox proportional hazards model was used to examine risk factors for mortality. **Results:** A total of 58 deaths out of 1696 patients (3.4%) occurred, two thirds (n = 39) during the first two months of treatment. Compared to HIV un-infected TB patients, mortality risk for TB/HIV co-infected patients was least when antiretroviral therapy (ART) was initiated after 14 days of anti-TB (RR = 3.55; 95% CI: 1.44, 8.73 $p < 0.0001$) and highest when ART was initiated 90 days or less prior to anti-TB and within the first 14 days of anti-TB therapy (RR = 10; 95% CI: 3.28, 30.54; $p < 0.0001$). **Conclusion:** Meticulously planned and supervised antiretroviral therapy reduces mortality among TB/HIV patients. Among patients with TB/HIV naïve of ART, withholding ART until the third week of anti-tuberculosis therapy will likely reduce TB mortality in Tanzania. Patients on ART and later develop tuberculosis should be closely monitored. **Keywords:** TB, survival, death, treatment outcome, HIV, Antiretroviral therapy, ART, TB/HIV, ARV, ART.

138. Venance, B., Larama, R., Simon, M. (2018). Dust exposure and respiratory health symptoms among workers in small scale sunflower oil industry in Singida Tanzania.

DOI: 10.5281/zenodo.1146334

Abstract

Background: Small scale sunflower oil industries are industries which extract oil from sunflower seed. Apart from its contribution to the economic development of the nation, during extraction process much dust concentration produced and respiratory symptoms are

unknown. The aim of study was to assess dust exposure and associated respiratory health symptoms among small scale sunflower oil industries workers in Singida Tanzania.Methods: A cross sectional study was conducted and 233 participants were interviewed using a modified American Thoracic Society questionnaire to assess the respiratory health symptoms. A Side Kick Casella Pump was used to collect respirable dust from a sub sample of 66 workers from the sieving section. Results: Respirable dust exposure levels for mean, and Geometrical mean was 10.45 mg/m3 (SD 13.90) and GM=5.25 mg/m3 (GSD 0.51) respectively, and 46% of the dust samples (n=66) were above the TLV of 5 mg/m3. Logistic regression analysis between measured dust and respiratory symptoms found to be statistically significant. Higher prevalence of respiratory health symptoms were seen in those with cough (33%), cough with phlegm (46.8%) and wheezy (41.6%). Conclusion: The study concludes that, respiratory symptoms were high and dust exposure was above recommended levels of 5 mg/m3. We recommend use of appropriate RPE.

139. Veronica, M., Romantiezer, R., Nelson, M. (2018). Investigation of Factors Affecting Preparedness of Reporting Adverse Drug Reactions among Nurses in Public and Private Hospitals in Dar Es Salaam, Tanzania.

DOI: 10.4236/pp.2018.91004

Abstract

The current study assessed preparedness among nurses about reporting adverse drug reactions in public and private hospitals. Nurses in hospitals are among health providers very close to patients and are involved in the process of administering medications especially to inpatients. A cross sectional study was conducted among nurses in public and private hospitals in Dar es Salaam city in Tanzania to compare their preparedness on reporting adverse drug reactions (ADRs). A total of 384 nurses were involved in this study, of which 50% were drawn from public hospitals and 50% from private hospitals. Majority of respondents (75.25%) in public and 84.73% in private hospitals said they have not received any training about reporting ADRs. Of the few trained nurses, 85.43% and 96.55%, in public and private hospitals, respectively, said they have been trained in a seminar only once, after they started working as nurses. Respondents in public (19.17%) and private (32.8%) hospitals reported to stock ADRS forms (Yellow cards). Less than 50% of respondents agreed to have access to reference materials such as a text books named “Good Dispensing Practice” and a “List of Registered Medicines”. Further results showed more than two third of all respondents in private (74.25%) and public (73.5%) hospitals reported that lack of training affects the process of reporting ADRs in terms of ability and tendency. In this study we found training, availability of Yellow cards and presence of a focal person are among important contributing factors to preparedness of reporting ADRs among nurses in public and private hospitals.

Chapter Two: Thesis/Disertations

1. Adatia, A. (2017). Clinico pathological features and treatment outcomes in parotid malignancies. Muhimbili university health and alliead science.

Abstract

Background: Neoplasms that arise in the salivary glands are relatively rare, yet they represent a wide variety of both benign and malignant histologic subtypes. Salivary gland neoplasms most commonly appear in the sixth decade of life. The salivary glands are divided into 2 groups: the major salivary glands and the minor salivary glands. The major salivary glands consist of the following 3 pairs of glands: the parotid glands, the submandibular glands, and the sublingual glands. The minor salivary glands comprise 600-1000 small glands distributed throughout the upper aero digestive tract. Among salivary gland neoplasms, 80% arise in the parotid glands, 10-15% arises in the submandibular glands, and the remainder arises in the sublingual and minor salivary glands. Tumors of the salivary glands form one of the most heterogeneous groups of oncological pathology. They constitute a substantial proportion of all tumors of the oro-facial region. Head and neck tumors represent approximately 5% of human neoplasms, and out of these, salivary gland neoplasms constitute 10%.Objective:To evaluate clinicopathological features and treatment outcomes of parotid gland malignancies in patients who attended Ocean Road Cancer Institute (ORCI) from 20092016.Methodology:A Retrospective study design was employed among all patients who had been diagnosed and confirmed histologically with malignant Parotid tumor referred to and treated at ORCI from January 2009-December 2016.Analysis of this retrospective study determined the sociodemographic factors, clinico-pathological features, treatment outcomes of surgery, radiotherapy, chemotherapy and assessment of 2 years overall survival of parotid malignancies from January 2009 to December 2014.In this study, the retrospective secondary data was extracted from the patient medical files and data was collected in the data collection form. The study was conducted at ORCI in Dar es Salaam.Results:Out of 94 patients with histologically confirmed parotid gland malignancy, more males were affected compared to females with the ratio of 1.18:1 and the mean SD age of patients was 51. 9years.Adenocarcinoma was the most common malignant tumor n=37 (40%) followed by squamous cell carcinoma n=18 (19.1%) and the left parotid gland being the most affected site. 44 cases (46.8%) had pathological grading, grade IV accounting for majority of the grades (27.3%). Stage IV was presented the most n=72 (76.5%) and 8.5% presented with metastasis at diagnosis. 31% of patients were subjected to surgery while 69.1% were deemed to be unfit for surgery due to advanced disease. Radiotherapy was received by n=82 (95.2%) with 13 patients (14%) subjected to curative intent and 69 patients (86%) subjected to palliative intent. 2-year overall survival for the curative cohort from 2009-2014 is 23% and 11% for the palliative arm. The 2-year overall survival of parotid gland malignancy treated at ORCI is 12%.Conclusion: Clinico-pathological presentation of parotid gland malignancy seen in this study differs from other studies probably due to geographical variations. More males are affected than women, especially in the middle ages. Adenocarcinoma was the most frequent histology. Two years' Overall survival from 2009 to 2014 was 12%. Late stage

presentation was seen as a problem that needs to addressed in order to maximize the effectiveness of the treatment, and improve the overall survival. Treatment modalities need to be standardized across health facilities in Tanzania.Key words: Parotid Tumor, ORCI.

2.Akrabi,A.M. (2017). Clinical profile, management and outcome of patients developing cardiac arrest in the emergency medicine department of Muhimbili national hospital, Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Cardiac Arrests in the Emergency Medicine Department of Muhimbili National Hospital is not uncommon occurrence and in most of these, cardiopulmonary resuscitations are done in order to revive these patients' lives. However little is known of their outcome in the department and beyond. **Aim of the Study:** To describe the clinical profile, management and outcome of all patients who develop cardiac arrest while receiving care in The Emergency Department of Muhimbili National Hospital (ED-MNH) in Dar es Salaam.**Materials and Methods:** This was a prospective cohort study of patients who developed cardiac arrest in the ED-MNH between August and December 2016. A structured case report forms were used to document the demographic, pre-ED course of illness, management in the ED, and outcome in the ED and overall hospital outcome of cardiac arrest patients. Data were summarized using descriptive statistics and analyzed using counts, proportions, median, interquartile ranges (IQR), 95% confidence interval (CI), relative risk (RR) and P-value.**Results:** A total of 68 cardiac arrests patients were enrolled out of 9431 who attended the department during the data collection period. The incidence rate was 7/1000. The median age of cardiac arrest was 39 years and males were slightly higher (54.4%) than females. Sepsis was the commonest diagnosis for cardiac arrest patients accounting for 28.4%. Those who attained Return of Spontaneous Circulation (ROSC) and survived at ED were 13.2%, however none survived up to 7 days. Conclusion and Recommendations: The study showed lower incidence of cardiac arrest at ED-MNH but whenever the arrest occurred, it had poor survival. Aggressive efforts are advocated to prevent the occurrence of cardiac arrest from critical patients. Further study is recommended with wider population size.

3. Alawy, K. (2017). Prevalence of hearing loss and associated factors among neonates born in Zanzibar.Muhimbili university health and allied science.

Abstract

Introduction: Hearing loss is one among the major abnormalities present at birth. If undetected will impair speech, language and cognitive development. The critical period for language and speech development is generally regarded as the first three years of life. Children who are identified with hearing at early stage of life and receive early and appropriate interventions have significantly higher developmental functions than those with late identification and intervention.**Objective:** The study aimed at determining the prevalence of hearing loss among neonates born in Zanzibar, which is part of United Republic of Tanzania.Study design Hospital-based, prospective cross sectional study. **Method:** This was

prospective cross sectional study and conducted in three hospitals and one health Centre where neonatal hearing screening was done in Zanzibar. All babies born from May to October 2016 and whose parents/caretakers consented, enrolled in the study. Data collected using a three staged protocol neonatal hearing screening with OAE and AABR, and other information was collected clinically using specialized forms and check list. A total of 600 neonates were recruited in this study and the data analyzed using the SPSS program.**Results:**This study included 600 neonates. Among these, 323 (53.8%) were females and 277 (46.2%) were males. Neonates who underwent 1st OAE, 36.2% failed the test and went for second test. For those who underwent 2nd OAE, 13.8% failed the test and went for AABR. 41.4% of those who went for AABR failed and went for Diagnostic ABR and among these only 3 (25%) failed. Three neonates were diagnosed with hearing loss and they were all males, with bilateral SNHL, making a prevalence of 0.5%. Among those with hearing loss 33.3% had severe SNHL and 66.7% profound SNHL. The most frequent risk factor was ototoxic medication use (11.8%) followed by low apgar score (11%) and family history of childhood hearing loss (7%) and hyperbilirubinemia (2.5%). Hyperbilirubinemia was the only risk factor significantly associated with hearing loss (p=0.001). **Conclusion:** The prevalence of hearing loss in neonates was 0.5%, more common in males, bilateral, sensorineural type and associated with risk factors.

4.Alex,M.B. (2017). Referral reasons and communication barriers influencing referrals of women with obstetric complications during peripartum period at Muhimbili national hospital, Dar es salaam. Muhimbili university health and alliead science.

Abstract

Background: World Health Organization (WHO) emphasises that the referral process should follow a pre- established plan that can be put into action without delay at any given time. While obstetric referral has continued to be a challenge in the health care system, adherence to referral guidelines reflects the effectiveness of maternal referral system in influencing quality of care for reduction of maternal morbidity and mortality.**Objective:** The aim of this study was to assess the obstetric referral process among women with obstetric complications during the peripartum period referred to Muhimbili National Hospital (MNH) for advanced obstetric managementMaterials and methods: This was a cross-sectional study that was conducted at the maternity block in MNH, Dar es Salaam. Both qualitative and quantitative research methods were employed. Quantitatively, the study population was women admitted in the labour ward, high dependency ward, ICU ward and postnatal ward, who were selected by convenience sampling. Qualitatively the study population was health care providers (nurse-midwives, and obstetricians) working at the Maternity block in MNH, who were selected purposively. Quantitative data was collected by review of files of women with obstetric complications which were collected from the four wards (labour ward, high dependant ward, ICU ward and postnatal). File numbers were written on small pieces of paper, then the pieces of papers were mixed together and then half the number of pieces of papers was selected randomly each day. Qualitative data was obtained through in depth interviews using semi-structured interview guide to explore means of communication during the referral process. Data generated were analysed using univariate statistics when

summarizing background characteristics. Qualitative data were analysed by using content analysis framework. The study was conducted in a one-month period from 5st April to 23rd May.**Results:** A total of 426 records of referred women were reviewed.95.8% came from public health facilities in which73.2% were referred from regional hospitals. Most documented reasons to refer women were hospital related factors 62%, among which theatre busy had 25.1%, unavailability of blood 11.3% and lack of equipment and supplies 10.3%. Late referrals (after two hours) were observed in60.3% of women. In-depth interviews indicated barriers in the referral process with the most commonly identified including: - use and non-use of phones before referral, unsatisfactory referral form documentation and inadequate feedback mechanisms.**Conclusion:** The study demonstrates lack of both human and non-human resources required for provision of health care services, and identifies high proportion of late referrals influenced by significant deficiencies in referral process.**Recommendations:** These findings call for the undivided attention of stakeholders in enhancing effectiveness of referral system by strengthening peripheral facilities and creating sustainable coordination between all levels of the referral system

5. Ali, S.S. (2017). Prevalence and factors associated with surgical site infections among patients attending Mnazi Mmoja hospital in Zanzibar, Tanzania.Muhimbili university health and allied science.

Background: Surgical site infections (SSI) are worldwide public health problem that have far reaching implications on patient morbidity and mortality in the hospital and outpatient settings. Worldwide, SSI is the one of the most common causes of nosocomial infections and account for nearly 20% to 25%. These infections develop from contaminated surgical wound site, either by exogenously (e.g. from the air, medical equipment, surgeons and other staff) or endogenously (micro biota). **Aim:** The aim of this study was to determine the prevalence and factors associated with surgical site infections among patients attending Mnazi Mmoja hospital in Zanzibar, Tanzania.**Methods:** This was a descriptive hospital based cross sectional study conducted from May to July 2017 at Mnazi Mmoja Hospital in Zanzibar. A total of 121 patients who underwent surgery were enrolled after consenting to participate in the study. Wound specimens were collected and processed as per standard operative procedures and were incubated aerobically at 37oC for at least 18 to 24 hrs. Bacterial identification was performed by biochemical identification and API 20E tests. Antimicrobial drug susceptibility testing was performed by Kirby Bauer disc diffusion technique. Data were analyzed using SPSS version 21.0.**Results:** A total 106 isolates were recovered from 75/121 (62%) culture positive samples. Of the isolates, 92/106 (86.8%) were Gram negative and 14 (13.2%) were Gram positive bacteria. The most predominant pathogenic bacteria were Pseudomonas aeruginosa (29; 27.4%), followed by Proteus spp (18; 17%), Escherichia coli (14; 13.2%) and Staphylococcus aureus (9; 8.5%). Of the isolated pathogens, 24 (82.7%) were ESBL producing Enterobacteriaceae, 3/29 (10.4%) MRSA and 2/29 (6.9%) were induced clindamycin resistance (ICR) strains. The majority of Escherichia coli (11; 79%), Proteus spp (7; 39%) and K. pneumonia (9; 69.2%) isolates were ESBL producers. Most of the Gram negative isolates were resistant to third generation cephalosporin. Gram positive isolates showed high resistance to (76 to 100%) penicillin. Univariate analysis showed that

there was no statistically significant association of SSI with social demographic and clinical characteristics of patients (p-value > 0.05).**Conclusions:** This study indicated that, the overall prevalence of SSIs 62%, which is very high compared to other studies. This prevalence was even higher in females compared to males. Pseudomonas aeruginosa was the most predominant pathogen from SSI. The majority of isolates showed high resistance to commonly prescribed antimicrobial agents used in our hospital setting. There was no factor that founded to be statistically significant association with SSI.

6. Ally,M. (2017). Fetal doppler ultrasound findings in preeclampitic women attending antenatal services at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Preeclampsia (PE) is among the leading causes of maternal and fetal morbidity and mortality. Developing countries are more affected, Tanzania being among them. We need more efforts to study this area in order to improve maternal and fetal wellbeing. Doppler Ultrasound to pregnant women attending maternity services was the screening method used.**Objective:** Fetal Doppler Ultrasound findings in Preeclamptic Women attending Antenatal Services at Muhimbili National Hospital. **Material and Methods:** Cross sectional hospital based study was conducted from July 2016 to December 2016 involving 143 pregnant women at MNH. The consented candidates from 20weeks of gestation to term were included in the study. Structured, close ended questionnaires were used to get patient information and fetal Grey scale and Duplex Color Doppler ultrasound were used to obtain biophysical profiles and Doppler / indices.**Results:** The candidates were aged between 16 and 42years, with the mean age of 29years. Among them the majority were married 82.5%, primary education 54.5% and 44.1% were self-employed. Preeclampsia affected 15.4% of the candidates. The age group more affected was between 20-35years. The risks for preeclampsia were previous Preeclampsia 22.7%(P-value 0.002) and family history of hypertension 63.6%(P-value 0.0001). The history of previous abortion carries 31.8%(P-value 0.175) in patients with preeclampsia but not statistically significant. The results showed that, there were statistically significant alteration of Doppler indices in preeclampsia. The percentage shown below indicate the patients who showed a particular named alteration in Doppler studies: Umbilical artery pulsatility index(UAPI) 36.4%, Umbilical artery resistive index(UARI) 31.8%, Middle cerebral artery index(MCARI) 54.5%, MCA/UAPI 27.3%, MCA/UARI 31.8%. The low birth weight accounts 20% of the total births. There was statistically significance association between abnormal Doppler indices alteration and Low birth weight, UAPI, UARI, MCAPI and MCARI, in which the number of patients were 42.2%,42.9%,71.4% and 57.1% respectively (P-Value 0.0001) also MCAUAPI 32.1% and MCAUARI 35.7%. The Systolic/diastolic ratio (SD ratio) was increasing with gestational age.Among the Preeclampsia women studied 18.2% fetuses experienced absent end diastolic velocity (AEDV) and 4.6% Reverse flow pattern, which indicate high level of hypoxia (placental insufficiency). These fetuses were born prematurely and all had low birth weight.**Conclusion:** The Prevalence of Preeclampsia was 15.4% among pregnant women attending MNH which is higher compared to other places. Factors related to Preeclampsia

were previous preeclampsia and family history of preeclampsia. Umbilical artery Doppler indices were more affected than MCA indices in Preeclampsia;however, alteration of MCA indices were much more related to low birth weight. **Recommendation:** Doppler Ultrasound Scanning should be one of the basic investigations in the antenatal care services, particularly in high risk pregnancies.

7. Ally,M. (2017). Clinical, laboratory features and available treatment options among patients with aplastic anaemia attending Muhimbili national hospital, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Aplastic anaemia (AA) is a rare, potentially life-threatening disease presenting with hypocellular fatty marrow and reduction in the blood count of all blood cell lines; the red cells, white cells and platelets. A cell- mediated autoimmune mechanism has been implicated in the pathogeneis of AA. Gold standard treatment is with either allogeneic haemopietic stem cell transplant or intensive immunosuppressive therapy with ATG followed by cyclosporine. AA is associated with high morbidity and mortality if left untreated. There is a paucity of studies on AA in Tanzania and East Africa. A fraction of AA patients evolves to paroxysmal nocturnal haemoglobinuria (PNH): this is associated with the appearance of a population of blood cells deficient in GPI-anchored proteins (GPI-negative: sometimes referred to belonging to a PNH clone).**Aim:** To describe the clinical presentation, laboratory features, treatment modalities, and presence of GPI negative red cells population among patients with AA attending Muhimbili National Hospital. Participants: All patients with AA who attended MNH from September 2016 to March 2017.**Study design:** Descriptive cross-sectional study. **Methods:** Consenting patients were sequentially recruited from inpatient and outpatient haematology unit. A structured questionnaire was used to obtain information on the socio-demographic characteristics, clinical history, physical signs and treatment modalities. Blood and urine samples were collected for investigations. Analysis was done using spss statistics version 20. Comparison between patients with AA alone and those with GPI negative red cell population with various characteristics was analyzed by using Fischer's exact test and statistical differences were considered to be significant if p value was less than 0.05.**Results:** A total of 40 patients with AA were recruited. Seventeen (43%) were males. The median (IQR) age at diagnosis was 24 (15-33) years. The male to female ratio was 1:1.4. Forty eighty percent of patients had severe AA, 20% had very severe AA and 32% had non severe AA. Anaemia was the dominant clinical presentation (78%) followed by bleeding tendencies (70%) and fever (48%). The median (IQR) haemoglobin level was 6.6(5.4-8.8)g/dl, median (IQR) absolute reticulocyte count was 10 (6.25-16) $X10^9$/L, median (IQR) absolute neutrophil count was 0.49(0.01-1.04) $X10^9$/L, and the median (IQR) platelet count was 17.50(9.63-41.00) $X10^9$/L. None of the patients had haemoglobinuria or positive Ham's test. Twenty-six samples were analyzed for presence of GPI deficient red cells, and in 42%,

GPI deficient red cells were significantly higher than seen in normal controls (>0.2%). In three patients the PNH clone comprised more than 1% of red cells. Of the patients with significant GPI negative red cells population, 91% had been diagnosed with AA for more than one year before recruitment, and 82% were found to have less transfusion requirement within six months. Seventy-eight percent of all patients were treated with a combination of supportive therapy and cyclosporine alone. Four patients (10%) were referred abroad and received intensive immune suppression therapy with ATG and cyclosporine. One patient (3%) received allogeneic haemopoietic stem cell transplant. Ten percent of patients had received only supportive treatment with blood transfusion and antibiotics.**Conclusion:** AA mostly affects people below the age of 40 years. The majority of patients with AA attending MNH have either severe or very severe AA. Almost half of patients with AA have PNH clones, although they do not have as yet any clinical or laboratory evidence of haemolysis (PNH-sc). Treatment offered at MNH includes supportive treatment and immune suppression with cyclosporine alone.**Recommendation:** There is a need of providing definitive therapy for AA in Tanzania.

8. Ambrose,L. (2017). Indications and availability of blood for transfusion in obstetric care at Muhimbili national hospital, 2016.Muhimbili university health and allied science.

Abstract

Background: Adequate supply and timely availability of safe blood for transfusion are important components of achieving good quality obstetric care. This is true because obstetric haemorrhage and anaemia are common obstetric complications that cause maternal morbidity and mortality in resource limited countries. **Objective:** The aim of this study was to determine indications and availability of blood for transfusion in obstetric care at MNH.**Methods:** This was a cross sectional study conducted at Muhimbili National Hospital (MNH) in Tanzania. Data were collected from records of women admitted for obstetric care and who were in need for blood or blood components transfusion from 1st September 2016 to 30th November 2016. Socio-demographic and clinical data were collected using a questionnaire. Total number of all obstetric admissions in the specified period was used to calculate prevalence of transfusion. **Results:** are presented as median and interquartile range (IQR) for continuous variables and proportions for categorical variables.**Results:** A total of 2,826 women were admitted at MNH for obstetric care during the study period. Three hundred and sixty-three (363) had indications for blood transfusion; half of the indications (183/363) 50.4% were due to obstetric haemorrhage, (149/363) 41% due to chronic anaemia, (14/363) 3.9% due to HELLP syndrome/Coagulopathy, (12/363) 3.3% due to both chronic anaemia & obstetric haemorrhage and (5/363) 1.4% others. Three hundred and fifty-one women (351) received blood transfusion, making blood transfusion prevalence of 351/2,826 (12.4%). Of the women prescribed to receive whole blood, (124/265) 47% were transfused with the prescribed amount of whole blood while those prescribed to receive packed red cells, only (5/103) 4.9% received the prescribed packed red cells. Whole blood was the most common transfused (934/1150) 81.2% followed by fresh frozen plasma (FFP) (135/1150) 11.7%, Packed Red Blood Cells (49/1150) 4.3% and platelets concentrates (32/1150) 2.8%.

The median time (IQR) from decision to transfuse to actual blood transfusion was 4:05 (7:54) hours.**Conclusion:** Obstetric haemorrhage and anaemia are still important indications for transfusion in obstetric care and in turn whole blood, FFP and PRBCs are the most common transfused blood types and components. Under half of the patients are transfused with blood units' amount as prescribed or recommended by the clinicians. The prevailing blood shortage in health facilities results in a long decision to transfusion time interval.

9. Ameir,M.M. (2017). Factors contributing to compliance or non-compliance with adapted who recommended visits among postnatal mothers attending Chumbuni phcu in Zanzibar.Muhimbili university health and allied science.

Abstract

Introduction: Postpartum period is the period that starts from delivery of placenta up to six weeks, this period constitutes a critical period for postpartum mothers and the newborn babies. Postpartum care is necessary for mothers and newborn and it helps to identify and manage complications, which may arise after delivery. Compliance to postnatal visits for checkup is necessary for promoting maternal and newborn health and non - compliance can lead to increased maternal and neonatal morbidity and mortality. Tanzania has adapted WHO recommendations on postnatal visits but the rate of compliance of postnatal visits in Tanzania including Zanzibar is still low.**General objective:**To assess factors contributing to compliance or non-compliance with adapted WHO recommended visits among postnatal mothers attending Chumbuni PHCU in Zanzibar.**Methods:**A descriptive survey was used. The study was conducted at Chumbuni PHCU Zanzibar at reproductive and child health (RCH) unit and involved 159 postnatal mothers through semi structured self-administered questionnaire. Ethical clearance was sought from Research Ethics Committee of Muhimbili University of Health and Allied Sciences (MUHAS) and permission was obtained from Zanzibar Medical Research Committee. Scoring of the responses to questions was done and data was coded, entered, cleaned and analyzed using the statistical package of social science (SPSS) version 21. Findings Among 159 participants, 66.7% knew about postnatal services, but 95.6% had insufficient awareness and most of them (52.2%) were not aware of the required number of postnatal visits. 50.9% had positive perception on postnatal services, among those who had negative perceptions, 33.3% perceived that postnatal services are only for mothers who had delivery complications. Felt well, not informed by doctors about postnatal services, no support person and safe delivery were among the factors hindering mothers from attending postnatal visits, however immunization, health checkup, health education, family planning and weighing baby were among the factors fostering mothers to attend postnatal visits. The findings are presented in tables, pie charts and histograms and all numerical data was presented in percentage (%) or was expressed in exact number (n). Chi-square test was used to determine the relationship between categorical variables and multivariate analysis was used to assess the association between dependent variables (Awareness and perception) and independent variables.**Conclusion and recommendations:**The study showed that half of postnatal mothers had positive perception toward postnatal services and was aware that postnatal services should be received from delivery up to six weeks. However, awareness of recommended number of postnatal visits

and the services provided to postnatal mothers and baby were poor. Education programs should be done to ensure that women understand the importance of attending postnatal services as per WHO recommendations. Further, health care providers should extend health education by conducting outreach programs to ensure that the whole community understands important of postnatal services. **Key words:** Factors Contributing Compliance/Noncompliance, Postnatal mothers, Postnatal Visits.

10. Andrea, D. (2017). Twelve -month treatment retention and associated factors; a comparison of two methadone assisted therapy clinics in Dar es Salaam Tanzania.Muhimbili university health and allied science.

Abstract

Background: Heroin addiction is a global health problem and PWID experience a range of health, socioeconomic and legal challenges, often with poor outcomes. Duration in Methadone maintenance treatment is critical to achieving better treatment outcomes. To date no studies have been done in Mwananyamala Medically Assisted Therapy clinic to find which factors best predict treatment retention. Likewise, it is not known whether the program, client characteristics and treatment retention differ between Mwananyamala and Muhimbili Medically Assisted Therapy clinics. Findings emanating from this study may have potential implications for clinical practice, research and scaling up Methadone Assisted Therapy services. **Objectives:** The specific aims of this research were to compare two MAT clinics in Dar es Salaam Tanzania, namely Muhimbili and Mwananyamala Methadone Assisted Therapy Clinics, with respect to client characteristics, client outcome (twelve-month treatment retention) and factors that predict twelve-month treatment retention.**Materials and Methods:**This Retrospective Registry Based Cohort Study, utilized the data collected for routine clinical and program monitoring at the two sites. All analyses were completed by using the IBM SPSS-20.0 package. Cumulative retention in treatment was calculated using Life tables and Kaplan-Meier survival analyses. The analysis of treatment retention predictor variables used both Kaplan-Meier and Cox proportional hazard analyses. **Results:** One hundred and eighty –one (181) clients in each clinic were studied with respect to the client and program related characteristics. Muhimbili MAT clinic had slightly older clients, more male clients, and more cases of Tuberculosis (TB) positive clients compared to Mwananyamala MAT clinic. At Muhimbili MAT clinic there were fewer females, more clients who had employment, fewer multiple substance use at entry to the program and more clients who travelled longer distance to the clinic compared to clients attending Mwananyamala MAT clinic. Twelve-month treatment retention was higher (73%) at Mwananyamala MAT clinic compared to Muhimbili MAT clinic (64%) with no statistically significant difference ($p > 0.05$). In both MAT clinics sex, level of education, HIV status, TB status and number of substance used did not significantly determine treatment retention. Having an employment and average short distance (<5km) travelled from home to the clinic significantly reduced likelihood of dropping out of treatment in Muhimbili MAT clinic (p value < 0.05) but not in Mwananyamala MAT clinic. Shorter duration of heroin use influenced the risk of dropping out of treatment in Mwananyamala MAT clinic (p value < 0.05) but not in Muhimbili MAT clinic. In both clinics high methadone dose (>60mg),

significantly predicted retention in treatment.**Conclusion:**We have found that though the clinics are located in the same city they differ in in distribution of client and program characteristics. In both clinics we have found that high methadone dose was associated with longer retention in treatment. We found out, though not in both clinics that, employment, short distance travelled from home to clinic and long duration of heroin use are associated with longer tenure in treatment.**Recommendations:**Prescribing clients adequate methadone dose may improve methadone treatment retention. Integrating employment and other vocational service components in MAT services can improve treatment retention. Scale-up of MAT clinics in Tanzania and other countries should take into account localities to ensure easy treatment accessibility. Research is needed to understand salient features which may explain the observed differences such client satisfaction, quality of the services, social support and other program characteristics.

11. Antony, B.J. (2017). Predictors and outcomes of allograft dysfunction among kidney transplant recipients at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Kidney transplantation is a Renal Replacement Therapy modality of choice for ESRD. Renal allograft loss remains an area of concern. In most native kidney diseases, glomerular filtration rate (GFR) declines progressively over time in renal transplant recipients. Monitoring changes in GFR is the recommended method for assessing the progression of kidney disease, aiming at delaying graft loss and maximize graft survival by identifying and deterring modifiable factors.**Rationale:** Identifying predictors of poor allograft function will help clinicians in selecting donor-recipient pairs that will maximize allograft survival as well as patients' survival and quality of life. No study on the subject has been done in our country and there is tendency of some patients to return to chronic dialysis within a year of transplant. Hence this study was set to determine predictor of allograft dysfunction among renal recipients. **Methodology:** Conducted a retrospective study at the Renal Transplant Clinic at Muhimbili National Hospital (MNH). Attendees of the clinic are patients who underwent renal transplantation abroad as of current transplant services are not available in the country. The Renal Transplant Clinic at the MNH runs a live-related donor Pre-Transplant Clinic and a lifelong follow-up for post kidney transplant recipients. A total of 182 recipients who were transplanted with minimum of at least 3 months' post-transplant were included in study. Using questioner factors at time 0, 3,6,12-month post-transplant such as recipients' and donors' BMI, gender, proteinuria, eGFR change, elevated blood pressure and episode of allograft rejection were recorded and MDRD to asses for eGFR. All these factors were obtained from patients' files supplemented with discharge summary from transplant center. The association between graft function and predictors was assessed by logistic regression. Outcome variables were; development of ESRD, return to dialysis, repeat Transplant, allograft dysfunction (defined as eGFR<60ml/min/1.73sqm or death with a functioning graft. Factors with P-value < 0.05 was considered significant.**Results:** Of 182 recipients, 146 (80.2%) were males. The mean age was 44.5(±12.5) years. Among donors, 97 (53%) were males with mean age of 35(±9) years whereby three quarters of the donors,

130(71%) were first degree relatives. Prevalence of allograft dysfunction at one year was 37.4%. Eleven recipients (6%) died with functioning graft within the first year of kidney transplant. On regression model; systolic blood pressure (SBP) of ≥140mmHg, proteinuria, and change of GFR emerged as significant predictors of allograft dysfunction.**Conclusion:**The burden of allograft dysfunction in the 1st year of kidney transplantation is high among patients attending post-transplant clinic at MNH. Monitoring post-transplant blood pressure, proteinuria and rate of change in GFR can help in regressing graft dysfunction following transplant.**Recommendation:** Timely and good post-transplant care on altering risk factor of graft dysfunction will increase graft and patient survival.

12. Areu, M.M.M. (2017). Early treatment of open diaphyseal tibia fracture with intramedullary nail versus external fixator: cost effectiveness analysis at Muhimbili orthopaedic institute, Dar es salaam. Muhimbili university health and allied science.

Abstract

Background: Open tibia fractures are some of the most common types of Orthopedics injuries occurring in the low and middle income countries (LMICs). Due to the urbanization and proliferation of motor vehicles and motor cycle as the main means of transport and the basis for daily income among the young and middle age groups in LMICs. In Tanzania, like other developing countries, trauma remains a major public health problem and is a leading cause of morbidity and mortality especially among previously healthy, productive young males in particular. In this region, these fractures are treated either conservatively by prolonged casting or surgically by external fixation (EF) and intramedullary nail (IMN) where available. The cost of treatment and time away from work for long periods of time are an economic concern. The goal of this study was to determine the cost effectiveness of IMN versus EF in the treatment of open diaphyseal tibia fracture at Muhimbili Orthopaedic Institute (MOI), Dar es Salaam, Tanzania. **Materials and Methods:** A prospective randomized control study conducted among 50 patients with open diaphyseal tibia fracture according to AO/OTA 42 classification; who were undergoing surgical fixation with either IMN or EF at MOI emergency department from June 2016 to March 2017. Data was collected using a structured questionnaire. The study participants were recruited and randomized into one of the two treatment arms after they met inclusion criteria and were given a written informed consent. After possible investigation, patients were taken to operating theatre; the researcher makes assessment of the wound size, degree of soft tissue damage, wound contamination, and close ability of the wound. The researcher used these criteria as intra-operative randomization to either IMN or EF for fracture fixation. After surgical debridement and fixation of patients' fracture with the IMN or EF, Patients remained in the ward for three days' post surgery before discharge home as per clinic assessment, with those who are clinic unfit to be discharge on the third day remained in the ward and continue treatment until they are clinically fit to be discharge. Patients were then followed-up at the 2ndweek; 6thweek and 12weeks, where functional outcome data and radiographs progress of fracture healing were collected. Patients were asked to self-assessed by filling the Swahili translated version of EQ – 5D questionnaire, clinical and radiographic assessment were also done at each visit. A micro-costing method was used to estimate the fixed and variable costs

of IMN and EF of the open diaphyseal tibial fracture. Variable costs assessed include medical personnel, ward personnel costs, implants, medications, and single use supplies cost. Fixed costs included surgical instruments, administrative cost. Using SPSS version 20 computer program, the categorical variables were analyzed using frequency and numerical data using means. Student T-test was used to compare the means of numerical variables between two groups and the fisher exert test was used to compare the categorical variable. The significant level was considered if the P-vale is 0.05 or less. **Results:** The mean age was 32.6 (18 – 62) years; most patients affected were between the ages of 18-39 years with male to female ratio of 4:1. The mean total cost per patient was $425.8 ± 38.4 for the IMN group and $559.6 ± 70.48 for the EF group; P-value < 0.001. The largest portion of the cost comes from medical personnel, and the implants in both groups. The mean length of hospital stay was 2.72 ± 1.4 days for the IMN group and 2.44 ±1.47 days for EF group. There were 0.262 QALYs per patient for the IMN group and 0.240 QALYs per patients in the EF group at 12 weeks from injury with a difference of 0.022 QALYs and a saving of $133.8 when IMN is chosen over the EF. Progress of union was 92% in the IMN group and 60% in the EF group. 8% of patients had delayed progress of union in the IMN group compared to 32% in the EF group and non of the patients in the IMN group had no radiological progress of union compare to 8% who had no sign of progress of union on radiologic assessment at 12weeks for EF group. **Conclusion and Recommendations:** Intramedullary nailing of a closeable open diaphyseal tibial fracture has been found to be cost effective, with a 0.26 QALYs and saving of $133.80. And 92% union progress rate at 3 months in the IMN group compared to EF group which shows high cost and less effective outcome with 32% delayed progress of union and the requirement of putting patient in a plaster of Paris (POP) cast after removing EF at 3 months which increases the cost of treatment. Open diaphyseal tibia fracture with closeable wound should be treated with surgical debridement and fixed with intramedullary SIGN nail and EF should be used in open diaphyseal tibia fracture with un-closeable wounds.

13. Aubroo, S.B. (2017). Prevalence of allergic rhinitis among secondary school pupils in Kinondoni district. Muhimbili university health and allied science.

Abstract

Introduction: An estimation of about 1.4 billion people are suffering from allergic rhinitis worldwide. Allergic rhinitis (AR) is a common debilitating disorder that can adversely affect the quality of life and the academic performance of school-age children. It is a condition that has a growing impact on every day medical practice, as its prevalence has steadily increased during the last decades. The burden of this disease has been on the rise according to recent ongoing studies. The quality of life of people with the condition is significantly affected, but there is very limited information on its pattern and magnitude in East Africa.Broad. **Objective:** The aim of this study was to determine the prevalence of allergic rhinitis among secondary school pupils in Kinondoni district, Dar-es-salaam. **Methodology:** This was a community based cross-sectional prospective study that was conducted in secondary schools in Kinondoni district, Dar-es-salaam over a period of six months between August 2016 and January 2017 using random sampling method. Data was collected using a pre-tested coded questionnaire and analyzed using SPSS statistical computer software version21.**Results:** A

point prevalence rate of 34.7% was reported with a female predominance with 15-16 age group predilections in this study. Sneezing (65.9%) was the commonest nasal symptom and hypertrophied inferior turbinate (61.8%) the commonest physical finding. The commonest aeroallergen was the house dust mite (77.3%) and the least was dog fur (5. 9%).Conclusion**:** Allergic rhinitis affects a significant proportion of the adolescent population with symptoms which have a negative impact on the lifestyle of these participants. The common aeroallergens are found within our immediate surroundings e.g. house dust mite, which can be controlled if participants are educated and proper clean environmental control measures are instituted.

14. Badi, S. (2017). Occupational injuries and associated factors among solid waste collectors in ilala municipality, Dar es salaam, Tanzania.Muhimbili university health and allied science.

Background: Solid waste collector plays an important role in maintaining the health and hygiene in the city. In Tanzania solid waste collectors areat high risk of occupational injuries since contaminated solid waste are collected manually often by hand with little or no protection from injuries and direct contact which may contribute to increases the prevalence of occupational injuries. **Objective:** The main objective of this study was to assessoccupational injuries and associated factors among solid waste collectors in Ilala. Materials and Methods: The cross-sectional study design was carried out where three hundred and fifty-four (354) solid waste collectors selected randomly participated as study subjects. Data were collected by using open and closed ended questionnaires. Data were coded and frequencydistribution runs to check for the consistency. Chi square test and Bi-variate logistic regression were used in data analysis. **Results:** The overall annual prevalence rate of occupational injury was 40.9%. Most respondents (90.1%) used personal protective equipment but they do not use them appropriately. The most common used PPE were footwear (93.14%) followed by hand gloves (76.57%). Sex was associated with higher odds of injury among social demographic factors (OR = 2.22, 95% C.I = 1.39 - 3.56). Identified factors associated with occupational injury were sex, working experience, alcohol consumption and cigarette smoking. Sex had significant association with occupational injuries among solid waste collectors due to the fact that more men were more engaged in tough tasks during solid waste collection than female.**Conclusion:** Solid waste collectors are highly affected by occupational injuries. The utilization of PPE is low and inappropriate among the workers. Working experience, Sex, and risky personal habits like cigarette smoking and consumption of alcohol hadsignificant association with occupational injuries among solid waste collectors. **Recommendations:**The provision of safety training (before and on job training), provision of appropriate and quality PPE to employee and supervising solid waste collectors on appropriate use ofPPE among solid waste collectors are an intervention to minimize the problem. **Keywords:**Occupational injuries, Solidwaste workers, Tanzania.

15. Bakari, K.Z. (2017). Assessment of maternal and fetal outcomes in pregnant women with preeclampsia or severe preeclampsia after receiving methyldopa alone or

methyldopa supported with nifedipine at Muhimbili national hospital. Muhimbili university health and allied science.

Abstract

Background: Globally, 10% of all pregnancies result in complications related to hypertension (1–3) andthese accounts for 10-15% of maternal mortality in developing country. Preeclampsia and severe preeclampsia are encountered in 5-10% of pregnant mothers and remain the important cause of maternal and perinatal mortality and morbidity. The use of anti-hypertensive medicines is vital in controlling elevated BP in order to reduce hypertensive-related complications. Methyldopa and Nifedipine are the first line drugs for the management of PE and SPE at MNH while other centers use labetalol. **Objective:** The aim of this study was to assess maternal and fetal outcomes among pregnant women that were on Methyldopa and Methyldopa supported with Nifedipine as a management plan for PE/SPE at MNH. Methodology: A prospective descriptive observational study was conducted at MNH maternity wards. Data were collected by using CRF and an excel sheet was used to record and calculate maternal MAP. Proportions were used to summarize categorical variables. The mean and standard deviation was used to summarize continuous variables.**Results:** An average MAP among treatment modalities during admission and after delivery the differences were statistically insignificant with a p-value of 0.879 and 0.061 respectively. Likewise, the mean platelets count between the two groups was 187.78 ± 89.99k/ul for pregnant women on Methyldopa and 184.62 ± 108.8k/ul for those on Methyldopa with Nifedipine. The biochemical derangements level (uric acid, SrCr, ALT, and AST) among pregnant women on Methyldopa and Methyldopa-Nifedipine add-on, the difference found were not statistically significant. Neonates delivered by women on Methyldopa alone <2kg were 40.7% compared to 47.5% neonates delivered by women on Methyldopa-Nifedipine. There were 11% stillbirths for pregnant women on Methyldopa alone compared to 16.7% from those on Methyldopa-Nifedipine. Neonate with an Apgar score <7 at five minutes were 11% for Methyldopa alone group and 7.7% for Methyldopa with Nifedipine while remaining has Apgar score 7 > at five minutes respectively. **Conclusion:** Both treatments approaches favor maternal outcomes. However, MethyldopaNifedipine add-on gave more favorable maternal outcomes compared to when Methyldopa is used alone. While Methyldopa treatment improves neonate's outcomes. Children were delivered with improved birth weight, good Apgar score with less proportional of stillbirth compared to Methyldopa-Nifedipine add-on. Both treatment approaches should be adopted in the management of PE and SPE but Methyldopa with Nifedipine should be taken with caution and should be used under close monitoring of both maternal and fetal well-beingparameters.

16. Barabara, M.L. (2017). Prevalence and associated factors of intimate partner violence among pregnant women attending antenatal care clinics at Moshi municipal council, Kilimanjaro, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Intimate partner violence (IPV) during pregnancy represents a field of inquiry of vital importance, since pregnancy is a delicate period when women are expected to be protected from violence. **The aim of this study:** was to explore the prevalence and factors associated with IPV among pregnant women attending antenatal care clinic (ANC) at Moshi municipal council, Kilimanjaro Region, Tanzania. **Materials and Methods:** A descriptive cross-sectional design using quantitative approach was conducted in seven health facilities. A total of 340 participants were enrolled using systematic random sampling. Data were collected for four consecutive weeks, using a structured questionnaire which was administered in Kiswahili language. Data were analyzed using SPSS version 21.0 software, and Chi-square test was used to determine the associations.**Results:** The mean age of 340 participants was 26.3 years (±6 SD). The overall prevalence of IPV during pregnancy was found to be 49.4% (n=168). Sexual violence was the most common (33%), followed by emotional (29%) and then physical (11%). Furthermore, IPV during pregnancy was significantly associated with: polygamous relationship (OR=0.5), unilateral choice of partner (when the male partner or his relatives choose the female partner without her consent) (OR=4.3), unintended pregnancy (OR=1.7), rare/no control over household expenditures (OR=3.5) and had partner who frequently consumed alcohol (OR=0.4). **Conclusions:** Nearly half of women experienced intimate partner violence during pregnancy. Sexual violence appears to be the most common type of IPV followed by emotional and physical IPV. Therefore, antenatal care clinic may represent a unique opportunity to identify and screen for IPV victims, and refer the victims to obtain relevant services.

17. Bashaka,P. (2017). Clinical profiles, initial management and outcomes of malnourished children presenting to the emergency medicine departiment of Muhimbili national hospital, Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: In Tanzania, the burden of malnourished children presenting to Emergency Departments, their management and outcomes are unknown.**Aim of the study:** To describe the clinical profiles, initial management and outcomes of acutely ill malnourished children aged under 5 years presenting to the Emergency Medicine Department of Muhimbili National Hospital (EMD-MNH). **Methods and Material:** This was an eight weeks' prospective cohort study of children aged 1-59 months presenting to the EMD-MNH from July, 2016 and August, 2016. A consecutive sample of children under 5years were screened using standardized World Health Organization (WHO) growth charts ('Weight for Height/length', 'Height for Age', and 'Weight for Age'), children below minus one SD z-score were recruited. Case report forms (CRF) were completed to obtain demographic, clinical presentation, initial interventions and outcomes of the enrolled children. Data was summarized using descriptive statistics and analyzed using counts, percentages, median, interquartile ranges (IQR), 95% confidence interval (CI), relative risk (RR) and P-value.**Results:** A total of 449 children were screened, of which 153 (34.1%) met definitions for malnutrition. 146 (95.4%) were enrolled. Of those enrolled, 42 (28.8%) mild, 51 (34.9%) moderate, and 53 (36.3%) had severe malnutrition. 46 (31.5%) were under 12 months old. Common co-morbidities included congenital heart disease 29 (19.9%), cerebral palsy 19

(12.8%), and hydrocephalus 5 (3.4%). The most common complaints were fever 36 (24.7%), cough 35 (24%) and weight loss 28 (19.2%). Within 24-hours follow up, 4 (2.9%) children died. At 30 days, 18 (13.3%) children had died, and eleven (7.5%) lost to follow up. Malnourished children under 5 years with low AVPU score (GCS <15) had statistical significance increased risk of mortality. **Conclusion and Recommendation:** More one third of acutely ill children under 5 years presenting to EMD-MNH have malnutrition, and mortality rate in these children is high. EMD physician should be educated on early recognition and management of malnourished children to optimise outcome

18. Bazilio, J. (2017). Prevalence and bacteriology of tonsillitis among patients attending otorhinolaryngology services at Muhimbilinational hospital Dar es salaam, Tanzania. Muhimbili university health and allied science.

Abstract

Introduction: Tonsillitis is a common infectious disease contributing to significant social-economic impact worldwide. Like other infectious diseases, the determination of the pathogenic agent is important in antibiotic selection for the medical treatment of tonsillitis.**Objective:** To determine the prevalence and bacteriology of tonsillitis among patient attending Otorhinolaryngology services at Muhimbili National Hospital.**Method:**This was descriptive cross-sectional study. That was carried out at Muhimbili National hospital, ORL department, both inpatients and outpatients from June to December 2016. Interview was conducted through special questionnaire and clinical examination forms, thorough ENT examination, throat swab for culture and sensitivity was done. Culturing for colony characteristics followed by gram stain was used for provisional identity of bacteria. Further identification was done by a set of biochemical test. Antimicrobial susceptibility pattern of pathogenic bacteria was determined by Kirby Bauer disc diffusion method.A total of 485 patients were involved in this study and the data was analyzed using the SPSS program. Frequency distribution and two way tables were used to summarize the data and Chi-square test was used to determine the association between independent and dependent variables and p-value of less than 0.05 was considered as statistically significant.**Results:** Out of 485 patients attending ORL services at MNH 100(20.6%) had tonsillitis. Prevalence was higher in males 23.7% as compared to females 18.3%. The most affected age group was 1-10years 42.6%. Nearly quarter of patient had family history of tonsillitis 21% siblings being commonly affected. The most common isolated bacteria were Coagulase negative staphylococcus, Streptococcus pyogenes and Bacillus species. Streptococcus pyogenes was susceptible to most of the drugs available at our setting and resistant to penicillin G.

19. Beverly, M.C. (2017). Prevalence and determinants of modern contraceptive use among postpartum mothers attending child health clinic at Mnazi-mmoja hospital, Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Postpartum family planning (PPFP) addresses the needs of those who wish to have children in the future, as well as those who have reached their desired family size and

wish to avoid future pregnancies. Despite the considerable risk of untimed pregnancy within two years of delivery, many mothers do not pay attention to post partum contraception. Short inter pregnancy interval results in an increased risk of maternal and neonatal morbidity and mortality. In view of the serious adverse consequences associated with short inter pregnancy interval, this study aimed to determine the prevalence, types of contraceptives used and factors influencing use of modern contraceptives among mothers with children less than 12 months old. **Methodology:**This hospital based cross sectional study was conducted where mothers bringing their children who were less than 12months old to the child health clinic were recruited till the sample size was reached. The proportion mothers who used PPFP was obtained from women who used modern contraceptive among all the women interviewed. Bivariate and multivariate logistic regression analyses were applied to identify independent risk factors associated with use of PPFP. All analyses were conducted using SPSS version 20.**Results:** The number of women recruited was 500 from which the obtained proportion of mothers who used PPFP in this study was 60.4%, the most used type of modern contraceptive was implant followed by injectables, IUD, Condoms and pills was the least used. The factors that were associated with increased use of contraceptive were age group (OR=3.040, CI 1.203-7.681), previous history of contraceptive use (OR=5.464, CI 2.256-13.234), resumption of menses (OR=26.383, CI 12.315-56.521), partner's approval (OR=4.596, CI 1.800-11.738), choosing FP during ANC (OR=2.812, CI 1.447-5.467) and counselling on FP after delivery (OR=19.919, CI 5.256-75.484).**Conclusion:**The prevalence of modern contraceptive methods use in Mnazi Mmoja was higher than the expected. The results show that age group 26-30years, previous history of contraceptive use, having resumed their menses, having their partner's approval, chose FP during ANC and had counselling after delivery have higher likelihood of using PPFP. To ensure adequate inter pregnancy interval, this factors need to be considered so as to increase uptake of PPFP.

20. Birago, E.W. (2017). Poultry dust exposure and lung function among poultry farm workers in Kibaha Pwani region, Tanzania.Muhimbili university health and allied science.

Abstract

Introduction: Poultry sector has created an opportunity to employ thousands of people. It is one among the fastest growing industry in Tanzania. According to National Sample Census of Agriculture (NSCA) 2007/2008, Pwani region had a total of 1,875,732 chickens. Moreover, this industry is known for potential hazards related to respiratory system. This study was planned in the absence of any published study poultry dust exposure and respiratory symptoms among poultry farm workers in Kibaha PwaniRegion, Tanzania.**Objective of the study:** The aim of this study was to determine poultry dust exposure and lung function among poultry farm workers in Kibaha Pwani Region, Tanzania. Materials and **Methods:** This was a descriptive cross-sectional study where 61 poultry farm workers and 30 controls participated in the study. Small scale fruits and vegetable vendors were used as less exposed group (controls). The respiratory health questionnaires and lung function tests were performed to all poultry farm workers satisfying the inclusion criteria. Area poultry dust sampling was done in selected poultry farms. Data analysis was done using

SPSS for Windows version 20.0. Ethical clearance was obtained from MUHAS-IRB.**Results:** Overall, this study indicated that poultry farm workers reported greater prevalence of respiratory health symptoms (cough 36.1% and phlegm 19.7%) than the control group (cough 30.0% and phlegm 10.0%) and that cage-based type of production method had lower poultry dust concentration (0.18 mg/m3) than litter/ground-based type of production method (5.36 mg/m3). It was observed that working in battery cage type of poultry housing system is less associated with the risk of developing respiratory health symptoms [OR=0.423, 95%CI (0.129-1.381)] compared to working in deep litter poultry housing system [OR=3.130, 95%CI (0.890-11.007)] although the differences were not statistically significant p>0.05. It was found that majority (58.8%) of poultry farm workers had mild lung impairment compared to (18.8%) of the controls based on FEV1 less than 80% of the predicted. **Conclusion and Recommendations:** Poultry farm workers had better lung functions compared to the unexposed group. Battery cage housing system is recommended over deep litter housing system because of lower poultry dust concentrations. Interventions for reduction of poultry dust levels and provision of RPEs is recommended.

21. Buliga,V. (2017). Assessment of dust exposure and associated respiratory health symptoms among small scale sunflower oil industry workers in Singida Tanzania.Muhimbili university health and allied science.

Abstract

Background: Small scale sunflower oil industries are industries which extract oil from sunflower seed. Apart from its contribution to the economic development of the nation, during extraction process much dust and other debris are produced, which are harmful to human health. **Study objective:** The aim of study was to assess dust exposure and associated respiratory health symptoms among workers in small scale sunflower oil industries in Singida Tanzania.**Methods:** A cross sectional study using quantitative approach was conducted employing the use of structured questionnaires. To assess the respiratory health symptoms, we interviewed 233 study participants using a modified American Thoracic Society questionnaire. Respirable dust samples were collected from a sub sample of 66 workers from the sieving section.**Results:** Respirable dust exposure levels for mean, and Geometrical mean was 10.45 mg/m3 (SD 13.90) and GM=5.25 mg/m3(GSD 0.51) respectively, and 46% of the dust samples (n=66) were above the TLV of 5 mg/m3. Logistic regression analysis between measured dust and respiratory symptoms found to be statistically significant. Higher prevalence of respiratory health symptoms was seen in those with cough (33%), cough with phlegm (46.8%) and wheezy (41.6%).**Conclusion:** The study concludes that, respiratory symptoms were high and dust exposure was above recommended levels of 5 mg/m3. We recommend use of appropriate RPE.

22. Chaya, P.S. (2017). Satisfaction of community health worker- students with the training program at Kahama and Shirati health institutes in Tanzania.Muhimbili university health and allied science.

Abstract

Background: There is the global dearth of evidence on the satisfaction of Community Health Worker (CHWs) students trained in the formal training programmes. In Tanzania, the gaps on satisfaction of CHW students with training program have existed since the inception of the Community Based Health Program (CBHP) policy guideline. **Objective:**This study aimed at assessing the level of satisfaction of CHW students with the training programme from Kahama and Shirati Health Institutes. The study envisaged specifically to assess the satisfaction of trainees with the content of the courses, relevance of the training to the job, instructor's competency, teaching methodology, learning environment and the use of technology.**Methodology:**The study used Kirkpatrick's Model - focusing on Level 1 to measure the satisfaction of the CHWs students with the training programme. The study employed across-sectional design with a total of 153 students pursuing the Community Health(CH) program and alumni of the CH programme who weresampled by simple random sampling, and a total of 14 tutors from Kahama and Shirati Health Institutes who were also purposively sampled. Data were collected using i) CHW survey using Questionnaire-Kirkpatrick tool ii) Focus Group Discussion (FGD) with the tutors. Quantitative data were processed, edited and descriptively analysed using SPSS version 20. The likert scale (1-5) was used and computation of weighted score was done which was used to get the score and decision rule. Focus Group Discussion (FGD) data were transcribed and analysed using content analysis. **Results:**The majority (66%; weighted score =4.5) were strongly satisfied with the course content and the curriculum despite the fact that the curriculum did not reflect the core need of the community health. In addition, 70% (weighted score=4.6) of the students were strongly satisfied with the available learning environment for the course. However, in some cases, there were concerns about the use of old teaching facilities, inadequate quantity and quality of the teaching and learning materials as well as lagging behind in use of innovation in teaching and learning. In the area of the tutors' competence, most students (69%, weighted score=4.6) were strongly satisfied with their capacity to teach. However, tutors themselves had concerns about being not oriented on the new cadre and students had concerns that the objectives of the course were not thoroughly articulated by tutors. The majority (70%; weighted score=4.7) of students were strongly satisfied with the relevance of the programme. However, they were not sure about their employability. **Conclusion:**It is concluded that there is strong satisfaction and motivation among the CHW students with the community health programme, in particular, the way the training is run, the competence and motivation of the tutors to teach them and the way the practical attachments are structured to give them opportunity to practise what they have learnt in the class. Despite these positive findings of the Programme, it yet is constrained by having a curriculum that does not capture all required contents, some tutors not well oriented on teaching the new programme, and inadequate use of innovative platforms such as m-learning and e-learning in teaching and learning. **Recommendation:**Success of CBHP in Tanzania needs strong Public and Private Partnership. The need for curriculum review should go hand in hand with putting in place CHW recruitment and deployment systems to assure CHW employability. On-the-job training programmes for the tutors are a key to enhance their teaching skills.

23. Chidi, S. (2017). Investigation of factors influencing data management in district health planning process: a case study of Kibaha town council.Muhimbili university health and allied science.

Abstract

Background information: Sound and reliable information is the foundation of decision making across all health system building blocks. Strengthening health information system is a global concern especially in developing countries as data management is reported to be weak. There is a need to explore factors influencing data management in health planning process.**Aim of the study:** The study aimed to investigate factors influencing data management in the district health planning process in Kibaha town council.**Methodology:**This study was conducted in Kibaha town council. The study populations were CHPT, CHMT and health workers of public health facilities who are involved in data management at Kibaha town council. The design of the study was cross sectional explorative study using qualitative approach. Sample size was 11 for CHMT and CHP, and 4 for health workers making a total of 15 who were interviewed after reaching saturation point. In-depth interview, observation and documentary review were used as data collection techniques and data collection tools included interview guide and observation checklist. Thematic analysis method was used in data analysis.**Results:**The results showed several positive factors influencing data management, including knowledge, positive attitude, training, supervision and culture of information use. The findings also revealed several challenges which hinder the effective data management; these include inadequate funding, data collection tools, qualified staffs, supervision, insufficient training, duplication and unfriendliness of data collection tools.A significant link between these challenges and data quality was reported, the interviewees confirmed a positive relationship between these factors influencing data management and health planning in the district as with quality data evidence based planning is possible. **Conclusion:** This exploratory study identified knowledge, positive attitude, computer use, availability and friendliness of data collection tools, supervision, availability of fund and culture of information use to be factors influencing data management health planning in Kibaha Town Council.The results provided strategies to support in improving data management and HMIS in general.

24. Chitara, M.(2017). Sexual and reproductive health needs and theirassociated factors among adolescent students aged 15-19 years in secondary schools in Ilala, Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Teenage pregnancy and their associated consequences are one of the poor sexual and reproductive health outcomes that continue to affect many adolescent girls in developing countries. Each year in Sub-Saharan Africa teenage pregnancy contributes to 16% of all births. In Tanzania teenage pregnancy has increased from 23% to 27% and it is the major reasons for female school dropout.**Aim:** This study aimed to assess the sexual and reproductive health needs and their influencing factors among adolescent students aged 15-19

years in secondary schools in Ilala, Dar es Salaam region. Material and methods: The study was a cross-sectional quantitative study, which employed simple random sampling where a random number generator (STAT TREK) was used to generate schools and study participants. Questionnaire with closed-ended questions were used to collect information from the study participants. Data was entered and analyzed by the Statistical Package for Social Sciences (SPSS) Version 23. Descriptive statistics was used to summarize the data. Logistic regression analysis used to determine the relationship between each independent variable and sexual and reproductive health needs. Odds ratio and its 95% confidence interval are reported. Significance level was set at $p< 0.05$.**Results:** A total of 358 students aged 15-19 years participated in the study where by 54% were females. The respondents mean age was 17 (standard deviation = 1.5) years with a larger proportion (67.3 %) of them aged 15-17 years. About sixty percent reported at least one sexual and reproductive health need. The most common type of sexual and reproductive health need reported was education on pregnancy prevention and other sexually transmitted infections (94.4%) followed by education on menstrual cycle (90.4%), sexuality education (86.6%) and the least condom provision (69.3%).Factors found to be associated with SRH needs were age (AOR = 0.46; 95%CI: 0.28 - 0.77); education level of the study participants: form two (AOR = 9.14; 95%CI: 1.81-46.17), form three (AOR = 5.31; 95%CI: 1.31-21.50) and form four (AOR = 6.53; 95%CI: 1.66-25.66); age of sexual debut (AOR = 59.89; 95%CI: 2.34 - 1531.93); the place to get the type of SRH services for protection (AOR = 16.97; 95%CI: 1.55-186.34) and the influence of peer pressure from other friends (AOR: 3.97; 95%CI: 1.55-10.15). **Conclusion:** More than half of the participants indicated a need for SRH services. The most frequently mentioned service was education on prevention of pregnancy and other sexually transmitted infections. The main determinants of SRH needs of adolescent secondary students were age, education level, age of sexual debut, place to get SRH services and the influence of peer pressure from other friends.**Recommendations:** This study suggests there is a necessity to revisit services offered in sexual and reproductive health clinics to cater for needs of adolescent secondary students. **Keywords:** Sexual and reproductive health needs, adolescents, Tanzania.

25. Credo, D. (2017). Antidiabetic activity of selected Tanzanian traditionally used medicinal plants.Muhimbili university health and allied science.

Abstract

Background: Diabetes is a widespread chronic metabolic disorder occurring in many parts of the world affecting human and animal population. The existing drugs for diabetes management have one or more side effects. Presently, some medicinal plants have been reported to be used traditionally to manage diabetes in man especially in developing countries where many people cannot afford modern antidiabetic treatments because of costs and in other cases people live in remote areas where they have no access to modern medicines. However, their efficacy and safety are unknown; therefore, there is a need to be evaluated.**Objectives:** Broadly, this study focused to investigate the antidiabetic activity and safety of five selected Tanzanian medicinal plants used traditionally for management of diabetes (Afzelia quanzensis (root), Bridelia duvigneaudii (root), Cyphomandra crassifolia

(fruit), Dioscorea praehensilis (tuber) and Ficus fischeri (stem bark)). Phytochemical screening of reported antidiabetic classes of secondary metabolites (terpenoids, alkaloids, phenolics, flavonoids, saponins, and cardiac glycosides) present in plant extracts and isolation of bioactive pure compounds from the most antidiabetic medicinal plant.**Materials andMethods:** Five Tanzanian medicinal plants traditionally claimed to manage diabetes were purposeful selected basing on literature review. Samples of these plants were collected from Kagera and Tabora regions in Tanzania. Experimental study was conducted at ITM - MUHAS. Evaluation for antidiabetic activity of 80% aqueous ethanol plant extracts and isolated pure compound was conducted orally on oral glucose loaded normal albino mice by using Oral Glucose Tolerance Test (OGTT) method. Safety of the most antidiabetic crude extract was evaluated on white albino mice by using Acute Toxic Class Method.Phytochemical screening of reported antidiabetic classes of secondary metabolites was done by using standard chemical tests. Isolation of pure compounds from the most antidiabetic plant extract was done using column chromatography packed with silica gel and eluted by solvents ranging from non-polar, medium polar and polar. Results of blood glucose levels are expressed as mean ± SEM, n = 6. Statistical differences in means were analyzed by Student's t-test for two means comparisons followed by one-way ANOVA and Tukey's multiple comparisons. Results of acute oral toxicity to compare mean body weight between the tested and control groups are expressed as mean ± S.D, n = 3. Statistical analysis was done by the Student's t-test, $p < 0.05$. The isolated compounds were identified on the basis of 1D and 2D NMR data.**Results:** Evaluation of antidiabetic activity for the 80% aqueous ethanol extracts of the five selected medicinal plants at a single dose of 200 mg/kgbwt; B. duvigneaudii roots extract exhibited antidiabetic activity by lowering blood glucose statistically different from that of untreated group ($p < 0.05$) at 0.5, 1, 2 and 3 hours after administration. Evaluation of safety for 80% aqueous ethanol roots extract of B. duvigneaudii at doses of 5, 50, 300 and 2000 mg/kgbwt revealed no toxicity and column chromatographic separation led to isolation of two ubiquitous steroids, namely, β-sitosterol [12] and stigmasterol [13]. At 50, 100 and 200 mg/kgbwt, stigmasterol exhibited antidiabetic activity by lowering blood glucose statistically different from that of untreated group at 0.5, 1, 2, 3 and 4 hours after administration, p 0.05. Phytochemical screening of plant extracts indicated the presence of terpenoids, phenolics, saponins and cardiac glycosides.**Conclusion:** 80 % aqueous ethanol roots extract of B. duvigneaudii exhibited antidiabetic activity amongst the extracts of five selected medicinal plants. Its safety evaluation on albino mice showed no toxicity. The isolated pure compound, stigmasterol [13] exhibited antidiabetic activity on glucose loaded normal albino mice. This result supports its hypoglycaemic activity reported by the previous studies in normal glucose loaded rats and in alloxan induced diabetic rats.**Recommendations:** Further studies should be carried focusing on herbal formulation of 80% aqueous ethanol roots extract of B. duvigneaudii and to determine its mechanism (s) of action in diabetic patients. Stigmasterol should be considered as a potential lead compound for developing antidiabetic agent (s) in future.

26. Ernest, A.L. (2017). Prescription and consumption patterns of blood and blood components in patients undergoing orthopaedic and neurosurgical procedures at

Muhimbili orthopaedic institute, DSM, Tanzania. Muhimbili university health and allied science.

Abstract

Background: Blood is a scarce resource, since there's limited availability of donated blood and absence of effective substitute that can perform the vital functions of blood; therefore, clinicians should cautiously assess the appropriateness of prescription of blood and blood components to minimize wastage of blood resources and optimize the utilization of blood products**. Objective:** To determine prescription and consumption patterns of blood and blood components in patients undergoing orthopaedic and neurosurgical procedures at Muhimbili Orthopaedic Institute, from May to September 2016. **Methodology:** Prospective Descriptive Cross-Sectional study was conducted at MOI, over period of five months. Data for elective and emergency surgeries were collected from patient's case files, laboratory requisition forms and blood bank registries. Blood utilization was calculated using crossmatch to transfusion ratio (CTR), transfusion probability (%T), and transfusion index (TI) indices. Results: During the study period, a total of 563 units of blood were crossmatched, and 502 units (89%) were transfused for 280 patients, and the overall blood transfusion of the requested blood which was explained by indices of CTR, %T, and TI were 1.12, 100%, and 1.79, respectively.**Conclusion:** The data for the crossmatch to transfusion ratio (CTR), transfusion probability (%T), and transfusion index (TI) were optimal; Hence, Blood utilization was efficient in both orthopaedic and neurosurgical procedures.

27. Fabian, F. (2017). Athree months' outcome of supracondylar fractures of the humerus treated by closed reduction and percutaneous pinning among pediatric patients treated at MOI.Muhimbili university health and allied science.

Abstract

Background: Supracondylar fractures of the humerus are common injuries around the elbow joint in children. This has a high rate of complications with improper management. No general agreement on the treatment is evident. Ideal timing of surgery, method of maintenance of reduction and configuration of pins are still controversial. However, patients treated with closed reduction and percutaneous pinning show better results compared to other treatment modalities.**Objective:** The purpose of this study was to determine a three-month outcome of patients with supracondylar fractures of the humerus treated at Muhimbili Orthopaedic Institute (MOI). **Methods:** This was a descriptive (hospital based) cross sectional study looking into the three months' outcome of paediatric patients with SCFH treated by closed reduction and percutaneous pinning at MOI from July 2016 to December 2016.Adequacy of reduction, complication associated with percutaneous pinning, range of movement of the elbow and carrying angle were assessed. Flynn criteria were used to assess functional outcome. Data analysis was performed 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:** A total of 504 children were attended at MOI emergency department during the study period as trauma patients ie 13.6% of all trauma

patients. Among those children 78(15.5%) had injury to their elbows and were diagnosed to have supracondylar fracture of the humerus. The mean age was 6.1±2.5 ranging from 1.8 to 12.8 years and a male to female ratio was 2.1:1. Playground injuries were the leading cause of supracondylar fractures injuries 62.3%, followed by falls from heights contributing 31.1%. The majority of the patients were operated within 24 hours of injury (54%). The Bauman angle ranged from 58 -81 degrees with a mean of 74.79± 6.13. Anterior humeral line passed through the middle of the capitellum in all the patients. No iaotrogenic nerve injury, vascular injury or compartment syndrome developed as a consequence of the procedure. The functional outcome according to the Flynn criteria was excellent in 45(73.8%) patients, good in 9 (14.8%) patients, fair in 5(8.2%) patients and poor in 2(3.3%) patients. One patient developed cubitus varus. The results were statistically significant as per time from injury to surgery, Gartland fracture type and initiation of supervised physiotherapy ($p<0.05$). **Conclusion:** Closed reduction and percutaneous pinning is an efficient, reliable, and safe method in the treatment of displaced supracondylar fractures of the humerus in children at MOI.

28. Feksi, J.(2017). The pattern of nystagmus in children attending the paediatric ophthalmology and neurology clinics at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Nystagmus is abnormal rhythmical eye movement which serves as valuable diagnostic sign indicating either a central or ocular abnormality. The ocular causes include childhood refractive errors, cataracts, strabismus, optic atrophies and Albinism. If not detected and managed early, they can lead to visual impairment hence poor academic performance, decreased job opportunities and increased dependency thus poor quality of life. The prevalence of nystagmus worldwide ranges from 1:1000 to 1:6500. Approximately 80% of patients with nystagmus have visual impairment. **Aim:** to assess the pattern of nystagmus in children attending the paediatric Ophthalmology and Neurology clinics at Muhimbili National Hospital.**Methodology and Data Analysis:** Hospital based descriptive cross-sectional study conducted among 96 children with nystagmus at Muhimbili National Hospital (MNH) from June to December 2016. Study participants were selected through convenient sampling method. All patients with nystagmus who met the inclusion criteria during the study period were included in the study. Data were analyzed using computer software SPSS version 20 and results summarized using frequency tables, bar charts and pie charts. **Results:** There were 57 males and 39 females. The age ranged from 2 to 180 months, with the mean age of 39.86±37.85 months and commonest age group being 13-60 months (60.6%). Most patients presented with nystagmus before the age of 6 months (94.7%). The most common type of nystagmus was Infantile Nystagmus Syndrome, (94.8%), with Associated INS being the commonest Infantile Nystagmus Syndrome sub-type (69.8%). The most common form of nystagmus was jerk nystagmus (87.2%). Refractive errors were the most common ocular manifestation (59.4%). Of the patients with nystagmus, 63.6% had a compensatory head posture with the commonest head posture being face turn (29.2%, $p=0.001$). Majority of the patients had visual impairment (89.6%) and the most observed refractive error was hyperopia

(26%).**Conclusion:**To our knowledge, this was the first hospital based study on the patterns of Nystagmus in Tanzania. A high proportion of the patients had anomalous head postures. Majority also had visual impairment with most having refractive errors followed by cataract which can easily be corrected if detected early.

29. Francis, P. (2017). In vivo evaluation of wound healing activity of selected medicinal plants traditionally used in Tanzania.Muhimbili university health and allied science.

Abstract

Background: The World Health organization (WHO) in 2015 reported Injuries as the third cause of deaths in Tanzania after communicable diseases. Tanzania has high number of accidents which cause injuries and wounds and a previous report shows that, a total of 4675 road traffic injury patients were seen between April 2014 and September 2014 at different hospitals which mostly resulted into wounds (Lawrence et al., 2016). The therapeutic activities of plants known to be used by traditional health practitioners in Tanzania for wound treatment have not yet been documented.**Methods:** Acute dermal toxicity using a limit test of 2000mg/kg (67%) formulation of 80% ethanolic extract from Hugonia castaneifolia, Trichodesma zeylanicum and Sida rhombifolia leaves was done on rats (n=6). Wound healing activity of 25%, 33% and 50% formulations and water preparations in mice using excisional and incisional models was done. Wound contraction, re-epithelization and percentage tensile strength were evaluated. Confidence level ($p<0.05$) was considered significant using ANOVA followed by Tukey method. Histopathological evaluation of fibroblast cells and collagen fibers of healed wound cuts was also performed.**Results:** All plant extract formulations were non toxic against albino rats. Sida rhombifolia exhibited the highest mean percentage closure of wound for all concentrations used and for water preparation from day 7 onwards. Trichodesma zeylanicum showed significant mean percentage closure of wound for 50% formulation from day 9 (57.3±1.9). Sida rhombifolia formulated herbal ointment had significant percentage tensile strength for all three formulations 50% (64.1±1.7), 33% (64.0±3.2) and 25% (53.1±4.0). Trichodesma zeylanicum percentage tensile strength also was significant for 50% (42.9±3.5), 33% (36.3±2.3) and for 25% (34.7±2.9) formulations. Histopathological assessment results showed Sida rhombifolia had remarkable fibrosis and collagenization for 50% formulation and for water preparation.**Conclusion and recommendations:** The 80% ethanolic extract formulation of Sida rhombifolia exhibited a potential benefit in enhancing wound healing process. More bioassay guided fractionation studies are recommended to allow identification of active compound(s) with wound healing activity for possible drug development.

30. Fugusa, E.W. (2017). Parenting styles, psychological well being and depressive symptoms among adolescents in Dodoma Tanzania.Muhimbili university health and allied science.

Abstract

Introduction: Parenting is the process of promoting, guiding and supporting the development of children from infancy to maturity. In everyday life especially in home

settings, there is regular interaction between parents and/or other caregivers with the children/adolescents. This interaction is conducted in many and varied forms. These forms of interaction between parent and child are called parenting styles. Researchers name four types of parenting, which are authoritative, authoritarian, permissive and neglectful parenting styles. These parenting styles are categorized depending on the level of responsiveness and demandingness of parents or other caregivers. Several studies have highlighted the effects of parenting styles on adolescents functioning. Few studies have been done in Tanzania on parenting styles, psychological wellbeing and depressive symptoms. The current study explored parenting styles, psychological wellbeing and depressive symptoms among adolescents in the Tanzania context.**Objectives:** To determine the association between perceived parenting styles, psychological wellbeing and depressive symptoms among adolescents between the ages of 10 to 15 years old attending public community primary schools in Dodoma. **Methods:** Simple random cluster sampling procedure was used to obtain six schools from a study population of 16 schools. Participants from each of the 6 selected schools who met the study criteria had an equal chance to be included in the study. 450 adolescents were invited to participate, 30 did not consent, and 10 did not meet criteria. Therefore 410 were enrolled for the study. A self-administered structured questionnaire was used for data collection. Three standardized scales were used to collect measures for parenting style, depressive symptoms and psychological wellbeing. This was a school based descriptive cross sectional and analytical study, using quantitative data collection methods. Study sample was obtained through randomized cluster sampling of school adolescents in Kongwa District of Dodoma region. Analysis of data: Univariate, bivariate and multivariate analysis was done involving independent variable, dependent variable and demographic factors. **Results:** 450 adolescents were eligible to participate in the study and 420 adolescents completed the study questionnaire. 10 (2.38%) were removed from the analysis as they did not have one major perceived parenting style. Females were 63.2% (259) and males 36.8% (151). The mean age (SD) of the participants was 12 years (1.22). The prevalence of depressive symptoms was 37%. Findings show age, sex, pocket money, caregiver education, religion and class repetition have no statistical significance while type of caregiver and school class shows a statistically significant association with depressive symptoms (p=0.002 and p=0.000 respectively). Furthermore, there was a significant association between psychological wellbeing and the presence of depressive symptoms (p=0.001). The association was also seen between (parenting styles and level of depressive symptoms (p=0.000).Adolescents who were in standard 5 compared to those who are in standard 6 are two times more likely to have depressive symptoms (OR, 2.16, 95% CI: 1.30-3.60). Adolescents who were living with single parents compared to those who had both parents were almost two times more likely to have depressive symptoms (OR, 1.76 95% CI: 1.03-3.05). Adolescents who scored low on psychological well-being compared to those who scored high in this measure were two times more likely to have depressive symptoms (OR, 2.54 95% CI: 1.44 - 2.54). And adolescents who perceived their caregivers to use authoritarian as the main parenting style compared to those who perceived authoritative were almost three times more likely to have depressive symptoms (OR, 2.93 95% CI: 1.66-5.15).**Conclusion and recommendations:** There is an increased prevalence of depressive symptoms among adolescents in Kongwa, Dodoma. Depressive symptoms appear to be

associated with ineffective parenting like authoritarian and permissive styles. Psychological unwell state and single parenting are of high percentage and associated with depressive symptoms in adolescents. It is therefore recommended that school based interventions that aim at increasing psychological wellbeing in adolescents are put in place. Awareness and knowledge of impact of parenting style on adolescent development should be provided to caregivers, to ensure effective parenting and more positive adolescent mental health.

31. Garimo, I.A. (2017). Individual risk factors for malaria infectionin Unguja island Zanzibar.Muhimbili university health and allied science.

Abstract

Introduction: In 2015, the number of malaria cases was estimated to be 214 million and 438,000 deaths globally. About 3.2 billion people almost half of the world's populations are at risk of malaria. In Tanzania mainland, the 2011–2012 Tanzania HIV/AIDS Malaria Indicator Survey (THMIS) showed malaria prevalence in children under five years of age to be 9%. This shows a fifty percent reduction compared with18% reported in the 2007-08 THMIS. In Zanzibar, the malaria level in the population has decline from greater than 10% in 2005 to less than 2% in 2010, whereas the incidence of new malaria episodes has reduced from 16/1000 to 2/1000 in children under five years and from 4/1000 to 2/1000 in above five years. The focus is to have no locally acquired cases of malaria by 2018.**Objective:** The study explored individual risk factors for malaria infection in Unguja island Zanzibar.**Methods:** A community based matched case control study was conducted in Zanzibar –Unguja island with case to control ratio of 1:3. A case of malaria was defined as; any individual currently living in the study area who tested positive by mRDT with or without signs and symptoms of malaria with no past history of malaria within the last two months. A control was defined as; any household member from the index case currently living in the study area who tested negative by mRDT. Structured questionnaire and observation checklist were used to collect information and data was analyzed using Epi-info version 3.5.1. Condition logistic regression was used to estimate adjusted odds ratios (AORs). **Results:** The study results revealed that chances of getting malaria infection was higher and statistically significant among those who travelled outside Zanzibar than those who did not travel [AOR =60.47, 95% CI 15.73 - 232.44]. The odds of getting malaria infection was higher among those who spend their time in outdoor activities during the night than those who spend their time indoors [AOR =8.53, 95% CI 1.96 - 37.11]. The odds of getting malaria were higher among individuals whose rooms were not sprayed or sprayed more than 9 months ago with indoor residual spray than those whose rooms were sprayed within nine months [AOR= 29.60, 95% CI 2.68 - 326.49]. Furthermore, cases of malaria were observed to be 16 times higher among those who do not have a bed net compared to those who have a bed net [AOR=16.25, 95% CI 3.32 - 79.50] **Conclusion:** Travel outside Zanzibar, spending time on outdoors activities during the night, not sprayed the bedroom or having it sprayed beyond the prescribed time of nine months and not having a bed net are major risk factors for malaria infection in Unguja Zanzibar.**Recommendations:** Ministry of health through Zanzibar Malaria elimination program should set a mechanism of encouraging and tracing people who travel outside Zanzibar to attend the nearby health facility for malaria infection

screening. Sensitizing people on using protective gears during the night (body covering clothing and application of topical mosquito repellants), discouraging unnecessary outdoor activities and promoting bed net ownership would effectively facilitate malaria elimination in Unguja Zanzibar.

32. Haji, H.A. (2017). Factors associated with poor adherence to ant-retroviral therapy among hiv/aids patients attending care and treatment clinic at Mnazi Mmoja hospital, Zanzibar.Muhimbili university health and allied science.

Abstract

Background: Anti-retroviral therapy (ART) adherence rates of >95% are needed to maximize the benefits of ART. Poor adherence to ART may result in treatment failure and the emergence of drug resistant strains of HIV, leading to an increase in morbidity and mortality of people living with HIV and AIDS. Adherence to anti-retroviral therapy can be influenced by socio-demographic factors, behavioral factors or treatment related factors. The aim of this study was to determine factors associated with poor adherence to ART among HIV/AIDS patients attending care and treatment clinic at Mnazi Mmoja Hospital in Zanzibar.**Methodology:** Unmatched case control study was conducted in Mnazi Mmoja Hospital from February to April 2017. A case was defined as any patients on ART attending Mnazi Mmoja Hospital care and treatment clinic who missed two or more ART doses in the last 30 days followed up visit. Cases and controls were selected randomly from CTC2 database after analysis of their adherence status. Data entry and data analysis were performed using Epi Info version 3.5.4.**Result:** A total of 388 HIV/AIDS patients were recruited in the study, where 25% were cases and 75% were controls. Majority of study participants (67.3%) were females, aged between 34 and 44 years (38.7%), self-employed (67.5%), had primary education (49.0%), and were married (47.9%). Factors that were independently associated with poor adherence to ART includes; drinking alcohol (AOR = 4.34, 95% CI:1.97, 9.59), drug abuses (AOR = 26.2, 95% CI: 2.95, 232.49), ART interfere with daily activities (AOR = 5.99, 95% CI: 2.35, 15.27), having no treatment supporter (AOR = 2.51, 95% CI = 1.41, 4.46), not living in the same house with their treatment support (AOR = 3.43, 95% CI: 1.20, 9.82) and undisclosed HIV status (AOR = 3.45, 95% CI: 1.16, 10.17), while taking ART dose twice a day appeared to be protected against poor adherence to ART. (AOR = 0.52, 95% CI: 0.30, 0.88).**Conclusion:** HIV/AIDS patient who has no treatment supporter, who has treatment supporter but not living in the same house with their supporter, who takes twice a day ART doses, who ART interfere with their daily activity, who did not disclose his/her HIV status, who drink alcohol and who abuses drugs were the major significant factors for poor adherence to ART.

33. Haji, M.S. (2017). Prevalence and characteristics of tobacco users with mental illness attending psychiatry outpatientclinic at MNH Dar es salaam Tanzania.Muhimbili university health and allied science.

Abstract

Introduction: Tobacco use has been a global health problem for many years leading to negative health impacts both on individuals and societies at large. Tobacco use has also been shown to have higher prevalence rates among certain subpopulations such as those with mental illness; thus causing a greater burden to this subpopulation. Tobacco control is an area of public health concern in order to prevention - communicable diseases. There is a significant rapid increase of tobacco use in the developing world by as much as 3.4% each year. Currently, there are more than 1.3 billion smokers world-wide, with around 82 percent residing in low and middle-income countries. Tobacco use habit is linked to a number of preventable diseases such as cancer, cardiovascular disease, respiratory illness and others. In Tanzania, there is scarcity of data and limited health care information related to tobacco use behavior especially among people with mental health problems. Moreover, the prevalence rates and characteristics of tobacco users among this subpopulation is not known in Tanzania.**Aim of study:** Todetermine the prevalence of tobacco use and characteristics of tobacco users among mentally ill patients attending psychiatry outpatient clinic at Muhimbili National Hospital (MNH) Dar – es- Salaam – Tanzania.**Methodology:** A cross-sectional descriptive study was conducted; with quantitative means of data collection from an estimated sample size of 397 participants who attended psychiatric clinic at MNH, Dar es Salaam.Sampling technique Systematic sampling technique was used; about 70 patients attended clinic every day, a list of patients was developed every day for 4 days and a number of 10 patients in a day were estimated. Using a rotary method of randomly number participant were selected, where by every 7th patient was invited to participate in the study. Data collection instruments: A semi-structured questionnaire was used to gather socio-demographic characteristics, prevalence of tobacco use and other information relevant to objectives. The Fagerstrom Test for Nicotine Dependence (FTND) was administered to those who reported tobacco use in order to quantify the level of nicotine dependence. Dataanalysis: Data from 397 participants was entered into a Statistical Package for Social Science Software (SPSS) version 20.0 and analyzed. The analysis was conducted to measure prevalence rates and other characteristics related to tobacco use. Logistic regression analysis at binary regression was performed for univariate and multivariate to explain the statistical significance of independent factors associated with tobacco use. P- Value of 0.05was tested. Ethical considerations: Procedure for data collection was performed after ethical clearance was granted from Muhimbili University of Health and Allied Sciences ethical review committee. All participants were informed of the purpose of the study as well as the benefits and risks of being a study participant. Consent from participants was requested and those who agreed to participate, confidentiality was maintained. **Results:** Of the 397 participants the number of males were 210(53.25%) and female was 187(46.5%). The proportion of age ranged from 18 to 75 with the mean age of 35.21years and (SD) of 10.1. Majority of the participants were unemployed 169(42.6%) or self-employed 166(41.8%). Over eighty percent 321(80.9%) reported to have primary or secondary education and nearly seventy percent 271(68.3%) reported being single status at the time of study. Life time tobacco users' prevalence rates were 224(56.4%) and current tobacco use was 135(34%). Tobacco use in the form of smoking was the main mode of taking nicotine by the majority 130(32.1%) of current tobacco users and over twenty percent 89 (22.4) had low level of nicotine dependence (n = 135). Twelve percent 46 (12.3%) attempted quit between 1 – 2 patterns and abstinence

duration were less than a day to ≤ 6 months by majority 82 (19.2%) current tobacco users. Haloperidol was the commonly anti-psychotic medication used by the majority. Current tobacco users were two times more likely to high dosage of haloperidol (AOR, 2.354 95%CI: 1.250 – 4.432, p = 0.008) compared to mental ill patient non-tobacco users. **Conclusion**: The findings of this study indicates that prevalence of current tobacco use was one third and more than half of the participants have used tobacco in their life time. Smoke tobacco is found to be the most common products used by many of current tobacco users. However, the nicotine dependence rate was low by almost two thirds of the most current tobacco users and one third were in moderate to high dependent levels at Muhimbili psychiatry unit. The high numbers of participants attempted quit tobacco and the abstinence duration was differed between patients. Many patients abstained between less than day to six-month duration. Moreover, current tobaccos use status predicting the use of high dosage of haloperidol medication. These results indicate the need for integration of smoking cessation program for psychiatric population. This study specifically highlights the need for making smoking cessation medications available in the national hospital to help formulary for those who are interested in quitting tobacco use.

34. Hamidu, I. (2017). Sexual risk behaviour among people on antiretroviral therapy in Kisarawe district: assessment of magnitude and associated factors.Muhimbili university health and allied science.

Abstract

Background: HIV transmission continues at high rates among ART patients and to uninfected persons. There is limited clear research evidence on the prevalence of high risk sexual behavior and associated factors in Tanzania. It is this gap in knowledge that this study intended to fill. **Objective:** The aim of this study was to assess the prevalence and factors associated with risky sexual behavior among people living with HIV on ART in Kisarawe District. **Methodology:** This study employed a cross sectional design. The study was conducted in Kisarawe District, among a random sample of People living with HIV on ART. Descriptive statistics were employed in analyzing the data collected. Chi square was to assess relationship between variables. The Logistic regression was use to assess the factors that were associated with dependent variables.**Results:** A total of 400 HIV positive patients on ART participated in the study, 47% of the patients were male and 53% of female, with the mean age of 37.2 (SD 8.3) years. Among 323 respondents who were sexually active, 162 (50.2%) engaged in high sexual behavior (did not use condom consistently in the past 6 months preceding the study). Out of these inconsistent condom users, 94 (58.1%) were females. **Conclusion:** High prevalence of high risk sexual behavior among HIV patients on ART is a matter of public health concern. This has implications for re-examining HIV prevention strategies.

35. Harun, S. (2017). Comprehension in doubt: an informed consent towards treatment among people living with HIV and aids at Mwananyamala hospital.Muhimbili university health and allied science.

Abstract

Background: Comprehension is one of the essential elements in truly informed consent. Maximizing comprehension is a major challenge for informed consent processes within an education difference and resource-limited settings. Comprehension with the informed consent process was found to be markedly lower among persons with lower educational levels. Tanzania is one among the underdeveloped countries, challenged by low education and poverty. So these make a doubt on Comprehension of informed consent process of treatment among HIV and AIDS patients.**Objective:** This study aimed at assessing level of comprehension of informed consent process for treatment among people living with HIV and AIDS.**Methodology:** This was a cross-sectional study carried out from March to June 2017 at Mwananyamala hospital. Random sampling technique was employed to select 75participants among people living with HIV and AIDS. Data was collected using a questionnaire. Data analysis was done using SPSS version 20+ to analyze dependent and independent variables which included descriptive statistics for frequency and tables. Fishers' exact test used for showing associations between study variables during statistical analysis. P-value of < 0.05 was considered statistically significant.**Results:** Out of the 75 patients 50.7% have good comprehension while 38.7% had poor comprehension of treatment preliminary information of informed consent. Of the 75 patients 96% comprehended the purpose(s) of their treatment. More than half (61.3%) of patients did not know the risk while 54.7% did not know voluntariness of their treatment. A significant association between level of education, sources of information and gender with patients' comprehension was observed ($p<0.05$). There was no association between patients' comprehension with age.**Conclusion:**The study clearly indicated that, level of comprehension of informed consent towards treatment preliminary information among People living with HIV and AIDS is poor, especially for female. Their lack of adequate sources of information towards treatment on informed consent was associated with lower level of formal education. All above factors affect greatly 51.2% of female comprehension of informed consent towards treatment. Therefore, more than half of female consent is not meaningful.

36. Hassani, F. (2017). Factors affecting care seeking behaviour among benign prostatic hyperplasia patients at Muhimbili national hospital. Muhimbili university health and allied science.

Abstract

Introduction: Benign prostatic hyperplasia (BPH) is a most common disease of the prostate gland that has significant burdens for patients and health-care systems worldwide. The disease has characteristics such as hormone-dependent growth and response to anti androgen therapy. Early treatment of prostatic hyperplasia is better as it avoids surgery and other complications such as bladder infection and urinary retention. **Objective:** This study aimed at exploring factors affecting care seeking behaviour among benign prostatic hyperplasia patients. **Methodology**: This was an exploratory study that used qualitative research

approach. A total of 15 in-depth interviews were conducted with BPH patients at Muhimbili National Hospital (MNH). The interviews aimed at exploring factors affecting care seeking for patients diagnosed with PBH. Findings **Results:** depict that BPH problem is not well known in the community and its one of the factors that contributed to delay in seeking BPH treatment even at a primary level facility. Another contributing factor for care seekers was social network, it was found to play a big role in facilitating care seeking. However the most common barriers for care seekers was BPH treatment cost, the cost was found to be a barrier because most of the patients acknowledge failure to afford the costs. Also negative beliefs and customs associated with the disease were found to hinder proper treatment seeking behaviour among BPH patients. Such beliefs include the perception that the disease was associated with old age condition, and transmission of disease was through oral or anal sex. **Conclusion and recommendation:**Therefore, it can be concluded that lack of information about BPH has an effects on care seeking behaviour. Application of health education and promotion has proven to be an effective tool on raising awareness of prevention and disease care seeking, such as malaria and TB programs. This is the problem of public health, intervention on raising awareness ismostly needed.

37. Hassam, I.(2017). Association of vitamin d and diarrhoea in children aged less than five years at Muhimbili national hospital, Dar es salaam: an unmatched case control study.Muhimbili university health and allied science.

Abstract

Background: Over the past decade's vitamin D has taken centre stage position due to its non-skeletal influences in the body. Particularly it's immune-modulatory properties which has been shown to influence the susceptibility and severity to infections. There is insufficient data globally that shows the association between Vitamin D levels and Diarrhoea in children, and none from Tanzania. **Objective:**To determine the association between vitamin D and diarrhoea in children aged less than five years at Muhimbili National Hospital Dar es Salaam, Tanzania.**Methodology:**Hospital based unmatched case-control study was carried out in the Diarrhoea ward, General paediatric wards and out-patient clinics (OPD) at Muhimbili National Hospital between September 2015 and January 2016. Cases were defined as patients admitted with diarrhoea, Sick controls were patients who did not have diarrhoea but were admitted for other illnesses and Healthy controls were children who had neither diarrhoea nor other co-morbid conditions recruited from the immunization and follow up clinic at MNH.Blood samples of all study participants were tested for serum vitamin D levels within 48 hours of admission or first contact at clinic, and was grouped as vitamin D sufficient, insufficient or deficient (VDD).Structured questionnaire was used to capture the demographic data and anthropometric measurements were recorded. Written informed consent was sought from every participants' guardian/parent. Data were recorded and statistical analysis was carried out in the SPSS version 20 software program. A p-value< 0.05 was considered to be statistically significant. **Results:**A total of 188 children under five were recruited in the study at the ratio of 1 case:3 controls, of these 47 were Cases, 94 were Sick controls and the remaining 47 were Healthy controls. The mean age was 17.01+14.8 months. The mean vitamin D level was 51.18+21.97 nmol/l. Majority of the participants 101 (53.7%) were

vitamin D deficient, 64 (34%) were insufficient and 23 (12.2%) had sufficient vitamin D levels. Study showed Sick controls were 3.2 times more likely to be VDD compared to cases [95% CI 0.14 – 0.69; p = 0.0015] and 5.03 times compared to Healthy controls [95% CI 2.22 – 11.55; p = 0.000]. The median vitamin D level for Sick controls was 44.67 nmol/L, IQR 19.92 nmol/L and for Healthy controls was 55.74 nmol/L, IQR 27.52 nmol/L (p < 0.001). Other factors such as vitamin D status of the child; sex of the child; maternal education, occupation and marital status as well as paternal education were not found to be significantly associated with diarrhoea. However, SAM was independently associated with diarrhoea (95% CI: 1.06 – 5.28, p 0.036).**Conclusions:**High prevalence of vitamin D deficiency was found in the children under five years studied. Vitamin D levels were not found to be specifically associated with diarrhoea in children under five years of age.

38. Helela,E.N. (2017). Childhood inter-parental violence exposure and dating violence victimization among 20-24 years old undergraduates in Dar es salaam.Muhimbili university health and allied science.

Abstract

Introduction: Several studies worldwide show a relationship between witnessing inter-parental violence (IntPV) and childhood abuse exposure and low self-esteem, depression, alcohol abuse, acceptance of non-equitable gender norms and male entitlement as risk factors of dating violence victimization (DVV). There is lack of documented studies on the prevalence and associated risk factors of DVV among undergraduates in Tanzanian universities. **Objective:** The aim of this study is to determine the prevalence of DVV and childhood IntPV witnessing during childhood in a University undergraduate populationaged 20-24 years old at MUHAS in Dar-es-Salaam, Tanzania; and determine the associations between DVV and IntPV and other risk factor including alcohol and substance use, depression, self-esteem, accepting non-equitable gender norms and male entitlement.

Study Design: A quantitative cross-sectional analytic study was used to respond to the study objectives.**Methodology:** Proportionate random sampling was used to select participants from undergraduate programmesto be representative of the target population, giving each in the population an equal chance to be selected. Structured questionnaires that wereself-administered were used to collect sociodemographic measures, dating violence (DV) occurrence and selected risk factors associated with DV.**Results:** Half of the population studied experienced childhood violence, reported by men (54.9%; n=112) than women (33.7%; n=62; p<0.001). About a quarter of men and women be (24.2%; n=94) reported being exposed in childhood to emotional inter-parental violence; with rates in men being 27.5% (n=56) and women 20.7% (n=38; p=0.13). Overall, any form of recent DVV (in past 12 months) was reported by 73.5%, rates in women and men being 76.1% (n=140) and 71.1% (n=145; p=0.30) respectively. Multivariate analyses using a full effects model showed not knowing the age of a current intimate partner compared to the partner being older than 25 years (OR 0.21; 95% CI 0.08, 0.52; p=0.001) and moderate compared to high self esteem (OR 0.83; 95% CI 0.46, 1.49; p=0.07) were independently associated with DVV reducing this risk by 79% and 17% respectively; this effect being significant for the former and

marginally significant for the latter. Furthermore, the absence of any childhood abuse compared to its reporting (OR 0.73; 95% CI 0.38, 0.86; p=0.007) reduced by 27% the likelihood of reporting recent DVV. However, interaction effects of sex were detected and findings of sex desegregated multivariate analysis showed; not knowing the age of a current sexual partner compared to the partner being 25 years or older remained a significant risk factor, reducing the likelihood of reporting DVV by 78% in women (OR 0.22; 95% CI 0.07, 0.75; p=0.02) and 79% (OR 0.11; 95% CI 0.02, 0.75; p=0.02) in men; moderate compared to higher self esteem increased by almost 2.5 times reporting DVV in men (OR 2.43; 95% CI 0.99,5.93 p=0.05) but not women (OR 1.38; CI 0.50, 3.86 p=0.54); and holding moderate versus strong gender inequitable norms amongst men was protective, reducing the risk of reporting DVV by 59% in men but not women. With none of the more distal risk factors assessed having associations with recent DVV in either men or women. **Conclusions and Recommendations:** This study found high prevalence of DVV in undergraduate students as well as childhood violence exposures. In examining associations between witnessing inter-parental violence and current DVV exposures outcomes, findings suggest support to the theory of male entitlement in intimate relationship dynamics as a risk factor for DVV in men. Further they suggest increased familiarity and emotional commitment to one's partner may be associated with DVV using the proxy measure of knowledge or not of the age of one's current sexual partner. While no associations were found between witnessing inter-parental violence and DVV, associations between DVV and lower compared to higher levels of self esteem may suggest underlying difficulties with emotional regulation that may be caused by childhood violence exposures. In concluding this study provides preliminary findings which suggest need for better designed studies such as as longitudinal cohort studies, to assess causal relationships between childhood witnessing IntPV and DVV during young adulthood in University undergraduates. Such studies may also better identify protective fators in this population sub-group providing important information to guide interventions in the Tanzanian context.

39. Iramu,R.S. (2017). Bone scintigraphy metastatic pattern in patient with prostate cancer at ocean road cancer institute.Muhimbili university health and allied science.

Abstract

Background: Prostate cancer is the second most common malignancy in the world next to lung cancer and it is the leading cause of morbidity and mortality among men. The most common metastatic site in prostate cancer is the bone. Bone scan has been used frequently to assess metastatic bone disease in prostate cancer patients, the common site of distant metastases being the skeletal system with the pelvis and spine most frequently affected. This study is aiming at finding the pattern of bone metastasis among prostate cancer patients attending ORCI, associated factors for metastases to occur and the frequency of bone metastases among all recruited patients.**Broad objective:**To determine bone scintigraphy pattern in patients with prostate cancer attending Ocean Road Cancer Institute from June 2014 to June 2016.**Methodology:**This was a cross section retrospective hospital based descriptive study that was conducted at the nuclear medicine department of the Ocean Road Cancer Institute, Dar es Salaam-Tanzania. A total of 139 patients with prostate cancer who

were seen from June 2014 to June 2016 at the department for bone scan were included in the study. Whole body scanning was performed 3 h after injection of 700MBq 99mTc methyldiphosphonate. A structured data collection tool was used to record the demographic information, laboratory and histological information from the patient's files. Data analysis was done using SPSS version 20. Cross tabulations and Chi square was used for assessing statistical association and comparing proportions respectively. A p-value of less than 0.005 was considered statistically significant.**Results:**The research included 139 prostate cancer patients who were referred to the nuclear medicine department for bone scintigraphic study. Bone metastases were found in 77 patients (55.4%) The prevalence was higher in the age group between 60 and 79(56.3%) however there was no statistical significance between age and occurrence of bone metastasis [p-0.933]Patient who had PSA level of more than 20 were noted to have higher skeletal metastasis as compared to those with PSA level of 10-20 and those of less than 10ng/ml. [p-0.0001]Gleason score level of more than seven was associated with higher skeletal metastasis as compared to those patients who had Gleason score of 7. The difference was statistically significant [p-0.0001] Spine was the most common site for bone metastasis constituting 72 patients (51.8%) of all the patients followed by ribs metastasis (31.7%), lower limb metastasis (20.1%) and upper limb was the least site for skeletal metastasis (18.7%). Also it was shown that of the spine metastasis, lumbar spine was more frequent affected (48.2%) followed by thoracic and cervical spine (41.0% and 27.3% respectively). The sacrum was the least affected site in the all spine.**Conclusion:**The prevalence of skeletal metastasis in patients with Ca Prostate attending Ocean Road Cancer Institute was high (55.4%) There was no statistical significant difference between the age group). The prevalence was higher in patients with PSA level more than 20 and those with Gleason score of more than 7. Spine was the commonest site for metastasis and of the spine metastasis lumbar spine metastasis was most frequent site.**Recommendation:**

Bone scintigraphy should be done as baseline in patients with prostate cancer particularly those with PSA level more than 20ng/ml and those with Gleason score of more than 7

Further multicentre study with a larger sample size is recommended.

40. Isengwa, O.F. (2017). The clinical presentation, magnitude and risk factors for development of inhibitors of factor viii and ix among patients with hemophilia at Muhimbili national hospital.Muhimbili university health and allied science.

Background: Inhibitor development continues to be a severe complication worldwide in hemophilia patients on factor replacement therapy. Given the difficulties associated with the treatment of inhibitors in both the developed and the developing world, prediction and prevention of inhibitors following exposure to factor VIII or IX in hemophilia patients has become a management priority.**Objective:** To determine the magnitude, clinical presentation and risk factors of factor VIII and IX inhibitors in hemophiliac patients at Muhimbili National Hospital (MNH) **Methodology:** A descriptive cross sectional study, involved

hemophilia cohort attending MNH. It involved patients in hemophilia registry in MNH which were comprised of 77 patients. Among 77 patients in the registry, only 60 patients had complete details. Forty-seven hemophilia A and 13 hemophilia B. Patients were recruited between August 2016 and February 2017. Activated Partial Thromboplastin Time (APTT) was performed to pooled patient's plasma with normal activated prothrombin time (23-30 seconds) and hemophiliac patient's plasma. Equal plasmas volume mixing of normal and hemophiliac patient was also done and APTT performed by using automated coagulation analyzer to determine presence of immediate inhibitors. After 2hours at 37 degrees' centigrade incubation of normal, hemophiliac patient plasma and a mixture of both, APTT for time dependent factors inhibitors (FVIII) was obtained. The collected data was analyzed using SPSS software version 20.0.**Results:** Sixty (60) patients with hemophilia were recruited, 78.3% with hemophilia A and 21.7% hemophilia B. The mean age at diagnosis was 6.6 ± 5.9 years while the mean age at interview being 12.9 ± 7.2 years. Majority of patients were at primary and secondary school by 36.7% and 31.7% respectively. Although hemophilia patients are widely distributed in all regions of Tanzania, 51.7% of patients recruited in the study were residents of Dar es Salaam.The prevalence of inhibitors was found to be 6.7% in all hemophiliac patients recruited in the study. Among hemophilia A patient, the prevalence of inhibitors was found to be 8.5%. The prevalence of inhibitors was found to be 15.4% in severe hemophilia A. Hemarthrosis was the frequent clinical feature 45.0%, at the time of diagnosis and 35.0% at the time of interview followed by hematoma 10.0% and 16.7% at diagnosis and interview respectively. Fifty percent (50%) of hemophilia A patient with inhibitors had a family history of uncontrolled bleeding despite the respective dose of factor eight (FVIII) concentrate which was suggestive of genetic predisposition. 3.6% had <50 doses of factor concentrate develop inhibitors while 40% had been exposed to factor concentrate>50doses developed inhibitors. **Conclusion:** The prevalence of hemophilia inhibitors was high in severe hemophilia A attending MNH. The most common symptoms were hemarthrosis followed by hematoma. Majority of hemophilia study population had been exposed to factor concentrates less than 50 doses during the course of illness.

41. James, R Y., Hendry, R. S., Juma, A. M., Ernest, N., Ethan, H., Charity, G. M., Michael, S. R., Stacy, L.R. (2018). Sub dissociative intranasal ketamine plus standard pain therapy versus standard pain therapy in the treatment of paediatric sickle cell disease vasoocclusivecrises in resource-limited settings: study protocol for randomized controlled trial.

Abstract

Introduction: Pediatric sickle cell disease, highly prevalent in sub-Saharan Africa, carries great morbidity and mortality risk. Limited resources and monitoring make management of acute vaso-occlusive crises challenging. This study aims to evaluate the efficacy and safety ofsubdissociative intranasal ketamine as a cheap, readily available and easily administered adjunct to standard pain therapy. We hypothesise that sub dissociative, intranasal ketamine may significantly augment current approaches to pain management in resource-limited settings in a safe and cost-effective manner. **Methods and analysis**: This is a multicentred, randomised, double-blind, placebo-controlled trial enrolling children 4–16 years of age with

sickle cell disease andpainful vaso-occlusive pain crises. Study sites include two sub-Saharan teaching and referral hospitals with acute intake areas. All patients receive standard analgesic therapy during evaluation. Patients randomised to the treatment arm receive 1 mg/kg intranasal ketamine at onset of therapy, while placebo arm participants receive volume-matched intranasal normal saline. All participants and clinical staff are blinded to the treatment allocation. Data will be analysed on an intention-to-treat basis. Primary endpoints are changes in self-report pain scales (Faces Pain Scale-Revised) at 30, 60 and 120 minutes and rates of adverse events. Secondary endpoints include hospital length of stay, total analgesia use and quality of life assessment 2–3 weeks post intervention. **Ethics and dissemination:** The research methods for this study have been approved by the Cameroon Baptist Convention Health Board Institutional Review Board(IRB2015-07), the Tanzanian National Institute for Medical Research (NIMR/HQ/R.8a/Vol. IX/2299), Muhimbili National Hospital IRB (MNH/IRB/I/2015/14) and the Tanzanian Food and Drugs Authority (TFDA0015/CTR/0015/9). Data reports will be provided to the Data and Safety Monitoring Boar(DSMB) periodically throughout the study as well as a reports of adverse events. All protocol amendments will also be reviewed by the DSMB. Study results, regardless of direction or amplitude, will be submitted for publication irrelevant peer-reviewed journals.

42. Jao, O.N. (2017). The pattern and causes of corneal opacities in patients attending eye clinics at Muhimbili national hospital. Muhimbili university health and allied science.

Abstract

Introduction: Corneal opacity refers to decreased or even loss of the corneal transparency due to scarring. It is not a disease rather a sequel of a wide variety of hereditary, infectious, traumatic and inflammatory eye diseases that cause scarring of the cornea. Significant scarring ultimately leads to functional visual loss. The worldwide prevalence of corneal opacities is about 5.1% being the fourth leading cause of blindness worldwide after cataract, glaucoma, and age related macula degeneration. It affects young potential individuals in the society compare to other major causes of blindness.**Objective:** To determine the pattern and causes of corneal opacities in patients attending eye clinics at Muhimbili National Hospital (MNH). **Methodology:** This was a hospital based descriptive cross section study which was conducted at the MNH pediatric and adult eye clinics from July 2016 to January 2017. Consecutive sampling was used to obtain the 95 participants. Data was collected by using a semi structured questionnaire for a relevant clinical history and ophthalmic examinations. Analysis was done using SPSS version 20.0. Ethical clearance was sought from Ethics and Research Committee of MUHAS.**Results:** Among the 1946 patients who attended the eye clinics during the study period, 95 (4.9%) had corneal opacities. The age range was 9 months to 80 years with the mean age of 20.1 years. Amongst the patients with corneal opacities, 64.2% were males and 58.9% aged <15years. Thirteen (13.7%) patients had bilateral and eighty-two (86.3%) patients had unilateral corneal opacities. The common causes of corneal opacities were trauma (51.6%) and infectious keratitis (24.2%) for both adults and children. The proportion of children (67%) with corneal opacities due to trauma was significantly higher than adults (27%) ($p < 0.0001$). The proportion of adults (43.2%) with infectious

keratitis was significantly high than children (12.1%) ($p < 0.001$). The common causes for unilateral corneal opacities were trauma (58.5%) and infectious keratitis (25.6%) while for bilateral were pterygium (23.1%) and congenital abnormalities (23.1%). Majority of the patients had normal vision (88.4%) and the rest had either visual impairment or blindness. Most patients with unilateral corneal opacities (95.1%) had normal vision and none was blind. More than a half of the bilateral cases (53.9%) were blind (23.1%) or visually impaired (30.8%). Trauma (76%) was the common cause of monocular blindness due to corneal opacities. Of all the eyes with corneal opacities, 47 (43.5%) had either visual impairment (11.1%) or blindness (32.4%).**Conclusion:** The proportion of corneal opacities is high among patients attending eye clinics at MNH with younger population and males being affected more. Trauma and infectious keratitis were the main causes of corneal opacities as well as monocular visual impairment and blindness due to corneal opacities. **Recommendations:** Efforts towards prevention of avoidable causes of corneal opacities should be emphasized as well as improving facilities like corneal transplant for better management of patients with corneal opacities.

43. John,W. (2017). Noise exposure and reported noise induced hearing loss among gas fired electric plants workers in Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Gas fired electric plants are equipped with heavy machines which produce hazards including noise pollution which is a threat in human health. Noise may damage hearing when in extreme levels that is above 85dB (A).**Objective:** The purpose of this study was to assess noise exposure level and reported prevalence of noise induced hearing loss among workers in gas fired electric plants. **Material andMethods:** This cross sectional study was conducted in three gas fired electric plants in Dar es Salaam (Plant A, Plant B and Plant C). Noise logging dosimeter was used to measure personal noise exposure level. Questionnaire was used to collect information on managerial factors, individual factors, socio demographic factors and history of the participants. One minute (short screening) validated questionnaire was used to obtain noise exposure score so to identify individuals at high risk of NIHL. Chi-square test, ANOVA and Regression analyses were done using SPSS version 20. **Results:** One hundred and six participants were involved in the study where 101(95.3%) were males and 5(4.7%) were females. The noise exposure level among gas fired electric plant workers was above 85dB(A), n=37.The equivalent sound level (LAeq) measured over 8hours 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±5.1dB(A)) compared to plant B (96.4±3.7dB (A)) and plant A (78.7±11.9dB(A)).Participants in operation and maintenance had higher equivalent sound level (LAeq) of 101.98±3.6dB (A) compared to maintenance 98.5±12.4dB (A) or operation 97.7±8.8dB (A).Using short screening validated noise exposure questionnaire, significant correlation was observed between noise exposure score and noise exposure level($r=0.409, p=0.012$).Proportion of participants with reported hearing loss was 57(53.8%) where 44(41.5%) participant reported difficulty hearing people during conversations. Hearing protective devices were reported to be used by majority 101

(95.3%).**Conclusion:** Workers in gas fired plants are exposed to high noise levels that could damage their hearing.

44. John,C.A.(2017). Mri findings of soft tissue injury tothe knee joints in correlation to clinical and arthroscopic findings in patients attending Muhimbili orthopaedic institute, Dar es salaam, Tanzania.Muhimbili university health and allied science

Abstract

Background: Trauma to the knee joint is a significant cause of morbidity in the young, active individuals, athletes and elderly. An accurate diagnosis regarding the type and extent of injuries is essential for early operative intervention as well as non-operative management. Xray can be used initially to rule out fractures and degenerative changes as its excellent in bony anatomy but a non displaced fracture may prove hard to spot. As Xays can also provide hints on ligamentous and tendinous injury. The most widely used diagnostic modalities to assess soft tissue injury of the knee joint are MRI and Arthroscopy. Magnetic resonance imaging (MRI) is accepted as the best imaging modality for non-invasive evaluation of soft tissue injuries of the knees and spotting early stress fractures. Arthroscopy, all though accurate and gold standard, is invasive and can cause complications; this study was undertaken to study the types of soft tissue injuries seen in traumatic knee joint correlate it to MRI imaging.**Broad Objective:**To determine the MRI findings of soft tissue injury to the knee joints in correlation to clinical and Arthroscopic findings in patients attending Muhimbili Orthopaedic Institute.**Methodology:**The study was a hospital based ProspectiveCorrelationalstudy that included all the patients who attended Muhimbili Orthopaedic Institute with the working diagnosis of Soft tissue injury to the Knee joint who did MRI at Muhimbili National Hospital.Data regarding the research were collected from the patient who underwent MRI scan at various diagnostic centres within the city. MRI images were obtained from Patient CDs and MRI official reports were reviewed.Clinical data was extracted using a questionnaire and a checklist from patient's medical records. Surgical data was collected from Post-operative and discharge summary notes.The data was entered in the statistical package for social science (SPSS) version 23 and analysed.The Study aimed at: Studying the spectrum of MRI findings of soft tissue injury to knee joints and correlation of MRI findings with clinical and arthroscopy findings.**Results:**This study included a total of 75 patients in which 29(38.9%) were males and 45(61.3%) were females. The mean age was 44.41 years old with range of (7-68) years old. The most affected age group was 45-54 years old 28(37.3%) followed with 24-34 years old 17(22.7%). showed that female patients in their 40th and 50 decades was more susceptible to non-sports (Accidental Fall, hit by an object with force, Motor Traffic Accident) related knee injury 51(68%) was affecting this age group more than other. In occupational group students were significantly more injured through sports 6(35.3%) followed by those non-sports injuries (Accidental Fall, hit by an object with force, Motor Traffic Accident) many are seen in employed 20(39.2%) who take sports as recreational activity followed by people with no history of trauma 5(71.4%). Knee injury for right legs was seen in 27(36.0%) while left knee was 26(34.7%) in 53 patients.Patients came with the main clinical feature of moderate pain in patient with non-sport nature of injury 29(78.4%) followed by mild swelling 39(78%) and instability 8(80%).Clinical tests such as

Mc Murrays test has a high diagnostic value with sensitivity and specificity in detecting meniscal injury in the patients,thisstudy revealed with Sensitivity - 72.9% and Specificity - 60.0%.MRI interpretation for 75 patients 37(49.3%) showed ACL injury,39(52.0%) showed medial meniscus tear, 4 (5.3%) showed PCL injury, 20(26.7%) showed collateral ligament tears. Medial meniscus tears are twice more common affected than lateral 39(52.0%) and 25(33.3%) respectively.Mmedial meniscus injury grade 2 was most common as 31(41.3%) and the posterior horn was mostly injured 35(46.7%) with a Sensitivity 73.6%. In lateral meniscus grades 2 injury was most common as 39(52.0%) and posterior horn is mostly injured by 39(52%) with the horizontal type of meniscal tear was higher 23(30.7.7%) with a sensitivity of 86.5% Correlation between MRI findings, arthroscopic findings and Clinicaltests in identifying the Sensitivity, Specificity and sensitivity of a clinical exam in Indicating tear provides a clue of diagnostic value. Medial meniscus 93.3%,88.9% ,72.9%, Lateral meniscus 93.8%,80%,96% ACL is 89.7%,86.1%, 71.4% PCL is 33.3%,91.4%,66.4% respectively.**Conclusion:**This study revealed that clinical tests hold a high Diagnostic value in the suspected knee injury patients. As MRI is more sensitive in detection of grade I and II meniscal tears than arthroscopy. In our settings the commonest lesion detected in this study was Partial ACL tears and Medial Meniscus tears, grade 2 posterior horn tears tear with horizontal type tears by MRI.**Recommendations:**

1. The studywill help to strengthen medical personnel's knowledge and skills to clinically diagnose knee injury using MRI to a greater proportion to avoid miss diagnosis.

2. Improved MRI study protocols to be carried out for suspected injured kneejoint.

3. Accurate MRI reporting will help in appropriate patient management.

4. Another study should be done using a larger sample size to look for wider arrays derangements.

5. Our Government should ensure MRI services is available all zonal referral hospitals and the tertiary specialized hospitals within the country.

45. Kabanangi, F.J.K.(2017). Mbacterial causes and antibiotic susceptibility patterns of aerobic isolates from burn wound infections in Dar es salaam, Tanzania.Muhimbili university health and alliead science.

Abstract

Background: Burn wound is one of the most common, devastating and painful trauma. Infection remains the most common cause of morbidity and mortality in burn patients. Information on local pathogens and sensitivity to antimicrobial agents is crucial for successful treatment of these infections.**Aim:** To determine bacterial causes of BWI and antibiotic susceptibility patterns of aerobic isolates from burn patients at tertiary and regional hospitals in Dar es Salaam, Tanzania.**Methods:** This was a cross-sectional study that was conducted between May and July 2017. Burn wound swabs were collected from patients with signs of wound infection. Swabs were cultured on blood agar and MacConkey agar and incubated aerobically at 37°C for 18–24 hours. In addition, a blood sample was collected

from patients with a history of fever and/or temperature of ≥ 38º C. Bacterial identification was done using conventional method and API20E. Antimicrobial susceptibility was determined by Kirby-Bauer disk diffusion method.**Results:** A total of the 70 patients with clinically diagnosed burn wound infections had their wound cultured. Sixty-six (94%) had positive bacterial growth after overnight incubation. A total of 131 pathogenic bacteria were isolated, with gram negative organisms 91(69.5%) being more prevalent. The most frequently isolated bacteria were Pseudomonas aeruginosa (26%), followed by Acinetobacter spp (22%) and Coagulase negative staphylococci (CoNS) (18%), Klebsiella spp (11%) and Staphylococcus aureus (9.9%). CoNS were most common in BSI. Proportion of BSI among patients with BWI was 37.5%. Chloramphenicol was found to be most effective drugs towards gram positive bacteria and Klebsiella, while imipenem was effective against Acinetobacter spp. Up to 73% Enterobacteriaceae were extended spectrum beta-lactamase producers, while 61% of Staphylococci spp were resistant to methicillin. Proportion of MDR among all isolates was 73.5%. Two (2/70, 2.9%) paediatric patients died during the period of the study.**Conclusions and recommendations:** P. aeruginosa was the most common isolate in BWI while CoNS were common in BSI. Most of the organisms isolated were resistant to commonly prescribed antibiotics. High proportion of infections were due to ESBL producers and methicillin resistance staphylococci spp. Routine culture and antimicrobial susceptibility testing should be performed before the start of therapy; including MRSA and ESBL screening

46. Kabano, M. (2017). Serum levels of folate and vitamin b12 in patients with bilateral optic neuropathy attending the eye clinic at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Optic neuropathy is a unilateral or bilateral disease of the optic nerve characterized by damage of the optic nerve (cells and sheath) anywhere between the ganglion cell layer and lateral geniculate body. It has different etiologies like ischemia, inflammation, pressure effect, infiltrative, traumatic, nutritional, toxic and hereditary causes. Patients with optic neuropathy usually have visual loss and defective color perception which can affect quality of life. In Tanzania, bilateral optic neuropathy has been reported to be epidemic and the proportion is estimated to be 0.3 to 2.4%.**Objective:**The aim: of this study was to determine the serum levels of folate and vitamin B12 in patients with bilateral optic neuropathy attending the eye clinic at Muhimbili National Hospital.**Methodology:**A cross sectional study was conducted at Muhimbili National Hospital eye clinic in Dar es Salaam from July 2016 to February 2017, where 93 patients with bilateral optic neuropathy were recruited by consecutive sampling method. Patients were examined in the eye clinic and best corrected visual acuity was taken, intraocular pressure was taken and color vision test was done. The anterior segment was examined using a slit lamp biomicroscope. Fundoscopy was examined using slit lamp biomicroscope with 78D and 90 D lenses after full dilation of the pupil. Blood was taken for measurement of folate and vitamin B12serum levels. Data were analyzed using computer software SPSS version 20 and results summarized using frequency tables, and pie charts.**Results:**Ninety-three patients with bilateral optic neuropathy were

recruited. There were slightly more males (51.6%) than females and the mean age was 29±3.4years. Low serum levels of folate were found in 60.6% of the patients, while 4.3% of the patients were found to have low serum levels of vitamin B12. About 48.3% of patients had moderate visual impairment of which 66.6% of these patients had low levels of serum folate. The commonest ocular feature was temporal pallor (92.5%) followed by color vision defect (83.9%). **Conclusion and Recommendations:**More than a half of the patients with optic neuropathy had low levels of folate while few had low levels of vitamin B12 and moderate visual impairment was a common feature found in patients studied. Measurement of serum folate and vitamin B12 levels before initiating treatment for optic neuropathy in order to ascertain the cause of optic neuropathy is proposing.

47. Kaduma,A.M.(2017). Magnitude and predictors of antiretroviral (art) treatment failure among women on option b plus attending pmtct clinics in Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: In 2010, the world Health organization (WHO) published prevention of mother to child transmission (PMTCT) guideline, to initiate ART to all HIV +ve pregnant/ breastfeeding women regardless of their CD 4 or WHO clinical Stages. Tanzania adopted this new guideline in September 2013 called PMTCT option B plus (PMTCT Option B+). The implementation of PMTCT B+ option has already begun to show impressive results and many pregnant and breastfeeding women have been put on ART. However, the challenges of, adherence to ART, retention and ART treatment failure are yet to be clearly understood.**Objective:** To assess the magnitude and predictors of ART treatment failure among women on option B+ attending PMTC clinics in Dar es Salaam region. Material and**Methods:** A cross sectional study conducted among 410 HIV +ve women who access PMTCT option B + services in Dar es Salaam. A two stage cluster random sampling method was used to select 410 participants of this study and 15 health facilities; First stage was to select Health facilities for study and second study for selection of participants of study. Ethical approval pursued from MUHAS ethical committee and informed consent from study participants. Structured questionnaire were used for data collection. And summarization of data was done through descriptive statistics; Chi square was used to test association between independent and dependent factors and multiple logistic regressions were used to determine independent predictor of ART treatment failure after controlling for potential confounding variables. The study was conducted between April and May 2017. ART treatment failure were considered in this study when women on ART for more 6monthsand have viral load of more than 1000copies after repeat viral test and CD4 cells drop of more than 50% from high peak value or baseline. **Results:** The overall ART treatment failure for women on PMTCT option B+ was at 26.6%; those who had immunological failure were about at 8%, virological failure was at 11.5% and those with both immunological and virological failures were at 6.8%. Findings showed that women who had not disclosed their HIV status to partner or relatives had higher odds of developed treatment failure compared to those disclosed their HIV status, women with poor adherence to ART medication has higher odds of develop failure compared to those with good adherence to ART medication and women who

experienced ART related side effects had higher odds of developing treatment failure compared to those with no history of ART related side effects. **Conclusion:**This study finding show that overall ART treatment failure was 26.6% and were strongly associated with poor adherence, Lack of disclosure HIV status and ART related side effects. It is recommended that health workers be trained. on identifying patients with ART failure for timely intervention which may include both targeted adherence interventions and better preservation of efficacy of second-line regimens.

48. Kain, U.J.(2017).A comparative study of intrathecal fentanyl as adjuvant to hyperbaric bupivacaine for post cesarean section analgesia at Muhimbili national hospial.Muhimbili university health and allied science.

Abstract

Introduction: The choice of Anaesthetic technique to be used for cesarean section depends on the indication for the surgery, degree of urgency, patient's choice and the clinical judgment of anaesthesiologist. Spinal Anaesthesia is the best anaesthetic technique for lower segment cesarean section as it is simple to perform with rapid onset, complete muscle relaxation, lower incidence of failed block, less drug usage, minimal neonatal depression, reduced incidence of PONV as well as decreased incidence of aspiration pneumonitis.1Spinal anaesthesia is a form of regional anaesthesia, it involves inserting the needle and injecting local anaesthetic agent though the intervertebral space at the level of lumbar 3-4 or at 5-6 into the subarachnoid space to minimize the chances of causing injury to the spinal cord. It has a number of complications which are mainly a result of physiological changes of the block as well as the technique used. Complications resulting from subarachnoid block may be immediate which includes, intraoperative hypotension and bradycardia which are secondary to sympathetic blockage, nausea and vomiting, high or total spinal as well as pruritus if opioids are used as adjuvants. Delayed complications includes, headache, urinary retention, hematoma, infections, meningitis, epidural abscess, neurological damage to the spinal cord secondary to direct trauma, impaired ventilation if opioids are coadministered with local anaesthetic agents or during high block. Since the discovery of opiate receptors in the brain and spinal cord the use of intrathecal opioids has become a common practice as effective method of analgesia. Hydrophilic opioids particularly gives good selective spinal analgesia because it has small volume of distribution and slower clearance from spinal cord however slow spinal cord penetration and prolonged duration in the cerebral spinal fluid results in slow onset, prolonged duration of action and delayed respiratory depression from rostral spread in the cerebral spinal fluid.Fentanyl is short acting lipophylic opioid which acts on μ receptors, it has rapid onset of action compared to Morphine following intrathecal administration. It inhibits ascending pain pathways hence increasing pain threshold to produce analgesia. Analgesia has been reported to occur within 5-10 minutes following its administration. It is highly protein bound 80-85% and elimination half life of 2-4 hours. It is metabolized in the liver by enzyme CYP3A4 and its excretion is mainly through urine(75%) also in feces(9%).It does not migrate to the 4th ventricle in sufficient concentration following intrathecal administration as the result augmenting the quality of subarachnoid block without increasing the risk of delayed respiratory depression so this makes it safe alternative than

morphine.2 It is one of the most widely used agent and commonly added to intrathecal bupivacaine in cesarean delivery by many anaesthesiologists, as it improves quality of anaesthesia without producing significant side effects and improves post-operative analgesia and hemodynamic stability. Addition of Opioids to local anaesthetics for spinal anaesthesia was first introduced into clinical practice in 1979 with intrathecal morphine as forerunner.Thereafter opioids have gained popularity as it was found to improve the quality of intraoperative analgesia and increasing duration of early postoperative analgesia.They are commonly added to local anaesthetics for potentiating, reducing their doses and thereby reducing their complications and side effects and offer hemodynamic stability. They also prolong the duration of post-operative analgesia. 2, 3For decades lignocaine has been the local anaesthetic of choice for Spinal anaesthesia, unfortunately recent reports of lignocaine neurotoxicity (Caudal equina syndrome) have cast doubts on its use for spinal anaesthesia. Some studies reported incidence of adverse reactions following the use of lignocaine for spinal anaesthesia such as dysaesthesia in buttocks, thigh or lumbar region.Bupivacaine was introduced by Ecknstam in 1957 and used clinically by Telivno in 1963, hyperbaric bupivacaine is now being used with opioids for almost all surgical cases. It belongs to amide group containing local anaesthetics with Pka of 8.1 and 95% protein binding. The primary mechanism of action of local anesthetics is blockade of voltage-gated sodium channels.Heavy bupivacaine is a common drug used for spinal anaesthesia due to its characteristic of high potency and the dose of 12-15mg is said to be sufficient. During cesarean section traction of peritoneum and handling of intraperitoneal organs occurs resulting into intraoperative visceral pain, this can be overcome by increasing the dose of hyperbaric bupivacaine but increasing the dose of bupivacaine increase the risk of high block.3

49. Kapinga, D.R. (2017) Seroprevalence and factors associated with hepatitis b virus infection in pregnant women attending antenatal clinic in karagwe district council, Kagera region. Muhimbili university health and allied science.

Abstract

Background: Hepatitis B virus (HBV) infection is a common serious liver disease affecting millions of people throughout the world. HBV infection in pregnant women can result in maternal complications and poor neonatal or infant outcomes. HBV infection in infancy increases the risk of developing liver cirrhosis and hepatocellular carcinoma. Broad. **Objective:**To determine the seroprevalence of and factors associated with HBV infection in pregnant women attending antenatal clinic in Karagwe District Council in Kagera region. Materials and **Methods:** Clinic-based cross-sectional study was conducted on 600 pregnant women attending first visits in four ANC clinics in Karagwe District Council, Kagera Region, Tanzania during March–April, 2017.Blood samples were tested for hepatitis B surface antigen (HBsAg) using rapid test.**Results:** The overall seroprevalence of HBV infection was 5.2% (95% CI: 3.6 – 7.3). In Bivariate analysis, history of multiple sexual partners ($p<0.01$), blood transfusion ($p<0.01$), alcohol consumption ($p<0.01$) and scarification ($p<0.02$) were associated with HBsAg positivity. In multivariate logistic regression analysis, history of multiple sexual partners ($p<0.01$) and drinking of alcohol ($p=0.03$) were significant predictors of HBV infection in pregnant women.**Conclusion and**

Recommendations: Seroprevalence of HBV infection in Karagwe District Council was intermediate. History of multiple sexual partners and drinking of alcohol predicted significantly HBV infection in pregnant women. Screening of pregnant women for HBsAg should be part of ANC visits followed by at birth-hepatitis B vaccination of new born babies of pregnant mothers who tested positive for HBsAg so as to reduce and prevent the spread of HBV infection.

50. Karlo, M. (2017). The prevalence of disrespect and abuse to women giving birth in mbeya city health facilities from October to December 2016.Muhimbili university health and allied science.

Abstract

Background: Disrespect and Abuse (D&A) in delivering women is a global problem in many low and high income countries though not well documented. Apart from Cost and Distance, recently women's experience of disrespectful care and abuse related directly to provider's actions have been found to affect their place of delivery, and hence many women continue to deliver at home, putting their health at even more risk. The high rates of D&A, along with its contributions to continued home deliveries with no skilled attendance push efforts toward finding possible interventions to decrease or eliminate it. **Objectives:** The study aimed at finding the prevalence of disrespect and abuse to women during childbirth in Mbeya City Health Facilities.**Methods:** A hospital-based cross sectional study was conducted in a period of three months from October 2016 to December 2016 involving 270 women who delivered in six Mbeya City Health Facilities. The women were observed during admission (247), during delivery (183), 23 women were not observed during admission and delivery and 64women were delivered by caesarean section (the study didn't aim at assessing disrespect and abuse during caesarean delivery). A postnatal observation and an Exit interview was administered to all 270 delivered women. Data analysis was done using IBM SPSS version 20. Frequency and percentages was used to analyse the prevalence and reasons for disrespect and abuse. Categorical variables were compared among women with or without outcome of interest (D&A) and chi square test and p value <0.05 was taken as statistically significant to show association between social demographic and obstetrics characteristics and the experience of disrespect and abuse to the women.**Results:**Total of 270 women was analysed. The prevalence of D&A during childbirth in Mbeya City health facilities is high 33.3%. Non confidential, non dignified-verbal and neglect were marked in the study.

Majority experience it while delivering at the Hospital, p value 0.004. The history of prior physical abuse had association with the report of disrespect and abuse at p value 0.031 and women who delivered by caesarean section reported more disrespect than those who delivered by SVD, at p value 0.001.Women considering D&A as something normal (normalization) and perceiving that providers' harshness and providers' poor knowledge of human rights were the most reported reasons for disrespect and abuse. **Conclusion:** D&A is alarmingly high in our institutions, though majority of women took the fault to themselves. Including topics on disrespect and abuse during childbirth during ANC visits and maternity blocks is essential to increase women awareness and to develop ways of dealing with D&A.

51. Kasanga, H.D. (2017). Job satisfaction among nurses working in public health facilities at Kisarawe district.Muhimbili university health and allied science.

Abstract

Background: Job satisfaction is an important part of nurse's lives, inducing patient safety, productivity, performance, quality of care, retention, turnover, commitment to the organization and the profession. Little is known about factors of job satisfaction and their relationship with overall job satisfaction among nurses working in Public health sectors. Satisfaction with one's job can affect not only motivation at work but also career decisions, relationship with others and personal health. Job satisfaction is also an essential part of ensuring high quality care. Dissatisfied nurse give poor quality, less efficient care. Interventions need to be implemented in order to improve the level of job satisfaction among nurses working in public health facilities at Kisarawe district.**Objectives:** The aim of the study was to explore factors affecting job satisfaction among nurses working in public health facilities in Kisarawe district.**Methodology:**The study was conducted at Kisarawe district. This was a qualitative study using convenient sampling technique whereby interview guide was used for In-depth interviews and focus group discussion to gather the information from the respondents. A total of 30 respondents were recruited for participating in the study. Twenty-four (24) registered nurse were recruited in Focus group discussion which comprises 6-10 nurses in the group and six (6) nurse supervisors were recruited for in- depth interview in data collection. Analysis using Qualitative Content Analysis (QCA) was applied to examine job satisfaction among nurses and understand the factors affecting their work environment.**Results:**Public-sector nurses were most dissatisfied with their pay, the workload and working condition and resources available to them. However, participants explained that they will be satisfied if working conditions (i.e. hours of work, rest periods and work schedule being given and well-thought-out for nurses) staff remuneration in terms of salaries and other benefits being given accommodation at the nearby hospital and better relationship with their supervisors. **Conclusion:**The study has shown that nurses working in public health sector they were not satisfied with their job. Intervention to address factors affecting job satisfaction in public sectors is needed therefore criteria for nurses who are supposed to be promoted in their career should be given the opportunities, the factors of incentives in monetary recognition supervision, value and working condition are the important elements for nurses be satisfied with their job and improve quality of service provided.

52. Kataya, H. (2017) Intimate partner violence among adolescent brides: exploring the nature and contributing factors in Pwani region.Muhimbili university health and allied science.

Abstract

Background: Despite the existence of several strategies for prevention and control of intimate partner violence against women, the problem has remained persistently high. Little is known on experiences of adolescent brides on physical, emotional and sexual violence – particularly with regard to the nature and associated circumstances or factors in Tanzania. It

is this gap that this study intended to fill.**Objective:** This study aimed at exploring adolescent brides' experience on the nature of intimate partner violence and contributing factors in Kisarawe District, Pwani region.**Methods:**This was a case study which involved Adolescent brides aged (10-15) years who have been in marriage for one year or more or got divorced within the past one year. A snowball sampling method was used to select 25 participants to participate in the study in Kisarawe district. Data collection was done qualitatively using in depth interviews. Data analysis was done using thematic approach. **Results:**The findings from the study revealed that almost all the participants had experienced one, two or all three forms of intimate partner violence perpetuated by their partners. The forms of physical violence that were identified included: beating without a weapon; beating with a weapon; and being beaten while pregnant. Moreover, forms of emotional violence that were reported include: insult, humiliation, and denial of freedom. Regarding sexual violence, respondents reported the following: sexual assault and fear driven non-consensual sex. The study revealed that the common factors influencing intimate partner violence are: gender norms that condone men's controlling behavior; women's economic dependency on their husbands; men's engagement in extramarital affairs; and alcohol consumption. The review of Laws and Action Plan for elimination of violence against women indicates vulnerability and invisibility of adolescent brides. **Conclusion:** The findings of this study have revealed existence of various forms of IPV among the vulnerable adolescent brides in Tanzania. All the above forms of intimate partner violence might be influenced by masculine norms of dominance, gender -related power disparity, economic dependence, and alcohol consumption Due to their young age and sometimes-prevalent traditions, most of the girls have limited options or alternatives in dealing with the violence. Furthermore, the existing strategies for ending gender based violence have paid very little or no attention on the plight of adolescent brides.**Recommendation:**There is need for a comprehensive strategy that takes into account the unique situation of vulnerability in which adolescent brides.

53. Katembo, B. S. (2017). Factors associated with antenatal clinic booking: Application of the ecological model for health promotion in mpwapwa, Dodoma – Tanzania. Muhimbili University of Health and Allied Sciences.

Abstract

Background: Antenatal clinic (ANC) is a clinic where a pregnant woman receives services during pregnancy through a series of consultations with trained health care workers such as midwives, nurses or doctors who specialize in pregnancy and birth. The ANC services are usually grouped into booking and follow-up visits. The booking visit offers the midwife/clinician the opportunity to assess the health status of the expectant mother and unborn baby. Mothers who miss antenatal clinic booking may also miss important services such as management of obstetric complications including pre-eclampsia, tetanus toxoid and identification and management of infections including human immune virus (HIV), syphilis and other sexually transmitted infections (STIs).**Objective:** This study describes factors associated with antenatal clinic booking among pregnant women in Mpwapwa using the ecological model for health promotion.**Methodology:** A cross sectional study design using a quantitative approach was employed. The study was conducted at Mpwapwa reproductive

and child health (RCH) clinic which is located in Mpwapwa District Council in the Dodoma Region, Tanzania. The study population was all pregnant women attending at Mpwapwa RCH clinic during the study. A sample size of 352 participants was recruited for the study. A semi structured questionnaire consisting of open ended and closed ended questions was used to collect information about the ANC booking among pregnant women attending at Mpwapwa RCH clinic. The data were entered and analyzed using software Statistical Package for Social Sciences (SPSS) version 21 where by chi square test was used to determine the associations between late booking and independent variables. **Results:** A totalof 352 respondents participated in the study. Majority of respondents (69.9%) registered at ANC after three months of pregnancy. This is due to the fact that most of the respondents were living in a distance of more than five kilometers to reach ANC and also majority of them were using foot as means of transport. About 227 (64.5%) of pregnant women knew that the first trimester is the best time to start ANC and 229 (65.1%) of pregnant women illustrated that required number of ANC attendance throughout the pregnancy is four times. This high knowledge of knowing best time to start ANC and required number of attending at ANC is due to the fact that most of respondents had formal education. About 231(65.6%) of respondents illustrated that it was necessary to get permission from their partner before they started ANC, and about 301 (85.5%) of respondents said that they were getting financial support from their partners. The findings of the study indicated that, the problems of depending on financial support and permission from their partners facilitated them to attend ANC late. Moreover, 140 (39.8%) of respondents reported that, they were waiting for more than an hour to get ANC services. This long waiting time was due to inadequate staffs which were observed during data collection; only one trained nurse was allocated to provide services from 40 to 50 pregnant women per day. Moreover 352 (100%) of respondents reported that they were not paying for ANC booking or clinic card. This indicated that the national exemption policy for pregnant women was adhered to.**Conclusion:** In conclusion, the overall proportion of late booking was high. Some of the reasons for late booking could be long walking distance to ANC, subordination of pregnant women on decision making concerning ANC booking, and dependence on partner for financial issues.**Recommendation:** It is important to provide community based information, education and communication on antenatal care. In addition, emphasis on the best time to start ANC is mandatory at all levels of health facilities.

54. Kebeyo, N.M.L. (2017). Right to privacy and confidentiality for people living with hiv and aids in accessing health care services.Muhimbili university health and allied science.

Abstract

Inroduction: People living with HIV and AIDS have a lot of serious ethical challenges including respecting their right to privacy and confidentiality when accessing health services, challenges that may cause psychological problems as well as stigmatization. Since HIV and AIDS are highly sensitive and emotionally charged issues, information about the clients' HIV and AIDS sero-status must be considered the most confidential information and must be protected at all times. Discussions between counsellors or health care providers and

supervisors, including case discussions in supervision, shall protect the privacy of PLWHA. Individuals' confidentiality is supposed to be protected in conversations between counsellors and other staff members.A total number of 15 informants, involving 10 People living with HIV and AIDS and 5 heath care workers were interviewed.Data analysis was done by using content analysis technique with the help of Computer Assisted Qualitative Data Analysis Software (CAQDAS) called NVivo software following the study **objectives:** and the emerging themes as reported by the study informants, as well as in line with the observation made in the study area. The findings show that a high percentage of People living with HIV and AIDS are still stigmatized by their relatives, friends and their co-worker hence they seek care and treatment far from their residents for taking anti-retroviral therapy.A combination of intertwined factors like mismanagement of patients' files, lack of counseling rooms in infectious disease wards as well as lack of privacy and confidentiality trainings for health care personnel accounts for dis-respecting right to privacy and confidentiality for People living with HIV and AIDS when access health services at Muhimbili National Hospital. Dis-respecting right to privacy and confidentiality undermines patients' relationships with health care workers and also it can adversely affect the quality of care, stigmatization and discrimination as well as loss of reputation, loss or denial of their health insurance and personal embarrassment. The study concluded that there is a challenge in respecting right to privacy and confidentiality for PLWHA in accessing health care services. It is **recommended:**that health care worker should be given short courses on ethical issues for people living with HIV and AIDS as they are in much concern with maintaining privacy that in turn protects individuals from unwanted intrusions into their file records.

55. Kibao, A.M. (2017). Knowledge and adherence visits to pmtct option b+ services among HIV positive pregnant women in Ilala municipal council.Muhimbili university health and allied science.

Abstract

Background: In 2013, Tanzania adopted the provision of lifelong antiretroviral therapy (Option B+) to HIV positive pregnant women, throughout the pregnancy and breastfeeding period and continues taking ART for the rest of their lives. However, in 2014, about 38.5% women were lost in adhering to PMTCT option B+ services at national level. More specially, in Ilala municipality, data from district health information system (DHIS2) shows that the rate of lost to follow up on PMTCT option B+ ranges from 36 to 49 percent, which has resulted into high transmission of HIV infection from mother to child. Against this observation a study was initiated to find out the relationship between knowledge and adherence to PMTCT option B+ services. **Objectives:** The study was undertaken to assess the quality of knowledge and adherence visit to PMTCT option B+ services among HIV positive pregnant women in selected health centers and hospitals in Ilala Municipality. Specifically, it focused on determining quality of knowledge delivered to HIV pregnant women during counseling for PMTCT option B+ services in Ilala Municipality, to determine level of knowledge on services among the HIV positive women, to determine adherence visits to PMTCT option B+ services and to explore socio cultural beliefs affecting adherence to visits to PMTCT option B+ services.**Methodology:** A cross sectional study design. The

sample of the study was 383 respondents composed of 378 HIV pregnant women and 6 HCPs. The sample was selected purposively. Data collection was done through questionnaire, interview and documentary reviews. Data analysis was done through SPSS and the findings were presented in the form of frequency tables and percentages.**Results:** The findings indicated that, 90.8% of the respondents were well informed in area of PMTCT Option B+ services and other related sexually transmitted diseases. The quality of knowledge on PMTCT Option B+ services among HIV positive pregnant women was also very satisfactory 79.9%. On the adherence to PMTCT Option B+ services, 77.7% of the HIV pregnant women were adhering to PMTCT Option B+ service provision. Counseling services adhering to PMTCT Option B+ services contributed by 93.3%, and was well provided, cutting across various PMTCT and HIV/AIDS issues.**Conclusion:** The study concluded that, the possibility of having a healthy child born free of HIV constitutes a strong motivator for attending PMTCT services. Various recommendation were made to address the discrepancies demonstrated in the study in terms of inadequacy of the knowledge, counselling skills, adressing both human resources and health facilities' contuining decentralizing the services so as to be easly accessible to the clients.**Recommendations:** The researchers recommend decentralization of PMTCT services to the lower health facilities and increase the number of qualified health care providers providing PMTCT Option B+ services so as to improve services. It is also recommended that the same study in other municipalities and councils on PMTCT Option B+ services to be done in order to get a more representative picture of the problem investigated.

56. Kibongolo, R.O. (2017). Assessment of water, sanitation and hygiene practices associated with diarrhea prevalence among households' members in flood prone areas:a cross-sectional study along Kilombero valley.Muhimbili university health and allied science.

Abstract

Introduction: The prevalence of diarrhea at household level in flood prone areas are largely associated with inadequate or poor water, sanitation and hygiene practices such as use of untreated drinking water, use of unimproved sanitation facilities and inadequate hand washing practices. Residents in flood prone areas experience flooding incidences which eventually alters their hygienic status due to limited safe water sources and sanitation facilities. **The study aimed**: at assessing water, sanitation and hygiene practices associated with diarrhea prevalence among households' members in flood prone areas of Kilombero Valley.**Methods:** Cross sectional study was conducted early of August, 2017 in the flood prone areas of Kilombero Valley involving household interviews. About 384 heads of households were interviewed in order to determine the prevalence of diarrhea and the associated WASH practices.**Results:** The prevalence of diarrhea was 30.6%. WASH characteristics showed that between 6% and 57% of households responded to use improved water supply, Household Water Treatment, improved sanitation and good hygiene condition. Treating drinking water (AOR=2.729, 95%CI 1.169-6.370, p=0.020), Sanitation status (AOR=6.749, 95%CI 1.602-28.434, p=0.009) and use of pit latrine without slab (AOR=8.213, 95%CI 2.070-32.587, p=0.003) increased the risk of diarrhea. Also, use of

good storage facilities (AOR=0.272, 95% CI 0.099-0.742, p=0.011), and handwashing after using toilet (AOR=0.513, 95% CI 0.229-0.881, p=0.015) were associated with reduced risk of diarrhea.**Conclusion:** The study reveals that, households' members in flood prone areas are at high risk of diarrhea associated with poor WASH practices. The intervention programmes enhancing use of effective household treated drinking water, improved sanitation facilities and handwashing status should be undertaken in order to reduce the burden of diarrhea disease in flood prone areas of Kilombero Valley.

57. Kichao, M.S. (2017). Respiratory symptoms and lung function among employees at bank of Tanzania headquarters.Muhimbili university health and allied science.

Abstract

Background: Exposure to dust might be responsible for elevated respiratory health symptoms. Bank employees are exposed to the money counting machine which blow dust from money. **Aims:** A study aiming to determine personal dust exposure, prevalence of chronic respiratory symptoms, lung symptoms and associated factors among workers at Bank of Tanzania.**Material and method:** A descriptive cross- sectional study was done, employing simple random sampling technique. 276 respondents were recruited in the study. Data was collected through self-administered questionnaire. To assess personal total dust exposure, the dust was sampled and their concentration measured. The lung capacity of the respondents was measured by using a portable spirometry. Data was analyzed in SPSS version 22.0 at confidence interval of 95%.**Results:** A total of 276 employees responded to the study tool. Slightly more than half were females 142(51.4%), higher proportion of the respondents were aged 49-60 years old. More than half 55.4% of the respondents were exposed to dust from money. Personal inhalable dust measured showed higher measurements among Currency department (0.23 mg/m3) compared to others however the Analysis by anova Bonifereni test showed the dust concentration among the BOT department showed no significant different between the currency, banking and others departments (P>0.05). More than three quarter of the respondents presented with more than one respiratory symptom, nasal irritation was the leading followed by difficulty in breathing. Higher proportion of employee with at least one respiratory symptom had dust (money) exposure. The highest prevalence for all symptoms to among workers was in the currency section, followed by Banking then other department combined. There were statistical significance differences for respiratory symptoms for cough, sputum production, and sneezing for the BOT departments. Cigarettes smoking was among the risk factors for the respiratory symptoms reported. Almost one third of the participants had lung dysfunction. The distribution of COPD by the lung function test among bank department showed the distribution among different department not differing significantly though currency department had slightly higher values than the others.**Conclusion:** Higher proportion of respondents with many years of being employed presented with respiratory symptoms. However personal employee habits (i.e. cigarette smoking, cold drinks consumptions) and family history of respiratory diseases significantly increases the likelihood of developing respiratory symptoms.

58. Kilume, U. (2017). Experience of food insecurity among elderly: nature, health impact and social support system in Mvomero district – Morogoro.Muhimbili university health and allied science.

Abstract

Background: Food insecurity among elderly is a growing concern. Studies on food insecurity in Tanzania have been quantitative in nature and have focused on specific population groups such as those of people living with HIV and women. However, there is very little, if any, qualitative research information in Tanzania on experiences of food insecurity among elderly with respect to its nature, health impact and social support system. It is this gap in knowledge that this study intended to fill. **Broad objective:** To explore food

insecurity experiences among elderly with respect to its nature, perceived health impact and the social support system.**Methodology:** This study employed a qualitative study that used explorative study design. It took place at Mvomero district council. A total of 50 food insecure elderly people and three district officials dealing with elderly welfare were involved in this study. In-depth interviews were conducted to 25 elderly people and 3 district officials. Three focused group discussion were also conducted involving only elderly people with 8-9 participants in each FGD. Participants were employed in the study using anon-probability purposive sampling method. Data were collected through in-depth interviews and focused group discussions; interviews were audio recorded and analyzed using thematic analysis method. **Results:** The study found that elderly have limited access to food, eat less number of meals as well as insufficient amount of meals. It was revealed that circumstance associated with food insecurity were limited strength to engage themselves in farm activities or working as casual laborer to earn some money to buy food, limited strength to prepare food, burden of taking care of grandchildren and inadequate food support from children. Reported perceivedhealth effects were wasting, being too old for age, limited strength to carry out activities and non-adherence to treatment. The study also found that the only social support to ensure availability of food to the elderly were TASAF and religious groups.**Conclusion:** This study has demonstrated that the elderly people experience food insecurity with respect to both quantity and quality. Consequently, elderly are vulnerable to nutrition related ill-health as self-reported in this study: limited strength, wasting, non-adherence to treatment, and too old for age. Food insecurity and adverse outcomes have been attributed to very limited support that range from the family to the national levels. Therefore, it is high time that a strategy was developed to ensure that all elderly are food secure.

59. Kimambo, H.H. (2017). Diabetes mellitus among patients with tuberculosis attending tb clinics in Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: A bi-directional interaction between diabetes mellitus and tuberculosis is well established and has been likened to that between HIV and TB. Whereas HIV screening is standard of care test in sub Saharan Africa TB programs, the same as yet is not true for diabetes mellitus (DM). Sub Saharan Africa, a region with high TB infection rates, is going through an epidemiological transition period with rapidly rising prevalence of diabetes with majority being undiagnosed. We aimed at characterizing TB patients with DM in order to identify factors associated with TB-DM dual disease among patients attending TB treatment clinics in Dar es Salaam.**Objective:** To determine the prevalence and describe the characteristics associated with diabetes mellitus among patients with tuberculosis attending TB clinics in Dar-es-salaam. **Methodology:** This was a clinic based descriptive cross sectional study among TB patient's ≥18years. Demographic information was collected and anthropometric measurements taken. Patients were then tested for diabetes using fasting blood glucose followed by 2hrs post prandial glucose (2h-PPG) after a 75g oral glucose load for those with impaired fasting blood glucose. The association between diabetes and clinical characteristics of the patients were examined using logistic regression analyses.**Results:** total of 660 TB patients were recruited into the study among whom 25(3.8%) were known

diabetics. 39/635 (6.1%) patients were diagnosed to have DM and in additional 147/635(23.1%) patients had impaired fasting blood glucose. Therefore, overall 64/660 (9.7%) of subjects had DM. Diabetes mellitus was more prevalent (15.6%) among TB patients aged ≥45years (p=0.01). Other independent risk factors for DM, on multivariate analysis were, a positive family history of DM (OR 2.8, 95%CI 1.52-5.06) p=0.001and overweight (OR 2.5, 95%CI 1.14-5.34) p=0.02.**Conclusions:** Diabetes Mellitus was a frequent co morbid condition among TB patients in Dar es Salaam and majority of these TB patients had undiagnosed DM. Screening for DM should be advocated among TB patients aged ≥45 years, those who are overweight or obese and with family history of DM.

60. Kimaro, E. (2017). Formulation development of chewable albendazole tablets with improved dissolution rate.Muhimbili university health and allied science.

Abstract

Background: Albendazole is an orally administered broad-spectrum anthelmintic. Currently it is mostly used in the treatment of soil transmitted helminthes, hydatidosis and neurocysticercosis caused Taenia solium.**Aim of the study**: To develop and optimize a formulation of chewable albendazole tablet with improved dissolution rate.**Methodology:** This study was specifically focused on formulation development which passes compatibility studies and optimization of the developed formulation. The formulations were evaluated on assay, dissolution, friability, hardness, weight variation, disintegration and similarity in comparison with the reference product on the market. Assay was required to be undertaken by HPTLC analytical methods. Design of Expert version 7 software was used for selection or making scientific decisions in selecting the best composition of the best formulation.**Results:**Five formulations out of ten (F-6, F-7, F-8, F-9 and F10) had all parameters in acceptable range. On optimization, one formulation with independent variables, SLS 1.911%, PVP-K30 3.128%, and CCM 4.95% was selected out of ten predictions made with Design expert version 7.0. It was found that assay of the best formulation is 99.23% which was within the in-house assay specification 95 to 105%. Dissolution single point in 30 minutes was found to be 91.5% disintegration between 2-5 minutes and friability 0.45%. The formulation was comparable to the reference product on the market with similarity factor (f2) 62 and difference factor (f1) of 6 at pH1.2. **Conclusion:**A new generic albendazole tablet with improved dissolution rate was formulated, developed and optimized by using a wet granulation method.

61. Kimboka, J.J. (2017). Nurses' knowledge and practice in the applicationof the glasgow coma scale in the intensive care units and emergency department at Muhimbili national hospital and Muhimbili orthopaedic institute, in dar es salaam. Muhimbili university health and allied science.

Abstract

Background: Neurological observations comprise of a combination of indicators and are performed on patients who may be at risk of neurological deterioration. The Glasgow Coma Scale (GCS), first presented by Teasdale and Jennet in 1974, is one of the most effective and

reliable tools to assess the depth and duration of impaired consciousness, especially for the patient with head injuries. It can be used by nurses as an indicator when there is a need for intervention or treatment in emergency conditions. **Aim:** To assess the knowledge, practice and identify the factors associated with assessment of the GCS among nurses working at Muhimbili National Hospital and Muhimbili Orthopedic Institute, Dar es Salaam. **Methods:** A quantitative cross-sectional design was used, where by a structured questionnaire assessed 158 nurses about their knowledge and the factors associated with utilizing the GCS, and a checklist was used for observation of practice. Nurses working in EMD and ICU were conveniently recruited. Data was analyzed using SPSS computer software version 21.**Results:** More than half (55.1%) were aged between 25 to 34 years. Many of them (69.6%) were females. Of the participants 62.7% had a diploma in general nursing and only 4 (2.5%) had a Master's degree and above. Only 13.3% of participants had high level of knowledge regarding GCS. More than half the nurses did not know the lowest score. Around half (47.6%) of nurses had never attended any type of training. Several factors were reported to deprive assessment using GCS such as lack of knowledge about application of GCS (19.6%), work overload of nurses (19.6%), lack of resources (14.6%), lack of skills (5.7%) and lack of training (5.1%).**Conclusion:** Nurses have a low level of knowledge about the GCS assessment. More than half the nurses did not know the lowest score for the GCS. They could not identify which GCS score indicated a patient was in a critical neurological condition. There was a large discrepancy between the knowledge scores and the nurses' perception about their current knowledge. There was less understanding of the neurological bases, and clinical application of the GCS, with lack of continuing educational updates on the GCS. The inadequate knowledge possibly will limit their capacity for clinical judgment and decision making in managing unconscious or deteriorating patients. **Recommendation:** There is need to implement a continuous professional education program on GCS assessment with special focus on methods of assessment, guidelines, how to use assessment tools, protocols and proper documentation for critically ill patients.

62. Kinasa, G.C. (2017). Prevalence of ventilator-associated pneumonia among patients admitted in intensive care units at muhimbili national hospital, Dar es salaam, Tanzania. Muhimbili university health and allied science.

Abstract

Introduction: Ventilator Associated Pneumonia (VAP) is associated with increased mortality, morbidity and enormous healthcare cost resulting from prolonged hospitalization. In Tanzania, the burden, patterns of pathogens as well as predictors for VAP have not been studied. The aim of this study was to determine the magnitude, bacterial aetiology and predictors associated with ventilator-associated pneumonia among patients admitted in the intensive care units.**Objectives:** To determine the magnitude, bacterial aetiology and predictors associated with ventilator-associated pneumonia among patients admitted in the intensive care units.**Methods:** This was a prospective cohort study, conducted for six months; involving patients aged five years and above admitted within intensive care units located in Muhimbili National Hospital, Tanzania. Basic demographic variables as well as clinical and laboratory data were collected using structured data sheets together with radiographic

findings of chest X-rays. High suspicion index of VAP warranted performing suctioning of tracheal secretions using sterile tracheal secretion bottles and the aspirates investigated for bacterial pathogens and antibiotic susceptibility. Data was cleaned and analysed using STATA v.13. The $\chi 2$ test and student t-test was used to compare proportions between patient's groups for categorical and continuous variables respectively. The logistic regression model was used for assessment of independent effects of multiple variables on the study endpoints. A p value of less than 5% was considered statistically significant.**Results:** A total of 71 patients on mechanical ventilation were recruited into the study. The major causes of ICU admission were infectious diseases, traumatic brain injury (TBI) and acute kidney injury (AKI) and frequently had co-morbid conditions with prior history of admission. The overall prevalence of VAP was 56.34%; with early and late-onset VAP of 11.27% and 45.07% respectively. The existing general infection control measures were largely performed. Of all patients, 94% were intubated using cuffed endotracheal tube. Mortuary disposition accounted for 61.97% of all studied patients. Final disposition was not associated with VAP status. Univariate analysis revealed significant association between VAP and duration of ventilation (95% CI 1.08 to 1.32, $p < 0.001$, OR 1.19), duration of ICU stays (95% CI 1.04 to 1.18, $p = 0.002$, OR 1.11) and changing or cleaning of ventilator condensates (95% CI 1.39 to 17.59, $p = 0.013$, OR 4.9). However, on multi-variety analysis, only the duration of ventilation displayed significance as an independent determinant for the risk of developing VAP (95% CI 1.01 to 1.44, $p = 0.035$, OR 1.2). The major bacterial isolates from samples of aspirates from patients with VAP were Gram negatives (GN) with over 52% being Pseudomonas aeruginosa. GN bacterial isolates were generally sensitive to meropenem (85%) and piperazine (83%). On the converse, substantial isolates, both GN and Gram positive (GP) displayed resistance to commonly prescribed antibiotics and the majority displayed multi-drug resistance (MDR). **Conclusions and recommendations:**The study revealed a substantial burden of VAP in three major ICUs setting within MNH. VAP is found to have an association with duration of ventilation as an independent factor. The commonest organisms isolated were Pseudomonas aeruginosa followed by Klebsiella pneumoniae and Corynebacterium spp. Of the antimicrobial agents tested, GN bacterial isolates generally showed good sensitivity to Meropenem and Piperazine. Frequently, the bacterial pathogens have developed resistance to commonly prescribed antibiotics including gentamycin, trimethoprim-sulfamethoxazole, ciprofloxacin, amoxyclav, cefotaxime, erythromycin and penicillin. Adversely, the majority of bacterial isolates have also developed MDR.In order to address the burden of VAP and the challenges related to risk factors and management strategies, it is herewith recommended to conduct further research to decipher potential determinants for acquiring VAP together with the local microbial pattern and sensitivity. In parallel, the institutions should design prompt interventional packages for prevention of VAP through adoption of specific local VAP bundles preferably delivered through committed programs.

63. Kissambu, L.M. (2017). Maternal and perinatal outcomes among women with short inter–pregnancy interval delivered at Muhimbili national hospital, Tanzania.Muhimbili univarsity health and allead science.

Abstract

Background: Pregnancy exposes a woman to physiological changes and increased demand to ensure adequate nutritional and oxygen supply to the growing fetus. Women should have an optimal time to recover from physiological stress of the preceding pregnancy and lactation before they conceive again. With regard to birth spacing, the Tanzanian standard antenatal clinic card (RCH4) indicates only an IPI of more than 10 years as a high risk pregnancy and does not consider short IPI as a high risk pregnancy despite having adverse pregnancy outcomes. Categorizing women with non-optimal IPI as high risk group is an important step to improve awareness of adherence to standard birth spacing.**Objective:** To compare maternal and perinatal outcomes of short inter-pregnancy interval and normal inter pregnancy interval among women delivered at Muhimbili National Hospital (MNH) Tanzania.**Methods:**This was a hospital based prospective cohort study conducted at MNH from July toDecember 2016. Parturient women aged 20 to 34 years with singleton pregnancy at ≥28 weeks of gestation and immediate preceding live birth, admitted in MNH labour ward were included in the study whereby 420 women and their newborns completed seven days postpartum follow up. Exposed group were 140 women and un-exposed group were 280 women. Non probability convenience sampling method was used to recruit study participants whereby each exposed woman who met the inclusion criteria was matched for age with two eligible unexposed women from the study population who met the inclusion criteria during study duration and delivered next to the exposed candidate. Structured questionnaire was used to collect information. Data analysis was done using SPSS software (IBM SPSS Statistics version 20.0) Results were summarized in form of proportions for categorical variables and in forms of mean and standard deviation for continuous variables. Chi square test was used to compare significance of association for categorical variables with a cut-off P value of less than 0.05; Binary logistic regression models were used to estimate the relative risk (RR) at 95% confidence interval for maternal and perinatal adverse outcomes across the two matched groups.**Results:** Compared with normal IPI, women with short IPI were at higher risk of having PPROM (RR 3; 95% CI 1.90-4.718), PROM (RR 2.58; CI 95% 1.578-4.229), preterm labour (RR 1.44; 95% CI 1.055-1.983) and HDP (RR 2.44; 95% CI 1.356-4.405). Newborns from women with short IPI were at increased risk of low birth weight (RR 2.74; 95% CI 1.986-3.778), prematurity (RR 2.82; 95% CI 1.974-4.029), low APGAR score at 5th minute (RR 1.78; 95% CI 1.280, 2.478) and perinatal deaths (RR 2.54; 95% CI 1.187-5.460).**Conclusion:** The findings suggest that, IPI less than 18 months was associated with poor maternal and perinatal outcomes compared with IPI 18 to 35 months.

64. Kisoka, E. (2017). Factors influencing female parental approval of contraceptive use among adolescent girls in Kinondoni district, Dar es salaam, Tanzania. Muhimbili univarsity health and allead science

Abstract

Background: Use of modern contraceptive methods among women of reproductive age inTanzania is low. This contributes to the increase of unintended pregnancy in the country. The impact is significantly demonstrable in the form unintended adolescent pregnancy which

has increased in number from 23% in 2010 to 27% in 2015. Parental approval of contraceptive use by adolescent girls is among the strategies proposed for reducing unwanted pregnancies among girls. However, little is known about the extent of female parents' approval of contraceptive use among adolescent girls in Tanzania. **Aim of the study:**The aim of the study was to determine factors influencing parental approval of contraceptive use among adolescent girls. **Materials and methods:** A quantitative approach utilizing cross-sectional study design involving 202 female parents and guardians living with adolescent girls aged 10-19 years was conducted in Kinondoni District in Dar es Salaam. Analysis of quantitative data was conducted using SPSS version 20 through descriptive, Pearson chi square test and regression analysis methods. In descriptive analysis, frequency measures were used to provide descriptive characteristics of the study population. The degree of association between the variables was tested by using Pearson chi square test with the value of $p>0.05$ at 95% confidence interval was considered to be statistically significant. **Results:**A total of 202 female parents were interviewed where only 25.7% reported to approve contraceptive use among adolescent girls. Parents aged $\leq$ 35 years ($p=0.04$) were less likely to approve contraceptive use among adolescent girls than other age categories. Parental communication on sexual and reproductive health issues with adolescents is a significantly related to parental approval whereby one-third (31.2%) of respondents reported to have discussed sexual and reproductive health related issues with their adolescent daughter covering topics such as HIV/AIDS, STI, sexual relationships, and teenage pregnancy. Very few participants talked with their adolescent girls about abortion and family planning. Parents' level of education was also a significant factor for parental approval of contraceptive use among adolescent girls ($p=0.04$).**Conclusion:** This study revealed, female parental approval on contraceptive among adolescents was relatively low and condom was the contraceptive method recommended by the respondent who approved contraceptive use among adolescents.

65. Komba, F.F. (2017). Factors influencing the implementation of isoniazid preventive therapy for people living with HIV in care and treatment centres in songea municipality.Muhimbili univarsity health and allead science.

Abstract

Background: Isoniazid Preventive Therapy (IPT) for people living with HIV/AIDS (PLHIV) is crucial and essential public health intervention in developing countries with high TB and HIV burden. Despite available evidence that IPT is efficacious and the existence of the WHO recommendation since 1998, its implementation is still low in many countries. In Tanzania little is known regarding factors influencing the implementation of IPT for PLHIV.Broad**Objective:** This study aimed at exploring factors influencing the implementation of Isoniazid Preventive Therapy for PLHIV in Care and Treatment Centres (CTCs) in Songea municipality. Materials and Methods: To explore factors influencing the implementation of Isoniazid Preventive Therapy, a cross sectional descriptive study design using both quantitative and qualitative approaches of data collection was employed. The quantitative part aimed to determine IPT coverage of the municipality while the qualitative part aimed to explore factors influencing the implementation of IPT for PLHIV in CTCs in Songea municipality. The study participants for quantitative part included all PLHIV

registered in CTCs of the selected health care facilities from January 2015 to January 2017.The qualitative part involved health care providers who were working in the five selected CTCs and adults PLHIV who were provided IPT in the five selected CTCs in Songea municipality. The quantitative data was collected by conducting review of patients' records using structured data collection form while the qualitative data was collected by conducting in-depth interviews and observations using in-depth interview guides and observation checklist respectively. Quantitative data was analyzed using SPSS for windows version 20 statistical software. Descriptive statistics (frequencies and percentage) were employed and data were visualized using tables and bar graphs. All interviews were audio-recorded and analyzed using thematic analysis approach. Data was collected between late July and early August 2017.**Results:**Twenty-one participants participated in the qualitative study. Of these 13 were health care providers and 8 were patients. Overall Isoniazid preventive therapy coverage of the municipal was estimated to be 45%. Insufficient drug supply and drug stock out, shortage of staff, lack of service privacy, long waiting time, drug side effects, pill burden, distance from health care facility, cost of transport, and forgetting drug collection date were reported as the main barriers in the implementation of IPT. Availability of IPT training, regular supportive supervision, collaboration between TB and HIV programs, good provider-client communication, availability of IPT guidelines, patient registers, Information Education and Communication (IEC) materials, availability of TB Screening Questionnaires, patients' knowledge of IPT and lack of stigma were identified by health care providers and patients as the main enablers/facilitating factors in the implementation of IPT. **Conclusion:** Implementation of Isoniazid preventive therapy in Songea municipality, Tanzania had low coverage. Health managers, drug suppliers and partners working in HIV and tuberculosis programs should be committed to ensure sufficient and an uninterrupted supply of Isoniazid and pyridoxine and full scale implementation of Isoniazid preventive therapy to eligible PLHIV.

66. Komba, T. (2017). Exploring socio-cultural factors influencing intimate partner violence among ever married women: a case of charambe ward in temeke district. Muhimbili univarsity health and allead science.

Abstract

Background: Intimate partner violence (IPV) is a serious public health concern. Nevetheless, few studies have explored the socio-cultural factors influencing IPV among women and its outcomes (Valladares, 2005; Jewkes, 2002; Obeid et al. 2010; Campbell 2002; Laisser et al. 2011; Kazaura et al. 2016; Kolawole et al. 2005; Uthman et al. 2009; D. Uwayo, 2014; Eric et. al 2013; Heilman, 2010). This study intended to explore the socio-cultural factors that influence IPV and document its outcomes among women in an urban community. **Aim:** This study sought to explore the socio-cultural factors that influence IPV among ever married women in an urban community and document the outcomes of IPV. **Methods:** The study was exploratory employing qualitative approach using focus group discussions with 28 women and 23 men, and in-depth interviews with 8 women who are survivors of IPV in Charambe ward Temeke district. The study was guided by the ecological model. R**esults:** Thematic analysis was conducted which yielded analytical themes for the

sociocultural factors that influence IPV and its outcomes. Love related jealousy and men's controlling behavior are the individual level socio-cultural factors found to influence IPV among ever married women. Relationship level socio-cultural factors influencing IPV include failed to meet intimacy expectations, inability to reproduce [infertility], interference of the in-laws, mens' high sexual libido, construction of masculinity through multiple sexual partnership and men demanding anal sex from wives. Poverty is a factor that influences IPV at community level. Cultural and gender norms that encourage inequalities between men and women are the socio-cultural factors that influence IPV among ever married women at societal level. Further results showed that injury, disabilities, dizziness, stress, sexual-transmitted infections and death are health outcomes of IPV among women whereas the social outcomes are separation, divorce and hostility. **Conclusion:** This research has shown that IPV is influenced by socio-cultural factors that are highly related to male partner and less related to female partner at individual and relationship levels. IPV causes negative health and social outcomes to women. The existing laws that restrict harmful use of alcohol among males, illegal multiple sexual partnership and the laws that restrict interference of the in-laws among people in marital union are less effective thus leaving women at a continued risk of experiencing violence. **Recommendations:** I recommend that the Ministry of Health Community Development Gender Elderly and Children (MOHCDGEC) should design behavior change interventions targeting men and women in marital union, and adult men and women in the community. The government should re-enforce laws that restrict harmful use of alcohol among male, restrict interference of the in-laws among people in marital union and the laws that restrict illegal multiple sexual partnership.

67. Lameck, L.A. (2017). Knowledge of danger signs during pregnancy and health care seeking actions among pregnant women at Ilembula rch clinic, Njombe.Muhimbili univarsity health and allead science.

Abstract

Background: Knowledge of danger signs during pregnancy and health care seeking actions after recognition of danger signs is essential for the good outcome of the mothers and expected new born. Increased knowledge of danger signs during pregnancy to the pregnant women is crucial for reducing delays in seeking health care. **Aim:** The aim of this study was to assess the knowledge of danger signs during pregnancy and its association with health care seeking actions among pregnant women at Ilembula DDH, Njombe.**Methods:** A cross sectional descriptive study design employed quantitative approach was conducted to pregnant women attended at Ilembula RCH for routine Antenatal care. A systematic random sampling method was used to select women to be interviewed. The pregnant women were interviewed using a self administered semi structured swahili questionnaire with closed and open ended questions. Collected data was coded, entered, cleaned and analysed using the statistical package of social science (SPSS) version 21. Data analysis was done by using descriptive statistics and chi square test to show the association between variables.**Results:** A total of 288 pregnant women have been incorporated in this study. 34% participants found to have good knowledge of danger signs during pregnancy. Maternal age, occupation, educational level, marital status and source of information were variables found to be statistical

significantly with women's knowledge of danger signs during pregnancy (p=<0.005). Most women (78%) have been informed about the danger signs by health personnel when attending ANC visits. More than a half of pregnant women (56%) with good knowledge of danger signs during pregnancy sought for health care after recognition of danger signs during pregnancy. Likewise, the findings have shown that there is statistical significance between knowledge of danger signs during pregnancy and health care seeking action (p=0.001). **Conclusion:** Based on this study the findings suggested that, poor knowledge of danger signs during pregnancy is one of the reasons of failure to recoginize pregnancy related complications as well as making decision to seek for appropriate health care. **Recommendation:** The Ministry of Health, Community, Development, Gender, Elderly and Children (MoHCDEC) and other stakeholders may need to design the monitored guidelineswhich will help to strengthen the ANC services provided to pregnant women including provision of targeted health education informations to pregnant women.

68. Likinderaki, B.W. (2017). Predictors contributing to loss-to-follow-up of HIV infected adults on antiretroviral treatment in two district hospitals in Dodoma region.Muhimbili univarsity health and allead science.

Abstract

Background: Previous studies performed in low-income countries in Africa have shown that, nearly half of HIV infected individuals attending Care and Treatment Centers for antiretroviral therapy (ART) are lost-to-follow up (LTFU) from care. HIV clients 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. This study aims at determining predictors contributing to loss to follow up of HIV infected adults initiating ARV therapy in two health facilities in Dodoma.Materials and **Methods:** 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. Baseline clients' records were extracted from electronic database and paper based CTC 2 cards. The Kaplan-Meier survival analysis technique and Cox proportional hazards regression model were 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 whom 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 (Adjusted HR = 1.43, 95%CI: 1.00 – 2.08) and being referred to CTC from a VCT center (Adjusted HR = 1.87, 95%CI: 1.16 – 3.02) were independent determinants of loss to follow up from care. On the other hand, status of being married as compared to being single (Adjusted HR = 0.64, 95%CI: 0.40 – 1.00) and higher WHO stages as compared to WHO stage I (Adjusted HR = 0.26, 95%CI: 0.09 – 0.74 for the WHO stage III and Adjusted HR = 0.29, 95%CI: 0.10 – 0.85 for WHO stage IV) were found to be

protective of loss to follow up in this cohort.**Conclusion:** Loss to follow up among HIV positive initiating ART in the two districts is high. Among other factors, VCT as the point of entry to CTC and male gender were observed to be 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.**Recommendation:** We recommend that, extensive counseling be done to clients seeking diagnosis services at VCT centers, clients at early stages of the disease, and those not in marriage or stable sexual relationships. Male clients should be given an extra attention when accessing HIV related services.

69. Luambo, S.A. (2017). Patients participation in their medical care and decision making at ocean road cancer institute.Muhimbili univarsity health and allead science.

Abstract

Background: Participation of patients in decision making is an ethical, legal and regulatory procedure, in medical care. Informed decision is accepted. In this process patients need to be informed about risks, benefits, and alternatives of the treatment intervention.**Objectives:**The objective of the study was to explore the involvement of patients in their medical care and decision-making at Ocean Road Cancer Institute.**Methodology:**The study used qualitative research method, where in-depth interview was employed. The study informants were cancer patients and doctors from Ocean Road Cancer Institute. The interviews were captured using a tape recorder. The recorded discussions were transcribed, and analyzed using thematic content analysis with the help of NVivo software.**Findings:** The study found most patients indicated preference to be involved in their medical care and decision making. Face to face method was mostly employed. The provided information was inadequate. There was poor awareness about patient's involvement. Little application of informed consent during involvement, and patients need not wanted to make decision.**Conclusion:**Due to participant's explanations about patient's participation in their medical and decision making, the study finding revealed that patients were not well involved as required by ethical principles, and also as it is directed by World Health Organization. This is due to the used decision method during provision of information, and other challenges relating to the involvement process. Among other, the involvement process, could be facilitated by management of Ocean Road Cancer Institute as well the entire Ministry of Health to take initiatives on making sure patients and all citizens are aware on their medical rights.

70. Lueeth, J.M.G. (2017). Prevalence, management and consequences of postoperative pain in pediatric patients undergoing elective surgery at Muhimbili national hospital, Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Inadequate postoperative pain management in children has been shown to be the cause for prolonged hospital stay due to its associated complications which include cardiovascular and respiratory complications, in addition to psychological and physiological adverse effects. This study aims to determine the prevalence, management and consequences of postoperative pain in the paediatric population.**Objective:** The objective of this study was

to evaluate the prevalence, management and consequences of children's pain after surgical intervention at Muhimbili National Hospital Dar es Salam, Tanzania.**Methodology:** A descriptive cross-sectional study was conducted among 245 pediatric patients who were undergoing elective surgery at MNH between Febuary2016 and November 2016. The purpose of the study was fully explained to the participants before their consent was obtained while waiting for surgery in the waiting room. Once a participant was considered fully awake from anesthesia, a face to face interview with children or their parents or guardians was then conducted immediately in the recovery room to assess their pain level. Participants were then followed to the wards and interviewed after 24 and 48 hours post surgery. Baker ¬- Wong faces pain rating scale, (Appendix 6), FLACC behavioural tool, (Appendix 4), Visual Analog Scale, (Appendix 5) and numerical rating scale were employed for the determination of pain scores based on child age or its ability to self-report his/her pain. Pain was categorized into four levels (no pain = o), (mild pain= 1-3), (moderate pain = 4-6) and (severe pain = 7-10). Demographic variables and analgesics drugs prescribed were obtained from participants' medical records. Other parameters collected were vital signs and saturation. Their baselines values were measured and recorded first. Abnormal and normal values were then identified from the postoperative measurements. All data required was obtained and analyzed using SPSS version 20. All variables were categorized and described using frequency distribution. Bivariate associations were described using chi- square tests. A p- a value of < 0.05 was considered statistically significant. **Results:**A total of 245 pediatric patients were recruited in this study. There were 169 males (69%) and 76 females (31%). The mean age was 4.5±3.1 years, the maximum and minimum ages were 12 and one years old respectively. Many of patients were classified as ASA I (86.5%). A big proportion(46.1%) of pediatric patients were shown to have severe postoperative pain immediately after surgery as compared to day one (24hrs) and day two (48hrs) which were, 5.3% and 2% respectively. More than half (55.5%) of the patients experienced moderate pain at 24 hours while slightly more than a quarter had moderate pain immediately and 48 hours after surgery with 27.8% and 26.1% respectively. Most patients were shown to be pain-free at 48hours post surgery, 35.5% as compared to immediately and 24 hours post surgery, 6.5% and 3.3% respectively. Fentanyl was the commonest intraoperative analgesic used 60.8% followed by paracetamol and morphine 28.6% and 10.2% respectively. A rise in physiological parameters such as heart rate and blood pressure was strongly associated with postoperative pain p- value < 0.001.**Conclusion:** Postoperative pain is common especially in the immediate postoperative hours and at 48hours in our setting. Pain assessment tools were not used by healthcare providers for postoperative pain assessment and scoring at MNH. Successful utilization of these tools could be made possible if all health care providers aretrained.**Recommendations:**Establishment of Acute Pain Service Units (APSU), to be headed by anesthesiologists could reduce the prevalence of postoperative pain. Proper use of validated pain assessment tools by health care providers for detection of degrees of pain could trigger appropriate response and management towards postoperative pain.

71. Lugina, E.L.(2017). Survival in laryngeal cancer and its predictors at ocean road cancer institute from 2008-2012.Muhimbili university health and allied science.

Abstract

Background: In Tanzania cancer of larynx is second in occurrence after sinonasal cancer among the HNSCC. There is no information in Tanzania about survival of laryngeal cancer patients after treatment as well as factors associated with survival. **Purpos:** The **objective**: of this study was to determine the 5 years overall survival rate and factors associated with survival of laryngeal cancer patients treated at Ocean Road Cancer Institute from 2008 - 2012.**Material and Methods:** This was retrospective study done at ORCI by reviewing records of 82 laryngeal cancer patients treated at ORCI from 2008 and 2012.All patients were followed up for 5 years. A structured questionnaire was used to extract information about characteristics of the patients and survival. For patients who were no longer attending follow up clinic a phone call was made to next of kin to the patient to inquire about the status of the patient. Five years overall survival (OS) was estimated by using the Kaplan–Meier method. Log–rank statistics was employed to identify significant prognostic factors for overall survival. Multivariate analysis was done by using Cox Proportional Hazard statistics. Association between categorical covariates was determined by using Chi-Square test and association between continuous variables determined by independent sample t-test.**Results:** The five years overall survival rate was 29 % and median survival time was 23 months. The main independent predictors of OS for the whole cohort in univariate analysis were T stage, presence of neck nodes, site of the tumor, level of hemoglobin and blood transfusion. High radiotherapy dose was associated with higher OS among patients treated with palliative intention. Presence of dyspnea at presentation, low performance status and N stage had borderline statistically significant association with OS. The effect of the presence of distant metastases (M stage) on survival could not be evaluated in our analysis due to the small number of patients with M1 stage. Only site of the tumor was statistically significant in multivariate analysis.**Conclusion:** The OS of laryngeal cancer patients is relatively lower in this study compared to those in developed countries. Early laryngeal cancer stages, glottis tumors, high hemoglobin, absence of blood transfusion prior to radiotherapy and high radiotherapy doses were associated with higher OS.

72. Lujuo, T. (2017). Dental fluorosis: prevalence, severity, treatment need and impact on quality of life among secondary school students in arusha, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Dental fluorosis is very common in Tanzania especially in fluoride endemic areas. Dental fluorosis presents clinically as a chalk-like discoloration of teeth with white spots or lines on tooth enamel. People who are affected by high levels of fluoride present with brown teeth discoloration and mottled teeth, hence their esthetic are compromised. The most commonly employed method of assessing dental fluorosis treatment need is clinically defined by dental professionals. Using the established fluorosis indexes alone as the basis for treatment need estimation may lead to overestimation of the need if general health and social impacts related to dental fluorosis are not taken into consideration.**Objective:** This study aimed to determine prevalence, severity and treatment need of dental fluorosis and its impacts

on oral health quality of life among secondary school students in Arusha, Tanzania.**Methodology:** This study was a cross-sectional analytical study which was conducted between January and February, 2017 among secondary school students in Arusha City. It involved 426 students who were selected among secondary school students in Arusha City. A cluster sampling method was used for selection of secondary schools, which was followed by random sampling of students from the selected schools. The subject's socio-demographic particulars, subjective treatment need and their perceived impacts were gathered through self-administered structured questionnaires. Clinical examination form was used to assess dental fluorosis according to Thylstrup and Fejerskov Index (TFI), clinical examinations were carried out by one calibrated dentists (Kappa = 0.86) under natural light, further TFI scores were categorized to determine treatment need groups. All the information collected were coded, entered in a computer and analyzed using SPSS version 20.0 software and statistical level of significance was put to $p< 0.05$. Chi-square test was used to compare proportions for any association and Pearson correlation coefficient was used to find correlation between Oral Impacts on Daily Performance (OIDP) scores and TFI scores. Linear logistic regression was used for multivariate analysis between severity of dental fluorosis and perceived impacts.**Results:**A total of 426 students aged 13-18 years were involved in this study with 50.2% being males. The prevalence of dental fluorosis was high (85.4%). Majority of the participants (37.1%) had moderate dental fluorosis (TFI 4-5), 34.9% severe dental fluorosis (TFI 6-9) and 28% mild dental fluorosis (TFI 1-3). Overall prevalence of oral impacts on daily performance among students with dental fluorosis was 76.2% while for those without dental fluorosis was 8.8%. The most perceived dental treatment was removal of brown teeth discoloration 70.7%, followed by pain relief 25.4%, filling of cavities 14.8%, correction of arrangement of teeth 14.1% and 3.5% needed extractions. The study showed also that there was a very big difference in perceived impacts on oral health quality of life between students with dental fluorosis and those without dental fluorosis ($p<0.001$).**Conclusion:**The prevalence of dental fluorosis was high. Moderate and severe forms of dental fluorosis were the commonest. Majority of the students perceived at least one oral impact and dental fluorosis was the main cause of the perceived impacts. The prevalence of oral impacts increases with an increase in the severity of dental fluorosis. Majority of the participants perceived removal of brown tooth discoloration as their most perceived dental treatment need.

73. Lukoya, A. A. (2017). Risk factors for perinatal mortality at Muhimbili national hospital, Dar es salaam Tanzania: un-matched case control study.Muhimbili university health and alliedscience.

Abstract

Background: Perinatal mortality is a sensitive indicator for maternal care. Understanding the risk factors for perinatal mortalityis key to reducing its incidence. There are many risk factors for perinatal mortality that act through complex and interrelated pathways. Intra-partum factors are the main risk factors for perinatal death at MNH, but very little is known on how much a role maternal and socio-demographic factors play in the incidence of perinatal death at MNH.**Methodology:** This was a hospital based un-matched Case control study conducted

at Muhimbili National Hospital between October 2016 and December 2016. Conven-ience, Non-probability method of sampling was employed whereby mothers with perinatal deaths are paired with two others who had live births as controls giving a case to control ratio of 1:2 and sample size of 240. Information including maternal Age, referral status, means of arrival at MNH, maternal level of education, marital status, parity, history of perinatal death, history of abortion, mode of delivery, birthweight of fetus, gestational age of the fetus, LNMP, interval between this birth and the preceding one, time of birth, week date of birth, history of hypertensive disorder, history of diabetes mellitus and number of ANC clinic visits were obtained by interviewing mothers, checking medical records and examining the babies. Bivariate and multivariate analysis was employed to determine the association between maternal socio-demographicfactors and perinatal death.**Results: A** total of 1025 mothers delivered at MNH during the study period, 107 were perinatal deaths and 918 live births. A sample of 240 mothers was selected of which 80 were cases and 160 were controls. Four factors were found to have significant association with perinatal mortality; Gestation Age<37wks (AOR2.53; CI1.1-5.83: p-0.030), Sponta-neous Vaginal Delivery (AOR3.7; CI 1.017 – 7.21p-0.001), Birth Weight<2500g (AOR2.3; CI1.03–5.25: p-0.04), and maternal Diabetes Mellitus (AOR 3.44; CI1.077–15.98: p-0.036).**Conclusion:** Our Study found that the risk of perinatal death at MNH was high among Diabetic mothers, Babies born by Spontaneous Vaginal Delivery, babies born before 37 completed weeks, and babies with birth weight <2500g. Maternal Hypertension, baby sex, number of ANC attendance weekend birth, maternal age and birth interval were not sig-nificant.

74. Lusaya, E. (2017). Provider characteristics and facility barriers to implementation of single visit approach to cervical cancer in Kinondoni. Muhimbili university health and alliedscience.

Abstract

Background: The MOHCDGEC cervical cancer prevention and treatment policy reccomends VIA combined with immediate treatment of precancerous lesions with cryotherapy in a single visit.The approach is recommended as it reduces chances of clients who are lost to follow-up.The recommendations is screening procedures after every three years following a normal result except HIV positive women who should be screened annually.Following abdomal results and or treatment,the screening should be repeated in one year and if follow-up screening is normal should be screened again after three years.HIV positive women should be screened annually regardless of the results of the treatment.**Objectives:** The primary objective of this study was to provide indepth analysis into provider characteristics and facility barriers responsible for poor implementation of single visit approach in Kinondoni Municipal.**Methods:**This was exploratory crossectional study design of healthcare providers who were trained to provide cervical cancer screening and treatment services.The study was conducted in one public hospital, one public dispensary and two private dispensaries in Kinondoni Municipal.The selection of facilities and key informants was done purposively considering the availability of VIA and cryotherapy services and trained providers with experience to provide services for at least three months and who were able to narrate their own experiences in service provision.There were nine healthcare providers from all four

facilities and all were included in the interview. The study excluded those providers who were still being mentored to build their skills for this service.A total of nine healthcare providers were interviewed from all four facilities.Data collection was done using key informant interview with topic guide.Tape recorders and note books were used to capture the responses and recorded the observations. Data analysis was done through conventional content analysis to group categories into themes.**Results:** All informants were aware of SVA policy.Barriers to service provision included: Limited number of trained staff, inadequate supportive supervision, poor supply of equipment and supplies, failure to afford cost of VIA and treatment and poor referral sytem.**Conclusion:** Thestudy identifies and analyses several factors responsible for the poor implementation of single visit approach to cervical cancer screening and treatment services.It calls for multisectoral collaboration for planning and allocation of resources and instituting effective mechanisms to monitor policies across all levels.

75. Lutter, D.N. (2017). Doctors prescribing behaviour: a comparative study between insured and un-insured patients at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Non- adherence to prescribing guidelines has been observed in a number of health care facilities worldwide and it is shown in various forms such as overprescribing of antibiotics, polypharmacy, prescribing using brand names and over prescribing of injections.Studies conducted in Tanzania and Kenya have revealed inappropriate use of injections, antibiotics and a high rate of polypharmacy, for example Tanzania's prevalence of injection prescribing is 50% which is far above the WHO reference values of 13.4%-24.1% .Kenya's prevalence of antibiotic prescribing is 74% which is quite high compared to the WHO reference values of 20-25.4%.However to the knowledge of the author, no study has been done tospecifically compare the doctor's prescribing patterns among insured andun - insured patients in public healthfacilities. Comparing the doctors prescribing practices among insured patients and un-insured patients will show the impact of medical schemes on prescribing.**Objective:** To determine doctors prescribing behaviour among insured and un - insuredpatientsatMuhimbili National Hospital and to identify prescriber factors associated with it.**Methodology:** This comprised of a retrospective partwhich was done on electronic prescriptions and across-sectionalpartwhich was done on prescribers. Thisstudy was conducted at the Out-Patient Department (OPD) of Muhimbili National Hospital. ASimple random sampling technique was employedto select 600 prescriptionsfrom 10649 prescriptions issued between January and February 2017. The World Health Organisation (WHO) recommends that for studies that describe current treatment practices a minimal of 600 encounters should be used.247 Prescribers of the selected prescriptions were identified and agreed to take part in this study. WHO prescribing indicators were used to assess 600 patient prescriptions of both insured and non-insured patients. The WHO prescribing indicators includedthe percentage of antibiotics encounters, percentage of injections encountered, percentage of drugs prescribed using generic names, percentage of drugs from the Essential Drugs List, The average number of drugs prescription. Complying with WHO

recommendations on prescribing meant rational prescribing and not complying with WHO standards on prescribing meant irrational prescribing. Data was cleaned, captured and analysed by using Statistical Package for Social Sciences version 20.0. The findings were expressed as means, percentages and frequencies. AChi-Square test was used to compareproportions and t-test was used to compare the means of the prescribing indicators of the two groups the insured and theun-insured in order to determine the level of significance. P-values below 0.05 were considered statistically significant.**Results**: The average number of drugs per prescription was higher in insured patients (3.92±2.2) than in un-insured patients (2.75 ±1.8) this was statistically significant (p =0.0012).The percentage of generic prescribing among insured patients was 80.58% in insured patients and 81.82% in non-insured patients this was not statistically significant (p =0.86) .The percentage of antibiotic encounters was 13.69% among insured patients and 15.45% in non-insured patients this was not statistically significant (p=0.90) .The percentage of injections prescribed in insured patients was 3.64% and 5.45% in non- insured patients this was not statistically significant (p=0.73). The percentage of drugs prescribed from the Essential Drugs List (EDL) was 55.55% in insured patients and 49.09% in non-insured patients this was not statistically significant (p = 0.322). Nearlythree quarters of the prescribers (73.7%) considered the patients insurance status before prescribing any medication. Treatment guidelines were widely used (57.1%) as a source of prescribing information.**Conclusion:** More drugs were prescribed among insured patients compared to un-insured patients at Muhimbili National hospital.This could have a negative financial impact on the medical insurance schemes.Poor prescribing practices such as prescribing using brand names and low compliance to the EDL were observed among the insured and un-insured patients.**Recommendations:** To overcome the problem of poly pharmacy among insured patients and MNH I recommend that Insurance policies should be reviewed to and co-payments should be introduced.Doctors should be provided with copies of the Tanzanian Standard Treatment guidelines, this will greatly increase compliance to the EDL. Educational and managerial measures should be put in place to improve generic and antibiotic prescribing. To increase compliance to the EDL. Educational and managerial measures should be put in place to improve generic prescribing and antibiotic prescribing. Since this survey was the first one to be conducted to look at prescribing behaviour using WHO prescribing indicators at MNH I recommend that further studies should be done to look at the different factors influencing prescribing other than prescriber factors.

76. Lyandala, V.H. (2017). The utility of ct optic nerve sheath diameter in patients with traumatic brain injury referred to Muhimbili national hospital.Muhimbili univarsity health and allied science.

Abstract

Background: Traumatic brain injury is a major public health problem in Tanzania and indeed worldwide. Many concerns that arise from different research are that neurological damage from Traumatic Brain Injury does not occur at the moment of injury but occurs after hours and day's 1.The rise in Intracranial Pressure is considered an integral part in the pathophysiology of traumatic brain injury. ICP monitoring is crucial in management of TBI

2, 3.Recent cranial Computed Tomography scan studies have shown relationship between CT Optic Nerve Sheath Diameter and Intracranial Pressure 4,5,6,7. Various non invasive methods have been used to measure signs of raised ICP like fundoscopy and ocular ultrasound of which the results are operator dependent 8,9,10. To date little is known in this study area in our community. This study wasassessing the utility of CT scan Optic Nerve Sheath Diameter as a measure of raised intracranial pressure in patients with TBI and the findings will help the clinicians in the triaging patients at risk of having raised ICP.**Broad objective:**To determine utility of CT Optic Nerve Sheath Diameter in patients with Traumatic Brain Injury referred to CT unit Muhimbili National Hospital from June 2016 to December 2016.**Methodology:**This was a prospective Hospital based Cross sectional study which was conducted at Radiology department, Muhimbili National Hospital from June to December 2016 among head injury patients referred to CT scan unit.Structured questionnaire were used for recording patient's demographics, clinical information and Brain CT scan findings. Finally, a systematic dataanalysis was done and Statistical Association was done by using cross tabulations; Chi-square test was used to compare proportions. P value of < 0.05 was considered statistically significant.**Results:**Two hundred and twelve patients with traumatic brain injury whom underwent head CT scan were included in this study, in which 175(82.5%) were male and 37(17.5%) were female. The participants mean age was 33.26 years with range of 18-76 years and standard deviation of 11.7. This study shows that patients with abnormal ONSD were 83 (39.2%) with mean ONSD of 0.6cm and mean GCS of 12 respectively which was statistically significant P=0.0011. Cutoff value of > 0.57cm was used. Sixty percent of patients with linear and depressed fractures significantly contributed more to the traumatic brain injuries and abnormal ONSD [P=0.0001 each].The secondary complications of traumatic brain injury like brain edema,midline shift, effacement of cistern and ventricles were all significantlyrelated to abnormal ONSD with the Pvalue of <0.001. There was strong relationship [P=0.0001] between GCS and ONSD among TBI patients where bymore than 60% of patients with severe and moderate TBI had abnormal ONSD.**Conclusion:**Based on these study findings there is strong relationship between Glasgow Coma Scale and CT Optic Nerve Sheath Diameter in patients with Traumatic Brain Injury. Patients with moderate and severe TBI have higher ONSD measurements than mild TBI patients. In a limited setting CT ONSD obtained from initial scan can be used in triaging patients at risk of having raised ICP. ONSD measurement is indicated in patients with moderate and severe TBI than mild TBI.

77. Lyatuu, L. (2017). Disease characteristics and survival of nasopharyngeal carcinoma patients treated at ocean road cancer institute, Dar es salaam, Tanzania.Muhimbili univarsity health and allead science.

Abstract

Introduction:NPC is the cancer of the nasopharyngeal epithelium. It ranks the third in head and neck cancer seen at ORCI, the first being oral cavity followed by laryngeal cancer. It differs from other head and neck squamous cell carcinomas in epidemiology, histology, natural history and response to treatment. NPC is uncommon cancer in the most parts of the world and demonstrates a marked geographical variation. It is more common in males

compared to females and more in low social economic class.Squamous cell carcinoma is by far the commonest histological type and the symptoms include nasal discharge, sore throat, nasal bleeding, and painful swallowing or enlarged cervical lymph nodes.In early stages, nasopharyngeal cancer can be treated by radiotherapy alone and combination of radiotherapy and chemotherapy in late stages of the disease.Delayed hospital presentation with advanced disease has lead to poor results of treatment.**Objective:** To explore the disease characteristics and survival of patients with nasopharyngeal carcinoma treated at ORCI. **Methodology:** This was a retrospective study designed to determine the disease characteristics and 3 years overall survival of nasopharyngeal carcinoma patients where retrospective secondary data were obtained from patient medical files from 2009 to 2013 and filled into data collection form. The study was conducted at Ocean Road Cancer Institute, Dar es Salaam.**Results:**The overall survival at 3 years was 37 % for those received radical treatment and 6.5% for those received palliative treatment. Median survival time was 28 months for those received radical treatment and 9 months for those received palliative treatment. On univariate analysis survival was significantly associated with treatment modality in both radical and palliative cohorts while age and disease stage was also significantly associated with survival in palliative cohorts. For those received palliative treatment, only age of the patient was significantly associated with survival on multivariate analysis. **Conclusion:**Most of our patients are diagnosed with advanced stage (stage III and IV). Concurrent chemo-radiation is associated with better survival in both radical and palliative cohorts. In multivariate analysis, only age of the patient was significantly associated with survival for palliative group. Early detection of disease, early referral and sustainable availability of chemotherapy may improve survival of NPC patients.

78. Lydenge, F.H. (2017). Evaluation of inter hospital transfer of patients by ambulances to Muhimbili national hospital in accordance to acceptable international standard guidelines.Muhimbili univarsity health and allead science.

Abstract

Background: Inter-hospital patient transfer is increasing due to centralization of certain procedures and interventions, centralization of certain expertise and lack of beds at the referring hospitals. Taking this into consideration. The detailed locally acceptable standard guidelines need to be established so as to decrease the morbidity and mortality at the referring hospitals, during transfer and arrival at the referred hospital. And the implementation of standard guidelines will also improve the outcome of patients referred due to the fact that little has been done regarding establishment of Inter-hospital patient transfer standard guidelines in Tanzania. Guidelines from the Association of Anesthetists of Great Britain and Ireland (AAGBI) format will be used in this study as a questionnaire to evaluate the transfer practices at Muhimbili National Hospital so as to guide in future improvement in patients transfer. A retrospective pilot study has shown that in a day around 100 patients are seen at the Muhimbili Emergency Department and this accounts to approximately 3000 patients a month. There is an average of 20 ambulance referrals per day. **Objective:**To evaluate the Inter hospital transfer of patients by ambulances to Muhimbili National Hospital, Dar-es-Salaam, in accordance to acceptable International Standard Guidelines.**Methodology:**A

convenience sampling method was conducted among patients referred to Muhimbili National Hospital through Emergency Medicine Department via ambulance. For the purpose of this study, the time between 4pm to 10pm was designated for data collection. Patients transfer personnel was informed about the study and was reassured on confidentiality of their participation after having agreed to join. Transfer personnel were recruited after having agreed there participation and an informed consent were given to them for signing. This study had focused on evaluating the Inter-hospital transfer of patients from pre-transfer decision and communication ,equipment and drugs availability checking, proper documentation, continuous monitoring in transit management and resuscitation, handover and the transport personnel skills using the acceptable standard guidelines. The data was analyzed using Statistical Package for Social Scientists (SPSS) from IBM SPSS Statistics Version 20 computer program. Data was presented as proportions for categorical variables. Univariate analysis was used for characteristics of research participants which were expressed as categorical and continuous variables. The chi-square testing was used to test for association between independent variables and dependent variable. If the p-value was found to be less than 0.05 then the association was deemed significant.**Results:**A total of 284 transfer personnel were recruited in this study. There were 128(45.2%) males and 156(54.9%) were females...Most referrals were coming from Amana, Mwananyamala and Temeke hospitals which are within Dar-es-Salaam and the least referrals were from Lindi, Ifakara, Zanzibar, Mbeya and Mtwara regions. The study showed that Senior consultants were involved in transfer decision making by 52% and most transfers 76.5%(on average between stable and unstable patients transferred) were facilitated by nurses. The study also found some poor communication, documentation during transfer processes. Unavailability of well trained personnel involved in transfer and lack of important equipments and drugs during transfer processes were also documented.**Conclusion and Recommendation:**Inter-hospital patient transfer is a very important link in patient care continuity from referring to receiving health facilities. There are many gaps that need to be fulfilled to ensure that the Inter-hospital transfer process is well attained in terms of safety transfer. Proper care during the transfer process and ensuring good outcome during the whole transfer processes; For this matter standard operating procedures for Inter-hospital patient transfer needs to be established.

79. Lyimo, M.J. (2017). Good manufacturing practices compliance: the case of registered small scale maize milling industries in ubungo and Kinondoni districts, Tanzania.Muhimbili university health and allead science.

Background: Good manufacturing practice requirements were introduced in the food industry following the increase in food borne diseases as well as raise in awareness among consumers on food safety issues. GMP in food industries helps to control potential hazards, if adhered to; maintain the certainty of food products through continuous improvement of quality; as well as have food products comply with Tanzania Bureau of Standards and CodexArimentarius Commission specifications. Low compliance to GMP in small scale food industries has been documented in developing countries for decades. However, in Tanzania there is paucity of knowledge on GMP compliance in small scale food industries.**Objectives:** This study intended to determine the proportion of registered small scale maize milling

industries and factors that affect compliance to GMP in Ubungo and Kinondoni districts ofDar-es-Salaam, Tanzania.**Methods:** A cross - sectional descriptive study was conducted among registered small scale maize millers who commercially pack maize flour. The study also included food inspectors from TFDA Eastern Zone Office. Both quantitative and qualitative approaches were used to collect data. A total of 155 millers and 3 food inspectors were recruited for the study. GMP for Food Products Observation Checklist adopted from TFDA (Guidelines for GMP of Food Products, 2013) was used to collect GMP compliance data. Closed and open ended questions and interview guide were administered to the respondents to gather information on factors that affect GMP compliance. Quantitative data were analysed using Statistical Package for Social Sciences (SPSS) and qualitative data were analysed using thematic analysis method. GMP compliance scale was developed from the TFDA Guidelines above and a total score of 65 was used.**Results:** About 21.9% of registered small scale maize millers were GMP compliant. Millers who were supervised by TFDA in the past 12 months were 5.54 times more likely to comply with GMP requirements while millers who had primary education and below (69%) were less likely to comply with GMP requirements. Also, millers who rented buildings (93%) were less likely to comply with GMP requirements. Majority (90.9%) of the millers perceived that GMP was necessary in milling industries however, they reported that it is difficult to implement (70.8%). GMP supervision was found to be affected by lack of financial and human resources. **Conclusion:** A few registered small scale maize millers of Ubungo and Kinondoni Districts complied with GMP. Low GMP compliance was highly influenced by low level of education among millers, lack of guidance from TFDA and within past 12 months use of rented buildings. Supervision is highly affected by lack of resources, human and financial.**Recommendations:** Small scale maize millers of Ubungo and Kinondoni Districts should be sensitized to abide by GMP requirements. Furthermore they should be encouraged to shift to industrial areas so as to comply with GMP requirements. Tanzania Food and Drugs Authority should increase the budget for supervision activities and employ sufficient number of food inspectors.

80. Mamboleo, N. (2017). Computed tomography imaging findings in patients presenting with chest masses at computed tomography unit, Muhimbili national hospital, Dar es salaam, Tanzania.Muhimbili university health and allead science.

Abstract

Background: Chest masses are among the leading causes of mortality worldwide. Chest masses are grouped according to the area they arise from. They can be located at the chest wall (chest wall masses), pleural (pleural mass), lung parenchyma (Lung masses) and mediastinum (mediastinal masses). CT is the most important tool in the workup of a patient with a chest mass. Chest CT provides excellent imaging of the mediastinum; as most of the time, lesions can be diagnosed with sufficient certainty despite their different locations, their presentation, clinical features and radiological features. Additionally, CT is the modality of choice for guided fine needle aspirations (FNA) and core needle biopsies, when a tissue sample is required; the aim of this study was to determine radiological findings of chest masses at Muhimbili National Hospital; as little is known on the presentation, radiological features and prevalence of the chest masses. Moreover imaging investigations e.g. CT are of

high cost and limited availability, so this study will help to justify the use and indication of CT scan of chest to relevant patients hence improvement in their overall management. **Broad objective:**To determine CT scan imaging findings in patients presenting with chest masses at CT unit, Muhimbili National Hospital, from June to December 2016.**Methodology:**This was a descriptive cross sectional study, which was done at CT unit, Radiology department, Muhimbili National Hospital from June to December 2016. All consented patients who were found to .have chest masses by CT scan were included in the study. Structured questionnaires were used for recording patients' demographics, clinical information and imaging findings. Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 20. Statistical association was done by using cross tabulations. Chi-square test was used to compare proportions. P value of < 0.05 was considered statistically significant.**Results:**The number of participants in this study was 120 by which males were 64(53.3%) and females were 56(46.7%). The mean age was 55.73 years old with range 89(6-95) years old and standard deviation of 17.2. The most affected age group was 54-65 years old 37(30.8%).Most of the masses identified were located in the Lung parenchyma (61.7%) , followed by mediastinum (31.7%) , bronchus (3.3%)and only 1.7 % of the masses were found in both the Pleural and Chest wall. Females were significantly presenting with mediastinal masses 23(60.5%) and (60.5%) were located in the anterior mediastinum .Patients with Lung parenchyma masses presents mostly with Cough (54.1%) followed by haemoptysis (27%); those with mediastinal masses presented with chest pain (52.6%). Cigarette smoking was the most risk factor mentioned by patients with lung parenchyma masses. Among all chest masses 43.3% were lung cancers, followed by 15% for metastases, 9.2 % for Retrostenal Goiter, 7.5 % for Aspergilloma, 6.7% lymphoma and 3.3 % for tumours of bronchial origin . 15% is for others which includes aneurysms, thymic cysts, thymoma, , thyroid cancers, neurogenic tumours, mesothelioma and paraspinal abscess. Sensitivity for CT to diagnose lung cancer was 92.9% and specificity of 100%.**Conclusion:**CT imaging plays a greater role in the detection and diagnosis of chest masses .Diagnosis can be made when ideal imaging procedure and good image analysis is done. Using proper protocols diagnosis can be made earlier and with high sensitivity and specificity. This is important in developing countries like Tanzania were competence and facilities for histological diagnoses are not readily available. Proper investigation and examination should be made for older patients who presented with cough, haemoptysis and with history of cigarette smoking.**Recommendations:**More specific studies should be done and include histological results for every patient CT scan should be used as a modality of diagnosing chest masses Public awareness should be done on the effect of cigarette smoking.

81. Mabula, A.M. (2017). Polytrauma: patterns of orthopaedic injuries in polytrauma patients treated at Muhimbili national hospital (mnh) and Muhimbili orthopaedic institute (moi).Muhimbili university health and allead science.

Abstract

Background: Orthopedic injuries constitute a major part of polytrauma. Treatment trends are evolving. In order to determine what is best for our environment, there is a need to define the magnitude of the problem. **Aims and objectives:** To describe the mechanism of injuries,

sociodemografical features, to determine the patterns of orthopedic injuries and to determine the early management of orthopedic injuries in polytrauma as well as carry out a review of relevant literature.Patients and **Methods:** This was a six month (July 2016-January 2017) hospital based cross sectional descriptive study of patients with polytrauma from which an analysis of orthopedic injuries was performed. Patients were recruited at the point of presentation in the accident and emergency departments of MNH and MOI and followed up to the point of early management of orthopedic injuries. Data analyses were 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:** Fifty six patients were recruited. All polytrauma patients recruited had orthopaedicinjuries. Lower limb injuries predominated, with femoral fractures being the most common in 35 (39.3%) patients. Head injuries were the most frequent associated injuries in 41 (65.1%). Only 6 (10.7%) patients had early total care (ETC) treatment,the rest had DCO (89.3%). RTC was the most causative agent of poytrauma by 52(92.9%) patients, motorcyclist were most involved 16(28.6%).male predominated, 47(83.9%) were involved and the most age group involved was 25-34yrs, 16(46.4%).**Conclusion:** Orthopedic injuries constitute a major part of polytrauma. Lower limb injuries predominate. Head injuries were the most common associated injuries. RTC was still the leading cause and motorcyclists were the most affected.DCO wasthe treatment advocated because of established advantages in literature.

82. Mabula,P.S. (2017). The impact of basic emergency medicine training on the understanding, perception and career decision-making towards emergency medicine amongst healthcare providers in tertiary referral hospitals in Tanzania.Muhimbili university health and allead science.

Abstract

Background: Emergency Medicine (EM) is a new specialty in Tanzania. Little is known about how to introduce EM to healthcare providers (HCPs) in hospitals without EM. **Aim:** To determine the impact of a 2-day EM training on the understanding, perception and career decision-making towards EM amongst HCPs at four tertiary level hospitals in Tanzania that do not have EM.**Methodology:** This was an interventional study including HCPs from four tertiary hospitals in Tanzania that do not have EM. Understanding, perceptions, and decision making regarding EM as a career was assessed before and after a 2-day basic EM training using a paper questionnaire. Quantitative data was obtained using Likert scale (out of 5) and was analyzed by T-tests, Mann-Whitney test and Kruskal Wallis test. Qualitative data was analyzed for content and themes by an inductive, iterative approach.**Results:** 96 HCPs participated in the study; the four hospitals were equally represented. Median pre-training scores for all Likert questions was 3.49 (IQR3.26-3.91); understanding 3.33 (IQR3.00-3.66), perception 3.40 (IQR3.14-3.71), and career decision making 3.66 (IQR3.33-4.00). Post-training scores showed improvement with median scores of 4.61 (IQR4.45-4.72) overall, 4.66 (IQR4.00-4.66) for understanding, 4.63 (IQR4.50-4.87) for perception and 4.66 (IQR4.33-4.83) for career decision making (all $p<0.01$). Themes addressed by participants included whether EM physicians were needed, whether they had sufficient career possibilities, and

whether or not doctors should be encouraged to pursue EM as a career.**Conclusion & Recommendation:**A 2-day EM training had a positive impact on understanding, perception and career decision-making towards EM amongst Tanzania HCPs that work in hospitals without EM. Long-term follow up to ascertain retention is recommended.

83. Machangu, O. I.N. (2017). Extent of use of skin bleaching agents and associated factors among female college students in ilala district, Dar es salaam.Muhimbili university health and allied science.

Background: Skin bleaching is the cosmetic treatment to reduce melanin in the skin. Melanin acts as a protector of the body from external factors that can harm it. The use of skin bleaching has recently increased in Tanzania due to globalization. Bleaching agents can be in various forms such as creams, pills, injection and soap. They contain hydroquinone, mercury and steroids which are highly poisonous to human body that may lead to diseases such as leukemia, skin cancer, kidney failure, hypertension and irreversible skin damage. Despite these adverse effects, the use of skin bleaching agents is still on the rise. Women especially female college students are engaged in bleaching their skin for beautification without the knowledge of adverse effects to their body physiology.**Aim of the study:** To assess the extent of use of skin bleaching agents and its associated factors among female college students in Ilala District, Dar es Salaam.**Methodology:** This was a cross-sectional study conducted among female students in four randomly selected higher learning institutions in Ilala district, Dar es Salaam Multi stage sampling technique was used to obtain the study sample. The data was collected by using self administered structured questionnaire to 623 female students. Data entry and analysis was conducted by the Statistical Package for Social Sciences (SPSS) version 20. Data was summarized using descriptive statistics. Frequency distribution tables summarized categorical variables. Logistic regression was used to examine associations between various study subjects' characteristics and use of skin bleaching agents.**Results:** The proportion of higher learning studentslearning students reported to use skin bleaching agents was 57.8%. College students who were divorced or cohabiting were about twelve times more likely to use bleach compared to those who were single [adjusted odds ratio (AOR), 11.97 (95% CI: 3.28, 43.72)]. Students from Institute of finance Management (IFM) and Dar es salaam school of journalism (DSJ) were more likely to use bleach compared to students from Muhimbili university of health Allied Science (MUHAS) (about 23 times and 7 times respectively, $p<0.0001$).Students who perceived positively about skin bleaching agents were twice more likely to use skin bleaching agents compared to those who are with negative views or those who did not have any views about skin bleaching agents (AOR, 2.63; 95% CI: 1.64, 4.23, $p <0.0001$). Age and income were not associated with use of skin bleaching agents.**Conclusion:** Results of this study led to the following conclusion. Over half of the female students reported to use skin bleaching agent. Secondly being married, divorced and a student of of Institute of finance management (IFM) or Dar es salaam School of Journalism (DSJ) student was associated with the use of skin bleaching product, However faceHowever face and arms where the most parts of the Body where by application of the bleaching agent was reported and Positiveand Positive perception towards the end results of using skin bleaching products caused the consumer to continue using the

product **Recommendation:** Sustainable health education to intensify awareness on the side effects of the skin bleaching agents may need to be raised to curb their serious health effects and change the perception among college students.

84. Mahamoud, K.J. (2017). Assessment of the quality and satisfaction of maternity health care services among post-natal mothers, tanga regional referral hospital, Tanzania.Muhimbili university heath and allied science.

Abstract

Background: Financial risk protection against the cost of unforeseen ill-health has become a global concern, as evidenced by the 2005 World Health Assembly resolution WHA58.33 which called upon all member states to "plan the transition to universal coverage of their citizens". In most African countries maternal and under-five services are officially exempted from user fee payment but in practice, these policies are not implemented. In 2012, the Tanzania National Health Insurance Fund (NHIF) with technical support from Germany began implementing a scheme of health insurance in Mbeya, Mtwara, Lindi, and Tanga regions. The scheme provides free health insurance to women during pregnancy and the post-natal period up to 3 months after delivery.**The broad objective:** This study assessed the quality and satisfaction of the maternity health care services provided under KfW scheme among post-natal mothers at Tanga Regional Referral Hospital.**Methodology:** A cross-sectional study design was conducted, using quantitative approach. Standardized Structured Likert scale questionnaires were used to collect data. The simple random technique was used to obtain a sample size of 217 participants and all participated in the study during data collection. Collected data were analyzed by Statistical Package for Social Science (SPSS) version 21.**Results:** The study found that most of the women who deliver at Tanga Regional Referral Hospital are satisfied with the quality of care received. In addition, the study found that socio-demographic characteristics in association with post-natal mothers' satisfaction of KfW services were statistically significantly associated with the level of education (0.022). But, Age, parity status, the area of residence, occupation and marital status were not found to be associated with satisfaction of KfW services.**Conclusions:** Most post-natal mothers who deliver at Tanga Regional Referral Hospital are satisfied with the quality of maternity health care services offered by KfW services, but a more educated woman is moderately satisfied. KfW scheme found to be useful to poor pregnant women to adequate health services due to the fact that most of the drugs and medical supplies are now available.

85. Mahundi, S. (2017). Sexual behaviours and perceived risk of HIV infections among female hairdressers in Kinondoni municipality Dar es Salaam, Tanzania.Muhimbili university heath and alliade science

Abstract

Background: Sexuality and sexual practices differ in context because of cultural and social environment differences that exist in the society. Although there is a greater variability in sexual practices particularly in Sub Saharan countries, such practices always considered to go hand in hand with taboos and culture. The environment in the salons provides hairdressers the

opportunity to discuss about sexual issues which may promote risk sexual behavior and increase the risk of HIV infections.Main **objective:** The main objective of this study was to explore sexual behaviors and perceived risk of HIV infections among female hairdressers in Kinondoni Municipality.**Materials and methods:** A descriptive cross-sectional study was conducted among 248 female hairdressers in Kinondoni Municipality. Structured questionnaire was used to collect data. Data were analyzed using computer software SPSS Version 16. Statistical significance was assessed using Chi-square test. A P-value of less than 0.05 was considered to be statistically significant. Ethical approval was obtained from Muhimbili University of Health and Allied Sciences (MUHAS) ethical committee and informed consent was obtained from each study participant.**Results:** About 98.8% of hairdressers reported being sexually active. Commonly reported sexual practices include vaginal sex, masturbation, and oral sex. About 5.2% of sexually active hairdressers reported having multiple sexual partners. About two of every five hairdressers (41.5%) reported to have low chance of getting HIV infection while only 10.9% believed the probability of getting infected was very high.**Conclusion:** Hairdressers engage in several risk sexual practices including multiple relationships and majority of them perceived to be at low risk of HIV infections. Interventions which include safe sexual practices and avoiding of multiple relationships should be implemented among hairdressers.

86. Makame, S.A. (2017). Factors influencing performance of screening methods for urinary schistosomiasis among school children in uwandani Pemba, Zanzibar - Tanzania, 2017. Muhimbili university heath and allied science.

Abstract

Background: Correct diagnosis for urinary schistosomiasis is essential for patient management, drug efficacy evaluations, and monitoring of large-scale control programs. However diagnostic performance of screening (indirect) methods varies in different endemic zones, age groups and sex especially when there is low prevalence after large scale praziquantel mass drug administration (MDA) in a school based schistosomiasis control programme. Main **Objective:** To assess the factors influencing the performance of screening methods (self-reported, macro and micro haematuria and microscopy) in the diagnosis of urinary schistosomiasis after wide scale up MDA with praziquantel in a school-based schistosomiasis control programme. **Materials and methods:** A cross-sectional study was conducted in Uwandani Village Chakechake District from May to June, 2017. Probability sampling applied to obtain the schools and participants of the study. Uwandani School was selected and a total of 334 participants from standard I – VI were randomly selected. A structured questionnaire was used to collect information on demographic characteristics; self reported haematuria, and status of praziquantel administration. Each participant was provided with 50mls clean, dry wide mouthed and well caped labeled plastic containers for collecting about 20ml of cleancatch, midstream urine sample between 10:00hrs and 14:00hr. The SPSS software version 16.0 was used to make data analysis. The diagnostic performance of dipstick screening test was compared with microscopic examination of urine for S. haematobium egg (filtration method, as the gold standard). **Results:** The prevalence of urinary schistosomiasis increased and decreased with age. The highest prevalence occur among students aged

between 13 – 15 years (4.66%) and 6 – 9 years (4.33%) but lower in age between 10 – 12 years (2.0%) for both sexes, but the difference was not significant (P > 0.05). The prevalence by reported haematuria was 19.3% of which the prevalence was 15% males and 4.33% females. The prevalence by reported haematuria with age group was (6%) at the age of 13-15 years and 10-12 years (5.66%) for males while the prevalence was 0% among xi students aged 13-15 years and 2.0% in the age of 10-12 years in females. For pupils aged at 6-9 the prevalence was 3.33% in males and 2.33% in females. The overall prevalence by visual haematuria was 3.7% in which (1.33%) students were males and (0.33%) were females aged 13-15 years while the prevalence in students aged 69 years was 0.33% in males and 1.6% in females. Those students aged at 10-12 years had 0% prevalence. Urine dipstick results revealed that 70 participants had haematuria of which 38 were girls (24.2%) and 32 were boys (22.4%). The overall intensity of infection was 33 (11%) participants were confirmed to have urinary Schistosomiasis, in which 17 had light infection (5.67%), where males were 9 (3%) and 8 females (2.67%). Additionally, 5 participants (1.66%) had mild infection in which males were 2 (0.67%) and 3 females (1%) and finally 11 (3.67%) had heavy infection where 5 of them were males (1.67%) and 6 female (2%). The sensitivity and specificity of self reported haematuria was 21.2% and 81% respectively. The negative predictive value (NPV) was 89.3% while positive predictive (PPV) value was 12.1%. The sensitivity and specificity of visual examination was 33.3% and 100% respectively. The negative predictive value (NPV) was 92.4% while positive predictive (PPV) value was 100%. The sensitivity and specificity of chemical reagent strips for haematuria was 39.4%and 75.3% respectively. The negative predictive value (NPV) was 91% while positive predictive (PPV) value was 16.5%. The logistic regression analysis showed that, sex and intensity had significant correlation with false positive results and influence the performance of self reported haematuria ($p < 0.05$ and $p < 0.001$) respectively. The intensity of infection also influenced the performance of visual haematuria and microhaematuria as ($p < 0.001$) and associated with false positive results. **Conclusion:** Among the three diagnostic tests used in this study the urine dipstick for microhaematuria has been shown to be highly performing test for rapid screening of urinary schistosomiasis influenced by the intensity of infection. The visual haematuria still remain as useful test for rapid screening of urinary schistosomiasis but the test should be confirmed by microscopy (filtration method).

87. Malekia, S.E. (2017). Active health research monitoring in Tanzania: perspectives from members of institutional review boards. Muhimbili university heath and allied science.

Abstract

Background: Ethical approval for research involving human subjects began in Europe due to gross abuse and unethical practices that occurred during the Second World War. In Africa, the ethical approval and active research monitoring of human research arose due to concern of possible ethical misconducts and exploitation on vulnerable population. In Tanzania, the National Health Research Ethics Committee (NatHREC) was established in 2002 to oversee all health research activities. To widen its scope, NatHREC accredited institutional review boards (IRBs) to review, approve and actively monitor research conducted by local

investigators with non-foreign collaboration at institution level. However, available evidence indicates that active research monitoring is scarce. Lack of available guidelines, competent personal and funds has been mentioned as factors that constrain or enable the conduct of active research monitoring in other countries. A knowledge gap remains on understanding the conduct of active research monitoring with perspectives from members of IRBs in Tanzania.**Objective:** The main objective of this research was to explore active health research monitoring in Tanzania with perspectives from members of institutional review boards.**Methodology:** A mixed method research that employed quantitative and qualitative research techniques for data collection and analysis was carried out between June-July in 2017. IRB documents such as annual report, proposals, active monitoring SOPs and were reviewed and analysed manually. In-depth interviews were conducted among 11 key informants purposively selected from four IRBs in Dar es Salaam, Tanzania. Interviews were recorded, transcribed and translated before being analysed using content analysis technique with NVivo software version 10 software.**Results:** Active research monitoring was preserved to be an important obligation for IRB members, however it was not being conducted regularly. Some of the IRB members felt that they were less involved in the decision-making on the conduct of active monitoring. Factors noted to constrain active monitoring included; financial resources, training, members‟ availability, lack of guidelines and tools, lack of prioritization and difficult to monitor research in remote areas. Factors that had enabled active monitoring included; institutional support and sense of obligation, alarming reports from passive monitoring, available SOPs and tools, proposal submission fees and the use of heads of departments.**Conclusion and recommendations:** The study findings revealed that active research monitoring at the IRBs was perceived to be inadequate. Inadequate financial support, training among IRB members, devoted time from members, lack of full time secretariat staff, lack of specific guidelines and tools for active monitoring as well as the lack of regular supervision and mentorship were described to hinder its implementation. Strategies considered to be important in addressing these challenges included; reinforcement of existing SOPs and guidelines from national level, IRB members to be more pro-active to prioritize its need during review meetings, consider IRB specific means in rising financial support for active monitoring e.g. through submission fee and subcontracting qualified individuals at regional, district and department level when required.

88. Mapala, Y.W. (2017). Use of geospatial analysis to support resource allocation decision-making in healthcare projects a case of usaid hiv/aids implementing partners. Muhimbili university heath and allied science.

Abstract

Background: Geospatial analysis identified as one of the best tools for improving decision making in donor financed healthcare projects that involve partnership with local organizations. However, for Tanzania, geospatial technology remains rare skill. The USAID and other DPs introduced GIS techniques as a way of supporting cost effectiveness allocation of resources for HIV/AIDS treatment. Planners and decision makers from different USAID HIV/AIDS implementing partners identified and trained in GIS. However, the status of adoption and use of geospatial techniques remains paradoxically unclear. **Objectives:** The

study aimed at examining how planners and decision makers from implementing partner organizations consider geospatial methods useful in improving resources allocation planning and decision-making. The study explored initiatives of the implementing partners to support adoption, how the users consider GIS techniques to be useful, and the challenges that experienced in the adoption and implementation.**Methods:** This study employed a cross sectional descriptive design. It involved 30 training of geospatial champions from 15 organizations under the USAID HIV/AIDS programs in Dar es Salaam. Twenty eight of the respondents who were still employed in the programs were interviewed and 14 of them participated in two Focus Group Discussions (FGDs). Data analysis involved qualitative content analysis, which was based on both the literature and new emerging themes from the interviews and FGDs.**Results:** Study results revealed that majority of the respondents had not successfully adopted the use of geospatial techniques in the day-to-day job activities. Most of the respondents felt that GIS was appropriate since its use made them perform professionally and could justify their resources allocation decisions. However, they found GIS to be difficult due to lack of access to software, limited skills that GIS needed including computer and ICT skills, limited support from the organizations, high cost of GIS software, and some notable inconsistences within the development of the GIS technology itself. While respondents thought GIS was useful in their job, many of them failed to sustain its use due to several challenges. The main challenges were lack of close support from the organizations, higher cost of the GIS software, limited availability of the software and hardware in the organizations, and limited skills in GIS, computer, and ICT. **Discussion:** The findings consistently revealed the importance of organizational support, which employees required to make successful adoption and use of GIS. The findings show that in organizations, which provide close support and encourage employees to use the GIS technology there are more chances for successful adoption compared to those, which do not.**Conclusion:** The study concluded that organizational support is very important in the adoption of useful technologies such as GIS. Even in situations where employees find a new technology useful, limited material and psychological support remains crucial.**Recommendations:** The study recommended that the USAID should make the use of GIS compulsory for implementing partner organizations and provide continued support in terms of training, software, and hardware. The management of the implementing partner organizations should incorporate GIS skills as a measure of individual performance and use the available GIS champions to train the rest of the employees.

89. Mariki, H.K. (2017). Gene expression profiles associated with congenital heart disease among children aged 0-59 months at Muhimbili national hospital and Jakaya Kikwete cardiac institute, Dar es salaam, Tanzania.

Abstract

Background: Congenital heart diseases (CHD) represent the most common birth defect in paediatric population. The majority of cases are caused by a combination of complex genetic alterations and environmental influences. There is still a large proportion of cardiac malformations with unknown precise origin. There is insufficient data in Africa, particularly in Tanzania on the profile of gene expression implicated to cause CHD. **Objective:** To

determine the gene expression profiles associated with CHD among children aged 0 – 59 months at Muhimbili National Hospital and Jakaya Kikwete Cardiac Institute in Dar es Salaam, Tanzania.**Methodology:** A cross-sectional hospital based study was carried out at the Paediatric units at Muhimbili National Hospital (MNH) and Jakaya Kikwete Cardiac Institute (JKCI), which are part of the tertiary hospital in Dar es Salaam, Tanzania. Ethical clearance and permission to conduct the study was sought from MUHAS ethical committee, JKCI and MNH administration respectively. Written informed consents were administered prior to any study procedures. A structured questionnaire was used and blood sample were collected for Real-time reverse transcription Polymerase Chain Reaction (RT-PCR) and baseline routine investigations. Echocardiogram was done to confirm the presence and type of CHD. RT-PCR was performed on a Light Cycler 480 Real Time PCR system (Roche) using standard RT-PCR conditions. Results were analyzed using the Light Cycler 480 Software v1.5. Primer sequences used for RT PCR.**Results:** A total of 220 children were enrolled into the study, highest percentage (58%) 1 month – 2 year. RT-PCR was performed on 163 samples. NKX2-5 and GATA4 were found to be expressed low in most of the subtypes of CHD. GATA4 and HAND1 were lowly expressed most in septal defects (GATA4 in 34% of Ventricular Septal Defects (VSD) and 27% of Atrial Septal Defects (ASD), while HAND1 in 31% of VSD and 22% of ASD). In conotruncal defects, NKX2-5, TBX5, GATA4 and GATA6 were lowly expressed, with the highest being in TBX5 (29% in Tetralogy of Fallot and 27% in Truncus Arteriosus).**Conclusion and Recommendation:** Expression of NKX2-5, TBX5, GATA4, HAND1 and GATA6 may signify a role in development of CHD. Further studies are recommended on protein sequencing of the genes that were lowly expressed in this study so as to know the exact mutations.

90. Masago, J. (2017). The pattern of salivary gland tumours among patients attending orl and maxillofacial services at Muhimbili national hospital. Muhimbili university heath and allied science.

Introduction: Salivary gland neoplasm constitutes about 10% of all head & neck neoplasm which represent 3% of all neoplasm of the body. The diseases contribute to significant morbidity worldwide while its epidemiology in Tanzania remains sparse. There was paucity of information regarding salivary gland tumours in our setting; therefore it was important to conduct this study to describe our experience on salivary gland tumours, associated co-morbidities and treatment outcome in patients attending Muhimbili national hospital.This study was carried out to find the prevalence and the frequency of malignancy among salivary gland neoplasms, their histological types, age and sex distribution of the patient.**Objective:** The study aimed at determining the pattern of salivary gland tumours among patients attending Otorhinolaryngology and Maxillofacial services at Muhimbili National Hospital.**Method:** This was a hospital based cross-sectional study that was conducted in the departments of the Otorhinolaryngology and Maxillofacial at Muhimbili national hospital involving all patients with a clinical diagnosis of Salivary gland tumours. Study was carried out on a total number of 276 patients of salivary neoplasms of different age groups. Data was collected by history taking, physical examination and the necessary investigations using a pre-tested coded questionnaire and analyzed using SPSS statistical computer software version

20.0. The study took a period of six months from July to December 2016 with an estimated cost of 1,500,000 TShs.**Results:**Among 276 study participants 156 (56.5%) were males and 120 (43.5%) were females. Their age ranged from 0 to 90 years with mean age of 49.47 years, SD ±15.7. Most of them 69 (28.6 %), were in the age group of above 60 years.Most of them 31 (26.1 %), were in the age group of40-49 and 60+ years. The prevalence obtained was higher among males, 64 (55.1%) salivary gland tumours occurred in men and 52 (44.8%) occurred in women, P=0.76 which is not statistically significant. The parotid gland was the most commonly affected site (75%) and the submandibular and sublingual were the least affected sites (7.5%). Among 116 patients with SGT, 76 (66%) had malignant type and 40 (34%) benign type. Both benign and malignant SGT tumours had male preponderance. The most common benign histology was pleomorphic adenoma which was high in males (28.1%) compared to females (25.0%), and the common malignant histology was mucoepidermoid carcinoma,(23.4%) in males and (28.9%) in females. The tumours affected men more commonly, particularly the 40-49 age group, but these differences were not statistically significant (p= 0.07). **Conclusion:**Majority of salivary gland tumours in our setting were malignant type and mucoepidermoid carcinoma being the most occuring histological type while Pleomorphic adenoma was the mostly frequent encountered benign type and both had male preponderance mostly seen at the age of 40 years and above. Majority of patients with malignant tumours presented late to the hospital therefore there is a need for advocacy for early health seeking behaviour to the community and early detection of the disease by health personnels in the primary health centers hence prompty referal to otorhinolaryngology specialists for definitive management.

91. Maselle, E.B. (2017).Assessment of the integration of tb and HIV services at different levels of selected health facilities in Ilala district, Dar-es-salaam.Muhimbili university health and allied science.

Abstract

Background: In 2015, there were an estimated 10.4 million new cases of Tuberculosis (TB) worldwide of which 1.2 million (11%) were associated with HIV. In Tanzania, the prevalence for TB is estimated at 164 per 100,000 population and about 50% of all TB patients are HIV positive. TB and HIV are overlapping epidemics where HIV is known for being the strongest risk factor for developing TB disease. TB disease is also more common in people living with HIV and accelerates progression of HIV infection. Several studies have shown early antiretroviral therapy (ART) reduces both morbidity and mortality in TB patients co-infected with HIV, hence improving the quality of life. Tanzania started offering HIV services in TB clinics in 2008 as per the World Health Organization recommendations; however no systematic assessment on the extent of integration of HIV services in TB clinics has been done to date.**Objective:** To determine the level of integration of HIV services in TB clinics in different levels of selected health facilities and associated factors in Ilala district, Dar-es-Salaam.**Methodology:** A retrospective cohort was established with all adult TB infected patients registered in selected TB clinics from January to December 2016. Data was extracted from facility records using a data compilation sheet and qualitative interviews were held with TB focal persons. Cumulative proportion of TB registered clients provided with HIV counselling and testing and/or initiated on ART was calculated. Survival analysis to determine time to integration was run. Cox regression models were used to identify independent predictors of overall integration of HIV services. Significance level was set at alpha = 5%.**Results**: A total of 1138 patients, ≥18 years who initiated on TB treatment between January and December 2016 were included in the study after excluding 12 patients with incomplete data. The median age (IQR) of study participants was 35 (28-45) years and 31% were females. Prevalence of TB/HIV co-infection among adult TB patients in our study was 33.7%. Of the 228 co-infected ART naïve patients, 6.6% were not initiated on ART during the TB treatment period. The level of CD4 cell count at the start of TB treatment was strongly associated with timely initiation of ART. Fifty percent (50%) of those with CD4 cell count<100 cells/mm3 were started on ART within 2 weeks after commencing TB treatment as compared to 17.2% of those with CD4 cell counts >300 cells/mm3 (HR = 5.09, 95%CI: 1.82-14.18, p = <0.001).There was no significant association between age, sex or type of TB and timely ART initiation. All TB/HIV patients already on ART were linked to HIV clinics within the recommended time.**Conclusion and recommendations:** The overall integration of TB/HIV services in TB clinics was at 100%, 98% and 93.4% for HIV screening, CPT coverage and ART coverage respectively. Delays in starting ART were substantial with more than half of ART naive TB/HIV co-infected patients initiated on ART more than 2 weeks post TB diagnosis contrary to the WHO and National guidelines of within 2 weeks and some did not start ART at all during TB treatment. More collaborative and coordinative efforts at district level is needed to ensure all newly diagnosed TB patients are timely started on ART and other HIV care and management services as per WHO and National guidelines.**Keywords:** Integrated TB/HIV services, TB, HIV, ART, Tanzania.

92. Masuma, G. (2017). Urethrographic patterns of urethral strictures among patients with micturition abnormalities at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Urethral stricture is a global health problem mainly occurring among males with history of pelvic trauma and urinary tract infections which normally is associated with various voiding problems ranging from urinary incontinence to complete obstruction. Urethrography is the most important imaging modality for urethral stricture and can help in planning of its management.Broad **objective:**To determine urethrographic patterns of urethral strictures among patients with micturition abnormalities at Muhimbili National Hospital from June to December 2016.**Methodology:**This was a descriptive cross sectional study that was conducted at radiology department MOI involving 145 patients with micturition abnormalities who were referred and had consented for urethrogaphy examination during the period of study. Convenience sampling method was used. Structured questionnaires were used for data collection and imaging findings recorded. Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 20. and a p-value of < 0.05 was considered statistically significant. Statistical association between urethral stricture patterns and various associated aetiological factors such as trauma, iatrogenic, congenital and inflammatory causes was done using cross tabulations and CHI-square test was used to compare proportions. Urethral stricture was the dependent variable while the urethral stricture causes such as trauma, inflammatory, congenital and iatrogenic causes were the independent variables.**Results:**This study involved 145 patients with micturition abnormalities who were refered to MOI radiology department .All patients were males. The median age was 65 years with age range of 86(1-87) and standard deviation of 24.56 for the mean age of 55.72 years [P=0.0002]. Many patients with Urethral stricture were above 60 years old 63(58.9%).Obstruction was a major symptom with which most patients presented (63.4%). Urethral catheterization appeared to be the dominant indication with which patients who were reffered for urethrography presented ie 53(36.6%) patients with [P=0.0001] followed by infections 20 (18.7%), trauma 20 (18.7%) and post prostatectomy strictures in 19 (17.8%) patients. The results show that among the anatomic patterns of urethral strictures, bulbous urethra was the most commonly involved anatomic site(54.5%) followed closely by membranous urethra(41.5%) and by far the penile(9.9%) and last was the prostatic urethra(2%). Most of patients found to have urethral strictures had short segment strictures (82%). The results revealed that most of the patients with urethral strictures presented with smooth mucosal pattern (76.6%) rather than irregular pattern (17.8%). Most of patients presented with single stricture (88.1%) rather than multiple (11.9).The study also showed statistically significant correlation between post urethral catheterization and bulbous urethral strictures($r = 0.340$ and $p=0.0001$) that are smooth [$r=0.349$, $p=0.001$] and of short segment. [$r=0.227$,$p=0.022$]. Trauma is shown to have significant correlation with membranous, [$r=0.488$, $p=0.0001$] long segment [$r=0.308$, $p=0.002$] as well as mixed type of urethral stricture patterns.[$r=0.201$, $p=0.044$]. **Conclusion:**Urethral stricture disease is a predominantly male disease. Most of patients with urethral stricture are above 60 years of

age. Bulbous urethra is the most commonly involved anatomic site. Urethral catheterization is a leading cause of urethral stricture in patients above 60 years. Infections are still a significant cause of urethral stricture in our communities.**Recommendation:**

1.All patients aged 60 years and above presenting with lower urinary tract symptoms should undergo urethrogram procedure to rule out urethral stricture disease provided prostate enlargement has been ruled out as a cause.

2. More research on assessment of urethral stricture patterns.

93. Mathias, M. (2017). Prevalence and aetiology of neck masses among patients receiving surgical services at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Neck masses are found in all age groups from many causes, ranging from congenital to acquired pathology. They can become a diagnostic challenge due to some of conditions that have this signal as the main manifestation. The prevalence of the neck masses at M.N.H is not yet known despite attending several patients presenting with neck masses. We also have late referral and management of patients with neck masses, and this can be due to lack of knowledge on neck masses.**Objective:**The study aimed at determining the prevalence and aetiology of neck masses among patients receiving surgical services at Muhimbili National Hospital in Tanzania.**Methods:**Descriptive hospital based cross sectional study was done from July to December 2016 involving the patients who were admitted in Otorhinolaryngology, Oral Maxillofacilal Surgery, General Surgery and Pediatric surgery wards. The participants who met the inclusion criteria were interviewed and thorough clinical examination was done. For the study participants with neck masses FNAC of the neck masses was done or open biopsy for ulcerated masses. Primary site of malignant neck masses was determined through various methods including indirect laryngoscopy, direct laryngoscopy and OGD then results were filled in questionnaires. CHI square test was used to test for significance. Statistical Package of Social Sciences (SPSS 20) computer software was used to analyze the data and a P-value of less than 0.05 was considered as statistically significant.**Results:**The overall prevalence of neck masses was found to be 14.1% and proportion of neck masses was found to increase as the age increased. The prevalence of neck masses did not differ significantly between males and females. Anterior triangle was the most anatomical site in the neck with neck masses (53.8%). Most of the neck masses (65.7%) were malignant and the age group most involved was >60 years (P-value 0.000). SCC was the leading malignant subtype among the malignant neck masses (54.1%). It was also found that 67.21% of the malignant neck masses were the metastatic nodes from primary cancers in the upper aerodigestive tract.**Conclusion:**This study shows that neck masses are prevalent at MNH and proportion of neck masses increase as the age increase. The most anatomical site involved with the neck masses was anterior triangle. Most of the neck masses were malignant in which majority of them were metastatic nodes from upper aerodigestive tract. Any neck

mass especially in adults needs thorough evaluation including upper aerodigestive examination to rule out possibility of malignancy.**Key words:** neck masses, prevalence

94. Maya, A.M. (2017). Assessment of the effect of supervised toothbrushing and use of plaque disclosing agent on oral health status of primary school pupils in Dar-es-salaam.

Muhimbili university health and allied science.

Abstract

Background: Use of plaque disclosing agent and supervised tooth brushing have shown to be effective in improving children's oral hygiene status in communities where children have good oral health behavior and home care**. Aim:**The aim of this study was to examine the effect of using plaque disclosing agent to aid tooth brushing and that of supervised tooth brushing on oral hygiene status, gingival health and tooth brushing skills of primary school pupils in Dar es Salaam. **Methodology:** This was a cluster randomized controlled field trial study with two interventions; supervised tooth brushing and use of plaque disclosing agent to guide tooth brushing in 7 to 8 years old children. Cluster sampling design was used to select the participants using a school as a sampling and randomization unit. Following baseline data collection of 245 pupils from ten schools, the schools were randomly allocated into three groups; three schools in each intervention arm and four in a control arm. The pupils were supervised to brush their teeth or to use plaque disclosing agent to aid tooth brushing for three consecutive days and were reminded on the interventions done once a week for a period of two weeks. Interviews (social demographics and oral health related behaviors), dental clinical examination (dental plaque and gingival bleeding) and observation of required tooth brushing skills were used for data collection before and after intervention. Data entry and analysis was done by using SPSS version 20.0. Frequency distribution for proportions, means for intervention outcomes were computed and cross tabulation was conducted to bivariately compare the variables. Paired t-test and one way analysis of variance (ANOVA) were used to compare intervention outcome means from baseline to follow up and examine influence of individual intervention on the intervention outcomes, respectively. Multinomial logistic regression was performed to adjust for the effect of socio-demographics and oral health behaviors on observed changes and was reported as odds ratio and 95% confidence interval; p-value<0.05.**Results:** A total of 245 pupils participated at baseline and 231 at follow-up.They were equally distributed in terms of sex (Female=50.2%) and age (8 years=50.2%), with parents of average education and occupational status. Children who brushed at least twice a day were only 8.2% and less than quarter (26.5%) were supervised during tooth brushing. At baseline, mean plaque score, gingival bleeding and tooth brushing skills were 26.0, 5.8 and 0.2, respectively. They were respectively, 20.3, 3.4 and 0.7 at follow up. Use of plaque disclosing agent had statistical significant effect on plaque and gingival bleeding score. The mean differences for the effect were 2.8 (0.8, 4.8) for plaque and 1.2 (0.4, 2.0) for gingival bleeding. The mean difference for the effect of supervised tooth brushing were 2.2 (0.1, 4.1) for plaque and -1.0 (-1.2,-0.6) for tooth brushing skills**. Conclusion:** Majority of the children had poor oral hygiene, unhealthy gingiva and had no tooth brushing skills at baseline. Supervised tooth brushing showed positive effect on pupil's tooth brushing skills and oral hygiene status. The use of plaque disclosing agent to aid tooth brushing positively influenced pupils' oral hygiene status and gingival health. Most socio-demographics and oralhygiene practices had an insignificant influence on the observed outcomes of the interventions

95. Mbarak, B.A. (2017). Prevalence of postpartum depression and associated risk factors following pre eclampsia/ eclampsia at Muhimbili national hospital - a cross sectional study.Muhimbili university health and allied science.

Abstract

Background: Postpartum depression (PPD) is a common complication of childbearing. It affects maternal functioning, maternal-infant bonding, and cognitive function in children and woman's relationship with her partner. The risk of postpartum depression increases among women with high risk pregnancies. Clinical observations suggest a higher risk of postpartum depression among those with pre-eclampsia and eclampsia compared to the general population. However, evidence is inconsistent and not from settings similar to Tanzanian context.**Objective:** To determine the prevalence and associated risk factors of Postpartum Depression among women who had Pre-eclampsia or eclampsia at Muhimbili National Hospital (MNH).**Methodology:** This hospital based cross sectional study was conducted among women who had pre-eclampsia or eclampsia during pregnancy attending postnatal care clinic at MNH. PPD was assessed using Edinburg Postnatal Depression Scoring scale (EPDS). The prevalence of PPD was obtained as percentage of women who scored 13 or more on EPDS. Bivariate and multivariate logistic regression analyses were applied to identify independent risk factors associated with PPD. All analyses were conducted using SPSS version 20.**Results:** A total of 386 participants were recruited. Postpartum depression was prevalent among 20.5% of women who had pre-eclampsia or eclampsia. The risk of PPD increased with severity of preeclampsia or eclampsia. The PPD was prevalent among 31.7%, 25.3% and 10.5% of participants who had eclampsia, severe pre-eclampsia, and mild pre-eclampsia respectively. Factors associated with PPD included young age (AOR=10.13 95% CI 1.99-52.02), being single mother (AOR=3.18 95% CI 1.02-9.95), having a lower level of education (AOR=3.83 95% CI 1.45-10.16), having a perinatal death (AOR=5.14 95% CI 2.53-10.45), lack of family support (AOR=7.06 95% CI 1.25-39.90) and any stressful event during pregnancy (AOR=15.14 95% CI 2.38-96.19).**Conclusion:** One in five women with pre-eclampsia or eclampsia had features suggestive of PPD. The magnitude of PPD increases with the severity of the disease condition. Women who were young, single with lower level of education or having perinatal death had higher risk of postpartum depression. Also, those women who lacked family support and had experienced stressful event during pregnancy were at risk of PPD. To prevent adverse consequences due to PPD, pregnant women with pre-eclampsia and eclampsia should be screened for this condition along with making it an integral part of postnatal care.

96. Mbike, S. (2017). Parasitic contamination of waste stabilization ponds effluent, prevalence and risk factors associated with transmission of soil-transmitted helminthiasis among school-aged children in the surrounding community in Dar es salaam. Muhimbili univarsity health and allied science.

Abstract

Background: Waste water can be treated by waste stabilization ponds (WSPs) to remove the parasites that might cause infectious diseases when released into environment. Partially or untreated waste water poses risk of transmitting potential infectious diseases like soil-transmitted helminths (STH) to the surrounding communities, the higher risk groups being irrigating farmers, vegetables consumers and children. **Aim/ broad objective:** To determine the level of parasitic contamination in waste stabilization ponds effluent, prevalence and risk factors associated with STH among school-aged children surrounding two municipal waste stabilization ponds in Dar es Salaam.**Materials and methods:**A descriptive cross-sectional study with a quantitative approach was used. A multistage sampling technique was used to select five primary schools located in area about 3 km in which a total of 342 pupils were enrolled in a study done in June 2017. Wastewater effluent was analysed by using modified Bailenger method, whereas stool specimen were examined by using Kato-Katz technique. Demographic data and hygienic practices information were collected by using a structured questionnaire and respective proportions calculated. **Results:**Study respondents were 319 pupils and response rate was 93.3%. The mean concentration of nematode eggs in Vingunguti WSP was 1.1eggs/litre specifically hookworm eggs (1.13 eggs/litre) and Ascaris spp. egg (1.1 eggs /litre). No parasitic egg was seen in Buguruni effluent. Overall prevalence of STH was (1/319) 0.3% Trichuris trichiura infection (0.7% in Buguruni and 0.0% in Vingunguti).**Conclusion:**The concentration of nematode eggs in effluent from Vingunguti was above WHO limits while effluent from Buguruni WSP abides by the guideline. There is very low prevalence of STH among school-aged children surrounding municipal WSPs in Dar es Salaam which might be due to high coverage of school deworming program.**Recommendation:**There is a need for technical maintenance and monitoring of Vingunguti WSP to improve pond performance and complete treatment of waste water. Health education and behavior change programs should be provided to urban farmers and inhabitants surrounding WSPs to improve awareness and knowledge on modes of transmission and preventive measures of STH.

97. Meshi, E.B. (2017). Thermal exposure and related heat illness symptoms among workers in mara gold mines.Muhimbili university health and allied science.

Abstract

Background: Working in humid and hot environment expresses the unique challenges to occupational health and safety in tropical countries. Tanzania being in the region experiences high ambient temperature that can exceed 30°C. The high temperature expose mining workers to heat related injury and illness and hence reduce productivity.**StudyObjective:**This study was undertaken to assess heat stress exposure and associated heat illness symptoms among gold mine workers at Mara region.**Materials and Methods:** A cross section study was conducted where the Similar Exposure Groups (SEG) of study participants were selected based on their risk to extreme heat environment. The Wet Bulb Globe Temperature (WBGT) index was used to assess the heat load while the change in core body temperature, blood pressure and pulse rate of miners presented the heat strain indicator. Data were analyzed using IBM SPSS software version 20. Chi-square test and Pearson correlation were used as a measure of association, while t-test and one way ANOVA were used to check the significant

differences between the variables. The p values of < 0.05 were considered significant.**Results:** Results showed that the averaged wet bulb globe temperature at the mining workplace 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. Moreover high body temperature and hot and dry skin were the highly reported heat illness symptoms among miners. Open cut mine workers were under much greater heat strain than underground mine workers with the mean core body temperatures of 38.4 ± 0.5°C and 37.3 ± 0.5°C respectively (p-value = 0.000). Approximately 80% of workers in open cut miners indicated high core body temperature above ISO 7933 threshold of 38.0°C for safety. Majority of workers under contractor were found to consume less water prior to work shift commencement.**Conclusion and recommendation:** Occupational setting at the mining area presents the potential exposure to thermal condition that can contribute to heat illness symptoms. Therefore effective strategies like hydration program and breaks must be implemented to enhance workers safety in mines.

98. Mdamu, J. (2017). Sexual and reproductive health among adolescents living in orphanages in Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Sexual and Reproductive Health (SRH) is a women's right, It is important to all women especially the adolescent who are facing some critical changes in their body and lack knowledge on how to handle such changes. Adolescent orphans are more likely to be illiterate on the issues related to SRH than their peer. They live in the orphanages with little or no parental guidance from low skilled caregivers; some of them are not attending schools and lack health care. In Tanzania, Little is known about knowledge, attitude and practice (KAP) of adolescent orphans regarding sexual SRH. Therefore this study determined the KAP on sexual and reproductive health among adolescents living in orphanages in Dar es Salaam, Tanzania. **Objective of the study:** The broad objective of this study was to determine the level of knowledge, attitude and practice on SRH among adolescent orphans in Dar es Salaam.Material and **Methods:** A cross sectional study was conducted in the three districts of Dar es Salaam involving 418 adolescent orphans aged 12 -18 years. The selection of orphanages was done purposively where in each district three centers were selected. Structured interviews and observation were done at nine orphanages; Data were collected by trained interviewers using structured questionnaire and observational checklist covering socio-demographic information as well as KAP regarding SRH. Data were entered into computer software for cleaning and analyzed using Statistical Package for Social Science (SPSS) version 20. Statistical associations were tested using chi –square test and p- value at 5% significance level. Knowledge were assessed in three levels: "good knowledge" with 80-100%, "moderate knowledge" with 50- 79% and "poor knowledge" with <50%.**Results:** Among 418 adolescent orphans 55.3% were male and 44.7% were female. Only 48% of adolescent orphans were aware of SRH services. Brochures/journals 43.1%, friends 42.6% and television/radios 41.4% were found to be the source of information to adolescent orphans. More than two –third 64.3% of adolescent orphans had moderate knowledge about ways of HIV and AIDS prevention and transmission. Age group (chi- square 43.10 p=0.00),

education level (chi square 41.04 p=0.00) was significantly associated with reproductive health knowledge on family planning.**Conclusions:** Generally, the study revealed that there is poor knowledge, appropriate practice and favorable attitude of adolescent orphans regarding different SRH-related issues. Socio-demographic characteristics found to have association with knowledge level on family planning methods and HIV/ AIDS prevention.**Recommendation:** It is important to educate adolescents about issues related to SRH, so that they can safeguard themselves against various sexual transmitted infections and unwanted pregnancies. Also the government should put strategies to increase awareness and knowledge on SRH in orphanage centers that are tailored to the need of adolescent orphans.**Key words:** Adolescent, orphan, Sexual and reproductive health.

99. Mdimu, E. (2017). Factors associated with under nutrition among children under five years (6-59) months in Ngorongoro district, Arusha region.Muhimbili university health and allied science.

Abstract

Background: Childhood under-nutrition is a multi-dimensional problem in developing countries, where inappropriate child caring and feeding practices have been strongly associated with it. In spite of the huge Government investments to reduce childhood under-nutrition, Ngorongoro district still prevalence of under-nutrition in children under-five years of age is fluctuate. This study aims to identify factors associated with under-nutrition in children under-five years of age in Ngorongoro district, Arusha region.**Methodology:** Hospital-based unmatched case-control study was conducted from 22 march to 25 April 2017 .Cases are all children aged 6-59 months with under nutrition by WHO anthropometric indicators of weight-for-height < -2SD or weight-for-age < -2SD or height-for-age < -2SD or MUAC <12cm, and simple randomly sampling was used to select the case. Controls were children within the normal range, were selected systematic. Ethical clearance was obtained from the Muhimbili University of Health and Allied Sciences Institutional Review Board. Mother/caregivers gave informed consent before the study. Structured questioner and anthropometric measurement was used to collect the data moreover Epi-info version 3.5.1 was used to analyze the data.**Result:** 400 (100 cases and 300 controls) were recruited into the study. Under-nutrition was associated with young age of mother/caregiver (aOR=38.8, 95% CI: 15.38-98.03); early age of initiation of complementary food (aOR=13.6, 95%CI: 3.15-59.06); a child having diarrhoea in past one month (aOR = 4.8; 95%CI: 1.76-12.85); a large family size (aOR = 6.0, 95% CI: 2.16-16.90); frequency of feeding per day (aOR= 3.9, 95%CI: 1.59-9.58); low birth weight (aOR= 7.3, 95%CI: 1.15-46.70); well (aOR=16.3, 95%: CI: 1.85-147.05) or surface such as dams, livers and lakes (aOR=16.2, 95%CI: 1.85-141.71) as a source of drinking water.**Conclusion:** Household, individual characteristics of child and mother/caregiver are important predictors of under-nutrition in this community. Interventions should be designed to address these factors to mitigate and eliminate childhood under-nutrition in Ngorongoro.**Keywords:** Under nutrition, Children, Under-five, Factors, Tanzania

100. Meena, G.G. (2017). Assessment of occupational exposure to metal fumes and associated respiratory health symptoms among small scale welders in Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Occupational respiratory health symptoms are among the leading cause of occupational morbidity and mortality cases worldwide. Studies show that many workers in developing countries, who engaged in small scale welding operations in the informal sector, have been exposed to high level of multiple health hazards. This study therefore was designed to assess occupational exposure level to metal fumes containing Cadmium, Nickel and chromium, and associated respiratory health symptoms among small scale welders in Dar es Salaam.**Methodology:** a cross sectional study using quantitative approach employed the use of interview based questionnaires was conducted, observation checklist and laboratory analysis of 30 personal air samples (NIOSH 7300 Methods). A multistage sampling technique with probability methods was used to select study area (Districts, Wards and welding workplaces). A simple random sampling was used to select study participants. Data analysis was done using statistical package for social sciences (SPSS) version 16.**Results:** The study was involved 110 Male small scale welders from three Districts (Temeke, Ilala and Kindondoni) of Dar es Salaam Region with Mean age of 34±11.6 years and illiteracy rate of 1.8%. The prevalence of respiratory health symptoms highly reported were Cough 40%, Breathlessness 27.3%, phlegm 24.5%, Wheeze 24.5, and Chest tightness 24.5%. the study suggest that small scale welders were exposed to high mean concentration level above TLV limit for total metal fume 6.57±2.50mg/m3 but below the limit level for its elements; Cadmium (Cd) 0.00163 mg/m3, Chromium (Cr) 0.07346 mg/m3, and Nickel (Ni) 0.09809 mg/m3. The proportion of utilization of appropriate PRPEs among small scale welders was low (2%) and findings showed that there was statistical significant evidence ($p<0.005$) that welders who were not used PRPEs were 5 times likely to develop respiratory health symptoms compared to those who were used.**Conclusion and Recommendation:** This study was found high occupational exposure level to metal fumes among small scale welders in Dar es Salaam. Implementation of sound control measures at the source of fumes is highly encouraged in order to minimize exposure concentration to the safe acceptable level.

101. Mghase, A. (2017). Five-year survival among post mastectomy breast cancer patients managed at Muhimbili national hospital, Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Breast cancer is the most common cancer among women, with more than 1.1 million women newly diagnosed globally every year. Death from breast cancer accounts for 1.6% of female deaths every year worldwide. In Tanzania, 90.7% of patients with breast cancer present with advanced disease by the time they reach a tertiary care institution. There is no documented data on breast cancer survival following surgical treatment in Tanzania.**Objective:**The main objective was to determine the five-year survival among

patients who underwent mastectomy at Muhimbili National Hospital during the period January 2007 to June 2010.**Methods:**A hospital-based retrospective cohort study conducted in Dar es Salaam. A structured checklist was used to collect data from 337 patient's case files and theatre operation register books, from Muhimbili National Hospital as well as medical records of Ocean Road Cancer Institute. All patients' records, irrespective of their co-morbidities, performance status, breast cancer stage, histological type, grade and treatment modalities were included. Survival at 5 years was estimated by using Kaplan Meier method. Factors associated with survival were examined using Cox proportional Hazards model. Ethical clearance was sought from the MUHAS review board and ORCI ethical committee.**Results:**A total of 337 patients who underwent mastectomy were analyzed. One hundred thirty nine (41.2%) of the participants were aged between 46-60 years. The overall five-year breast cancer survival for the entire cohort of 204 stage II and III patients after excluding stage IV patients was 66% (95% CI=54% to 75%). The five year breast cancer survival for stage II patients was 84% and stage III was 65%. The common surgical treatments performed were MRM (modified radical mastectomy) and Toilet mastectomy. The most frequently used adjuvant therapy was chemotherapy (43.4%) followed by hormonal therapy (36.0%) and radiotherapy (18.5%). The least used adjuvant treatment was immunotherapy (2.1%). Factors such as age, pathological grade and stage of the disease were found to be significant predictors of breast cancer survival post mastectomy.**Conclusion:**Good survival rate is achieved for patients with early disease i.e. stage II. Age and pathological grade of the tumor influence survival rate in breast cancer patients. The common surgical treatments performed were MRM (modified radical mastectomy) and Toilet mastectomy followed by adjuvant therapies; chemotherapy, hormonal, radiotherapy and immunotherapy respectively.**Recommendation:**These findings call for strengthening health education and promote early health seeking behavior and advocate on screening for early detection of breast cancer for good survival rate.

102. Mgaya, A. (2017). Characteristics of patients with post caesarean section burst abdomen and its treatment outcome at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Burst abdomen is a distressing complication and remains a major cause of morbidity following any abdominal surgery whether elective or emergency. There are many factors responsible for burst abdomen. Anaemia is among others that play a significant role in causing burst abdomen. Owing to high rates of cesarean section, different post surgical complications including burst abdomen are encountered in post CS patients at MNH.**Objective:** The objective of this study was to describe the characteristics of patients with burst abdomen and its treatment outcome among patients who underwent CS at MNH.**Methodology:** This was a case series study conducted from 22ndJuly 2016 to 22ndJanuary2017 among patients who underwent CS at MNH and developed burst abdomen. Patients were recruited in obstetric wards after they had met the inclusion criteria and had consented. They were then followed up until the first follow up visit (two weeks) after being discharged home. Data on socio-demographic characteristics, patient's medical history,

physical examination, laboratory investigations, and surgical procedure were obtained from patients and their files using a structured questionnaire and a checklist. Data was analyzed using SPSS version 20 software and results presented as means and proportions.**Results:** A total of 12 patients who underwent CS at MNH and developed burst abdomen were studied. During the study period, a total of 2768 CS were done at MNH (an average of 461 CS per month) of which12 developed burst abdomen. This is an average of 2 cases every month with a frequency of about 4.3 per 1000 patients who had undergone CS at MNH. The mean age of the studied patients was 26.7years. On average burst abdomen was reported on the 5th day post CS. Most patients were operated as emergency (10 patients) while 2 were elective cases. SUMI was the most used abdominal incision (10 patients) while Pfannenstiel incision was used in 2 patients. The duration of hospital stay ranged from 7-35days with a mean duration of 23.1 days. There was no death among the studied patients.**Conclusion:**Burst abdomen is said to have occurred when there is disruption of the layers of an abdominal wound including the rectus sheath or herniation of peritoneal contents through a gap in the rectus sheath, eviscereation of peritoneal contents and serosanguinous discharge. The frequency of burst abdomen is about 4.3 per 1000 patients who had undergone CS at MNH.**Results** of this study suggest that patients who develop burst abdomen may have clinical cor-morbidities such as anaemia, pre-eclampsia and eclampsia, PROM and obstructed labour. Surgery related characteristics such as experience of the surgeon, type of incision, use of pre and post operative antibiotics have a role to play for a good outcome of a post CS wound. Some patients with post CS burst abdomen may have STAH done even before completion of their families. It is a fact that patients with post CS burst abdomen have a prolonged hospital stay.**Recommendation:**A large study of a different design is needed in order to find out the statistical association between different causative factors for burst abdomen.

103. Mgongo, O.I. (2017). Men's awareness, utilization and involvement in family planning and associated factors in Micheweni, Zanzibar, Tanzania. Muhimbili university health and allied science.

Abstract

Introduction: Family planning and reproductive health programs are increasingly recognizing that men are important participants for their services. Women's reproductive health can be affected by men's behavior. Participation of men in health issues has increased the acceptance, correct usage and continuation of family planning services and subsequently improved pregnancy-related health outcomes. Zanzibar is still experiencing low men utilization and involvement in family planning services elsewhere. However the role have not been well explored in Zanzibar. **The objective**: of the study was to establish factors associated with involvement in family planning among married men in Zanzibar.**Methodology:** Community based cross-sectional study was conducted at Micheweni District, Pemba Zanzibar, Tanzania between September and November 2016. The study population was married men of age between 15 and 60 years. About 384 men were randomly selected house-holds. A closed-ended questionnaire was used to collect data from the participants. Data were analyzed using Epi Info program, version 5.3.1.**Results:**Participants' age ranged from 15 to 60 year old. Mean age of the respondents

was 39.37 age, while the mean age for the first marriage was 23years. About 23% men reported to use family planning services, while the total involvement was 31.2%. Being aware of family planning methods by married men, and allowing wife to use family planning were more likely to be associated with the use of family planning services among married men ($p<0.001$). Involvement of men in family services is likely to be associated with the knowledge and perceived benefits of family planning services, and allowing his wife to utilize family planning services ($p<0.05$). The mean age of the respondent was 39.37 with SD of 10.9 years, while the mean age for the respondent's first marriage was 23 with SD of 4.3 years. **Conclusion:** Men's use of family planning and involvement in their wives family planning use is still low despite various interventions by the government and other reproductive health related programmes. Hence, special targeted efforts have to be instituted by all family planning actors to emphasize mens' involvement and engagement in family planning and other reproductive health services.Keywords: Family Planning, Male Involvement in FP services.

104. Msimbe, M.L. (2017). Introduction of epidural labor analgesia and its outcomes at Muhimbili national hospital Dar-es-salaam. Muhimbili university health and allied science.

Abstract

Background: Epidural labor analgesia use is widespread and safe and it gives excellent pain relief. It involves the injection of local anesthetic agent with or without an opiod into lumbar epidural space to produce segmental sympathetic and sensory nerve block.Indications for epidural labor analgesia are maternal consent, medical reasons like patients with pregnancy induced hypertension, parturient with Diabetic mellitus, cardiovascular diseases, respiratory diseases like asthma, sickle cell diseases excites contraindications are refusal of consent, coagulopathy, maternal haemorrhages, maternal sepsis, infection at the site of needle and catheter placement and so on. Advantages of using it is it provides excellent pain relief and cooperation between health attendants and parturient. Disadvantages are the side effect associated with its use in labor and childbirth like prolongation of labor, increase rates of caesarian section and instrumental vaginal deliveries, poor neonatal APGAR score and failure to breastfeed.This study looked at the association between use of epidural labor analgesia and the perceived side effects.**Methodology:** A cross sectional study was conducted among 53 patients who received epidural analgesia with (0.1% 10 mls bupivacaine) for labor analgesia when they were in active phase of first stage of labor. Patients who were admitted in labor ward for delivery had the study explained to them and were told about their rights to decline participation at any stage of the study if they do wish to. Study participants were recruited after being admitted if they met the inclusion criteria and gave informed consent. A lumbar epidural catheter was placed and a bolus dose of (plain bupivacaine 0.1% 10mls) was given. Analgesia was maintained with intermittent bolus doses plain bupivacaine 0.1% 10mls hourly. Participants were followed until discharge from the labor ward. The duration of labor, instrumental delivery and its indication, the neonatal APGAR score and the participants' satisfaction with the epidural analgesia were documented. Healthcare worker(61) responsible for taking care of these patients were also interviewed after patient

was discharged from labor ward using a separate questionnaire which was attached to the patients questionnaire about their opinion of epidural labor analgesia services.The data collected and analyzed with IBM SPSS Statistics Version 20.**Results:** A total of 53 women were enrolled. 94.2% of the participants were satisfied and happy with the service and reported that they would ask again for it in future days. 11.3% and 18.6% had prolonged first and second stage of labor respectively, 5.7% had instrumental assisted delivery due to prolongation of second stage of labor. The rate of caesarian section among was 22.6% reasons being (maternal -obstructed labor, cervical dystocia and poor progress being (17.0%) and (1.9%) due to motor weakness and fetal distress 3.7%. APGAR score of the neonates was above 7 score by 92.5%and 98.9% at 1 and 5 minutes respectively. The health care worker participants (61) were also interviewed after introduction of Epidural labor analgesia at MNH 83.6% agreed and among them 29.5% strongly agreed to the routine use of Epidural labor analgesia. The greatest hindrance to routine use of epidural labor analgesia was given as inadequate anesthesia staff, inadequate equipment. 13.1% of healthcare workers thought epidural labor analgesia denies mother's natural birth experience.**Conclusion and recommendations:** From the study it is noted that Epidural labor analgesia was accepted among women as most were satisfied with pain relief and it had manageable side effects.Therefore these pain relief services should continue as they are beneficial to parturient in labor.

105. Michael, M.C. (2017). Prophylaxis practice and incidence of deep vein thrombosis among patients operated for hip fracture at Muhimbili orthopaedic institute, Dar es salaam. Muhimbili university health and allied science.

Abstract

Introduction: Deep vein thrombosis is clot formed within the deep veins of the lower limbs or pelvis where it causes pain and swelling. When some or all of thrombus becomes detached and moves retrograde in the right side of the heart and lodge in one or more pulmonary arteries, pulmonary embolism occurs. Massive pulmonary embolism is fatal to life. Hip fracture and major lower injuries are risk factor for deep vein thrombosis. DVT prophylaxis is therefore important to hip fracture patients.This was a facility based descriptive study which was conducted at MOI in DSM city from 2016-May to June 2017. The **objective:** of the study was to determine the prophylaxis practice and incidence of DVT among patients operated for hip fracture at MOI.Patients who sustained hip fracture and those who fulfilled the desired criteria for this study were selected by convenient non random sampling and enrolled day after their surgical treatment of the fracture.A structured questionnaire was used in capturing baseline information of the patients including, name, age, mechanism of injury, immobilization duration before and after surgery, co morbid conditions, the type of DVT prophylaxis given and any associated clinical signs and symptoms suggestive of DVT.Each patient was followed up for a minimum of 4 weeks from the day of discharge. During the follow visits clinical progress was assessed including evaluations of clinical signs and symptoms of DVT such limb swelling, redness, pain and tenderness. The informed obtained were entered in the research tools, processed and analyzed using SPSS computer software version 20.The study results indicated comparatively low (23%) rate of DVT prophylaxis

practice among 49 enrolled cases. And incidence of the DVT is also lower (6%) of the study group. Chemical prophylaxis was the commonest prophylactic agent used followed by emphasis on early ambulation after operation. Mechanical prophylaxis such as graduated compression stocking and intermittent pneumatic compression were rarely used.The emphasis should be put on screening of all patients at risk of DVT and provide DVT prophylaxis to all eligible patients. Further study is needed to establish the fundamental differences in rate and incidence of DVT observed in different racial groups.

106. Mlagalila, N.F. (2017). Treatment outcome and associated factors for ovarian cancer patients attended at ocean road cancer institute Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Introduction: Ovarian cancer is a common malignancy among women in Tanzania and worldwide. It is associated with high morbidity and mortality especially in developing countries. Surgery and chemotherapy plays major role in the management of ovarian cancer. Response to treatment is influenced by several clinical factors like disease stage, initial tumor burden, histology and performance status of the patient, modality of treatment and age of the patient.**Objective:** To explore the social demographic characteristics, histological presentation, treatment modalities and treatment outcome of the patients with ovarian cancer who had attended at Ocean Road Cancer Institute, Tanzania from 2012 to 2016.Patients and **Methods:** This is a retrospective cross sectional study designed to determine one year overall survival among ovarian cancer patients, and factors related to it. Data were obtained from patients medical files and filled into data collection form. Data was collected from patients who were diagnosed from January 2012 to January 2016. This study was done at Ocean Road Cancer Institute, Dar Es Salaam.A total of 96 patients with ovarian carcinoma with all stages and histological confirmation, were followed up one year post treatment. Patients were treated either with surgery alone, or surgery then chemotherapy or neoadjuvant chemotherapy followed by surgery then adjuvant chemotherapy, and lastly those who received chemotherapy alone.Evaluation and analysis: Patients were evaluated one year post treatment. Survival was evaluated using Kaplan Meir method. Social demographic and Clinical factors were analyzed using frequency and percentage as well as mean and standard deviation. Survival curves were estimated by the Kaplan-Meier method. To identify factors predictive of survival outcome the variables were analyzed by univariate analysis by using log-rank test and multivariate analysis by using Cox Regression model. All drop outs were considered as censored. An association was regarded as statistical significance if the p-value < 0.05. **Results:**A total of 96 patients were included in the analysis among them 22 were in curative intent group (treated according to NCCN protocol and ORCI protocol for ovarian cancer) and 74 were in palliative intent group(all patients who were under treated). Mean age 51.4 years with the range of 19 years up to 97 years, standard deviation of 17.3. Most patients had epithelial cell tumor about 85.4%. In most patients, 55.2%, surgery was done first followed by chemotherapy while 27.1% hadsurgery alone andabout 12.5%, received chemotherapy alone and only 5.2 % received neoadjuvant chemotherapy followed by surgery and then finished up with adjuvant chemotherapy. Most patients received taxanes and

platinum based chemotherapy (60.3%), followed by BEP (Bleomycin, Etoposide and Cisplatin) 6.3% patients and other chemotherapy regimen 6.3%. Among patients who received chemotherapy only 27% received more than 6 cycles.Overall survival and associated factors After one year, among 22 patients who were in curative intent group, only 4 had passed away while in palliative group we had 74 patients and 40 patients had passed away after one year post treatment. Patients who have received curative treatment had more survival 82% as compared to the patients who had received palliative treatment 40% (P value 0.003). In both curative intent and palliative intent group, patients who received chemotherapy less than 35 days from time they had surgery had better survival compared to patients who received chemotherapy more than 35 days from surgery with p value 0.02 and 0.001 respectively. In curative intent group, OS was favoured more in age below 51 years (p value 0.001). Patients with no residual disease, early stage and less than ECOG 2, had better OS, though the association was not statistically significant. Also OS had no association with histological type of tumor, number of chemotherapy cycles or type of chemotherapy in curative intent group.In palliative intent group, patients who came earlier to ORCI for adjuvant treatment(within 30 days of surgery) had better survival when compared to patients who came late and the association was statistically significant (p=0.001). Furthermore, in this group patients who had ECOG status less than 2 and FIGO stage three had better survival with p value 0.04 and p=0.04 respectively. There was no association between OS and histology type (p=0.907), number of cycles (p=0.667) nor treatment modality in palliative intent group (p=0.135).**Conclusion:** The study has shown that patients in curative intent group had greater survival than in palliative intent group and in both groups, delay in starting chemotherapy more than 35 days after surgery is associated with poor overall survival. In curative intent group, younger age was associated with good Overall survival while in palliative intent group poor ECOG status was associated with poor overall survival.

107. Milando, F.A. (2017). Factors associated with uptake of intermittent presumptive treatment of malaria among pregnant women in bagamoyo district. Muhimbili university health and allied science.

Background: Malaria infection during pregnancy presents significant risks for the pregnant woman, the developing foetus and the newborn infant especially in sub-Saharan African countries despite of control efforts. The disease during pregnancy can lead to negative consequences to the mother, her unborn fetus, and the newborn such as severe malaria, severe anaemia, pre-term delivery, maternal death, and placental malaria. In 2010, the WHO issued an Intermittent Presumptive Treatment (IPTp) for malaria in pregnancy guidelines, in which pregnant women should receive one dose of SP as an IPTp at each ANC visit after the first trimester with at least one months between doses. However, it has been observed that there is low uptake of IPTp in a number of African countries including Tanzania. According to systematic review and meta-analysis on the beneficial effects of three or more doses of SP during pregnancy in the prevention of malaria-related adverse outcomes,it showed that SP is still useful in prevention of malaria even in areas with moderate to high SP resistance(10)In Tanzania by 2016 only 35% of women received at least two doses and 8% of women received three or more doses of Sulfadoxine Pyrimethamine (SP) during antenatal care

(ANC)(11).Broad objective: To determine the factors associated with the Uptake of Intermittent Presumptive Treatment of Malaria in Pregnancy (IPTp) using SP in Bagamoyo District Research Methods: A cross sectional study was conducted with a sample of 378 Mothers who gave birth within the last one year irrespective of pregnancy outcome residing in Bagamoyo district. A multistage sampling technique was used to randomly select eligible women.Results: A total of 378 women were recruited into the study. Only 38.1% of the women took two doses of IPTp-SP during their previous pregnancy. Logistic regression indicated that factors associated with uptake of IPTp-SP are;maritalstatus(AOR=3.02,95% C.I (1.17-7.78),SP administration in facility under observation (AOR =136.67,95%C.I (31.13-599.99), high knowledge on importance of SP toward malaria prevention (AOR = 4.18, 95%C.I (1.16- 15.1)and positive attitude towards malaria prevention using IPTp-SP (AOR = 3.51, 95%C.I (1.35-9.15).Conclusion: Based on the study findings, recommendations are;Male should be involved in antenatal clinics as they help in decision to utilize ANC services including use of IPTp-SP. It also important to practice DOT in the administration of IPTp-SP as required. As well, increasing women's knowledge on importance of IPTp-SP during pregnancy may encourage their uptake. Along with these, continuous education of pregnant women on importance of IPTp-SP by any locally applicable methods should be encouraged as this may influence their attitude towards malaria in pregnancy.

108. Mistry,K.R. (2017). The pattern of ocular manifestations in patients with sickle cell disease attending sickle cell clinic at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Sickle cell disease (SCD) is a disorder that affects hemoglobin with around 300,000 births per year globally and over 75% of it being in Africa. The prevalence of the ocular manifestations of SCD ranges from 30-90%. The SCD ocular manifestations have been documented in eye adnexa, anterior and posterior segments.**Aim:** The aim was to determine the pattern of ocular manifestations in patients with SCD attending the sickle cell clinic at Muhimbili National Hospital (MNH). **Methods:** Cross-sectional descriptive hospital based study with a calculated sample size of 186 patients. Systematic random sampling technique was used whereby patients 5 years and older were included. Visual acuity (VA), intraocular pressure (IOP), anterior and posterior segment were assessed and recorded.**Results:** Out of 190 patients recruited, 104(54.7) were females and 117(61.6) were 18 years and above. The overall prevalence of ocular manifestations was found to be 80% with conjunctival sickle sign being the most prevalent sign 153(80.5). Majority had a normal VA and IOP. Multivariate analysis revealed patients aged 18 years and above to be 4 times more likely to have ocular signs related to SCD. (AOR=4.2, 95%CI 1.5-11.8).**Conclusion:** A high prevalence of ocular manifestation associated with SCD was revealed in this study. SCD ocular manifestations were associated with the age of the patients.

109. Mlughu, T.S. (2017). Exploring ethical challenges in voluntary counseling and testing for hiv/aids: a case of Kinondoni municipal.Muhimbili univarsity health and allied science.

Abstract

Background: Voluntary HIV counselling and testing (VCT) is the process by which an individual undergoes counselling enabling him or her to make an informed choice about being tested for HIV. VCT is the World Health Organization recommended tools for HIV/AIDS prevention, care, and treatment. Regardless the known benefits of voluntary counseling and testing in the fight against HIV/AIDS, uptake of this service is still low among the youth. Presence of ethical challenges in VCT clinics lead to different ethical dilemmas towards the utilization of VCT services. Such dilemmas were; quality of counseling the informed consenting process, fear of HIV positive results due to presence of stigma and discrimination, lack of privacy, and confidentiality concerns at the VCT clinics especially on disclosure and non-disclosure of the client HIV status. **Aim of the study:**To explore ethical challenges facing voluntary HIV/AIDS counseling and testing services among youth in Kinondoni municipal.**Methodology:** Three key informants interview (KIIs), eight in-depth interviews and four focus group discussions (FGDs) were conducted in this qualitative exploratory study carried out in Kinondoni municipal. Key informants were purposefully selected basing on their roles in VCT services while the FGD participants and in-depth interview respondents were purposefully selected among commercial motorcyclists. Qualitative content data analysis was done to analyze the gathered information. Findings: Lack of privacy during counseling and treatment, fear of HIV status disclosure to other people by the counselors and difficult in counseling some youth who approach VCT services while drunk were found as the main ethical challenges facing VCT services among youth in Kinondoni Municipal. Our study also found that; availability of small number of counselors to match the number of VCT services' clients and lack of on-job training on HIV/AIDS testing and counseling among counselors were partly contributing to the revealed ethical challenges. In attempts to address the ethical challenges, youth peer educators and routine supervision were the available initiatives on improving VCT services among youth.**Conclusion and recommendations:**The findings of this study underscore that VCT services are hampered by ethical challenges which can be classified in to three major categories. Whereas, community related challenges are prevalent, the facility based challenges are also hampering service provision. Further, the challenges which are ministerial level and in particular those related to policy change also influence the performance of VCT and in particular touching ethical aspects which are fundamental in this study. To tackle this puzzle, this calls for urgent multisectoral approach. However, if awareness in community remain to be low, such efforts are likely to prove futile.

110. Mohamed, M.S.A. (2017). Imaging findings in adult patients with suspected urinary tract abnormalities who underwent ct urography investigation at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Introduction: CT Urography is the modality of choice to evaluate the urinary tract abnormalities. This study aimed to determine the imaging findings of all adult patients with suspected urinary tract abnormalities referred for CT Urography.**Methodology:** It is a cross-sectional hospital based study involving adult patients with suspected urinary tract abnormalitiesreferred for CTU. Dermographic and clinical informations was extracted from request forms.Imaging findings were interpreted by two radiologists and upon agreement data was entered into standardized questionnaires. SPSS version 20 was used for data analysis.**Results:** This study involved 82 participants, 34 males and 48 females. The mean, median, mode, range and standard deviation of patients participated were 43.98, 44, 38 and 54, 15-82 years old and 18.2 respectively. Patients suspected with urinary tract diseases most commonly presented with renal angle pain and their common CTU finding was renal stone (47.6%).The most common urinary tract tumours was renal tumours (19.5%).The most common cause of obstruction was PUJ obstruction (13.4%).Hematuria significantly associated with bladder tumours and renal trauma (p=0.00, 0.049 respectively), and negatively associated with renal tumours (p=0.022). Renal angle pain was significantly associated with renal stone (p=0.022) and renal masses had negative association with renal angle pain(p=0.003).**Conclusion:**CTU can detect various urinary tract abnormalities with its associated features. Results in this study support the use of CTU as a screening and diagnostic tool in patients presented with renal angle pain and haematuria. So with accurate use following the established standard protocols will accelerate the pathway in patient assessment allowingfor comprehensive evaluation and management of the urinary tract system.**Recommendation:** 1. All patients presented with renal angle pain and haematuria should be evaluated for CTU.2. A study with a larger sample size should be conducted.

111. Mohamed, S. (2017). Rrisk factors and outcomes of reduced fetal movements among women admitted in Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Reduced fetal movements in pregnant women are a common cause of anxiety, non-schedule visits to antenatal clinics and admission. It is considered a high risk pregnancy with the fetus at risk of hypoxia and sudden death. Maternal vigilance of fetal activity and timely reporting to healthcare providers when experiencing reduced fetal movements may prevent perinatal morbidity and mortality. Therefore fetal surveillance is always indicated to assess the fetal wellbeing and to aid in opportune time of delivery. At least 40 % of pregnant women are concerned about RFM one or more times in pregnancy. Four to 15% of women will contact their doctor because of persistent reduced fetal movements in their third trimester. The management of reduced fetal movements varied significantly in different hospitals. The purpose of this study is to establish risk factors and outcomes of RFM among women admitted and delivered at Muhimbili National Hospital.**Objective:** To determine risk factors for RFM and fetal outcomes of women admitted with RFM in Muhimbili National hospital.Study Design: Hospital based unmatched case control. Study took place in

Muhimbili National Hospital during November 2016 to April 2017. Ninety cases and 181 controls.Study site and setting: The study took place in the maternity wards at Muhimbili National Hospital.**Methodology:** Unmatched case control study was conducted between November 2016 and April 2017. Using a Systematic sampling technique, cases of single tone mothers who were admitted in the antenatal wards due to various conditions and reported RFM were consecutively recruited for the study shortly after delivery. For each case two controls were also selected based on closest timing of their deliveries to that of the case, preferably from the same ward as the case. Cases and controls were eligible if they were at the gestational age of 32 weeks or more at the time of delivery. Those who met eligibility criteria were asked for consent and after acceptance, a structured questionnaire was administered and the newborn outcomes were recorded from delivery notes. Data were analyzed by using IBM SPSS statistics version 20.0 software. Odds ratios and 95% CI were calculated to estimate risks for RFM and association of RFM with fetal outcome variables were established using Chi square. In all statistics, a p-value of <0.05 was considered significant. Ethical clearance was sought from MUHAS Senate Research and Publication Committee. **Results:**A total of 271 pregnant women who delivered at MNH were recruited in the study including 90 cases and 181 controls. Mean age of the case and control were 29.23±6.16 years and 28.43±6.28 years respectively. Factors that were independently associated with RFM were, pregnant women with no formal education were more likely to have reduced fetal movements as compared to those with secondary and above (AOR=2.26, 95% CI,:1.224 - 4.160, p 0.009). Women with history of alcohol intake were shown to be more likely to have reduced fetal movements as compared to those with no history of alcohol intake (OR=4.20,95% CI,:2.29 – 7.58, p <0.001) and obstetric factors that were independently associated with RFM were PIH (OR= 2.44, 95% CI :1.41 – 4.17, p 0.001) and PPROM (OR=3.83, 95% CI: 1.15 – 10.0, p 0.007). The risks for RFM presenting with any of the medical conditions were (AOR= 3, 95% CI: 1.95 – 14.10, p 0.001). CS delivery was slightly higher in RFM (81.1%) compared to women with normal fetal movements. (71.3%), p=0.082.) and low birth weight (OR= 6.31, 95% CI:3.619-11.012, p <0.001), babies admitting to NBU (OR= 6, 95% CI: 3.542-10.424, p <0.001).**Conclusion:**RFM is independently associated with a number of social, obstetric and medical factors. Women who report persistent RFM were more likely to end up with poor fetal outcomes as compared to controls hence should never be ignored.

112. Mphuru, A. (2017).Prevalence and contributing factors for missed opportunity for vaccination among children under two years of age attending health facilities in kinondoni municipal council, Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: A missed opportunity for vaccination (MOV) is an incident whereby a child visits a health facility service and does not receive all recommended vaccines despite being eligible. Despite the efforts aiming at attaining universal vaccine coverage, anecdotal and reported findings indicate significant MOV in Tanzania. Moreover, several factors play part in contributing to MOV. Such findings, however, are not systematically documented in

Tanzania. This study, therefore, aimed at exploring MOV and proposes appropriate measure in Tanzania context.**Aim of the Study:** This study has a broad aim of determining the prevalence and contributing factors for MOV among children under two years of age attending health facilities in Kinondoni Municipal Council, Dar es Salaam, Tanzania. Materials and **Methods:** This was a facility based cross-sectional study that used both quantitative and qualitative approach to data collection. A total of 330 parents/caregivers of children under two years of age participated in the quantitative survey and 6 health care workers participated in the qualitative approach of the study. Sample size was allocated in proportion to the target population of the facility. Analysis of quantitative data was conducted using IBM SPSS version 17 through descriptive and regression analyses methods. For the qualitative part, data was transcribed, coded and analysed using content thematic analysis method. **Results:** A total of 195 out of 330 children recruited were eligible for vaccination during the day of interview, of which 142 (72.8%) received the vaccine during that day and the remaining 53 (27.2%) did not receive vaccine despite being eligible (MOV). The likelihood of experiencing MOV is high in children below 12 months compared to children above 12 months of age (OR 0.13, P<0.001). Moreover, the likelihood of experiencing MOV occurs in children whose main reason for attending health facility is medical consultation compared to those who attend health facility for vaccination (OR 77.43, p=0.001).Health care workers described stock out of vaccines, knowledge /attitude of health care workers, breakdown of cold chain system and timing/days of immunization services as the main contributing factors for MOV.**Conclusion and Recommendations:** The study highlighted prevalence of MOV and contributing factors in Kinondoni Municipal Council. Proper attention to children below 12 months of age during medical consultation, ensuring availability of vaccines, proper timing of immunization, and ensuring functionality of cold chain and change of attitude of health care workers are of paramount importance to reduce MOV.

113. Msaki, L.(2017). Perceived risk of hiv, motives for buying sex and type of sex practice preferred among clients of female sex workers at brothels found in Dar es salaam, Tanzania.Muhimbili university heath and allied science.

Abstract

Introduction: Clients of sex workers are usually men who pay with cash or other resources for sexual services either explicitly or within an agreed package. HIV prevalence among female sex workers (FSWs) in Dar es Salaam is higher (31.4%) than the estimated rate of infection among FSWs in Tanzania which stands at 26.6%. It is estimated that at least 15,000 male clients visit female sex workers for sex in Dar es Salaam every night. The city has about 7,500 FSWs, and it is reported that only 40% of them use condom.**Objective:** The main objectives of this study was to assess the perceived risk of HIV, motives of buying sex and the type of sex practices preferred among clients of brothel-based female sex workers in Dar es Salaam.**Methodology:** Cross sectional descriptive study designs were used to generate data from clients of sex workers in the city.**Results:** A total of 225 clients of brothel sex workers participated in the study. Their age ranged from 14to 70 years. Reported motives for buying sex include lack of sexual satisfaction with permanent partners (35.7%) which was

found to be the most common reason while vaginal sex was type of sex preferred by the most clients (92%) and three out of five study participants (61.3%) did not perceive to be at any risk of contracting the HIV infection.**Conclusion & Recommendations:**Client of female sex workers in the brothels are motivated to buy sex due to dissatisfaction of sexual pleasure with their permanent partners for 35.7% while most of them at the first day of sex prefer virginal sex 92% and the rest anal. The majority of the clients are not perceive themselves on the risk of HIV for 61.3% Low comprehensive knowledge of HIV coupled with low exposure to HIV prevention services will continue to inhibit appropriate HIV risk assessment among clients of FSWs and thus limit the reduction of sexual risk behaviour among them. Increasing the level of consistent and correct condom use both in clients and FSWs in the brothels is an urgent HIV prevention need in order to mitigate HIV transmission within the general population. Further research is needed to evaluate risk perception of clients of FSWs in different contexts.

114. Muhali, R. (2017). Satisfaction with laboratory services among patients attending outpatient departments of regional referral hospitals in Dar es salaam Tanzania.Muhimbili university heath and allied science.

Abstract

Introduction: Patient satisfaction is one of the key determinants for clinical outcome, compliance to medical treatment, and therefore health status. Satisfaction to laboratory service satisfaction can significantly enhance patients‟ quality of life and enable health service providers to determine specific problems of clients. Monitoring client's satisfaction in clinical laboratory is therefore an important and useful for quality and service improvement. Moreover, knowing factors associated with such satisfaction can be an entry point towards improving it. Despite such importance, only handful evidence is available, and none is from Tanzania. Therefore, this study evaluated patients‟ satisfaction and factors associated with satisfaction with laboratory services among patients above 18 years attending regional referral hospital laboratories in Dar es salaam, Tanzania. **Methodology:** This descriptive cross-sectional study design was conducted in the three regional referral hospitals in Dar es Salaam, Tanzania. The three referral hospitals are Amana, Temeke and Mwananyamala referral regional hospitals. The study included a total of 406 patients aged 18 years and above attending the laboratory from the Outpatients department (OPD). Data was collected using face to face interviews. The sampling frame used to pick the participants was the list of patients who needed laboratory service per each day of the data collection in the hospital. The systematic sampling method was used to get the study participants for each hospital. Thus, since the number of questionnaires to be filled in each day was 20 (basing on 20 minutes estimated time of completion of one interview), the sampling interval was calculated by dividing the number of patients in need of laboratory services per day by number of questionnaire to be filled per day. After obtaining the sampling interval, the first study participant was selected randomly. Thereafter the calculated sampling interval (nth) was used to pick the subsequent patients to be interviewed.Dependent variable was patients‟ satisfaction while independent variables included sociodemographic, socioeconomic, and facility characteristics. Data analysis was conducted using descriptive and logistic regression

analyses to address the specific objectives using SPSS version 20 software. P-value <0.05 was considered as statistically significant. **Results:** Only about 39.2% of 406 participants were satisfied with laboratory services in the three referral hospitals in Dar es salaam, Tanzania. Mwananyamala had the higher proportion of satisfaction compared to Temeke and Amana. Based on multiple logistic regression analyses: compared to young patients, those who aged above 58 years were less likely to be satisfied with laboratory services (p=0.009). There was no significant association between satisfaction and wealth index. However, compared to those with primary education, those with higher education levels were less likely to be satisfied with laboratory services.**Conclusion and recommendations:** This study reported low satisfaction with laboratory services (39%) among patients attending the regional referral laboratories. Such pattern has a great impact on patients as they can opt not to go for laboratory tests and take medication without proper diagnosis. This study also reported older patients, those with higher than primary education and professional occupation were not satisfied with laboratory services.

115. Mumba, S.O. (2017). Analysis of factors influencing multi-sectoral collaboration in responding to emerging zoonotic diseases: a case of Kilosa district council, Tanzania.Muhimbili university health and allied science.

Abstract

Introduction: The integration of the veterinary, medical and wildlife conservation necessary to predict, prevent or respond to emerging zoonotic diseases requires effective collaboration and exchange of knowledge across these disciplines. Current status reveals the non-existence joint structures that are prepared for collaboration in response to zoonotic disease emergencies.**Aim:** The study analysed factors influencing multi-sectoral collaboration in responding to emerging zoonotic diseases among livestock, wildlife and health depatments in Kilosa District, Tanzania.**Methodology:** A qualitative case study design in which key informants interviews were used to seek in-depth information on the Factors Influencing Multi-sectoral Collaboration in responding to emerging zoonotic diseases. The sample size of 15 key informants were drawn purposefully from Health, Wildlife and Livestock Department from Kilosa whereby respondents selected based on their occupational and professional experience and involvement in zoonotic disease with regards to multisectoral collaboration and they were interviewed at their natural setting.Data analysis: The qualitative data analysis employed a thematic approach which involved reading through the transcribed texts of each interview to identify responses relevant to the specific research questions of the study.Themes were categorized in different phases from familiarization with data up to producing the final report whereby researcher started by listerning carefully to the audio tape recorder for several times, and all transcript were transcribed verbatim.**Results:** The study did not find any functioning organizational structure in the departments of livestock and wildlife in controlling and managing the emergence and spread of zoonotic diseases, which contributed to low collaboration between the three departments. Lack of financial resources to support the running of the three departments was a key setback to the efforts at countering the challenge of zoonotic diseases which later on resulted to poor or no suportive supervision conducted. Also, not considering zoonotic diseases as a priority within the district's planning

framework hinder the efforts to address the challenges posed by zoonotic disease in Kilosa District. However findings reveals on the availability of clear roles and responsibilities on managing zoonotic diseases though implementation of the roles were hindered by financial constrations.**Conclussion:**The multi-sectoral collaboration should be considered as one of the main issues to all sectors that are responsible for controlling and managing zoonotic diseases. Moreover, control of zoonotic diseases should be included in the district and departmental plans and should be placed among the priority areas of the district.Ministry of Healtth, Vertinary and wildlife should increase its commitment through Memorundum of Understanding (MOU). in controlling and managing zoonotic diseases to prevent the eruption of such diseases instead of waiting until a particular disease erupts so as to reduce the negative impacts of the diseases.The central government should ensure that the existing guidelines and policies emphasize on 'One Health' concept and multisectoral collaboration in managing and controlling zoonotic diseases. Officials from all departments in Kilosa District should be trained on the concept of 'One Health' so as to facilitate the implementation of joint activities that, if not addressed by all the departments, could result in heightened risk including the eruption of zoonotic diseases in the community.

116. Munuo, M. (2017). Determinants of kangaroo mother care method utilization among women with preterm infants at referral hospitals in Dar es salaam,Tanzania.Muhimbili university health and allied science.

Abstract

Introduction: Kangaroo Mother Care (KMC) is defined as skin to skin contact between a mother and her new born infant. The concept was proposed as alternative to the conservative (maternal-infant skin-to-skin contact) method of care for preterm and low birth weight infants in separate bassinettes with little human touch, and in answering difficulty of severe congestion in neonatal intensive care units. Basically, KMC uses the mother as an incubator. According to this concept, LBW/preterm infants are placed on the mother's chest in an upright position, where mother's heat can help control the infant's body temperature. Although it is widely used in many parts of the world, KMC is poorly practiced in Referral Hospitals in Dar es Salaam in Tanzania. Thus, main **objective:** of this study was to explore determinants of Kangaroo Mother Care method utilization among women with preterm infants admitted at Referral Hospitals in Dar es Salaam. Descriptive cross sectional study design was employed.Systematic sampling procedure was employed to enroll 218 participants including fifteen women who were observed. Close-ended questionnaire was used to obtain required data. A modified checklist with 9 items was used to determine women utilizing KMC. Data analysis was performed through Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics were used to describe the study population and the mothers' KMC practices. Chi-square test was used identify the relationship between independent variable and KMC utilization. Results with a p- value of < 0.05 were considered statistically significant. **Results:** Socio-demographic characteristics of respondents indicated that were aged 25 to 35 years with 80.7 percent married, while 52.8 percent women had primary education. On the other hand, 76.6 percent had self-income generating activities. KMC utilization among participants was found to be low. The main sources of information

on KMC involved 21 percent nurses in the ward followed by 8.3 percent reproductive health clinics. In addition, 63.8 percent of participants had no information regarding KMC. There was a significance between some demographic characteristics of the mother (marital status Chi-square=30.815, p-value 0.000, age chi-square= 11.422, p-value=0.010) and occupation (chi-square = 4.285, p-value 0.044) and KMC utilization. Place and mode of delivery were among factors influenced by KMC utilization significant. It is surmised that there should be provision of support such as give adequate knowledge on ANC, involve community in actual care during referral of infant to ensure continuous KMC implementation. The nurse stands better chances to educate and provide proper information to mothers on importance of KMC method for survival of their newborns.

117. Muola,D.(2017). Prevalence and pattern of white matter abnormalities in adult patients referred for brain magnetic resonance imaging at Muhimbili national hospital.Muhimbili university health and allied science.

Introduction

Background: White matter abnormalities are a worldwide problem. They are regularly encountered at health care facilities. Their occurrence varies globally with different rates based on age and sex. Women are generally affected more than the males and with increasing age (1)(2).White matter consists of glial cells and myelinated axons that transmit signals from one region of the cerebrum to another and between the cerebrum and the lower brain centers. It lies below the cortical surface and comprises approximately 40-50 of total volume of the healthy young adult human brain (3). Both white and grey matter is of equal importance as the cortical areas cannot fulfill their functions without the white matter connections. There is therefore importance in knowing the white matter connections as they are susceptible to certain diseases such as cerebrovascular diseases, infection, multiple sclerosis and etc.Conventional neuroimaging identifies normal white matter tracts which appear homogenous. Magnetic resonance imaging (MRI) is more sensitive than computed tomography (CT) in the detection of white matter abnormalities of the brain (4). Abnormal signals in cerebral white matter are increased in prevalence and severity in association with aging and cerebrovascular risk factors among older individuals (5)(6)(7). They are frequently observed on T2 weighted magnetic resonance imaging (T2W MRI) of the brain. They are alternatively referred to as lesions or hyperintensities, which is because of their white appearance on T2W MRI (8). On CT scan they are hypodense. They are usually caused by demyelination (9), arteriosclerosis, and perivascular space dilatation (10), gliosis, loss of axons and oligodendroglial cells and blood vessels stenosis.White matter abnormalities are associated with an increased risk of stroke, cognitive decline, dementia and death (8). The aim of this study is to determine the prevalence and MRI patterns of white matter abnormalities in Tanzania as little is known.

118. Musa, W.J. (2017).Prevalence of adolescent deliveries and factors associated with poor pregnancy outcome at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Adolescence is the transitional period from childhood to adulthood characterized by significant physiological, psychological and social changes. Adolescent pregnancy has remained a major health and social concern internationally and nationally because of its association with higher maternal morbidity, mortality and negative socioeconomic effects. Poor pregnancy outcome among adolescence is common occurrence and MNH is not exceptional. The hospital receives most referral patients and Adolescent pregnant women accounts to a major role in leading to adverse pregnancy outcomes. However, little is known to what extent socio-demographic and others factors contributes to the poor pregnancy outcome. **Objectives:**The aim of this study was to determine the prevalence of adolescent deliveries and factors associated with poor pregnancy outcome at Muhimbili National Hospital. **Methodology:**A hospital based descriptive cross sectional study was conducted among adolescent mothers who delivered at MNH from September 2016 to December 2016.Interviewers administered questionnaires were used to collect the information after delivery in the postnatal ward. The information collected was socio demographic data, Obstetric and Medical history and delivery outcome. Data was analysed using descriptive and regression methods using SPSS version 20.The prevalence of adolescence deliveries was obtained as a percentage of total adolescent mothers deliveries over all women delivered at MNH. The factors associated with poor pregnancy outcomes were calculated by using multiple logistic regression analysis.**Results:**There were 2744 women delivered at MNH .One hundred and ninety one (191) of these were adolescent mothers, the prevalence of adolescent deliveries was 6.9%.The proportion of poor maternal outcomes was 77.7%, direct causes of poor maternal outcomes were eclampsia and severe pre eclampsia (19.4%,17.3 respectively),followed by perineal tear (13.1%),obstructed labour(11%) and PPROM(9.4%).The proportion of poor fetal outcomes was 52.9%,the adverse fetal outcomes associated to adolescent deliveries were low birth weight (37.2%), prematurity (37.2%)and low Apgar score at 5 minute(12.0%).The unplanned pregnancies was found to be an independent factors associated significantly with poor delivery outcome or adverse fetal outcomes at an OR of 1.78 (95% CI: 1.76– 15.75), while partner occupational was discovered as a protective factor. Government employed adolescents mothers partner were less likely to have poor delivery outcomes as compared to unemployed adolescents mothers partner at an OR of 0.05 (95% CI: 0.004– 0.741). **Conclusion:**Prevalence of adolescent mother delivery at Muhimbili National Hospital despit of being low it is .among the leading cause of poor maternal and perinatal outcome. Among the leading of poor pregnancy outcome in adolescent deliveries were eclamsia, severe pre eclamsia and obstructed labour .These were associated with low Apgar score <7 at 5 minutes, low birth weight and prematurity. Improved quality of antenatal care in primary health facilities and utilization of family planning especially to the adolescent girls will reduce poor pregnancy outcome.

119.Mussa, D.S. (2017). Factors associated with maternal mortality among women admitted in maternity wards at Mnazi mmoja hospital - Zanzibar.Muhimbili university health and allied science.

Abstract

Background: Improving Good Health and Well-being is the third goal among seventeen Sustainable Development goals (SDG) of 2015. The target of these sustainable development goals is to reduce global maternal mortality ratio to less than 70 per 100,000 live births, with no single country having a maternal mortality rate (MMR) greater than 140/100,000 by 2030. Most of maternal deaths are preventable. Zanzibar like other East African countries is experiencing preventable maternal mortality. **Aim:** The objective of this study was to determine the factors associated with maternal mortality among women admitted in Maternity wards at Mnazi Mmoja Hospital in Zanzibar.**Methodology:** A descriptive retrospective design which employs quantitative approach was utilized. The study was conducted from April to May 2017 involving women admitted at Maternity wards from August 2015 to March 2017 at Mnazi Mmoja hospital. Systematic random sampling was used to select patients' files of women admitted in Maternity Wards at Mnazi Mmoja Hospital. Data abstraction form was used to collect information from women's files. Institutional factors (referral status, mode of delivery and birth attendants) and maternal factors (antenatal attendance, conditions of women during admission, gestational age of women during birth, parity, underlying medical and surgical conditions, age and obstetric factors) were extracted. Data were analyzed using Statistical Package for Social Science (SPSS) version 20. Chi square analyses were employed to determine the existence of a relationship between the variables. Multivariate binary logistic regression analysis was used to measure the magnitude of association with prediction of each factor towards maternal mortality.**Results:** The proportion of maternal mortality among studied population were 24 (6.2%), N =384. The Chi square results show that; six factors were statistically significantly associated with maternal mortality, these included; Parity (p =0.041), obstetric factors (p =0.000), gestational age during birth (p =0.003), conditions of women's during admission (0.000), pre-existing health conditions (p =0.000) and birth attendants (0.036). However, in logistic regression, the results revealed that puerperal sepsis had significantly higher risk of deaths as compared to other obstetric factors (OR = 248.95, p value 0.004 with 95% CI from 5.850-10595.03) .Post-partum hemorrhage were twenty times more likely to cause maternal deaths as compared to other obstetric factors (OR =20.112, p value 0.003 with 95% CI from 2.731-149.594). Severe pre-eclampsia were six times more likely to cause maternal deaths as compared to other obstetric factors (OR = 6.744, p value = 0.040 with 95% C.I from 1.092-41.653).**Conclusion:**The findings of this study show that most mothers are dying due to preventable conditions. These findings are alarming and more efforts need to be focused in improving such conditions to cut-down the number of maternal deaths in Zanzibar by strengthening ante natal and post natal clinics. Immediate intervention is required to archive the SDG 2030, and to end with reduce preventable maternal mortality.**Recommendations:**Most of these conditions are preventable by early detection during antenatal care. Antenatal and postnatal care could provide opportunities for the detection of risk factors for severe pre-eclampsia, postpartum hemorrhage and puerperal sepsis that may put women at risk during birth and puerperal period. There is a need to focus on intergraded care throughout pregnancy and child birth.

120. Mushi, B.K. (2017). Ocular manifestations of cerebral palsy in children attending mnh cerebral palsy clinic. Muhimbili university health and allied science.

Abstract

Background: Cerebral palsy is a chronic, static impairment of muscle tone strength, coordination and movement resulting from cerebral insult before, during birth and or perinatal period. It may be associated with ocular abnormalities such as refractive errors, strabismus, nystagmus, optic atrophy and cortical visual impairment (CVI). Ocular abnormalities in children with Cerebral palsy impair learning, movements and are associated with increased dependency on care takers. If these ocular abnormalities are detected early before visual maturation has occurred and visual therapy initiated, the vision of these children can improve tremendously which, ultimately reduce the dependency on caregivers and improve the child's quality of life**. Aim:** To assess magnitude and pattern of ocular manifestations of Cerebral Palsy in children attending Muhimbili National Hospital Cerebral Palsy clinic**.Methodology**: A hospital based descriptive cross-section study among 198 children aged 6 months up to 18 years attending Cerebral Palsy clinic at Muhimbili National Hospital was done. Study participants were selected by systematic random sampling followed by gathering of data through history taking, case notes review and a full ophthalmological assessment**. Results:**There were 116 males and 82 females and the mean age was 44.2±35.8 months. Most of the studied children had spastic type of Cerebral palsy (83.4%), with birth asphyxia being the most likely cause (62.1%). About a half of the children who had attained the school going age were not enrolled in school. The overall incidence of ocular abnormalities in this study was 84%. Major ocular abnormalities identified in these cases were refractive errors 48%, nystagmus 21%, strabismus 20% and optic disc pallor 13%. Only 16% of the children with refractive errors had spectacle correction. Visual impairment was present in 74% of children, Cerebral visual impairment (CVI) was the commonest cause (80%). Ophthalmology clinic attendance prior to the study was 32% with the mean age at first attendance being 20.1 months while Physiotherapy clinic attendance was 82% and mean age at first visit was 9.8 months.**Conclusion:** Majority of children with cerebral palsy attending the MNH CP clinic had visual impairment caused by different ocular abnormalities.The commonest cause of visual impairment was CVI related to birth asphyxia. Most of them had never attended ophthalmology clinic and those who had started, attended at an advanced age. Recommendation Early ophthalmological assessment for every child attending CP clinic was proposed to recognize visual impairment at the age where appropriate visual rehabilitation is worthwhile.

121. Mutigitu, J.I. (2017). Factors leading to elevated viral load among HIV infected individuals receiving antiretroviral therapy in Pwani region, Tanzania.Muhimbili univarsity health and alliade science.

Abstract

Background: Antiretroviral therapy (ART) has dramatically reduced HIV-associated morbidity and mortality and has transformed HIV disease into a chronic, manageable condition. The quantification of viral load in plasma is a determinant of the progression of the disease and, along with CD4 lymphocyte counts, has been used to monitor therapeutic responses in HIV patients on ART. **Objective:**To determine the factors leading to elevated viral load among HIV infected individuals receiving ART in Pwani region Tanzania.**Methodology:**This study was analytical cross sectional facility based among a cohort of Patient attending three hospitals in Pwani Region. The study was conducted for a period of 12 months using viral load data collected at care and treatment clinic (CTC) in Pwani region from June 2016 to May 2017. A total of 482 HIV infected individuals enrolled on ART in Pwani region were included in this study. Plasma viral load results were obtained from patient's medical record files. Structured questionnaires were administered to participants to gather information on factors associated with elevation of viral load. Viral load was also tested after 12 months or more of using ART i.e. six months from the initial viral load test. Data analysis was done using Epi info version 3.5.1. Chi squared-Mantel-Hansel test was used to for comparison of proportions. Logistic regression and multivariate analysis were used to analyze factors associated with elevated viral load.**Results:**A total of 482 HIV infected individuals were recruited in the study. The proportion of participants with elevated viral load (>1000 copies/mL) was 188 (39%). The median viral load results obtained in patients' medical records after period of six months or more of using ART was 12368 copies/mL (IQR=3999-47236) which decreased significantly to 437 copies/mL (IQR=20-9303) after being on enhanced adherence counseling and close follow up by health worker. In this study, we found the following factors were significantly associated with elevated viral load; HIV infected individuals who had not disclosed their HIV status were four times more likely to have elevated viral load compared to those who disclosed their HIV status (OR=3.78 95% CI (1.78-7.88). HIV infected individuals who did not attend enhanced adherence counseling were three times more likely to have elevated viral load compared to those who attended (OR= 3.08 95% CI (1.74- 5.46). Those who reported to be taking alcohol were three times more likely to have elevated viral load compared to those who reported not to be taking alcohol (OR=3.49 95% CI (2.09 – 5.82). Moreover, individuals who were not members of psychosocial groups were three times more likely to have elevated viral load compared to those who were members of psychosocial groups (OR=2.64 95% CI (1.28-5.44). Participants who reported to take two meals or less per day were two times likely to have elevated viral load compared to those who reported to take more than two meals per day (OR= 1.64 95% CI (1.13-2.38). HIV infected individuals who could not take medication on an empty stomach were four times more likely to have elevated viral load compared to those who were able to take medication even on empty stomach (OR= 4.03 95% CI (2.47- 5.98),**Conclusion:**While ART has made it possible to significantly decrease of HIV related morbidity and mortality, this study found a high proportion (39.%) of individual had elevated viral load despite being on ART for 12 months or more. The factors which influence the elevation of viral load in patients using ART in Pwani region, included taking alcohol, taking few meals per day, not attending EAC session, failing to take medication in empty stomach, consuming few number of meals per day, not being member of psychosocial group and failing to disclose their HIV status. This study also found that being depressed or having illness, forgetting or being busy,

unavailability of ART at the clinic, change of daily routine were among the reasons for non-adherence to ART. **Recommendation:**Emphasis should be made by health-care providers to enhance adherence and counseling to all HIV infected patients at the time of ART initiation. Patients should also be encouraged by health care providers to join a psychosocial group where they will receive psychosocial support to help them to cope with fear of disclosing their HIV status as well as stigma. We also recommend for another study to assess the role of antiretroviral drug resistance on persistence of high level HIV viral load, particularly for patients with elevated viral load after 12 months of ART despite being on enhanced adherence and counseling groups.

122. Msovela,E.J.(2017). Knowledge on prescribed artemether-lumefantrine among outpatients and caretakers attending temeke hospital: patients fundamental rights. Muhimbili university health and allied science.

Background: Patients have fundamental rights and dignity of receiving adequate information regarding their illness and therapeutic management. Comprehension of information is essential for good adherence to the prescribed drugs and for participating in decision makingabout treatments as recommended in the International Covenant on Civil and Political Rights (ICCPR) article 19. In spite of existence of such covenants, Tanzania has recorded up to 85.1% of patients who do not adhere to prescribed ALU drugs; probably due to poor comprehension of instructions. **General Objective:**The main objective of this study to assess the knowledge on prescribed ALu among outpatients and caretakers attending Temeke hospital. **Methodology:**This was a cross sectional study involving 224 outpatients and caregivers who were attending at Temeke Hospital and received Artemether-lumefantrine(ALU) drugs. A self administered questionnaire was used. Data analysis was analyzed by using SPSS version 20.0. Frequency distributions were generated; then Chi-square was used to compare proportions of participants with high and low knowledge and the associated factors. $P \leq 0.05$ was considered to be statistically significant. **Results:** Majority of participants 172 (76.8%) of 224 received more than three types of drugs along with the prescribed ALu. Only 105 (46.9%) understood the Interval of hours required to take ALu pills; their knowledge did not vary with sex. However those with university/college education (74.1%) were more likely to be knowledgeable as compared to those with primary or lower education (45%). Fifty eight percent of participants did not understand the number of days required to complete ALu dosage, while only 114 (50.9%) understood the instructions written on the ALu package. When asked about the consequences associated with incomplete ALu dosage, 176 (78.6%) did not understand the risks of not completing ALu dosage. More than half (58.5%) of participants were not satisfied with the information given by health workers about risks and benefits of the prescribed ALu. The Majority (84.8%) of participants did not discuss with care provider about managing the prescribed ALu. In this regard 198 (89.2%) of participants did not get an opportunity to ask any question about the prescribed ALu medication.**Conclusion:**Finally this study revealed that, nearly half of patients neither knew the interval of hours required to take ALu nor did they know the number of days required to complete the ALu dosage. Those with higher education were more likely to be knowledgeable. Most patients did not get an opportunity to ask questions related to the

prescribed medicine because there was little provision for discussion with the care provider.**Recommendation:**It is recommended that; health care providers have to observe their moral obligation of spending sufficient time with their patients to ensure that their instructions are well comprehended by their patients.

123. Mwabulambo, S.G. (2017). Health symptoms associated with pesticides exposure among flower and onion pesticide applicators in arusha region.Muhimbili university health and allied science.

Abstract

Background: Pesticides are extensively used in agriculture to control harmful pests and prevent crop yield losses or product damage. In Tanzania several studies have been conducted on health symptoms of pesticides to agricultural workers. However there are few studies on neurological health symptoms associated with pesticide exposure in flower and onion farms.**Objective:** The study focused on health symptoms associated with pesticides exposure among flower and onion pesticide applicators in Arusha region.Material and **Methods:** The study used cross sectional study design with quantitative approach, it employed the use of interview based questionnaires, observation checklist and laboratory analysis of 140 cholinesterase test at flowers and onion farms. A multistage sampling technique with probability methods was used to select study area (districts, wards and villages). A simple random sampling was used to select study participants. Data analysis was done using SPSS software version 20.**Results:** About 98% of pesticide used was organophosphate and only 2% was carbamate used in the area to protect crops from the effect of diseases, pests and weeds. The prevalence of neurological health symptoms reported more to onion farms, with higher body weakness (91.1%) pain in part of the body (64.3%) but the situation differ from flower farms were reported in excessive sweating followed by body weakness. More than 39% of the study participants from onion and 19% from flower farms had Acetylcholinesterase levels below the normal range. The mean average of participants from onion farms was 27.882 ± 3.829 U/g Hgb of cholinesterase test level whereas participants from flower farms was 25.146 ± 3.9607 U/g Hgb of cholinesterase test level which was lower by 2.736 U/g Hgb compared to those of onion farms. About 39.3% and 19% of participants from onion and flower farms had cholinesterase level below the limit level respectively. Study shows that only 60% of pesticide applicator use personal protective equipment when exposed to pesticide. **Conclusion:** High proportion of neurological health symptoms and cholinesterase test depression was noted among pesticide applicators in both farms. There is a need to conduct further studies to ascertain causal to such high neurological health symptoms

124. Mwakatima, M. (2017). Prevalence of cytomegalovirus and epstein barr virus and associated factors among lactating mothers attending postnatal clinic in Mbeya region, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Cytomegalovirus (CMV) and Epstein Barr (EBV) virus are two ubiquitous organisms that potentiate a wide spectrum of disease in children and adults. They are the most common cause of congenital and postnatal infection throughout the world, usually primary infections follows a benign course but the virus remains latent or persistent in the body. CMV and EBV can be transmitted through most body fluids including saliva, urine, human milk, genital secretions and blood. They are commonly excreted in breast milk of sero-positive mothers with rate of detection estimated to be 40-99%. About 50% of infants exposed to the virus through human milk acquire the virus. In this error of immunesuppression and immunecompromised it is important to understand the magnitude of CMV and EBV in breast milk. **Objective:** To determine the prevalence of CMV and EBV and associated factors among lactating mothers attending postnatal clinics in Mbeya region.**Methodology:** Hospital based cross section study among lactating mothers attending postnatal clinic in Mbeya Region. Questionnaire was used to collect social demographic data and clinical history from mothers. Specimen including breast milk and saliva were collected using aseptic technique to ensure quality. saliva was screened for CMV and EBV antibodies and milk was tested for CMV and EBV DNA. Data were analyzed by means of statistical inference; Statistical calculation was calculated using graph pad prism and STATA software.**Results:** A total of 144 lactating women were included in the study, where by 63.9% were CMV seropositive and 53.5 % was EBV seropositive. The prevalence of CMV and EBV in breast milk was 80.8 % and 63.2 % respectively. Overall, CMV and EBV DNA in breast milk were detected in 95 % of all seropositive mothers. The proportion of co-infection of CMV and EBV through detection of DNA in breast milk was 50.4% and 9.7% respectively had IgM alone for both CMV and EBV. Seropositivity was significantly associated with detection of CMV and EBV in breast milk ($p<0.05$). Age, Gravidity, HIV status, occupation and education were not associated with detection of CMV and EBV in breast milk.**Conclusion:** The prevalence of CMV and EBV is highly detected in breast milk of lactating mothers attending postnatal clinics in Mbeya region and majority of seropositive lactating mothers shed the virus in breast milk Quantification should be done to ensure the amount is negligible to be transmitted to infants.

125. Mwakibibi, D. (2017). To validate the use of possum score to predict morbidity and mortality among enteric perforation peritonitis patients undergoing laparotomy at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Enteric perforation peritonitis is a very common surgical emergency at MNH and scoring these patients will help to select those at high risk who require intensive management and also to provide a reliable objective classification of severity, operative risk and treatment outcome. The Physiological and Operative Severity Score for the enumeration of Mortality and morbidity (POSSUM) is a surgical risk scoring system which has been used extensively in various countries to predict post-operative morbidity and mortality in surgery.**Objective of the study:** To validate the use of POSSUM scoring model in MNH patients undergoing exploratory laparotomy for enteric perforation peritonitis **Methodology:** This was a prospective study that involved patients with enteric perforation peritonitis who

underwent laparotomy over a nine month period in the year 2016/2017study was hospital-based prospective analytic one. Ethical approval was obtained from MUHAS – IRB.POSSUM score for each patient was used to calculate predicted mortality and morbidity postoperatively. Linear regression analysis was used to determine the relationship between the observed and expected morbidity and mortality. Data was analyzed using SPSS with statistical significance set at p value of less than 0.05.**Results:** A total of 62 patients whose mean age was 36.4+16 years. The observed mortality was 22 patients (35.5%) and observed morbidity was 12 patients (30%). The expected/calculated morbidity and mortality were 14 patients (35%) and 19 patients (30.7%) respectively. Observed to expected mortality and morbidity ratios were 1.16 and 0.86 respectively. By applying a linear analysis, there was no statistical significant difference between the predicted and observed values ($\chi 2 = 2.33$, $p = 0.94$) and ($\chi 2 = 0.00$, $p = 1.00$) respectively.**Conclusion:** This study has validated the use of POSSUM scoring system in enteric perforation peritonitis patients at MNH.

126. Mwalumuli,E.O.(2017). Comparison of level and predictors of adherence to art option b+ between hiv infected pregnant and lactating women at Mnazi mmoja hospital Dar es salam Tanzania.Muhimbili university health and allied science.

Abstract

Background: Adherence to medication is a crucial component in the prevention of mother to child transmission of HIV. The prevention of mother to child transmission (PMTCT) program is an intervention that aims towards reduction of vertical transmission of HIV. It is obvious that without this intervention many babies would die within the first two years of life as evidenced by the fact that mother-child transmission account for 18% of new HIV infections and almost 99,000 HIV positive women deliver exposed infants annually in Tanzania. In line with the objectives of PMTCT to eliminate mother-to-child transmission through improvement of reproductive and child health (RCH) services the Ministry of Health, Community Development, Gender, Elderly and Children adopted option B plus PMTCT program since 2013.**Aim:** This study aimed to compare level and predictors of adherence to ART between HIV/AIDS infected pregnant and lactating women currently on Option B + regime.**Methodology:** This was a comparative cross-sectional study involving 338 participants of which 169 were pregnant and 169 were lactating women on Option B + regime attending PMTCT services at Mnazi Mmoja Hospital Dar es salaam. Data on adherence level were collected from patients by self-reporting method whereby a questionnaire which was adapted and modified from the tool to measure ART adherence in the resource constrained settings of South Africa, which contain the questions of Information- motivation and behavior skills (IMB) model was used. This IMB model postulates that health related information, motivation and behavior skills are important determinants of whether or not a health behavior is performed.The questionnaire was used to collect socio-demographic information, measures of drugs adherence, medical history and Obstetric history. Important variables were marital status, HIV disclosure status, economic status (measured by employment status), and distance from health facility, education level, gestational age and gravity. Data were analyzed using the Statistical Package for Social Sciences (SPSS) computer software, version 20. Data were presented by using descriptive

summary statistics like proportions as well as logistic regression for determining association between dependent and explanatory variables.Results were considered of statistical significance when the p-value <0.05. **Results:** The overall proportion of good adherence to ART option B+ in this study was 58.9%, pregnant women were found to have good adherence (66.6%) than lactating mothers (51.0%). Controlling for the effect of other factors, the odds of adhering to ART Option B+ were 7 times higher among women who received good partner support as compared to those with poor partner support (AOR=7.2, 95% CI =1.01-14.22). Similarly, women with good knowledge on PMTCT were 2.5 times likely to have good adherence than those with poor knowledge (AOR 2.54(1.29-5.01).Disclosure status also has shown to influence adherence (AOR=1.07 95% CI =1.01 – 4.22) and participants who knew HIV status of their male partners were (COR=2.17, 95% CI=1.40-3.36) more likely to be adherent compared to those who did not know their male partner HIV status. When confounding factors were considered, knowing partner HIV status had no significant difference in adherence as compared to their counterpart (AOR=1.28, 95% CI=0.68-2.43). Comparatively, only three factors were found to influence adherence to option B+ in pregnant group of which being married, having good partner support and good knowledge on PMTCT significantly influenced adherence, in contrast to lactating women group in which more factors were observed such that being married, having good partner support, disclosing HIV status and knowing spouse HIV status and short duration after delivery significantly influenced adherence status.**Conclusions:** The overall proportion of good adherence to PMTCT option B+ in this study was 58.9%, pregnant women were found to have high level of good adherence (66.6%) than lactating mothers (51.0%). The main predictors influencing adherence were good male partner support, marital status, and good knowledge on PMTCT and, disclosure status.**Recommendations:** Furtherstudies multicenter with large sample size should be conducted as it will also help to find out the associations of multiple factors with adherence, together with the evaluation the components of counseling in relation with adherence.Counseling should be intensive and comprehensive including all the components as recommended by ministry of health, including importance of disclosing own HIV status, knowing partner HIV status and adhering to ART.

127. Mwamasage, B.LA.(2017). Factors associated with risk for pregnancy among secondary school girls in ilala municipality,Dar es salaam, Tanzania.municipal. Muhimbili university health and allied science.

Abstarct

Background: Adolescent pregnancy is a global public health problem and mainly affecting low income countries. In Tanzania, it is a major cause of drop-outs from schools. However, several factors have been associated with adolescent pregnancy but in general they include individual, home environment and school characteristics in relation to lack of knowledge, negative attitude and low self-efficacy towards pregnancy prevention. This study revealed that adolescents generally have moderate knowledge, negative attitude and low self-efficacy towards pregnancy prevention. Nevertheless, there was observed differences across different socio-demographic characteristics.**Objective:** This study was done to assess the magnitude and factors associated with risk for pregnancy in relation to knowledge, attitude and self-

efficacy, among secondary school adolescent girls in Ilala Municipality, in Dar es salaam.**Methodology:** A cross sectional quantitative study was conducted. The study involved 340 participants. Self-administered structured questionnaires were used for data collection. Simple random sampling was used to select study participants and data analysis was done using SPSS version 23 where descriptive analysis was run to determine frequency and percentages and the degree of association was established using comparison of mean differences and chi squire. A p value of less or equal to 0.05 was used to measure the degree of association **Results:**About 4.4% (15) respondents were observe had exposure to sex and the large proportion were older adolescents. Participants had good knowledge on pregnancy (83.1%)and had low knowledge on pregnancy prevention, as the highest score was 39.1%. The attitude towards pregnancy was negative for (78.2%) as well as pregnancy prevention (64.1%). Lastly, perceived self-efficacy to pregnancy prevention was low (42.1%), with high percentages for the item observed in the neutral and don't know responses. However, comparison of mean differences was done for the knowledge, attitude and self-efficacy in relation to the socio-demographic characteristics in order to establish the association between groups. As regards to the knowledge item, there was observed statistically significant association for age (p = 0.007); school grade (p = 0.000) and school composition (p=0.028). Likewise, statistical significant results for the attitude item was observed for the school grade (p=0.003). Comparison of mean differences between socio-demographic characteristics and perceived self-efficacy, revealed statistical significant association for religion (p=0.005); school grade (p=0.000) and school composition (p=0.000)The last measure was done to compare the mean differences between the risk factor for pregnancy (exposure to sex) and all three items (knowledge, attitude and perception). The knowledge item revealed statistical significant association (p=0.035) **Conclusion:**In this study participants were found to have moderate knowledge about pregnancy prevention, but generally had negative attitude low self-efficacy to pregnancy prevention. Those factors put them in high risk of getting pregnancy, if interventions are not taken to rectify the situation. Therefore; efforts done to address the deficiencies observed in this study so as to alleviate the situation and make girls achieve their education goals.**Recommendations:**There is a need to ensure that sexuality education is strengthened in schools and parents are encouraged to hold open discussion with their adolescents about sexual reproductive health. It is recommended that reproductive health education and services are availed to adolescents in a more convenient way to them, order to prevent them from pregnancy and lastly, strategies should be laid down to address attitude and low self- efficacy towards pregnancy prevention, preferably through peer education.

128. Mwambambale, A.(2017). Nutritional status, physical exercise and associated factors among urban secondary school adolescent girls in Ilala municipal.Muhimbili university health and allied science.

Abstract

Background: Poor nutrition status among adolescent girls is a global public health challenge facing the world today, especially in the developing countries. In Tanzania more than 17.5% of adolescent girls aged 15 to 19 years are considered to be thin, with 4.4% being severely

thin while about 9% are overweight or obese. Adolescent girls are particularly vulnerable to poor nutrition because they are growing fast, they need more of protein, iron, and other micronutrients to support the adolescent growth development and meet the body's increased demand for iron during menstruation. Poor nutrition in adolescent girls contributes to maternal mortality/morbidity as well as to the low birth weight which in turn might contribute to increased percentage for infant mortality and nutrition-related chronic diseases. **Objective:** The study aimed at assessing nutrition status, physical exercise and associated factors among urban secondary schools adolescent girls aged 13 -19 years old in Ilala municipal.Materials and Methods: A cross-sectional descriptive study of 284 selected urban adolescent school girls aged from 14 to 19 years. Multistage, simple random sampling technique from Secondary schools in Ilala Municipal was carried out. Their nutritional status was determined using anthropometric measures (BMI for age). The socio demographic, individual and environmental variables were analysed to determine their relationship with under nutrition in adolescent girls. Data was analyzed using SPSS (version 18) and Anthroplus software package. Logistic regression analysis (bivariate) was used to examine how independent variables influenced dependent variable.Association between independent variable and dependent variable was considered significant if p-value is less than 0.05.**Results:** The study reveals prevalence of stunting in adolescent girls (31.4%) whereas 20.9% were severely stunted. wasted and overweight/obesity were 1.5% and 2.3% respectively. Study findings revealed that the only predictor variable which yielded significant result was quality of drinking water ($p< 0.098$). **Conclusion:** Under nutrition especially stunting of the adolescent girls is an important public health problem in the area and it is likely to remain a problem if left unaddressed and no intervention put is in a place.

129. Mwambene, G.A.(2017). The indications and magnitude of implant removal among patients undergoing orthopaedic and trauma surgical procedures at Muhimbili orthopaedic institute.Muhimbili university health and allied science.

Abstract

Introduction: The goal in fracture management is to obtain union of the fracture with maximal functional return as early as possible hence internal fixation of fractures is becoming more popular. Because of an increasing trend towards internal fixation hardware removal after the fracture healing is becoming a common elective orthopaedic operation. Currently the indications in favour of implant removal include pain, infections, nonunion, malunion, patients requests and surgeons advise (following scientific indications). The operation for implant removal carries significant morbidity with complications as high as 40% reported in certain publications. The study sought to determine the indications and magnitude of implant removal procedures among the operated orthopaedic and trauma patients. This was a descriptive cross sectional study involving orthopaedic and trauma patients who were operated in the department of orthopaedic and trauma of MOI from 8th June, 2016 to 30th December, 2016. Ethical issues pertaining to informed consent, confidentiality and the rights to withdraw from the study were respected by the researcher. A structured questionnaire was used to collect the information from the study participants in a face to face interview. Data on the demographic factors, indications for implant removal, duration of implants in place, types

of implants, sites of implant removal and radiological findings were recorded in the questionnaire. Data were entered into the Statistical Package for Social Sciences (SPSS) program (version 20) for clearing, coding and statistical analysis. P-value of 0.05 was considered significant. In the period of seven months a total of 2216 operations were done in the department of orthopaedic and trauma. Emergency operations were 910 and elective operations were 1306. There were 200 operations involving orthopaedic implant removal and all were elective, of these 140 (70%) were in males and 60 (30%) in females. The age ranged from 2 to 75 years with the mean age of 25.9 years (SD=18.1). The majority (42%) of the participants were aged less or equal to sixteen years.Orthopaedic implant removal procedures formed 9% of all operations at MOI.The commonest indications were surgeons advise (34.5%), infections (18.5%), nonunion (17.0%), patients request (13%), pain (11%), prominent implants (2.5%), implant failure (2.5), malunion (0.5) and refracture (0.5). The implants that were removed included plates (39%), intramedullary nails (33%), Kirschner wires (24%) and screws (4%). The bones from which implants were removed included femur (39%), tibia (22.5%), humerus (22%), radius and ulna (12%) and others (4.5%). 35% of the implants had been in place for less than six months and 65% more than six months.The 9% proportion of orthopaedic implant removal procedures found in this study is lower than the reported findings by other studies done elsewhere. Studies done in Kathmandu and New york reported proportions of 7.8% and 5% respectively which are lower than that found in this study. Surgeon's advice was the commonest indication and accounted for 34.5% which is higher than the findings of the studies done in other countries that showed a range of 14.9%-21.8%. The author advised the surgeons to strictly abide to the scientific criteria for implant removal when making decisions on whether to remove or retain implants as most of them can stay in the body for life without complications.

The study ended up with some recommendations that include;

1. Further studies are needed to determine the reasons for increased implant removal procedures due to infections, nonunion and surgeons advise.

2. Further studies are needed to establish the complications of orthopaedic implant removal procedures.

3. Further studies are needed to assess the economic cost of these procedures and their burden to the hospital and patients.

130. Mwamasange, B.L.A. (2017). Factors associated with risk for pregnancy among secondary school girls in Ilala municipality,Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Adolescent pregnancy is a global public health problem and mainly affecting low income countries. In Tanzania, it is a major cause of drop-outs from schools. However, several factors have been associated with adolescent pregnancy but in general they include individual, home environment and school characteristics in relation to lack of knowledge,

negative attitude and low self-efficacy towards pregnancy prevention. This study revealed that adolescents generally have moderate knowledge, negative attitude and low self-efficacy towards pregnancy prevention. Nevertheless, there was observed differences across different socio-demographic characteristics.**Objective:** This study was done to assess the magnitude and factors associated with risk for pregnancy in relation to knowledge, attitude and self-efficacy, among secondary school adolescent girls in Ilala Municipality, in Dar es salaam.**Methodology:** A cross sectional quantitative study was conducted. The study involved 340 participants. Self-administered structured questionnaires were used for data collection. Simple random sampling was used to select study participants and data analysis was done using SPSS version 23 where descriptive analysis was run to determine frequency and percentages and the degree of association was established using comparison of mean differences and chi squire. A p value of less or equal to 0.05 was used to measure the degree of association **Results:**About 4.4% (15) respondents were observe had exposure to sex and the large proportion were older adolescents. Participants had good knowledge on pregnancy (83.1%)and had low knowledge on pregnancy prevention, as the highest score was 39.1%. The attitude towards pregnancy was negative for (78.2%) as well as pregnancy prevention (64.1%). Lastly, perceived self-efficacy to pregnancy prevention was low (42.1%), with high percentages for the item observed in the neutral and don't know responses. However, comparison of mean differences was done for the knowledge, attitude and self-efficacy in relation to the socio-demographic characteristics in order to establish the association between groups. As regards to the knowledge item, there was observed statistically significant association for age (p = 0.007); school grade (p = 0.000) and school composition (p=0.028). Likewise, statistical significant results for the attitude item was observed for the school grade (p=0.003). Comparison of mean differences between socio-demographic characteristics and perceived self-efficacy, revealed statistical significant association for religion (p=0.005); school grade (p=0.000) and school composition (p=0.000)The last measure was done to compare the mean differences between the risk factor for pregnancy (exposure to sex) and all three items (knowledge, attitude and perception). The knowledge item revealed statistical significant association (p=0.035) **Conclusion:**In this study participants were found to have moderate knowledge about pregnancy prevention, but generally had negative attitude low self-efficacy to pregnancy prevention. Those factors put them in high risk of getting pregnancy, if interventions are not taken to rectify the situation. Therefore; efforts done to address the deficiencies observed in this study so as to alleviate the situation and make girls achieve their education goals.**Recommendations:**There is a need to ensure that sexuality education is strengthened in schools and parents are encouraged to hold open discussion with their adolescents about sexual reproductive health. It is recommended that reproductive health education and services are availed to adolescents in a more convenient way to them, order to prevent them from pregnancy and lastly, strategies should be laid down to address attitude and low self- efficacy towards pregnancy prevention, preferably through peer education.

131. Mwandelile, I.F. (2017). Uptake of folic acid fortified flours among women of reproductive age in Ifakara, Morogoro region.Muhimbili university health and allied science.

Abstract

Background: Folic acid food fortification has been in place for over two decades after several studies proving folic acid beneficial effects on prevention ofneural tube defects (NTDs).Tanzania has adopted mandatory fortification policy on wheat and maize flour. Essentially all wheat flour in Tanzania is fortified.Fortified maize flour from smaller mills is also available but less common. Uptake of fortified flours is important in prevention of the micronutrient deficiency among women of reproductive age (WRA) as well as NTDs to unborn babies. However, the uptake of folic acid fortified flours among WRAis unknown. Therefore this study intended to determine awareness, uptake of folic acid fortified flours, influencing factors and reasons hindering uptake among WRA in Ifakara Town Council, Morogoro region.**Methods:**This was a cross sectional study involving698 WRA, conducted from March to April 2017 in Ifakara. A multistage cluster random sampling technique was used to select study participants. Pretested interviewer administered questionnairesand observation checklists were used to collect information on uptake and availability of fortified wheat and maize floursfrom local retail shops. Data were managed and analyzed by Epi Info7 and STATA 13. Association between uptake of folic acid fortified flours and independent variables was assessed using odds ratios through cross tabulations and significance testing was done using Chi square or Fishers's exact test. P value of 0.05 was considered significant. Factors with p-value of ≤0.2 at bivariate analysis including conventional confounders such as age were entered in multiple logistic regression model to assess significant independent factors associated with fortified flours uptake among WRA and to control for potential confounders.**Results:**A total of 698WRA participated in the study. Awareness of folic acid and fortified flours were found to be 6.9% (5.2%-9.0%) and 7.5% (5.7%-9.6%) respectively. The uptake of fortified flours was found to be 63.3% (59.7%-66.8%). Fortified wheat flour was found available in all 9 villages involved in the study while fortified maize flour was found in only one village. Factors that were significantly associated with fortified flours uptake included; Being employed, AOR=1.99(1.27-3.13), household size of 5 or more people, AOR=1.37(1.02-1.85) as well as nulliparity, parity of 1-4 children, AOR=2.74(1.54-4.87) and 1.92(1.17-3.13) respectively and awareness of folic acid, AOR=2.67(1.37-5.19. The common reasons mentioned to hinder uptake of fortified flours included: not knowing that the flour is fortified and unaffording to buy fortified flours.**Conclusion and recommendations:**Uptake of fortified flours among WRA is relatively high however, low for maize flour accompanied with low awareness of folic acidand existence of fortified flours.All9 villages involved in the study had an access to fortified wheat flour and only one village had an access to fortified maize flour. Being employed, having fewer children, household size of 5 or more people and awareness of folic acid are significant influencing factors for uptake of folic acid fortified flours.Not knowing thatflour is fortified and unaffordability were commonly mentioned hindering reasons for fortified flours uptake. To increase uptake of fortified flours, institutions like Tanzania Food and Nutrition Centre (TFNC) should be used to increase awareness on the benefits of folic acid fortified flours among women and the general community.

132. Mwangoka,S. (2017). Factors associated with caesarean section among women delivering at mbeya zonal referral hospital. Muhimbili univarsity health and allied science.

Background: The rate of caesarean section has been rising in most of countries around the world. World Health Organization (WHO) has recommended the limit of caesarean section rate to be 15%, as rate beyond this limit have negative consequences to both mother and the baby. Tanzania is among the countries with limited resources settings, caesarean section rate is 6% but the rate of Referral Hospitals is more than 30% which is beyond WHO recommended limit. The factors associated with caesarean section need to be explored so as to complement with other studies and provide specific recommendations on appropriate interventions to improve obstetric practice particularly in reducing caesarean section.**Objectives:** To assess the factors associated with caesarean section deliveries.**Methodology:** Quantitative approach using analytical cross sectional study design. A total of 400 post natal mothers were randomly selected in post natal ward. Data was collected from patient records and interview using a structured questionnaire. Descriptive statistical analysis using mean, frequency and proportion was computed. Chi-square test ($P<0.05$) and odds ratio with corresponding 95% confidence interval was used to determine the association between dependent and independent variables as well as predictors of caesarean section deliveries.The ethical clearance was acquired from MUHAS – IRB and MMREC, also written informed consent was used to obtained consent from all participants.**Results:** The proportion of caesarean section among participants was 186 (46.5%), N = 400. The obstetric factors associated with caesarean deliveries was maternal age ($P<0.001$, OR = 4.456), parity ($P<0.05$), birth weight ($P<0.05$) and co morbid illness such as Pregnancy Induced Hypertension (PIH), Pre-eclampsia /eclampsia and Genital warts ($P<0.001$). Non obstetric factors identified were marital status and socio economic status ($P<0.05$, OR = 2.303).**Conclusion:** The rate of caesarean section at Mbeya Zonal Referral hospital is high. To maintain optimum rate, there a need to reduce unnecessary cesarean section among women with low risks. Health care providers should be aware of the risks of unnecessary caesarean section as well as women should be fully informed on benefits and risks of caesarean section. **Recommendations:** MOHCDGEC may incorporate Midwives Model of Care in antenatal and postal services, Mbeya Zonal Referral hospital need to develop and operationalise guideline for safe conduct of vaginal birth after Caesarean section delivery, regular coaching of staff on proper foetal monitoring as well as conducting audit of caesarean section deliveries.

133. Mwashemele,Y.Z. (2017).Local government preparedness and community knowledge and practices to cholera outbreaks: the case of Kinondoni municipal in Dar es salaam, Tanzania. Muhimbili univarsity health and allied science.

Back ground: Cholera is an acute diarrhea infection caused by ingestion of food or water contaminated with the bacteria Vibrio-Cholera (WHO, 2000). Cholera is a highly infectious disease and it affects both children and adults. The bacteria affect the transport of water in the small intestine, and secrete cholera toxin (CT) which causes severe fluid loss into the digestive track leading to dehydration and ultimately death if untreated (Vicki

Symington).Much has been done by the government of Tanzania in collaboration with other donor agencies to prevent cholera outbreaks, but little is still known about coping strategiesduring and after cholera outbreaks. It is against this background that the proposed research aimed at assessing Local Government Preparedness and Community knowledge and Practices to cholera outbreaks so that the impacts of future cholera outbreaks are minimized. The aim of this study was to assess local government authority's preparedness and community knowledge and practices to cholera outbreaks.**Methods:** This study combined both qualitative and quantitative data collection methodologies. The study was conducted at Kinondoni Municipal where a total of 6 key informants and 402 households were interviewed. The study assessed the local government authority's preparedness and community knowledge and practices to cholera outbreaks. Quantitative data were entered, cleaned, analyzed and summarized in percentages and numbers per need using SPSS version while the qualitative data was read, arranged by themes and analyzed by using grounded theory approach. The findings were used to answer the study objectives. **Results:** Overall the Local Government Authorities preparedness and community knowledge and Practices are inadequate. Regarding the Knowledge about cholera preparedness and prevention, the multiple data analysis responses indicated that the most common known causes of Cholera was 152 (38%)''Ingesting faces and Vomiting'', and 'Vomiting'' was 261(65%) the most known symptoms of Cholera. Regarding the Cholera Treatment, ''Medicine given by health workers '' was known by all respondents 402 (100%).Practices regarding cholera preparedness and prevention are still inadequate in terms of water treatments, hygienic practices, food safety practices, methods to empty the toilets and sanitations though households found with average knowledge of Cholera. **Conclusion:** This study confirmed that the Kinondoni Municipal is not well prepared to respond quickly to Cholera outbreaks though it has well skilled staff and households have sufficient knowledge about Cholera and how it can be prevented.

134. Mwang'amba, G.F. (2017). Clinical outcomes after ultrasound guided supraclavicular brachial plexus blockade for upper limb surgeries at Muhimbili orthopaedic institute. Muhimbili university health and allied science.

Short background: Upper limb surgeries can be done with regional anaesthesia, general anaesthesia or combination of the two. Ultrasound guided regional anaesthesia has become a popular technique and has transformed Supraclavicular blocks into potentially safe superficial blocks. The improved safety and efficacy that ultrasound brings to regional anaesthesia has helped to promote its use and realize the benefits that regional anaesthesia has over general anaesthesia. Broad **objective:** The objective of this study was to determine clinical outcomes after ultrasound guided supraclavicular brachial plexus blocks among patients who underwent upper limb surgeries at Muhimbili orthopaedic institute.**Aim of study:** Ultrasound guided blocks is a poorly researched area in our country. No research has been done in ultrasound guided supraclavicular brachial plexus block. This study was done for the purpose of understanding clinical outcomes after ultrasound guided supraclavicular brachial plexus blockade.**Methodology:** After local ethical committee approval and obtaining informed consent, a hospital based prospective observation cross-sectional study was done in 86 adult

patients of both sexes aged 18 years and above who underwent upper limb surgeries under regional anaesthesia by ultrasound guided supraclavicular blocks.The study was done at MOI whereby 0.5% Bupivacaine plain and 2% lidocaine with 1:200000 epinephrine were used. Blocks were performed in supine position with the head turned contralateral to the block site. Block success, motor and sensory blockade, complications, duration of analgesia and patient satisfaction were assessed. Pain assessment was done based on patient's awareness to pain, using visual analogue scale at recovery (00hrs) and at time of breakthrough analgesia. Patients were followed up to 24 hours for any complications.Data was analyzed using SPSS version 20.0 computer software. Continuous variables were expressed as means and standard deviations. Association between independent and dependent variables was done using independent t-test for continuous variables and chi-square test for categorical variables. Difference was considered statistically significant with a P value of <0.05.**Results:**Ultrasound guided supraclavicular block were performed in 86 patients with a success rate of 97.6% of which 89.5% were successful after the first attempt and 8.1% were successful after supplementation. There were 2.4% failures.The average duration of analgesia was 211.73± 24.79 mins. Mean duration of analgesia had no statistically significant correlation to type of surgery. The most common complication was unintended vascular puncture (9.3%) followed by haematoma (4.7%), Horner's syndrome (2.3%) and pain and paraesthesia (2.3%). Complications were statistically significant associated with BMI and sex with P values of <0.001 and 0.02 respectively.Most of the patients were comfortable with the technique.**Conclusion:**The results of the study show very high successful block rate and good analgesia that extends for adequately longer time postoperatively. Patients were satisfied with the block and no serious complications were reported. Therefore, in absence of contraindication, the technique offers the best choice for upper extremities procedures especially to patients with cormobities like chronic renal failure and hypertension where general anaesthesia is associated with increased risk of complications.**Recommendation:**Ultrasound guided supraclavicular block should be routinely done to patients undergoing upper limb surgeries in Tanzania.

135. Mwanyika, M.P. (2017). Factors associated with missing appointments in the prevention of mother to child transmission of HIV (option b+) program in Njombe town council.Muhimbili university health and allied science.

Abstract

Background: Tanzania has adopted the World Health Organization recommendation of initiating lifelong anti-retroviral treatment to all pregnant and lactating mothers infected with human immunodeficiency virus (HIV) regardless of disease immunological or clinical stage with the aim to eliminate mother to child transmission (eMTC) of HIV. Challenges in consistently attending care and treatment services as scheduled have been reported, this study seek to find out whether such factors also affect PMTCT option B+ program.**Objective:** To determine factors associated with missing appointments in prevention of mother to child transmission of HIV (Option B+) program in Njombe town Council **Methods:** Descriptive cross-sectional study with a sample size of 196 participants. Interviewed responses were analyzed using SPSS version 20.0. Chi square was performed to determine the association

between the independent variables and the dependent variable. Odds ratios were calculated to assess the likelihood of some factors that were found significant.**Results:** A total number of 196 participants were interviewed of which 37% reported to have been missing clinic since ART initiation. Age group above 35 years had increased risk of missing appointments in the PMTCT clinics (AOR=1.7, 95%CI=0.51-6.07). However, this age group has no statistical significance since 95% CI includes one. Divorced women (AOR=12.2, 95% CI=1.77-85.8), education level secondary school and above (AOR=12.2 95% CI=1.77-83.8), norms and beliefs (AOR=4.1, 95% CI=1.71-9.92), religious beliefs (AOR=4.4, 95% CI= 1.25-15.67), those with little community cooperation (AOR=9.9, 95%CI=1.68-59.0) were more likely to miss PMTCT clinics. Economic factors studied with the exception of lack of road accessibility throughout the year were not associated with missing clinic. Those who experienced lack of privacy (AOR=3.582, 95% CI=1.59-8.06), dissatisfaction (AOR=8.8, 95% CI= 3.07-25.61), spending much time at clinic (AOR=1.8, 95%CI=1.37-8.23) were more likely to miss clinic appointments.**Conclusion:** More strategies and sustainability measures for improving attendance into PMTCT services in Njombe Town Council like tracking system using home based care services, community health worker for maximum impact in tracing clients' early need to be revised and improved.

136. Mwashiuya,O. (2017). Routes of entry into early infant diagnosis of HIV infection and factors associated with late uptake of first HIV dna pcr test in mbeya region, Tanzania.Muhimbili university health and allied science.

Abstract

Background: HIV infection among children is a global public health problem. In 2015 it is estimated that there were 150,000 new child infections through mother-to-child transmission globally. Tanzania had 91,000 new child infections in the same year. Ninety percent of HIV infections in children occur through Mother- to- Child Transmission. Early infant diagnosis of HIV helps identify infected infants at early stages and initiate anti-retroviral therapy to limit disease progression. However implementation of early infant diagnosis is challenging in sub-Saharan Africa where disease burden is high and health care services are limited.**Objectives:** This study aimed at identifying routes of entry into early infant diagnosis of HIV and factors associated with late uptake first DNA PCR test in Mbeya region, Tanzania. **Materials and methods:** We conducted a facility based cross sectional study that involved review of records and interview of mothers/caregivers of HIV exposed infants. Five health facilities in Mbeya region were involved. Information on infants who were aged 0-2 years during enrolment into early infant diagnosis for uptake of the first HIV PCR test in the period from June 2014 to June 2016 were collected from mother and child follow up facility registers. A total of 1176 records were reviewed and 285 mothers/caregivers were randomly selected from the reviewed records and were interviewed. Data was cleaned and analyzed using Microsoft Office Excel and Epi Info 3.5.1. Continuous variables were summarized using measures of central tendency and dispersion while categorical variables were summarized using proportions and were compared using Chi-squared test. Odds ratio was used as a measure of association.**Results:** A total of 1176 HIV exposed infants' records were reviewed. Of these 9.6% (113) infants were enrolled through PITC/VCT referral points.There

were 55 (4.7%) infants who were found to be HIV positive on first PCR test of early infant diagnosis. Among the 55 HIV positive, 29 (52.7%) were initiated on ART. Median time from confirmation of HIV to ART initiation was 31 days (IQR 17, 49). Among all reviewed records of HIV exposed infants, 24.4% (95% CI: 22-27) were enrolled late into early infant diagnosis (beyond recommended age of 8 weeks). Factors that were found to be independently associated with late uptake of first HIV DNA PCR test were: parents having low education level (aOR: 5.38 95% CI: 1.57-18.37), parents being single (aOR: 4.69 95% CI: 1.49-14.76), and infants being referred from PITC/VCT (aOR: 42.71, 95% CI: 13.83-131.90). **Conclusion:** Findings of this study reveal that early infant service is being implemented in Mbeya region in efforts to attain the goal of reducing mother to child transmission of HIV. However, there are areas that need to be addressed to improve service so that HIV exposed infants benefit from the service. These areas include increasing the number of infants who access early infant diagnosis within 8 weeks after birth, and increasing the proportion of HIV positive infants who are initiated on antiretroviral therapy immediately after diagnosis.**Recommendations:** PMTCT program should strengthen awareness creation to all pregnant women so that 100% of HIV exposed infants have access to early infant diagnosis through PMTCT, efforts should be directed to ensure that all infants who get diagnosed as being HIV infected start ART early so that we at least reach global target of 90-90-90, symptomatic infants should be screened on PITC basis to be able to identify infected infants who missed EID through PMTCT route, PMTCT program should revise guidelines to state time from birth to uptake of first HIV DNA PCR test as 8 weeks so that it is in line with reporting tools, and PMTCT program should revise guidelines to include the exact time from diagnosis to initiation of antiretroviral treatment instead of the current statement of 'immediately' which is difficult to measure and monitor.

137. Nandala, R. (2017). Assessment of health system factors influencing treatment of mult-drug resistant tuberculosis: a case of ambulatory and hospital based care models.Muhimbili university health and allied science.

Abstract

Background: The two approaches, i.e. Ambulatory and Hospital Care models used in the treatment of multi-drug resistant tuberculosis require a functioning health care system with a multidisciplinary team of providers, including physicians, pharmacists, laboratory experts, nurses, social workers, community health workers and volunteers. **Aim:** This study was intended to assess factors in the health system influencing treatment of multi-drug resistant tuberculosis in ambulatory and hospital care model.**Methodology:** A cross sectional study design was used to gather information from respondents in the hospital and ambulatory models. A qualitative study design was used in three districts of Dar es Salaam Region and Kibongoto Infectious disease Hospital. Purposeful sampling was used in selecting the three districts of Ilala (Ukonga Prisons Health Centre), Temeke (Rangi Tatu Health Centre) and Kinondoni (Sinza Health Centre) which are in Dar es Salaam Region and have MDR-TB patients. Sample of 24 respondents was purposefully selected based on their position they hold in their institution: include 2 Clinicians, 2 nurses who were working at the TB Clinic or TB ward, 1 CHMT members (DTLC) and staff at (2 Laboratory, 2 Pharmacy). In depth

interview of key informants was the method used to collect data by using interview guide and digital tape recorder to record the conversations.**Results:** The findings of this study revealed that the decentralisation of MDR TB Services is a new approach and hence the health workers do not yet have experience on management of the ambulatory model in all departments. Health workers are afraid of working in the TB department for the reason that they may contract the disease. On integration of service delivery points is excellent as patients turn up from other departments and there is no discrimination. Due to the layout of the infrastructures, i.e. waiting area, injection room, and dispensing room) in our health facilities, the threat of spreading infection is high.**Conclusion:** The study has shown that both ambulatory and hospital models are needed and they are both accepted by the community members. However, there are barriers that should be overcome and strategic initiatives should be adopted to address those challenges in a timely manner, especially in the new ambulatory model.

138. Nandi, S.S. (2017). Prophylactic use of intravenous dexamethasone in reducing the incidence of postoperative sore throat following general anaesthesia with endotracheal intubation at Muhimbili national hospital, Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Postoperative sore throat is a common complication that develops after mucosal damage by the endotracheal tube. It may be very distressing to the patient and thus undermining patient satisfaction due to discomfort experienced in the postoperative period. The present study examined the effects of prophylactic dexamethasone on the incidence of sore throat and severity of sore throat after extubation. **Objective:** To assess the effectiveness of prophylactic intravenous dexamethasone in reducing the incidence of postoperative sore throat in elective patients under general anesthesia with endotracheal intubation at MuhimbiliNational Hospital **Methodology:** A prospective, randomized double-blind study of intravenous dexamethasone using a dose of 0.1 mg/kg was conducted. A total of 92 patients aged 18-60 years of age with American Society of Anaesthesiologists physical status class I or II undergoing elective surgery under general anesthesia were enrolled and randomly allocated into two separate groups. One group (D1) received I.V dexamethasone 0.1 mg/kg 60 minutes before endotracheal intubation and the other group (D2) received placebo (normal saline) at the same time. The incidence and severity of sore throat was then evaluated postoperatively at 1, 6 and 24 hours.**Results:** The incidence of patients developing sore throat postoperatively at 1, 6 and 24 hours was statistically different between the two groups. The group of patients who received dexamethasone exhibited statistically significant lower incidences compared to the group of patients who received placebo (58.7% vs 95.6%; 21.7% vs 95.6%; 4.4% vs 69.6%) at 1, 6 and 24 hours respectively with the reduction of incidence sore throat by 36.9% during the first hour. In addition, the intensity of postoperative sore throat was less in the dexamethasone group than in the placebo group with statistically significant less proportion of patients experiencing moderate sore throat at 1 hour in the dexamethasone group.**Conclusion:** This study has shown that prophylactic use of intravenous

dexamethasone at a dose of 0.1 mg/kg has significantly lowered the incidence of postoperative sore throat by 36.9% at 1 hour post-extubation as well as its severity.

139. Natana, G.G. (2017). Occurrence, clinicopathological characteristics and treatment modalities of orofacial tumours and tumour-like lesions in children treated at muhimbili national hospital, Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Children with orofacial tumours and tumour-like lesions who were treated at the Oral and Maxillofacial Surgery department Muhimbili National Hospital (MNH) were often seen to have huge swellings which caused marked facial deformity and at times functional difficulties. The clinical presentation, pathological characteristics and treatment modalities of these lesions were quite diverse and warranted an investigation to assess their burden in Tanzanian children. It's envisaged that the data obtained will help the clinicians at the Oral & Maxillofacial department MNH and other healthcare institutions in early detection and appropriate management of children with these lesions.**Objective:** To determine the occurrence, clinicopathological characteristics and treatment modalities of orofacial tumours and tumour-like lesions in children who were treated at Muhimbili National Hospital, Dar es Salaam, Tanzania during the period from September 2016 to March 2017.**Methods:** This cross-sectional hospital-based study was conducted in the Oral and Maxillofacial Surgery and Otorhinolaryngology departments at MNH. Children aged below 18 years with orofacial tumours and tumour-like lesions or their parents/guardians were interviewed using a structured questionnaire and clinical examination of the patients was done and the details recorded in the clinical form. Data analysis was done using statistical package for social sciences (SPSS) version 20.0. Level of statistical significance was considered at a P-value of < 0.05.**Results:** A total of 121 children aged 4 days old to 17 years (mean= 8.56 years ±5.5 SD) participated in the study, of whom 52.1% were males. The age groups 0-5 years (38%) and 11-15 years (28.1%) were most affected by orofacial tumours and tumour-like lesions. Majority 86% of the lesions were benign whereby haemangioma was the most common benign tumour encountered (16.4%), followed by lymphangioma (13.6%). The most frequent tumour-like lesion observed was the dentigerous cyst (7.8%), followed by the dermoid cyst and fibroma in 4.1% of participants. Burkitt's lymphoma and squamous cell carcinoma were the most common malignant lesions encountered in 23.5% participants in that category. All the lesions in this study presented with swelling as a common clinical feature in both benign and malignant tumours and tumour-like lesions. Surgery was the most common modality of treatment employed.**Conclusion:** Orofacial tumours and tumour-like lesions were relatively common in children seen in this study. Delay and late reporting for treatment was noted in many children with orofacial tumours and tumour-like lesions. Benign orofacial lesions are more common than malignant tumours in children in this study. Due to overlapping of clinical presentation between benign and malignant lesions, clinicians must establish histological diagnosis of every tumour before initiating definitive treatment. Surgery was the main treatment modality used for orofacial tumours and tumour-like lesions in this study.

140. Ndasika, J.W. (2017) Prevalance of hoarseness of voice and other accompanied symptoms among patient receiving orl services at mnh.Muhimbili university health and allied science.

Abstract

Introduction: Hoarseness of voice is a common complaint in otolaryngological practice and it is the earliest manifestation of a large variety of conditions directly or indirectly affecting the larynx, ranging from inflammatory to malignant. Hoarseness has a prevalence of 6% in the general population, rising to 11% for professional voice users (30% of the workforce). Despite the high prevalence many people are unaware that persistent hoarseness may be a red flag indicating cancer. Any patient with hoarseness lasting longer than two weeks in the absence of an apparent benign cause requires a thorough evaluation of the larynx by direct or indirect laryngoscopy.**Aim/objective:** The purpose of this study was to determine the prevalence of hoarseness of voice among patients attending Otorhinolaryngology services at MNH.**Methodology:** This descriptive cross-sectional study was conducted for a period of 6 months between August 2016 and January 2017 at ORL department, MNH, Sample size of 427 patients were recruited. Standard questionnaires were used to collect clinical and socio-demographic information. Hoarseness of voice were identified by listening the spoken voice, then further evaluation carried on ,including Laryngoscopy, direct scopy and biopsy for patient with laryngeal mass. Data were entered and analyzed using SPSS version 20.**Results:**The overall prevalence of Hoarseness of voice was 15.2% (65/427). The prevalence is more common in males 40(17%) and age group above above 60 years were most affected, Common laryngoscopy findings among patient with hoarseness were laryngeal mass 47(63%) and leading accompanied symptom was difficult in breathing 25(32%).**Conclusion:**Prevalence of hoarseness of voice is higher and majority of patient has neoplastic causes. They found to visit health facility late as they are not aware hoarseness of voice could be symptom of serious condition like malignant.

141. Ndeserua, R.H. (2017). Short-term management outcome of thoracolumbar injuries among patients admitted at Muhimbili orthopaedic institute.Muhimbili university health and allied science.

Abstract

Background: Injuries to the spine are among the significant causes of morbidity and mortality. More than half of these injuries involve the thoracolumbar region. Motor traffic crash and fall from height are the most common cause of thoracolumbar spine injuries. Males are the most common victims of these injuries and majority are young adults. These injuries can be treated non-operatively or operatively and selection is based on the degree of bony injury, neurological involvement, presence of associated injuries and the integrity of the posterior ligament complex. Outcome has been shown to depend more on the initial injuries while complication and their degree varies among literatures. The study aimed at assessing the management outcome of patients with thoracolumbar spine injuries treated at Muhimbili Orthopedic Institute. **Methodology:**The study employed prospective cohort study design whereby 48 eligible patients admitted at Muhimbili Orthopaedic Institute due to thoracolumbar spine injuries were enrolled. Patients were interviewed, clinically examined and radiological findings recoded using structured questionnaire. Patients were followed up for three months and management outcome including final neurological status and

complications were evaluated. Data were analyzed using 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 Director of Muhimbili Orthopaedic Institute. **Result:** Study participants were aged between 21 to 75years with a mean age of 40 years and standard deviation of 14 years. Majority 42 (87.5%) were male with male to female ratio of 7:1. Private cars 32 (66.7%) were the commonest mode of transportation from scene to hospital followed by motorcycles 11 (22.9%). Motor traffic crash 24 (50%) was the commonest etiology for thoracolumbar injuries while 83.3% were associated with neurological deficits were by ASIA A, B, C and D were 7(14.6%), 17(35.4%), 6 (12.5%) and 10 (20.8%) respectively.Thoracolumbar junction was frequently 26 (47.3%) injured area and majority 18 (69.2%) were fractures. Surgically treated patients were 22 (45.8%) and had higher median days of hospital stay of 40 days which was due to prolong days (median 34 days) from admission to surgery. On outcome, 18 (37.5%) had full neurological recovery, 25 (52.1%) had partial neurological recovery and 5 (10.4%) died. Incidence of developing bedsores and gastro-intestinal tract disturbances were 9 (18.8%) and 11 (22.9%) respectively.**Conclusion:**Thoracolumbar Injuries occurs most frequently among young adult males due to motor traffic crashes as the leading cause. More than two third of thoracolumbar injured victims present with neurological deficit. Patients with ASIA E and D recovered fully irrespective of treatment modality. Surgically treated patients had increased days of hospital stay. Females had better outcome in neurological recovery than male patients. Bedsores and gastrointestinal disturbances were the leading complications encountered and the former was significantly associated with mortality.**Recommendation:**Reasons for delayed surgical treatment should be identified by the institute hence reducing days of hospital stay. Measures for bedsore prevention should seriously be taken by the institute so as to reduce its incidence among injured victims.

142. Ndobho, F.N. (2017). The magnitude of hyper-reactive malaria splenomegaly among patients with massive splenomegaly at Muhimbili national hospital, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Hyper-reactive malarial splenomegaly (HMS) is a syndrome of massive splenomegaly occurring in a malarious region. There is limited information about the prevalence in Tanzania overall and how these patients present clinically.**Aim:** To assess the magnitude of HMS among patients with massive splenomegaly at Muhimbili National hospital, Tanzania Participants: All patients with massive splenomegaly aged 15 years and above who were seen at MNH for 3 months period, from January-March 2017Study design: Descriptive cross sectional study **Methods:** Consenting participants were recruited from the EMD, cold OPD and outpatient clinics of MNH, A structured questionnaire was used to obtain social demographic particulars; the same also recorded symptoms associated with massive splenomegaly, history of recurrent malaria, history of hepatitis, alcohol abuse, exposure to schistosomiasis, family history of hemoglobinopathies, signs and symptoms of portal hypertension. On physical examination pallor, jaundice, lymphadenopathy, spleen and liver sizes were recorded. After exclusion of all other causes of massive splenomegaly, i.e. ≥

10cm below left coastal margin, a diagnosis of HMS was made based on a patient coming from a malaria endemic country, and having a, raised serum IgM.**Results:** in a total of 99 study participants, 5 were found to have HMS: 3 of these were females. The median age of HMS patients was 35 years. With respect to common complaints on presentation, all 5 patients had abdominal distension, all 5 had abdominal pain, and 4 had symptoms of anaemia. Upon physical examination, all patients had pallor, splenomegaly and hepatomegaly. All HMS patients had severe anaemia with a median (IQR) haemoglobin concentration of 6.4g/dl (5.0-7.5) and significantly raised serum IgM, which were well above 2SD above the local mean. Other causes of massive splenomegaly were also determined; 37 had chronic myeloid leukemia, 16 had lymphoma, 13 had chronic lymphocytic leukemia and 8 had acute leukemia. In 6 patients a clear diagnosis was not made and SCD in 4 patients. **Conclusion:** These data confirm that, like in other malaria endemic countries, HMS exists in Tanzania. The fact that HMS only accounts for 5% of cases underscores the importance of a systematic approach to the differential diagnosis of massive spenomegaly. This work supports the notion that a very high (non-monoclonal) serum IgM level is the key to diagnosis.

143. Ndomondo, M.D. (2017). The perception of induced abortion and its ethical implication among women of reproductive age in Mtwara.Muhimbili university health and allied science.

Abstract

Background: Induced abortion in Tanzania is illegal and the culture and beliefs of the society prohibit its practice. However, it is commonly done and almost always in unsafe environment and sometimes by none professionals. Annually about 405,000 induced abortions are conducted in Tanzania that contribute to 17-21% of national Maternal Mortality Ratio (MMR) of 556 deaths per 100,000 live births annually**. Objectives:** This study aimed at exploring the perception of induced abortion and its ethical implication in Mtwara Region.**Methodology:** The exploratory study design guided the research study that was conducted in Mtwara urban District. Thirteen (13) in-depth interviews with women of reproductive age, who were conveniently recruited, were conducted. NVivo 10 computer software guided the analysis of the data. Findings: The study reports women's perceptions regarding socio-economic benefits, psychological experiences and ethical implications of induced abortion. Women perceived induced abortion to have some social economic benefits. Shame, anxiety, guilt feelings and depression were some of the psychological experiences of women following induced abortion. Further, women thought that abortion violates religious beliefs, customs and taboos and national abortion policy. **Conclusion:** Women of reproductive age perceived induced abortion to have socio-economic benefits. They though that induced abortion would make women free and able to care for their young children, it will enable students to complete studies and achieve their goals, couples will be able to provide support to other children. However, induced abortion made some women to experience psychological effects such as shame, fear, guilt feelings and depression. Moreover, participants knew that induced abortion was against religious teachings, custom and taboos and the national policy of abortion.

144. Ndossi, B.E. (2017) Brain magnetic resonance imaging findings among paediatric patients with seizure disorders attending Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Paediatric seizures are a common problem in developing countries including Tanzania. However little information is available regarding the aetiology of seizures in our society.There are several causes of seizures ranging from congenital, infectious, tumors, vascular to unknown causes where by precise identification is a key to the long term management and control of seizure disorder.MRI is the most advanced crosssectional imaging modality which has enabled identification of several causes of seizure from congenital, infectious, tumours, vascular to structural causes.This study aims to investigate the patterns of MRI findings in children presenting with seizures at Muhimbili National Hospital, Dar es salaam , Tanzania and to characterise the demographic patterns of identified lesions associated with seizures in these children.Broad **objective:**To determine patterns of MRI findings associated with seizure disorders among paediatric patients at Muhimbili National Hospital from June 2016 to December 2016.**Methodology:**This is a descriptive cross sectional study which was conducted at the Radiology department, Muhimbili National Hospital from June to December 2016. Children presenting with seizures referred for brain MRI were included in the study. Consent was obtained for children who met inclusion criteria for the study from their parents/guardians. Formal ethical approval was obtained from the Muhimbili university of Health and Allied Sciences Senate Research and Publications Committee. Structured questionnaires were used for recording patients' demographics, and imaging findings. Data analysis was done using the Statistical Package for Social Sciences (SPSS) 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:**The median and mean age of the study participants was 6.8 and 5 years respectively with a range of 1 to 17 years. Prevalence of seizures was more in males compared to females (62.9%), and the most affected age group was those below 5 years old.Tonic clonic seizures were the commonest seizure pattern in all age groups observed in this study followed by partial seizures, and status epilepticus.More than half of the seizures (53.2%) were spontaneous. Birth associated problems (birth asyphyxia, trauma), meningitis, and trauma were the commonest risk factors associated with seizure disorder.The most common findings were Infarct (8.1%), encephalomalacia (6.5%), congenital anomalies (4.8%), Gliosis and hydrocephalus (4.8%). There was no significant relationship of these patterns with seizure type observed **Conclusion:**Abnormal findings were found in 41.9% of patients in this study. Although there was a significant number of normal MRI found, investigation of seizures in children is mandatory for proper management planning. **Recommendations:**MRI is a safe and efficient imaging tool, I recommend all children presenting with seizures to be investigated thoroughly using this tool.I reckon for more studies regarding seizures in our society to be done to include bigger sample sizes and multidisciplinary approach.

145. Ndosi, W. (2017). Computer tomography findings among adult patients with suspected hepatocellular carcinoma at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Liver cancers account for 6% of the worlds cancer incidence, 9% of the global cancer mortality burden and the second most common cause of death due to cancer worldwide. Of the primary hepatic malignancies, HCC accounts for 80% of cases. HCC primarily affects males more than females. HCC is mostly associated with chronic liver disease or cirrhosis. There is classical HCC and its variants.**Objectives:** To determine the role of CT radiological patterns in the management of adult patients with clinically diagnosed hepatic mass at MNH from December 2015 - March 2016.**Methodology:** Patients with clinically diagnosed hepatic mass who underwent abdominal CT scan examination were included in the study. The images were examined and reported by the principal investigator together with a Radiologist. The report was issued after reaching a consensus.**Results:** A total of seventy four (74) patients were involved in this study. HCC was seen in twenty seven (36.0 %) patients. HCC was non-significantly associated with males (45.00% vs. 26.47%, p-value= 0.099) and in patients 60 years and below (47.62% vs. 32.08% %, p-value= 0.216). Radiological features of HCC included a shrunken liver (18.52% vs. 2.13%, p-value= 0.013) and nodular liver appearance (33.33% vs. 0%, p-value= 0.000) in HCC. Heterogeneous mass attenuation (33.33% vs. 12.77%, p-value= 0.034), irregular mass margins (74.07% vs. 55.32%, p-value= 0.109), complex mass properties (40.74% vs. 70.21%, p-value= 0.013) with mainly solid content predominance (66.67% vs. 29.79%, p-value= 0.002). Post contrast images showed HCC with heterogeneous enhancement pattern to be 33.33% vs. 8.51% (p-value= 0.007), ascites (48.15% vs. 19.15% p-value= 0.009) and less likely para-aortic lymph nodes (7.41% vs. 17.02% p-value= 0.244).**Conclusion:** HCC is well described by non-contrasted and contrasted abdominal CT scan examinations. HCC was mainly affecting males and patients aged 60 years and below. HCC mainly presents with a shrunken liver, nodular liver outline, heterogeneously attenuating complex masses with irregular outline, predominantly solid with heterogeneous enhancement, peripheral fat stranding, ascites and less likely para-aortic lymphadenopathy.**Recommendations:** It is recommended a larger sample size to be used in future studies.

146. Nestory, E. (2017). Fire disaster preparedness in secondary schools a case study of ilala municipal council.Muhimbili university health and allied science.

Abstract

Background: Fire outbreaks in schools are now reported to be of public concern because of the increased incidences, injuries and deaths due to fire accidents. Regular media reports on fire outbreak incidences grim a picture that secondary schools are not well prepared for fire emergencies in Tanzania. Therefore this study assessed fire disaster preparedness among secondary schools in Ilala Municipal Council.**Objectives:** This study specifically assessed knowledge on fire safety among secondary teachers, fire safety equipments available in

secondary schools and assessed whether secondary schools provide training to school community for fire safety preparedness.**Methodology:** A cross sectional study was employed where by a single cluster sampling study was used to obtain study participants. A total of 94 secondary schools and 422 teachers were included in this study. A self-administered questionnaire with closed and open ended questions were used to collect information on general information and socio demographic characteristics of study participants, fire safety measures and plans pertaining to fire disaster preparedness, determine whether secondary schools train staff on fire disaster preparedness and assessment of knowledge/awareness on fire safety preparedness among boarding secondary schools in Ilala Municipal Council. Data was analyzed by using an Epi info software version 3.5.1 whereby proportions, frequency, distribution tables and figures were used to present the results. A p-value of less than 0.05 was considered to be statistical significant.**Results:** A total of 422 secondary school teachers were recruited in this study, 283 (67.1%) were from public owned secondary schools and 330 (78.2%) were from day secondary school category. Of all 422 secondary school teachers, 220 (52.6%) were females, the mean age was 40.7 years ± 6.5 SD.Adequate knowledge on fire safety prepared was 293 (69.4%). Of all 94 secondary schools, 57 (60.6%) had fire extinguishers, of these 43 (43.6%) had serviced fire extinguishers. Less than half, 38 (40.4%) secondary schools have fire emergency plan and 23 (24.5%) have persons responsible for fire safety. During analysis we found that adequate knowledge, 33 (71.7%) on fire safety their schools were 9.64 times more likely to be prepared compared to 10 (20.8%) with inadequate knowledge (OR = 9.64, 95% CI; 3.74 – 24.87; $p < 0.001$). Secondary schools 17 (73.9%) had person for fire safety were 4.90 times likely be prepared for fire disaster as compared to 26 (36.6%) which have no person designated for fire safety, this was statistical significant (OR = 4.90, 95% CI; 1.72 – 13.99, $p < 0.001$).Head of schools with adequate knowledge on fire safety their schools were more prepared for fire disaster and it was statistical significant (AOR = 9.23; 95% CI; 3.08 – 27.63; $p < 0.001$). Secondary schools which are inspected once or more per annum were more prepared for fire disaster (AOR = 7.48; 95%CI; 2.15 – 26.04; $p = 0.002$). Having person for fire safety was not statistical significant at multivariate (AOR = 1.58; 95%CI; 0.46 – 5.47; $p = 0.47$).**Conclusion and Recommendations:** Based on the study findings obtained on the assessed fire disaster preparedness; we found there was inadequate knowledge on fire safety preparedness among secondary school teachers, most of the schools have un serviced fire fighting equipments, lack of personal responsible for fire, lack of fire safety inspection in secondary schools and lack of fire emergency plans in school (policy) among secondary schools are contributing to unpreparedness among secondary schools. Therefore regular training on fire safety, provision of fund in secondary schools to ensure provision of fire fighting equipments and regular inspection of secondary schools for fire safety.

147. Ngaja, B.C.(2017). Quality of life of benign prostatic enlargementpatients undergoing treatment with tamsulosin at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Introduction: Benign prostatic enlargement (BPE) is a condition that most commonly occurs in aging males between the ages of 50 to 90years.The condition cause slower urinary tract symptoms (LUTS) which is the most common presentation at various urological clinics. Most of the patients with mild to moderate symptoms diagnose dusing the international prostate symptom score (IPSS) are usually treated medically. Tamsulosin is an alpha adrenergic receptor blocker mostly used in the medical treatment of BPE in Tanzania.**Broad Objective:** To evaluate the quality of life and improvement of symptoms of BPE patients undergoing treatment with Tamsulosin at MNH.**Methodology:** This was quasi pre and post-test Study design to investigate the quality of life of BPE patients undergoing treatment with Tamsulosin at MNH. A structured questionnaire was used to assess symptoms before treatment with Tamsulosin and three months after treatment, evaluation included improvement of symptoms and quality of life, and side effects associated with use of Tamsulosin. Patients were followed up monthly for three months.Data were analyzed by SPSS version 20; Chi-square test was conducted to determine the association between the proportions of social demographic characters, IPSS, quality of life and side effects. The $p< 0.05$ was considered statistically significant.**Results:** A total of 192 patients were enrolled in the study, 39 patients were drop outs from the study, due to incomplete follow up, 153 patients were available for analysis after three months. Mean age was 67.67(±6.64). There was an improvement in symptoms after three months of use of Tamsulosin from Initially 3.3%, mild, 96.7% moderate symptoms to61.45% had (no or mild symptoms), 32.7% (moderate symptoms), and5.9% (progressed to severe symptoms)In terms of quality of life before treatment50.3% of participants were dissatisfied with their quality of life, and 49.7% of participants considered their quality of life to be terribleor unhappy. Three months after treatment 61.4% of participants had either felt delighted, pleased or happy with their quality of life and 32% had remained dissatisfied with their quality of life while 6.5% had still experienced terrible or unhappy quality of life. Improvement of symptoms and QOL were not associated with prostate size or residual urine volume.Enumerated side effects, with the use of Tamsulosin, were as follows; headache (9.8%), dizziness (9.2%), poor ejaculation (2.6%) and nausea (2.6%). **Conclusion:** Both Quality of life and international prostate symptom score improved 3 months after Tamsulosin use. In this study prostate sizeand residual volume was not associated with outcome on use of the drug. Few side effects were observed during the treatment of BPE with the use of Tamsulosin.**Recommendations:** Tamsulosin should continue to be used as a medical therapy for patients with benign prostatic enlargement with lower urinary tracts symptoms given the improvement in both qualities of life and prostate symptoms

148. Ngemera, J.A. (2017). Body fat composition and dyslipidemia among students at the Dar es salaam university college of education, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Obesity, defined as excessive body fat accumulation, has a significant role on the occurrence of cardiometabolic dysregulation. Obesity is associated with dyslipidemia, impaired glucose metabolism and hypertension all of which exacerbate

atherosclerosis.Accurate determination of body fat composition is the mainstay of early detection of obesity and prevention of its cardiometaboliccomplications.The BMI, a commonly used surrogate marker for adiposity, only measures weight relative to height and does not provide information on excessive body fat contribution to the overall body weight. Bielectric impedance analysis isone of the non invasive methods used to measure BF%. However, whether BMI or BF% predicts better cardiovascular risks remained to be answered.**Objective:** To determine and compare body fat composition by body mass index and by body fat percentage and corelate it with dyslipidemia, hypertension and diabetes mellitus among DUCE students.**Methodology:** A descriptive cross-sectional study among DUCE students. The Body fat percentage (BF%) was estimated by a bioelectric impedance analysis (BIA) method and theBMI was measured using standardized method. Blood pressure measurement, blood samples for lipid profiles and blood glucose estimation were taken from each student. SPSS version 23 was used for data analysis. Pearson Chi square statistics test used to compare group differences for categorical variables. BMI and BF% prediction of cardiovascular risks were examined using logistic regression analysis. **Results:** Of the 275 students, 23(8.4%) were obese by BF% criteria andbased on BMI criteria, 14(5.1%) students were found to be obese. BF% to an extent correlated with BMI on measuring obesity ($r=0.658$, $p<0.001$). The overall prevalence of dyslipidemia was 27.3%, hypertension 11.6% and diabetes mellitus was 2.9%.Students with high BF% had 3.9 times greater odds of being hypertensive and 13 times greater odds of being diabetic than students with normal or low BF%, on the other hand students with high BMI had 6.4 times greater odds of having dyslipidemia than students with normal and below normal BMI.**Conclusion:**This study revealed a high prevalence of obesity and dyslipidemia among a relatively young adult population. There was a correlation between BF% and BMI on measuring obesity which implied that an increase in BMI corresponded also with an increase in BF%. However, high BF% was associated with the occurrence of hypertension and diabetes mellitus, while high BMI was associated with the occurrence of dyslipidemia.Even though both BF% and BMI were somehow comparable in obesity determination, they were different in predicting the associated cardiovascular risk factors.It is therefore recommended that more studies be carried out in other specific as well as thegeneral population to further describe how the two methods work.

149. Ngonyani, E. (2017). Efficacy of multimodal versus unimodal analgesia among post operative patients at Muhimbili national hospital, a randomised controlled trial.Muhimbili university health and allied science.

Abstract

Introduction: The experience of pain is complex, multifaceted, and "an unpleasant sensory and emotional experience" as defined in part by the International Association for the Study of Pain.1The success of a surgical procedure is conditioned by many factors, including appropriate pain control, early am¬bulation and rehabilitation after surgery. There are many mechanisms of post-operative pain management; therefore, various approaches to post-operative analgesia should be used to improve pain relief, reduce the number of complications and eliminate suffering. At Muhimbili National Hospital (MNH),

postoperative patients are given analgesia depending on individual doctor's choice and availability of the medications. Superiority randomized controlled trial was done to investigate the efficacy of multimodal versus unimodal analgesia among patients undergoing major abdominal surgeries at Muhimbili National Hospital.**Objectives:** To assess the efficacy of multimodal versus unimodal analgesia within first 48 hours among patients who underwent major abdominal surgery at Muhimbili National Hospital.**Methodology:**Hospital based, single blinded randomised controlled trial to measure the efficacy of multimodal versus unimodal analgesia among patients following major abdominal surgery at Muhimbili National Hospital. All patients undergoing major abdominal surgery in the department of surgery aged 18 years and above was eligible for the study from September 2016 to March 2017. The study population was divided in two groups whereby one group received single drug analgesia of an opioid (pethidine) and another group received multimodal analgesia, a combination of opioid (pethidine) and NSAID (diclofenac). After the surgery both groups were assessed for their pain scores at 12 hours, 24 hours and 48 hours post operatively.**Results:**A total of 122 patients were analysed where each arm had 61 patients. The mean age in the study was 40.89 ± 14.58 years majority of which were males accounting for 60.7% of the total number. Mean VAS scores were observed to be lower in the multimodal group compared to the unimodal group. The difference was found to be statistically significant (p=<0.001). Incidences of nausea were found to be more in multimodal group compared to the unimodal group while vomiting was more in the unimodal group compared to the multimodal group, the difference was not statistically significant (p=0.464 for nausea and p=0.762 for vomiting). Sedation scores decreased with time in both groups with higher scores observed at the first post-operative assessment (12 hours) while only one patient was dosing intermittently at 48 hours.**Conclusion:**Multimodal analgesia is superior to the unimodal analgesia among major abdominal surgery cases and it is associated with no significant side effects. It can be used safely in the management of postoperative pain at Muhimbili National Hospital.

150. Njau, O. (2017). Adherence to antiretroviral therapy among hiv- infected underfive children attending at municipal hospitals in Dar - es - salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: To reduce AIDS related mortality in children, adherence to antiretroviral treatment (ART) is critical. However, little is known about factors associated with ART adherence among children in Tanzania. **The objective:** of this study therefore, was to assess the ART adherence among HIV infected under-fives in Dar es Salaam and identify factors associated with their adherence to ART.**Methods:** This was a cross sectional study conducted in three municipal hospitals of Mwananyamala, Amana and Temeke in Dar es Salaam region. A systematic random sampling method was used to select the caretakers/children from the daily appointment list obtained from the clinic until the sample size was reached. Caretakers were interviewed using a structured questionnaire. Data was entered into the computer using excel sheet and then analyzed using SPSS statistical software. Descriptive, bivariate analysis and multiple Logistic regression analyses were performed.**Results:** The study population

comprised of HIV positive under-five children attending the three Municipal Hospitals. Out of the 172 under-five sampled, 77 (44.8%) were males. This study found that only a small proportion (35%) of children had an optimal ART adherence in the one month preceding the study. Majority of caretakers, 121 (70.4%) had adequate knowledge on HIV and adherence issues. Caretakers who were housewives were four-fold more likely to adhere (OR, 4.89, 95% CI, 2.08, 11.51) compared with children from caretakers who were businessmen or women. Receiving care from Amana municipal hospital and Mwananyamala municipal hospital was associated with lower rates of adherence compared to those from Temeke municipal hospital. **Conclusions and recommendation:** While the levels of ART adherence among under-five children in the three municipal hospitals were low, it was found that under-fives from the caretakers who were housewives had a significantly higher adherence rates compared to caretakers who were businessmen/women. Special interventions targeting caretakers who spend more time outside home are needed to increase adherence on ART for the under-fives.

151. Njovu, L. (2017). Exploring perceptions of multi drug resistant tuberculosis patients and their supporters on hospital based and ambulatory care treatment models. Muhimbili university health and allied science.

Abstract

Background: Despite the existence of several studies reporting on the challenges and benefits of MDR TB patients being treated under hospital and ambulatory care models, there is a dearth of information on patients' and treatment supporters' perceptions regarding the effectiveness of the models.**Methodology:** A cross sectional study was conducted whereby thirty-six (36) participants were interviewed. This number included 21 males and 15 females from three Municipalities in Dar es Salaam and the Kibong'oto Infectious Disease Hospital. The selected facilities were chosen because, Dar es Salaam is one of the phase one ambulatory site and has many patients compared to other regions and KIDH was chosen because is the only facility where MDR TB patients are hospitalized. The data collected were analyzed using thematic approach. Permission to conduct this study was sought from the Institutional Review Board (IRB) at theMuhimbili University of Health and Allied Sciences (MUHAS). Permission to interview study participants was sought and granted using consent form. The study respondents were purposefully selected. In-depth interviews (IDIs) were used to collect primary data. Data was recorded, transcribed and later manually analyzed qualitatively. **Results:** The analysis of the study findings has generated themes that explain the perceptions of MDR TB patients and treatment supporters' regarding the models. These themes are: - the first section presents introduction, the second section is on socio demographic information of the study participants, the third section presents patients' perceptions on ambulatory care model and hospital based model of MDR-TB treatment (care and treatment, opportunity to learn about drug use ,patients and relatives awareness of the model, stigma) . The fourth section addresses the treatment supporters' perceptions on the ambulatory care model and hospital based model (family support, economic status of relative, misconception about hospital care model). The firth section covers the perceived benefits for MDR TB patients receiving treatment under hospital and ambulatory care models (health

improvements, availability of basic needs, close follow up by family members). The last section presents the results on the perceived challenges for MDR TB patients receiving treatment under hospital and ambulatory care models (inadequate medication and supplies, distance to the facility, inadequate staffs, unfavorable environment and infrastructures and limited choice of food). **Conclusion and Recommendation:** Perceptions of patients and supporters regarding the models, benefits and challenges faced by patients and relatives are worth explored because it will help to institute interventions or improvements that might be introduced as there are scientific evidences to support them, these models of MDR TB treatment are all of crucial importance for the betterment of patients' health. The models complement each other. Therefore, it is recommended that the Government should strategize i.e. increasing funding to TB clinics to utilize both models for the overall successful treatment outcomes.In conclusion it can be argued that the perceptions of patients and their supporters on the benefits and challenges of the two models are both positive but also show challenges for both models. Both models are however considered important and complement each other.

152. Nkane, J.A. (2017). Facilitators and barriers to fathers' engagement in supporting exclusive breast feeding by HIV infected mothers in Temeke Dar-es salaam Tanzania.Muhimbili university health and allied science.

Abstract

Background: Exclusive breastfeeding has been universally recognized all over the world as the best way of feeding the infant. It has been estimated to prevent 15% of child deaths in high HIV prevalence settings. It has been established that support of father is important in facilitating exclusive breast feeding (EBF) to his wife. However, very few studies in Tanzania have targeted men to tap their experiences in supporting their partners who are HIV-infected to be able to breast feed exclusively for six months. Consequently, little is known in Tanzania on facilitators and barriers to fathers' engagement in supporting exclusive breastfeeding by their spouses who live with HIV as an integral part of preventing transmission of HIV from mother to the child. It is this gap in knowledge that this study intended to fill.**Broad objective:** To explore the facilitators and barriers to fathers' engagement in supporting exclusive breast feeding among HIV infected women in Temeke Municipality Dar es Salaam. **Material and methods:** An exploratory qualitative study design was conducted among partners of HIV positive mothers with an infant aged 6 - 12 months at 4 Temeke Public health facilities: Temeke referral hospital, Rangitatu Hospital, Roundtable Health Centre and Yombo Vituka Health Centre. A total of 26 fathers and four policy makers and implementers participated in the study. Fathers were conveniently selected from PMTCT clinic through their partners as they came for their monthly visit and policy makers were purposefully selected. In-depth interviews were audio digital recorded, transcribed and translated. Data was analyzed using thematic analysis. **Results:** The results demonstrate that facilitators of father's engagement in supporting exclusive breast feeding include positive acceptance of the partner's HIV positive status, awareness of EBF and PMTCT, reliable income, health care providers counseling and information and facilitative provisions of policy documents. On the other hand, barriers to fathers' engagement on EBF were found to be

unstable income, inconvenient clinic hours, less emphasis on postpartum male involvement in PMTCT, gender stereotype and stringent work regulations that provide very limited paternity leave.**Conclusion:** Fathers' engagement in supporting exclusive breast feeding to their partners who are HIV positive is very important in Prevention of Mother to Child Transmission of HIV. This study has generated some insight on the main facilitators and barriers to fathers' engagement in supporting Exclusive Breast Feeding. This knowledge can be applied in practice, policy, education and in research.**Recommendations:** Facilitation to fathers' engagement in Exclusive Breast Feeding and PMTCT in general should go beyond antenatal clinic attendance (during which couple counseling and testing for HIV is done) and include postnatal clinic attendance during which Exclusive Breast Feeding education and follow- ups are made.

153. Nkingi, R.C. (2017). Experiences of living with sickle cell disease among adults attending clinic at Muhimbili national hospital,Dar-es-salaam,Tanzania.Muhimbili university health and allied science.

Abstract

Background: Sickle Cell Disease (SCD) is a potentially overwhelming condition that is caused by an autosomal recessive inherited hemoglobinopathy. Sickle Cell Disease affects all areas of the patient's life and results in different events or experiences (occurrences which leaves an impression on someone).**Aim:** This study aimed at understanding the perceptions of adults living with SCD on triggering, aggravating and alleviating factors for pain, describing the perceptions on pain management, and understanding perspective experiences of social implication on living with SCD.**Methods:** The method used in this study was phenomenological study that used descriptive qualitative method. Study population was of adults living with Sickle Cell Disease in Dar-es -Salaam Region, aged 18 years and above. Sample size was of 15 adults living with SCD. Sampling procedure used to select study participants was Purposive/judgmental. Adults aged 18 years and above screened at Muhimbili National Hospital SCD Cohort and confirmed to have SCD, who consented to be enrolled in the study were included. Adults with SCD who were not enrolled in the cohort were excluded. Data were collected at Muhimbili National Hospital from March 2017 to May 2017. Fifteen in-depth interviews with adults living with SCD aged eighteen years and above were conducted to collect primary data. Data were analyzed by using content analysis approach. Findings: Adults living with SCD mentioned different factors that perceived to trigger, aggravate and alleviate pain. Most participants reported to manage pain by home remedy together with self-medication, however all participants seek hospital care whenever the pain continues. Sickle Cell Disease was also found to have led to poor school attendance and hence poor academic performances, also it has been found to have caused difficulties in getting life partner and establishing family as well as failing to work and become independent eeconomically**. Recommendations:** Living with a sickle cell disease is a challenge. According to experiences reported by participants, health outcomes of adults living with SCD depend on good physical, social and psychological management. These can be influenced by the health care system, health personnel and individuals. The government through the Ministry of Health, Community Development, Gender, Elderly and Children, should support

on prevention of the disease, (cut off the chain of inheritance), and management of the disease.

154. Nkuwi, E.J. (2017). Methicillin resistant staphylococcus aureus from patients care environment at muhimbili national hospital, Dar es salaam.Muhimbili university health and allied science.

Abstract

Background: Environmental contamination with 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. Study **Objective:** To determine the magnitude and distribution of MRSA contamination among various items in a patients' care surroundings at Muhimbili National Hospital (MNH).Study **Methodology:** A cross sectional study was conducted where specimens from various parts of patients' care surroundings at MNH were processed for detection of MRSA using 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 samples from hospital environment were processed; the prevalence of MRSA was 19.5 % with significantly higher prevalence in general wards. Patients' beds surfaces were the most contaminated among studied items (43.7%), whilst the surgical trolleys were least contaminated (7.7%). Highest proportion of isolates were resistant to Ampicillin (87.2%) where as none of the isolates were resistant to vancomycin. Ten (10) or more patients in a room and specimen source were significant predictors for MRSA contamination by bivariate logistic regression model.**Conclusion and recommendation:** The reported high MRSA prevalence confirms that areas of hospital environment present underestimated important reservoir for MDR pathogens even in non outbreak settings. The findings provide the basis to emphasize on the need to formulate hygiene protocols with special consideration on high touch surfaces, Moreover larger prospective studies are recommended to assess the correlation between environmental MRSA and the acquisition of MRSA by patients or the vice versa.

155. Nkya, E. (2017). Factors affecting level of awareness of birth preparedness and complication readiness among women attending reproductive and child health clinics in Nyamagana district.Muhimbili university health and allied science.

Abstract

Background: Birth Preparedness and Complication Readiness (BP/CR) encourages women, households and communities to make arrangements for childbirth by skilled birth attendants and reduce delays in reaching care. The practice of BP/CR in the Third World settings has the potential of reducing the high maternal and neonatal morbidity and mortality rates. The study aimed to assess the level and associated factors of awareness and uptake of BP/CR among

women attending Reproductive and Child Health clinics (RCH) in Nyamangana District.**Materials and methods:** A cross-sectional study involving 737 randomly selected, both postnatal and pregnant women, was conducted at Nyamagana district hospital and Makongoro health centre. Data was collected by using a structured questionnaire adapted from the JHPIEGO questionnaire. Data were analyzed using Statistical Package for Social Sciences (SPSS) version 21.0 software and summarized using frequency distributions and charts. Associations between variables were tested using the Chi-square test at 5% level of significance and 95% confidence level. Multivariate logistic regression identified predictors of BP/CR awareness and uptake. Ethical clearance was sought and obtained from the MUHAS Directorate of Research and Publications (Ref.No.MU/PGS/SAEC/Vol.IX).**Results:** A total of 737 women with mean age of 26.2±5.9 years participated in the study. Majority were married (85%), educated up to primary education (63%), multigravida (70%), having up to three living children (80%), and attended Antenatal Care (ANC) clinic for at least 4 times (65%). Level of awareness on danger signs and BP/CR was low (40% and 35% respectively). Predictors of level of awareness of BP/CR were multigravidity, awareness of danger signs and using public means of transport.**Conclusion:** Low awareness of BP/CR was exhibited by the majority of women calling for strengthened efforts from health policy-makers and healthcare providers to design strategies for effective mass education to the women and the community at large on the importance of BP/CR in the efforts for reduction of maternal and neonatal mortality rates to meet the Sustainable Development Goals.

156. Nondo, S.R. (2017). Short term outcome of patients with open tibia diaphyseal fracture treated with external fixator at Muhimbili orthoepedic institute.Muhimbili university health and allied science.

Abstract

Title: Short term outcome of patients with open tibia diaphyseal fracture treated with external fixator at Muhimbili Orthoepedic Institute.**Objective:** To determine the short term treatment outcome of tibia diaphysial fractures treated with external fixator at MOI.**Methodology:** A prospective descriptive study done on adult patients 18 years and above with open tibial shaft fractures treated by AO tubular EF. This study was conducted at MOI for a period of twelve months from beginning April 2016 to the end of March 2017. Eighty patients met the inclusion criteria and were recruited after signing the informed consent. Data was collected using guided structured questionnaire including wound status, callus formation, malalignment and weight bearing stutus. Other tools like tape measure and goniometer were used to collect necessary information during follow up clinic at 2nd, 6th, 10th, and 12th week post-surgery. The obtained data for short term outcome were analyzed by SPSS version 20. **Results:**During this study a total of 80 patients with open tibial shaft fractures were enrolled and followed up. The proportion of open tibia diaphyseal fractures among all open fractures was found to be 7.2 %. Of these 80 patients males were 69(86.2%) and females 11(13.8%), with approximated male to female ratio of 6:1.The majority of patients were in the age group of 18-30 years (47.5%) with a mean age of (33.61 +/- 10.71) years. In this study motorcycles were the leading mechanism of injury, contributing 53 (66.2%) patients, followed by motor vehicles 23(28.8%), then falls from the height 4(5%) patients. In all these motor traffic crashes (76 patients), 38(50%) were passengers, 26(34.2%) drivers and 12 (15.8%) were pedestrians. Grade II fractures were most common 47 (58.8%) patients, followed by grade IIIA, 26(32.5%) patients, grade IIIB 6(7.5%) patients and least was grade I, 1(1.3%) patient. In these fracture the average time of initial callus formation visible on x ray was 10 weeks, it ranged from 6 weeks to 12 weeks ,with the mean RUST score of 7 at the end of the follow up.In this study, 7(8.8%) patients had superficial wound infection and 3(3.7%) had deep wound. Patients with grade III injury develop infection more (70%) compared to grade II injury (30%) and there were no wound infection in grade I. It was statistically significance that grade III fractures had high rate of infection compared to other grade with p-value of 0.031. Following the use of external fixator, 53(66.3%) develop pin tract infection. Duration of stay for the shantz pin in a patient affect the chance for pin tract infection, the longer it stay the higher the chance of infection. This was statistically significance under chi square test with P-value of less than 0.001 within 95% confidence interval. Out of 80 patients of study population 38 (47.5%) had malunion which include shortening (7.5%) and angular deformity (40%). Reoperation was planned for 22(27.5%) patients; malalignment(23.7%) and deep infection (3.8%) were the main cause.**Conclusion:**Motor traffic crashes were the main cause of open tibia diaphyseal fractures. Younger population constitutes a larger number of the injured. Treatment of these fractures with AO tubular EF resulted in high complication rate. **Recommendation:**Due to high complication rate AO tubular EF should be used only temporarily in case there is high level of contamination, severe soft tissue or bone damage with or without compartment syndrome and high fracture grades such as grade III fractures. This is for wound care as well as fracture stabilization since internal fixation cannot be used primarily in that condition.

157. Nyakuya, B.M. (2017). Prevalence of malaria, household coverage with long lasting insecticidal nets and factors associated with bed net use among school children in butiama district, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Butiama District is among the highly malaria endemic areas in Tanzania. The National Malaria Control Program (NMCP) distributed free Long Lasting Insecticidal Nets (LLINs) to reduce malaria transmission. Available data shows high prevalence of malaria among school pupils in Butiama. No routine health system that monitors malaria control interventions such as LLINs coverage and use. Use of school pupil's report has been shown to be a good proxy for the community estimation of malaria burden and assessing effectiveness of malaria interventions.**Objectives:** This study examined the prevalence of malaria, household LLINs coverage and use factors associated with bed net use among school pupils in Butiama district, Tanzania.**Methods:** A quantitative cross sectional survey was carried out among primary school pupils in Butiama District. A multi-stage sampling technique was used. Pupils were interviewed regarding LLINs coverage, perceived safety and factors associated with net use. Then a malaria test from a finger prick using malaria Rapid Diagnostic Test (mRDT) and Blood Slide (BS) for microscopy was taken. Data was entered into a computer using Epi data, then transferred to STATA for analysis. Ethical approval was obtained from Muhimbili University of Health and Allied Sciences (MUHAS)Ethical Board before the beginning of the survey.**Results:** A total of 590 school pupils participated in this study. The overall ownership of at least one LLIN was 95.4% with a universal coverage of 69.7%. The average number of nets per household was 3 ± 1.72. The most mentioned source of LLINs was free mass distribution 78.5% followed by School Net Program (SNP) 30%. In households with at least one LLIN 92.4% of the under-fives slept under LLINs a night before survey compared to 75.6% of school pupils. The overall malaria parasite prevalence by mRDT in school children at Butiama District was found to be 16.1% CI (13.34, 19.30), (95/590) but by microscopy was found to be 6.44% (68/590), 95% CI (4.72%, 8.74%). Malaria prevalence was significantly lower among pupils who slept under ITNs than those who did not. (P=0.029).**Conclusion:** Malaria prevalence has declined in Butiama District among school children compared to the previous studies.Universal coverage of LLINs is not yet attained.**Recommendations:** Further studies should be done in Butiama to look at what factors contributes to high malaria transmission in Butiama despite of high ITN coverage and use.

158. Nyambo, P.B. (2017). Knowledge and practice regarding umbilical cord care among mothers attending Mkoani health center at Kibaha.Muhimbili university health and allied science.

Abstract

Introduction: Clean cord care is one of the essential newborn care practices recommended by the WHO to reduce morbidity and mortality amongst the world's newborns. Despite this, cord infections are still prevalent in developing countries because of the high rates of

unhygienic cord care practices.**Objectives:** The broad objective was to assess the knowledge and practice regarding umbilical cord care among mothers attending Mkoani Health Center at Kibaha.**Methodology:** Cross sectional descriptive design was used and 262 respondents with neonates of 2-28 days were selected using systematic sampling. Structured questionnaire was used in data collections. Neonate information, knowledge on cord care practice including material used, technique use, and supportive education were collected. Descriptive analysis such as means, frequency and proportions were computed. $\chi 2$- test was used to determine the association between dependent and independent variables not only but also binary logistic regression analysis was performed to determine which independent factors were likely to influence umbilical cord knowledge and practice. **Results:** Ninety five percent of deliveries occurred at health facilities. A large percentage of 71.4% (n=187), tied the cord with a cord clamp. Mothers had their babies cord cleaned with Methylated spirit alone 50.8% (n=133) while 190 (72.5%) applied other substances and 76% (n=199) applied some of material on cord. Seventy four point eight percent (74.8%) of mother leave cord uncovered. Mothers' education, age and number of children, were statistically significantly associated with knowledge and practice on cord care with their p-values 0.000, 0.000 and 0.010 respectively. From logistic regression results revealed that mother's education and age were statistically significant with p-values of 0.000 and 0.018 respectively. Also results indicated that mothers education and age are less likely to have knowledge on cord care as their OR were 0.345 and 0.444 respectively, place of delivery and alternative solution applied after cleaning cord were revealed statistically significant with p-values of 0.044 and 0.000, their OR were 0.228 and 22.148 meaning that they are less likely to have cord care practice. **Conclusion:** Based on the findings, study shows that there was inadequate knowledge of signs on cord infection among the respondents. Comprehensive postnatal checkup and education of the mothers by the health personnel must increase to reduce the consequences of cord care infections.

159. Ngalula, J. (2017). Retinoblastoma: clinical picture and grouping at the time of first presentation in patients attending paediatric oncology ward at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Introduction: Retinoblastoma (Rb) is the most common intraocular and life threatening eye cancer that affects mainly children under the age of five years. In developing countries including Tanzania, 50-70% of affected children die because they are diagnosed too late to save their lives. Delay in diagnosis, referral, treatment and follow up increase morbidity and mortality rate. **The aim of this study:** was to identify clinical picture and group the eye according to the International Classification at the time of first presentation in patients attending pediatric oncology ward at Muhimbili National Hospital (MNH).**Methodology:** Descriptive cross sectional study was conducted in oncology ward at MNH, Dar es Salaam from April to December 2016.The study involved 72 patients with retinoblastoma. Parents/caretakers of every patient were interviewed in detail. Patients were examined under general anesthesia to measure horizontal corneal diameter, intraocular pressure, anterior segment of the eye and fundoscopy with indentation was performed using indirect ophthalmoscope. International classification of Retinoblastoma (ICRB) was used for

grouping the disease. Ultrasonography, neuroimaging and histology to confirm the tumor were also performed.**Results:** 72 patients were found to have Rb with a median age of 28 months, Interquartile Range (IQR) of (17-42 months). Out of 72 patients, 39(54.2%) were males and 33(45.8%) females. Majority of cases were from Coastal and Lake Zones. Family history of Rb was positive in only one patient who had bilateral Rb. Unilateral Rb was the most predominant type of the disease seen in 54(75.0%) patients.The commonest first clinical presentation noted by the family was Leukocoria reported in 56(77.8%) patients though at MNH about 30(41.7%) patients presented with proptosis. At the time of presentation at MNH, both bilateral and unilateral cases had advanced disease (group E and extraocular extension) where 84 eyes out of 90 eyes were indicated for enucleation. The median lag time was 4 months.**Conclusion:** Leukocoria is the commonest first sign of retinoblastoma at home. Majority of the patients presented to MNH in advanced stage of the disease though they were taken to local peripheral hospitals early enough. Programs to raise awareness on retinoblastoma to both health workers and the community are important for early case detection, referral, diagnosis and treatment.

160. Ngimba,G.A. (2017). Sociodemographic and etiological patterns of traumatic pelvic injuries at muhimbili orthopedic institute Dar es salaam. Muhimbili university health and allied science.

Abstract

Background: The traumatic pelvic injury is among the injuries that involve strong forces and may be associated with serious debilitating complication like dislocation, fractures, severe haemorrhage and neurologic deformities. Pelvic radiograph is cheap imaging method that helps to a quick identification of patterns and types of pelvic trauma for appropriate further immediate management planning in emergency setting. The study aim was to determine the Socio demographic and etiological patterns of traumatic pelvic injuries at Muhimbili Orthopedic Institute which is the main specialized trauma centre. **Objective:**To determine the socio demographic and etiological patterns of traumatic pelvic injuries at Muhimbili Orthopedic Institute Dar es Salaam from September 2016– February 2017. **Methodology:**This was a prospective cross sectional hospital based study where by One hundred and thirteen (113) patients with traumatic pelvic injury referred to Muhimbili Orthopedics Institute radiology department from September 2016 to February 2017 were studied. All patients underwent pelvic radiograph evaluation, the pattern of bone injuries were documented and recorded. The structured questionnaires with close ended questions were used to collect the information. Statistical analysis was performed using computer program Statistical Package for Social Sciences (SPSS) version 16 and P-value of <0.05 considered statistically significant.**Results:**The age ranged from 2 to 80years with an overall mean age of 35.31 years. Male to female ratio was 3.5:1. The most affected age group involved was 15- 30years (38.9%) and more patients were referrals from Dar es Salaam region accounting for 73%. About 35(26.7%) had pelvic ring fracture, 19(14.5%) presented with acetabular fractures and 10(7.6%) had hip joint dislocation. The main causes of pelvic trauma were Motor car 32.7% and motor cycle 39.8% respectively. Others were fall from height 15.9% and 11.5% for other causes.**Conclusion:**Acetabular fracture was more frequent

type of pelvic trauma. Motor cycle against pedestrian's injuries was the commonest mechanism of injury for pelvic trauma. Most young adult male group was involved in pelvic trauma. **Recommendation:** In emergency department setting all pelvic trauma patients should do plain X- ray as the first line of diagnostic imaging which is cheap and yet can give important clinical information instead of instant planning for more advanced and expensive imaging methods.There is need to do more similar studies elsewhere in the country as this study was limited to Dar es Salaam; data for the country in general is lacking.

161. Odeki, J.O.M.(2017). Maternal morbidity and perinatal outcome in preterm premature rupture of membranes between 28 and 34 weeks gestation at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Preterm premature rupture of membrane (PPROM) is the spontaneous rupture of membrane below 37 weeks gestation without onset of labour. It complicates 3% to 8% of pregnancies and leads to one third of preterm deliveries. It results to increase the risk of prematurity, perinatal morbidities and as well as perinatal mortality. It remains an important clinical and public health burden where it is associated with maternal morbidities like chorioamnionitis, abruption placenta and postpartum endometritis. PPROM that occurred below 34 weeks are managed expectantly to improve fetal survival and outcome without increasing maternal morbidity. Despite of this, still some degree of complications do occur. However in our setting maternal morbidities and perinatal outcome associated with PPROM below 34 weeks gestation have not been properly documented. Therefore this study aimed at describing these outcomes for better understanding and for counseling of mothers on choice of management.**Objective of this study:**To describe maternal morbidity and perinatal outcome in singletone pregnancies with preterm premature rupture of membranes between 28 and 34 weeks gestation, managed conservatively in MNH; from august 2016 to march 2017.**Methodology:**A cross-sectional study was conducted between August 2016 and March 2017 involving 229 women who had PPROM and their pregnancies between 28 and 34 weeks gestation in Muhimbili National Hospital were involved in the study. Data were collected through a checklist from maternal case notes and supplemented with information from the ANC card. The neonate's information was collected from their admission files in NICU. The checklist contained information on socio-demographic factors, obstetric factors, maternal outcomes and fetal outcomes. Data analysis was done by statistical data editor IBM SSPS version 20.The categorical variables were summarized in frequency distribution and percentages and the continuous variables were summarized in means and standard deviations.**Results:**In this study out of 229 participants only 212 were analyzed with a response rate of 92.6%.Clinical chorioamnionitis was found in 9.0%, postpartum endometritis in 5.2% abruption placenta in 9.0% and severe oligohydramnios in 20.8% of the study participants Major fetal complications were RDS 34.2%, Neonatal sepsis 19.8%, neonatal jaundice 22.8% and perinatal mortality rate was 14.6%. The mean latency period was 5.7±5.5 days.**Conclusions:**PPROM is a major obstetric problem. It leads to increased maternal morbidity as well as perinatal morbidity and mortality. Clinical chorioamnionitis, abruption placenta and postpartum endometritis were evident as major maternal morbidities;

but with a significant rates of perinatal morbidities namely RDS, neonatal sepsis and neonatal jaundice.

162. Odu, H.S.C. (2017). Prevalence of post dural puncture headache and associated factors in mothers for elective cesarean section at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Neuraxial anesthesia is still the key note of regional blockade; it is popular for its effectiveness in producing anesthesia and analgesia. Post dural puncture headache occurs as the cerebrospinal fluids leaks out from the breach that the needle has made in the dura during administration of spinal anesthesia. PDPH is a common complication after spinal anesthesia(1). However spinal anesthesia is one of the routinely done procedures in practice.**Broad objective:**To assess the magnitude of post dural puncture headache and associated factors after spinal anesthesia among patients at Muhimbili National Hospital.Study DesignHospital based cross sectional study Study Population. All patients undergoing elective caesarean section under spinal anesthesia during the study period. Study setting.The study was conducted at MNH, Dar es Salaam at the maternity theater and maternity ward.Data collection form was used to collect data from all eligible patients included in the study period, who came for elective cesarean section under spinal anesthesia at MNH. Patients were interviewed and their chart reviewed at 24 hrs, 48hrs and 72 hrs, postoperatively by the principle investigator. Data Analysis, Data collected was coded, entered in computer and managed in Microsoft access database. It was analyzed using SPSS version 20 and presented in tables and graphs. All variables were categorized and described using frequency distribution. Bivariate association was described using chi- square test, a p – value of < 0.05 was considered statistically significant.**Results:**Out of 276 mothers undergoing spinal anesthesia for elective cesarean section the prevalence of PDPH was found to be higher 56% among patients who developed PDPH. Multiple dural puncture attempts were significantly related to PDPH (P value ≤ 0.001). While younger age is susceptible to developed PDPH. Out of the 154 mothers who developed PDPH, 124 had other symptoms associated with PDPH. **Conclusions and Recommendations:**The prevalence of PDPH was found to be higher in MNH. The hospital management and the anesthetists in the hospital should minimized the prevalence of PDPH by avoiding multiple dural puncture and encourage single attempt during training of residents.

163. Omary,B. (2017). Prevalence of pulmonary tuberculosis and associated factors among Tanzanite mineworkers in Mererani, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Tuberculosis remains an important public health problem in developing country especially in this era of HIV/AIDS. Mineworkers have been shown to have a very high risk of becoming infected with tuberculosis (TB), especially in Sub-Saharan Africa. However there is paucity of information on the prevalence of PTB among Tanzanite

mineworkers that can be used to guide intervention and inform policy. This study aimed at assessing prevalence of PTB and its associated characteristics.**Method:** Across-sectional study was conducted in Mererani mining site between March and June2017.Mineworkers, who met inclusion criteria were randomly selected and interviewed using a standard questionnaire to obtain information regarding socio-demographic and potential risk factors. Sputum samples were collected and analysed using AFB and Gene Xpert while blood samples were subjected to HIV rapid test, using SD Bioline HIV 1/2 3.0 as a screening test and Uni-gold as confirmatory test. Data was analysed using Epi Info version 3.5.1 and Microsoft excel soft ware. Univariate, bivariate multivariate analysis was carried out where frequency, measure of central tendency and dispersion were used to summarize data and odds ratio was used as measure of association.**Results:** A total of 293 mineworkers were recruited. Their median age (±SD) was (35years±9.98), with a range of 18 to 73 years. Of 293 sputum samples, 26 (8.9%) were positive for PTB while 13 (4.5%) of the 291 blood samples were positive for HIV infection, while 5(1.7%) of the miners had PTB/HIV co-infection. None of the PTB positive sputum samples were resistant to rifampicin. The odds of developing PTB was 10.2 (AOR 10.2 95% CI 1.38-75.44) times higher among those who were exposed to silica dust, 9.1 among those infected with HIV (AOR 9.09 95% CI 2.39-34.06), 2.1 among smokers (AOR 2.07 95% CI 0.78-5.52), and 2.8 among those without knowledge of TB transmission (AOR 2.76 95% CI 0.95-8.00).**Conclusion:** The prevalence of PTB in mineworkers was high (8.9%) and was significantly associated with HIV infection, smoking and exposure to silica of TB transmission. Control of TB in Mererani would need to address these factors.

164. Pancras,G. (2017). Non-medical facilitators and barriers towards accessing haemodialysis services: an exploration of ethical challenges.Muhimbili university health and allied science.

Abstract

Background: In Tanzania, there is a significant increase in number of patients diagnosed with ESRD and a minute number of patients receiving CHD, yet little is known on non-medical barriers and facilitators towards accessing CHD services and the associated ethical challenges. Medical barriers such as presence of co-morbidities like diabetes, advanced vascular diseases, HIV/AIDS and hepatitis infections are well known and documented in clinical guidelines.**Aim:**The study aimed at exploring non-medical facilitators and barriers towards accessing CHD services and the associated ethical challenges at Muhimbili National Hospital.**Methodology:**An exploratory descriptive study design employing qualitative approach was used. The study was conducted at the dialysis unit harboured within Muhimbili National Hospital and data was purposively collected from 14 selected key informants [nephrologists, renal nurses, and social worker, nutritionist and ESRD patients]. Interviews with key informants were carried out by the principle investigator using two themes of interview guides; one for health care providers and the other for patients. Both interview guide contained open ended questions. Text data obtained was analysed based on both inductive and deductive content analysis methods with the help of the computer software [NVivo Version 10].**Results:**Three major themes emerged: a] non-medical facilitators

towards accessing CHD services which enshrines three sub-themes [possession of health insurance, family support and affluent position], [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 practices], and lastly [c] ethical challenges associated with accessing CHD services which also enshrines three sub-themes [dual role of health care providers, patient autonomy in decision making, and treatment disparity].**Conclusion and recommendations:**As major facilitators to conveniently and timely access CHD remain to be limited to a small group of patients with health insurance, good family support and to some extent respectable political positions, barriers such as high treatments costs and geographical inaccessibility remain to challenge large group of patients suffering from ESRD. As a result most ESRD patients remain un dialyzed or become partially dialyzed. The dialysis unit in collaboration with the Muhimbili National hospital at large should take precedence in formulating a guideline highlighting non-medical factors associated with accessing CHD services, their position, limitation and importance in determining adequate patients for CHD. This will bring consensus on who deserves to receive CHD based on social, cultural, economical factors.

165. Pastory, L.C. (2017). Individual and social factors associated with antiretroviral treatment adherence among HIV positive adolescents attending care and treatment clinics in Dodoma municipality.Muhimbili university health and allied science.

Abstract

Background: Treatment adherence is generally regarded as an important factor in achieving optimal outcomes across many disease states. Unfortunately, most HIV-infected adolescents find it extremely difficult to adhere to their dosing schedules consistently. ALHIV often face multiple barriers to adherence including structural barriers in fitting medication into complex patterns of daily life, low expectancy for outcome of antiretroviral therapy and mental health/substance abuse. The increased access to antiretroviral treatment (ARV), has resulted to children who have survived the diversity of the disease and are now adolescents or young adults. This cause the number of HIV positive adolescents to grow with high incidence rates. Adolescents are vulnerable to HIV due to the physical and emotional transitions, and potentially heightened risk-taking behaviour, inherent to this period of life Following the UNAIDS post 2015 mbitious plan of averting HIV and AIDS in the globe, 90% of all diagnosed HIV positive clients should be initiated into life serving treatment, should be retained into care and be virally suppressed by the year 2020. To achieve this, all people initiated in ARV should remain in care and maintain good treatment adherence on ARV medication.**Objective:** To assess the level of adherence and identify the individual and social factors associated with antiretroviral treatment adherence among HIV positive adolescents in care and treatment clinics in Dodoma Municipality.**Methodology:** This was a cross-sectional study employing qualitative approach to data collection and analysis. The study population was seventeen HIV positive adolescents (10-19 years) who are on ARV medication attending at care and treatment clinics, twelve parents/care takers of HIV positive adolescents and six health care providers providing HIV care and treatment services at the two selected high volume facilities in Dodoma Municipal. The sample size was 24 indepth interview and one

Focus Group Discussions (FGDs) with twelve members. Adherence level was measured using multi-method approach incorporating three different tool (self-reported, visual analogue scale and Pill identification tests).The setting was at the Care and Treatment Clinics during normal adolescent clinic days at Dodoma Regional hospital and Makole Urban health centre in Dodoma Municipal Findings: The findings in this study suggests that very few adolescents (2/17) have high or good adherence level (above ninety five percent) to ARV mediaction while majority (15/17) present low level of adherence. Delayed disclosure of HIV status, unfriendly time (school hours and during examination) were among the individual factors found to be associated with poor adherence. Fear of parents to disclose to their children due to stigma, inadequate knowledge on psychosocial support and unfriendly environments including families and schools were among the social factors associated with poor/low adherence among ALHIV.**Conclusion:** Delayed disclosure has a big impact on ARV treatment adherence among HIV positive adolescents. Parents/care takers should be empowered to provide early disclosure to their HIV children to enable them cope with status. Family and communities should be supportive to ensure good adherence among ALHIV.

166. Pierre, N.M.J. (2017). Review of post operative notes after caesarian section at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Post-operative notes (PON) documentation following caesarean section (C/S) is crucial for subsequent management of patients after the surgery. No study has ever been done in our setting to assess the contents of PON. The aim of this study was to evaluate the completeness of written PON from C/S at Muhimbili National Hospital (MNH).**Methodology:**One thousands two hundred PON were reviewed against pre developed criteria. Each note was assessed for completeness of the criteria developed. The criteria were developed by reviewing literature and discussion with doctors in the department of Obstetrics and Gynecology. The persons who performed the C/S were identified, either registrars/residents or specialists. Analysis was done using Statistical Package for Social Sciences (SPSS) version 20 and results were presented as frequency tables. **Results:**Among 1200 PON reviewed,833 were emergencies and 367 were elective C/S. Registrars/residents wrote 68.5% of the PON, and specialists wrote 30% of them. The main indication for C/S was previous scar (26.2%) followed by CPD/obstructed labor/big baby (17.5%). Four post operative notes (0.3%) were complete. Four criteria (indication of C/S, intravenous antibiotics, pain management and intravenous fluids) came out to be present in all PON. The criteria with deficiencies varied from 99.8% for the highest to 2% for the lowest. Difference in writing PON between registrars/residents and specialists were noted in: washing and draping, type of uterine closure, suture used for uterine closure, swab and instrument count, appearances of fallopian tubes and ovaries. P-value for those elements was< 0.001.**Conclusion:**Few PON met the agreed criteria. Differences of contents of the notes between registrars/residents and specialists were noted in some of the criteria. There is a need for a standard national guideline for operative notes documentation. A checklist can also be available in theatre, to remind surgeons on what type of information is needed to help in patient's care post surgery.

167. Rahib,J.S. (2017). Prevalence of age related sensorineural hearing loss in elderly patients receiving ent services at Muhimbili national hospital.Muhimbili university health and allied science. (2017).

Abstract

Background: Age related SNHL in elderly, is a progressive, usually bilateral hearing loss that occurs in older people as they age. It is eminently correctable using rehabilitative hearing devices, and its successful correction can vastly improve the older person's quality of life. There has been no study done to show the magnitude of age related SNHL in elderly in our country.**Objective:**To determine the prevalence of age related SNHL among elderly patients receiving ENT services at the MNH, Dar es salaam, Tanzania. Studydesign Hospital-based, descriptive cross sectional study. **Methodology:**This study included elderly with minimum age of 50 years and above. A total of 380 elderly patients who received ENT services at the ENT clinic at MNH from June 2016 to December 2016, through convenient sampling were enrolled to participate in this study. Participants were screened on hearing loss and interviewed by the structured questionnaire followed by otoscopic examination, and PTA. All information obtained was entered in computer and analyzed using SPSS version 20 software. A PTA with slopping pattern at higher frequencies was taken as age related SNHL. Chi-square test was used to determine the differences among different groups, and linear regression analysis done to determine the contribution of risk factors.**Results:**This study included 380 elderly participants receiving ENT services at MNH, 182(47.9%) males, and 198 (52.1%) females. The prevalence of age related SNHL was 27.6%, males mostly affected 57(31.3%) p= 0.574. A statistically significant bilateral age related SNHL was found 90 (85.7%) p= 0.026, and the severity of age related SNHL was found to increase as age increase. No statistical significance in contribution of the risk factors was found, P>0.05. **Conclusion and recommendations:**Findings corresponded to several other literatures that prevalence of age related SNHL among elderly is high, mostly bilateral, and its severity increases with age, with the oldest age groups having the most severe hearing loss. Confounding factors such as duration of hypertension, DM and of cigarette smoking and the amount smoked, the dose of ototoxic medication used may have contributed to differences compared to other studies. Further studies that will address these factors at MNH are needed.

168. Rajab, L. (2017). Correlation of mrcp and surgical findings in patients with obsructive jaundice at mnh.Muhimbili university health and allied science.

Abstract

Background:MRCP has shown an excellent capability in outlining the biliary tree hence demonstration of the level of biliary blockage (obstruction).**Objective:**To determine the correlation of MRCP and intra operative (surgical) findings in patients with obstructive jaundice at MNH from June-December2016.**Materials and methods:**This is a cross-sectional hospital based study in which patients with obstructive jaundice were recruited. Sample sizes of 60 patients were studied using standardizedquestionnaires. Data analysis was done using statistical software(SPSS version 20) and statistical level of significance was p <

0.05.**Results:**In this study females37(61.7%) are more affected than males 23(38.3%).Of these 41-60 years old age group were commonly seen with range of 32-79 years of age. Obstructive jaundice was commonly caused by Cholelithiasis followed by pancreatic head tumor. Obstructivejaundice issignificantly caused by cholelithiasis($p<0.001$) and pancreatic head tumor (p-value<0.0001).With MRCP, sensitivity and specificity was almost 100%.The results show that therewere very strong and positive correlations between MRCP and intra operative findings.**Conclusion:**MRCP is highly sensitive and specific with almost 100% in provision of accurate diagnosis. It is important because it shows levels, causes and extent of obstructions making it easier for surgeons to intervene.**Recommendations:**

1. MRCP should be an indication for the patients with obstructive jaundice.

2. Large study should be conducted involving other referal hospitals in the country so that it can represent the general population.

3. MRCP should be used before surgery or for surgical planning.

169. Rashid, I.Z. (2017). User fee increase in improved community health fund: community participation and coping mechanisms in Kondoa district council.Muhimbili university health and allied science.

Abstract

Background: Evidence shows that introduction or user fee increase not coupled with improvements in quality of services triggers diverse coping strategies that result in substantial decline in services utilization. Previous studies focused on the impacts of user fees mainly on utilization of health services and the illnesses-related coping strategies. Little is known on how user fees increase would trigger full range of coping mechanisms in the Tanzanian context. This study explored community participation in decision to increase user fees and the mechanisms to cope with the user fee increase. **Objectives:** To explore community participation and coping mechanisms in respect to user fees increase in the improved CHF.Materials and **Methods:** A descriptive cross-sectional study using qualitative approach was conducted in Kondoa district Council. Study population was community members, health managers, local community leaders, in-charges of health facilities and relatives of admitted patients. FGDs, IDI and document reviews were employed to foster triangulation of the findings. A total of 33 participants were recruited (23 participants from FGDs, 10 from IDI). FGDs and IDI guides were used to collect data. Special designed forms were used to collect OPD attendance data for document reviews. Qualitative data were analyzed using thematic analysis approach. Inductive approach was used to identify themes as they emerge from the data. The data were analyzed manually through reading and re-reading the transcripts until the content was clear.**Results:** This study found that the community was not involved in decision to increase user fees; the decision lacked community ownership, and it was a ‘’top-down’’ order. Regarding strategies to cope with increased user fees; poor people embarked on cost prevention strategies, which in its extreme were marked with complete

neglect of treatment, leaving everything to God's mercy, signifying hopelessness. Others resorted to self-treatment consuming herbals yet others delayed treatment, waiting for spontaneous recovery. Cost management strategies took the form of borrowing, selling assets, some of which with survival value to households like farms/lands and cereals signaling catastrophic health spending and deepening poverty. The study also found a reduction in health services utilization following user fees increase. Waivers as a protection for the poor against social exclusion were virtually inaccessible especially by the poor. There was a modest increase in enrolments in iCHF following user fees increase.**Conclusion:** Community did not participate in the decision to increase user fees and this was linked to poor enrolments in iCHF. Generally, raising user fees as a standalone strategy to accelerate enrolments in improved CHF (iCHF) did not adequately work and came with a heavy price tag of reduction in utilization of health services that offsets any potential benefits. Manipulation of user fees to accelerate enrolments in CHF has to be balanced with strategies that improve accessibility to waivers to protect the poor and vulnerable people.**Recommendation:** Kondoa district council should give community participation a due priority in activities targeting the community for the realization of envisaged goals. Further, it should identify the poor and give subsidized CHF ID cards similar to those of the paying counterparts. Kondoa district Council should consider going back to usual user fees for the sake of safeguarding the accessibility of the poor to health services. The Government of the United Republic of Tanzania through the MoHCDGEC and PO-RALG should consider making CHF mandatory using the iCHF model to attain UHC. More studies are needed to establish whether the observed decline in services utilization was due to user fees increase.

170. Rashid,S.A.(2017). Antimicrobial resistance pattern of bacteria causing urinary tract infection among pregnant women in Zanzibar.Muhimbili university health and allied science.

Abstract

Background: Treatment of urinary tract infections (UTI) during pregnancy is essential in preventing complications that occur to mother and child. Employment of empirical treatment or misuse of the antimicrobial agents results in a widespread of antimicrobial resistance (AMR) among uropathogens including beta- lactamase bacteria which are common isolated. Failure to timely detect and adequately treat ESBL producing uropathogens during pregnancy may cause pyelonephritis, maternal sepsis, pre-mature delivery, abortion, and fetal death.**Aim:** To determine the prevalence and susceptibility pattern of the common cause of urinary tract infection among pregnant women with symptomatic and asymptomatic UTI.**Methodology:**This was a cross sectional study that was carried out from January to July 2017, involving 300 pregnant women with or without symptoms of UTI attending antenatal clinic at Mnazi Mmoja Hospital. All urine samples were cultured and isolates were identified by Analytical Profile Index 20E (API 20E). Participants were screened for significant bacteriuria, microscopically and by urine multi-stick strips deep method. Antimicrobial susceptibility testing (AST) was performed using Kirby Bauer's disc diffusion method; extended spectrum β–lactamase (ESBL) producing bacteria were detected from urine by double disk synergy test (DDST) and confirmed by combination disk test method (CDT).Results of AST and ESBL production were interpreted in line with Clinical and Laboratory Standards Institute guidelines. **Results:** Of the 300 cultured urine samples for UTI, 46 (15.3%) showed significant bacteriuria, of which 14 (30.4%) were ESBL producing organisms. Pseudomonas spp. and E. coli were common isolated uropathogens, ESBL producing pathogens were predominantly E.coli (85.7%) and P. aeruginosa (14.3%). The prevalence of beta lactamase producing bacteria among pregnant women with symptoms of UTI and those without symptoms was 57.1% and 42.9% respectively. Highly resistant rate was observed against erythromycin (90%) among CoNS and all gram positive isolates were highly sensitive to gentamycin and nitrofurantoin. Majority of the gram negative bacteria exhibit multidrug resistance, highly resistance found against ampicillin, amoxicillin and third generation cephalosporin. ESBL producing E. coli were 100% resistant to amoxicillin, ampicillin, Amoxicillin/clavulanic acid, cefotaxime and ceftazidime, and 91.7% resistant to cotrimoxazole and ceftriaxone. ESBL- P. aeruginosa were 100% resistant against cefotaxime, ceftriaxone and meropenem. Beta- lactamase producing E. coli were sensitive to meropenem (100%), nitrofurantoin (91.7%) and amikacin (66.7%).**Conclusion:** Urinary tract infection is highly prevalent in pregnant women. This study alerts on the existing of beta lactamase producing uropathogens among pregnant women with both symptomatic and asymptomatic UTI. ESBL and non- ESBL-producing bacteria were highly resistant to antibiotics which are common used on treatment of urinary tract infection during pregnancy. Signifying on the importance of performing culture and antimicrobial susceptibility pattern to pregnant women with UTI, and treatment of urinary tract infection should base on AST.

171. Robert,L.A. (2017). Gender-based violence and adherence to anti-retroviral therapy among hiv-infected women attending care and treatment clinic, Mbeya Tanzania.Muhimbili university health and allied science.

Abstract

Background: Approximately62% of women living with HIV receive antiretroviral therapy (ART) in Tanzania. To maximize the clinical benefits of ART and attain a successful treatment outcome, more than 95 % adherence level is necessary. However, sustaining high levels of adherence to ART is a challenge. Gender based violence is identified as one of the barrier to achieving that high level of adherence among women living with HIV/AIDS. **Objective:** This study aimed at determining the relationship between Gender Based Violence and ART adherence among women on ART attending CTC in Mbeya Region.**Methodology:** Analytical cross-sectional study was conducted among HIV-infected women aged above 18years on ART attending CTC in Mbeya Regional hospital. A probability sample was drawn and interviewed after informed consent using structured questionnaire. Collected data was analyzed using Epi Info version 7. **Results:**A total of 411 participants were recruited into the study, 67% were in the age group 28-48years, 45.5% were married, 30% widowed, and 58.9% completed primary education, and 78% were self-employed. Sixty one (14.8%) had reported poor adherent to their ART treatment while prevalence of ever having any form of violence was (24.8%).Poor ART adherence was more likely among clients with psychological violence (AOR=4.89, 95%CI:1.07-22.2), had history of alcohol use (AOR=5.54, 95%CI:1.3-4.6), or had stigma (AOR=7.55,95%CI:1.61-35.24), lack of disclosure of HIV sero-status(AOR=1.12,95%CI:0.21-5.81), and rural residence(AOR=0.52,95%CI:0.07-3.57), were not associated with poor adherence to ART.**Conclusion:** The results indicated that gender based violence contributes to poor adherence to ART for women. Therefore routine screening of women for exposure to violence may be useful in clinical settings where HIV services are provided in order to increase adherence to ART.

172. Rukeha, L.P. (2017). Short term outcomes of gut anastomosis surgeries at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: There are a great number of abdominal surgeries that are being performed at Muhimbili National hospital. Worldwide, intra-abdominal surgical interventions carry high risk of complications and mortality. Anastomotic break down is one of the most feared complications and it is associated with increased morbidity, mortality and number of hospital stays. The quality of gut anastomosis by looking on the degree of anastomotic breakdown is one of worldwide agreed assessment tool, and it can be used as an indicator of the quality of surgical care with comparison of Anastomotic Leak rates between different health facilities[1–4].**Objective:** This study aimed at determining short term outcomes of primary Gut anastomosis surgeries.**Methodology:** This was a descriptive prospective study conducted at Muhimbili National Hospital in the period of 9 months from April 2016 to January 2017. Patients underwent Gut anastomosis were recruited, interviewed and clinically assessed, patients charts were also reviewed and a follow up of 30 days was done.**Results:** A total of 240 patients who underwent primary Gut anastomosis were recruited, and the majority (60%) were males. The mean age of participants was 29.5±23.75 (0.08 -84) with those who were between 30 – 59 years of age being the majority (46.7%), followed by paediatric patients who were (38.3%). More than half of the cases operated were emergencies (62.5%). A 30 days

mortality rate was 2.1%, which was statistically significant in patients aged more than 60 years (p value < 0.001). Leak rate was found to be 4.6%, all the patients who had anastomotic leak were diagnosed clinically at day 9.55 ± 3.078(5-15) postoperatively. All the patients who leaked had ASA 3 and 4. Anastomotic leak was significantly associated with abdominal pain (p. value <0.001), wound discharge (p.value <0.001) and fever (p.value <0.001). 30.1% of patients developed surgical site infection. **Conclusion and Recommendations:** Radiological investigation should be incorporated in making early diagnosis of anastomotic leak. In patients with high ASA status (3 & 4) establishing Gut continuity should be deferred, rather a temporal bowel exteriorization as stoma should be encouraged. For patients with increased risk of anastomotic leak, early home discharge should be deferred and patients should be kept inpatient for at least ten days.

173. Rugemalila, J.C. (2017). Mothers' knowledge about neonatal danger signs and health seeking actions during neonatal illness at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Neonatal period is the most critical time for survival of an infant. Neonatal deaths account 45% of all under five deaths worldwide. Tanzania is among the countries to have reduced under five years' mortality but not neonatal mortality. This suggests the lack of timely and appropriate neonatal care intervention when danger signs are recognized.**Aim of the study:** The study intended to determine the knowledge about neonatal danger signs and health seeking action among the mothers with neonates.**Methodology:** This was a descriptive hospital based cross-sectional study, conducted at Muhimbili National Hospital. The study enrolled 216 women. The women were individually interviewed face to face using Swahili questionnaire. Simple random sampling method was used to select the women for the study. Data was coded, entered, cleaned and analyzed in SPSS for windows version 21. Chi-square test (p value) and Multivariate analysis used to define the significant association between dependent and independent variables.**Results:** A total of 216 mothers' were interviewed between May and June 2017. Large proportion 156 (72.2%), of mothers had low knowledge on neonatal danger signs. Respondents with completed secondary education were more likely to have average knowledge by six (6) times more than those without formal education and the associations was statistically significant (p=0.018).The study confirmed that the higher the knowledge about neonatal danger signs the higher the appropriate health seeking actions among mothers, and the higher the decrease of in-appropriate actions among them by 9.3% however this association statistically insignificant (p=0.792).**Conclusion:**There is low level of knowledge on danger signs of neonatal illness among the mothers with neonates in Dar es Salaam. Knowledge about neonatal danger signs need to be increased because it is associated with appropriate health seeking actions.**Recommendations:**Low knowledge of danger signs of neonatal illness and in-appropriate health seeking actions can be improved by Midwives and other trained health care providers to educate pregnant women about danger signs of neonatal illness during antenatal visits and emphasize more after delivery before being discharge home.

174. Rusibamayila, M.(2017). Respiratory impairment and personal respirable dust exposure among underground and open cast gold miners in north-Mara Tanzania.Muhimbili univarsity health and alliade science.

Abstract

Background: 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.**Objectives:** To determine respiratory impairment, personal respirable dust exposure levels and associated factors among miners in a gold mine in Tanzania.**Material and 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 20.0.**Results:** The overall Geometric Mean of respirable dust was 0.26mg/m3 (GSD=0.32) over a mean sampling time of 8hours (with a range between 7-11hours). The GM for underground (0.41±0.28mg/m3) was significantly higher compared to open pit (0.17 ±0.23 mg/m3) with $p<0.01$. For underground, the GM was highest among bogger operators 0.53mg/m3(GSD=0.27) while for open pit, the highest GM was found among quality controllers 0.39mg/m3 (GSD=0.18). Respiratory symptoms were phlegm (49.1%), Breathlessness (42.9%), cough (37.5%), wheezing (18.8%) and chest tightness (10.7%).Cigarette smokers were more likely to suffer from breathlessness compared to non-smokers. Prevalence of airflow obstruction (FEV1/FVC<0.7) was 1.9% while prevalence of lung restriction was 8.8%. Age, smoking and previous exposure to dust could not predict lung function impairment.**Conclusion and recommendations**: Despite levels of respirable dust exposure being 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.

175. Rusigwa,S.E. (2017). Regulating the traditional and alternative medicine practice: regulatees awareness, adherence and regulating challenges in Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Ineffectiveness of traditional medicine practices regulation has been a major challenge worldwide especially in the developing world. In Tanzania, regulation to traditional medicines has not been well documented regarding the extent to which it meets the WHO (2016) requirement. Although the Traditional Medicine Act was enacted in 2002, there are no studies that have focused on the functioning and effectiveness of the traditional medicine regulatory framework. This study therefore aimed at exploring regulatees' awareness and adherence to TAM regulations and obstacles/barriers face by both regulatees and regulators

in fulfilling the regulatory requirement in Tanzania.**Objective:** To assess awareness and adherence of the regulatory process among regulatees and challenges faced by regulators in implementing the the regulatory process in Tanzania.**Materials and Methods:** A cross-sectional study design was used employing qualitative data collection approach and analysis. Purposive and snowballing samplings were used to select participants. In-depth interviews were conducted with regulators and regulatees. Dthematic data analysis started with organizing, breaking it into manageable units, synthesizing and searching for patterns, discovering what was important to be learned and coded them into nodes.**Results:** The findings of the study revealed that awareness of the regulatory framework among the traditional/ alternative medicine practitioners is low and still a challenge that needs to be addressed in order to promote the subsector. Non-adherence to regulations was also revealed to be pronounced among regulatees. Non-adherencees is influenced by both regulatees' awareness of the process and their ability to comply with the regulatory requirements; there is lack of direct public private partnership in regulating traditional and alternative medicine sub sector; and lack of enough manpower was reported to be a hindrance in implementing the regulatory process. There is lack of infrastructure, transport and human resources; and also regulators interviewed revealed lack of professional knowledge, proper task scheduling and interest on traditional/ alternative medicine.**Conclusion and Recommendation:** The study concludes that some regulatees are not aware of the regulatory framework; non-adherence is a problem among regulatees. Lack of professional human resources, interest, skills, and means of transport are the problems that affect the capacity and effectiveness of the regulators. So we recommend more frequent education provision on regulatory framework to regulatees by the regulatory body and regulating body should appoint regulators who are interested in TAM to improve efficiency and effectiveness in regulating TAM subsector.

176. Rwegalulira,J.B. (2017). Level of compliance to quality assurance and quality control procedures among fortified wheat flour manufacturers of Dar es salaam.Muhimbili university health and allied science.

Abstract

Background information: Quality assurance and quality control procedures for food fortification were introduced in fortified wheat flour industries. This was done so as to ensure that the wheat flour circulating in the market are adequately fortified. Adherence to the stipulated quality assurance and quality control procedures helps manufacturer to be able to monitor the products quality and safety before entering the market. Hence it is important to know at what extent are they implement the stipulated procedures and the perceived barriers they encounter during implementation.**Aim of the study:** This study assessed level of compliance to specified quality assurance and quality control procedures among fortified wheat flour manufacturers, determined the extent to which fortified wheat flour comply with the specifications and identified industry barriers that affect attainment of compliance.**Materials and Methods:** A descriptive cross-sectional study was conducted in Dar Es Salaam involving 6 fortified wheat flour manufacturers from July to August 2017. Six observational checklist were used to assess the level of compliance to QA/QC procedures performed by manufacturers. A total of 216 samples randomly selected from the market were

analysed to determine the extent of compliance to the specification. The obtained data were analysed both qualitatively and quantitatively to get the results. Interview guide with semi structured questions was used to collect data from 6 respondents on perceived barriers.**Results:** Proportion of compliance to QA/QC procedures implemented by manufacturers was (33.3%), was mainly predicted by observational checklist from TFDA guideline for external monitoring of fortified wheat flour. All respondents perceived QA/QC procedures was important for compliance to food regulations, however, they face difficulties to comply with stipulated QA/QC procedures because of perceived barriers: competition with non-fortifying or non-compliant producers, Poor laboratory capacity, lack of regulatory monitoring and clarity, awareness and attitude to food fortification and lack of training in the area of food fortification. Only (67.6%) of samples analyzed were adequately fortified.**Conclusions:**Two manufacturers (33.3%) out of six complied with stipulated QA/QC procedures stipulated in the manual for internal monitoring of wheat flour. Compliance to Food Fortification Regulations was highly affected by competition with non-fortifying or non-compliance producers, Poor laboratory capacity, lack of regulatory monitoring and enforcement, awareness and attitude to food fortification and lack of training and expertise in the area of food fortification. Percentage of overall inadequately fortified wheat flour was (32.4%).

177. Rwegoshola, F.A. (2017). Reasons behind reckless riding among commercial motorcyclists in Dar es salaam.Muhimbili univarsity health and alliade science.

Abstract

Background: Motorcyclists and their passengers are 37 times more likely to die in traffic injury than drivers of four wheeled vehicles. These rates of death and injury from motorcyclist are reportedly higher in developing countries than in the developed world. Observed risk riding behavior of motorcyclists in the Dar es Salaam City included, carrying more than one passenger, riding under the influence of alcohol, over-speeding, and non-adherence to or ignorance to road traffic laws and regulations such as ignoring traffic police instructions and riding through red traffic lights. **Objectives:** The purpose of the study was to explore the reason behind reckless riding among motorcyclists in Dar es Salaam. **Methods:** A cross sectional descriptive study design was used for generating data. A total of 279 commercial motorcyclists participated in this study. All riders on the motorcyclists parking points along Morogoro road on the day of data collection were included in the study sample. Structured interview guides were used for getting the required data and included questions which measured knowledge on road use behavior and traffic regulations. The data collected from the field were analyzed using Statistical Package for the Social Sciences, version 20, (SPSS 20). **Results:** All commercial motorcyclists were males with the median ages of 27 years. Most of them (73.5%) had primary education or less. None of them had any formal training on motorcycles riding. They disclosed that, they learned how to ride the motorcycles from garages (11.1%), friends (53.8%), and relatives or family member (35.1%). Nearly a half of the respondents (49.5%) had an average knowledge of road use behaviour and traffic regulation. Ignorance of traffic law (99.6%), frequent traffic jam (86.4%), lack of action from traffic police when they ignored traffic rules and regulations (96.7%) were among reasons

given for reckless riding behaviors in the city.**Conclusion:** Generally, the study participants learned how to ride the motorcycles from informal sources and the majority of them were ignorant of traffic rules and regulations. Reasons for not wearing helmets when on the road included: showoff to other riders, add weight to their heads, helmet affects the visibility and helmet weakens the ability to hear.**Recommendation:** There should be regular educational campaigns to all commercial motorcyclists on traffic regulation and road use behaviour so as to enhance awareness on road use behaviour and traffic regulations.

178. Sadallah, M. (2017). Gene expression profile and factors associated with neural tube defects among infants attending Muhimbili national hospital and Muhimbili orthopaedic institute in Tanzania.

Abstract

Background: Neural tube defects (NTDs) are severe congenital anomalies of the central nervous system. Although largely preventable, they are still significant cause of death and lifelong disabilities worldwide. The specific cause is not known though several factors including genetic, nutritional and environmental have been implicated in NTDs etiology.**Objective:** To identify gene expression profile and factors associated with NTDs among infants attending Muhimbili National Hospital (MNH) and Muhimbili Orthopaedic Institute (MOI).**Methodology**:This was a hospital based matched case control study involving infants who were attending MNH and MOI from November 2016 to April 2017. Cases were defined as infants with any type of NTDs and controls were those without detectable birth defects attending MNH/MOI. Each case was matched with two controls by gestational age, sex and birth weight. A structured questionnaire and antenatal cards were used to collect information on risk factors. Whole blood samples were collected from all study participants for gene expression analysis. Total RNA was isolated using Qiagen RNA blood mini kit, and then reversed transcribed into complementary DNA (cDNA) using Super Script II Reverse Transcriptase cDNA Synthesis kit. Real-time polymerase chain reaction was performed on extracted cDNA by a Light thermal Cycler 480 machine using specific primers for eight selected genes to determine their expression levels.Data were analyzed using SPSS version 20.Conditional logistic regression model was used to calculate both crude and adjusted Odd's ratios. For genetic study component the results were analyzed using the $\Delta\Delta$Ct method. A p value of < 0.05 was considered to be statistically significant. **Results**: The study recruited 50 cases and 100 controls. We found no significant difference on periconceptional folic acid use among cases and controls, however the overall uptake was low (8%). Among environmental factors, history of fever was found to increase the risk of NTDs (cOR 3.2, 95% CI 1.3-8.0, p=0.014), however after controlling for confounders the risk was not statistically significant. Infants whose mothers were peasant farmers had 7.4 times increased risk of having NTD when compared to those with other maternal occupation (aOR 7.4, 95% CI 1.6-36.3, p=0.010).The study also revealed a significant association of maternal history of spontaneous abortion with NTDs occurrence (aOR 2.8, 95% CI 1.0-7.9, p=0.045).Among eight studied genes, we found significantly low expression of MTHFR gene among cases than controls (p=0.006).**Conclusion:** The study revealed a very low uptake (8%) of periconceptional folic acid supplements. A low expression of MTHFR gene, history

of spontaneous abortion(s) and mother being a peasant farmer were significant risk factors associated with NTDs.**Recommendation:** Gene expression analysis should be done on mothers of infants with NTDs and those with history of spontaneous abortion(s) to identify those at risk to enhance genetic counselling hence preventing future recurrence. Further studies on mutational analysis can be conducted to determine specific genetic mutations associated with NTDs occurrence. Health education on benefits of folic acid supplements should be provided to increase proportion of women using folic acid during the periconceptional period.

179. Sagaika,J.N. (2017). Trend of burden of influenza associated sari and factors associated with sari in kibondo district, Kigoma region, Tanzania.Muhimbili university health and allied science.

Abstract

Background: Data on the burden of influenza in developing countries are limited. Despite the availability of influenza surveillance system in Tanzania, there is scarcity of information on the burden of influenza and its associated factors within the country. Thus this report present the results from a study aimed to assess the trend of influenza associated with severe acute respiratory infections (SARI) and their associated factors. **Methods:** We conducted a study with two components, a retrospective longitudinal study component and an unmatched hospital based case-control component in Kibondo district. The retrospective cohort study was conducted to determine the trend of influenza associated severe acute respiratory infection (SARI) using data the SARI patients records admitted during 2013 to 2015 registered in the influenza surveillance registers, data base of laboratory results for influenza among SARI from the Ministry of Health and other relevant hospital records. We used WHO manual for estimation and calculation of burden of influenza, data was collected by using formatted checklists. An unmatched hospital based case- control component was then conducted during March and April 2017 to determine factors associated with severe acute respiratory infections. Data were collected using a structured and pretested questionnaire among cases and controls at a ratio of 1:2. Data were analyzed by using Epi info version 3.5.1 and Stata software for descriptive statistics and unconditioned logistic regression at $p < 0.05$. Graphical work was done using Ms excel.**Results:** During 2013-2015, a total of 2705 SARI cases across all age groups were admitted at Kibondo sentinel hospital, out of those 2515(92.9%) cases were residents of Kibondo District council. A total of 1002 (39.8%) cases from whom clinical specimens were taken and180 (17.9%) were positive for influenza. Most of cases were children < 5 years (65.2%). The median age was 2 years, range (0.08 -90) years. The overall estimated incidence of influenza associated SARI during 2013-2015 was 317(95%CI: 274-368) per 100,000 persons-years. The estimated annual incidence of influenza associated SARI in 2013, 2014 and 2015, was 80 (95%CI: 62-104), 155(95% CI: 128-190) and 52 (95%CI: 33-82) per 100,000 persons-years respectively. The estimated incidence of influenza associated SARI in children < 5 years old was 277(95%CI 313-360); 574 (95%CI 479-689) and 136(95%CI 85-218) per 100,000 persons-years, during 2013, 2014 and 2015 respectively. The incidence of influenza associated SARI in people aged ≥ 5 years was 24(95%CI 14-44); 41(95%CI 25-70) and 24 (95%CI 8-75) per 100,000 person-years

during 2013, 2014 and 2015 respectively. The annual hospital case fatality ratio in 2013, 2014, and 2015 was 0.9%, 1.6% and 2.9% respectively. There were higher hospital case fatality ratio among persons with age group of ≥ 5 years in 2013 and 2014 which was 4.2% and 2.9% respectively compared to children < 5years which was 2.1 and 1.1, respectively. The annual hospital case fatality ratio among < 5 years increased in 2015 which was 1.4 for < 5 years compared to ≥ 5 years which was zero. Annual influenza positivity among SARI cases in 2013, 2014 and 2015 were 8.8%, 47.4% and 17.4% respectively.Factors associated with severe acute respiratory infections (SARI) were passive smoking [OR 25.05(95%CI: 7.48-96.02)], indoor air pollution [OR 2.61 (95%CI: 1.10-6.19)] and contact with person with respiratory infections in the past seven days [OR 73.00 (95%CI: 18.82-283.16)]. Persons at the age group of < 5years were at higher risk for SARI compared to those at the age group of (25-44) [OR 18.93 (95%CI: 4.66-76.86)], also persons at the age group of ≥ 45 years were at higher risk for SARI compared to those at the age group of (25-44) [OR 5.46 (95%CI: 1.06-28.13)] respectively.**Conclusions:** We found substantive influenza burden leading to hospitalization and mortality in Kibondo district. Children aged < 5 years were hospitalized for influenza at higher rates than people aged ≥ 5 years. The hospital case fatality ratio was higher among persons ≥ 5 years compared to children < 5 years. Factors associated with SARI include; indoor air pollution, passive smoking, contacts a person with history of respiratory infections and age. The findings highlight the need for a wider study to explore the burden of influenza and reviews of SARI case management practices to provide adequate data for planning national wide management and preventive programmes. Furthermore, future studies should examine other causes of SARI apart from influenza virus and burden of influenza into key potential risk groups.

180. Sakita,F.M.(2017). Clinical profiles and outcomes of paediatric patients presenting with abdominal pain to the emergency medicine department of Muhimbili national hospital, Dar es salaam, Tanzania. Muhimbili university health and allied science.

Abstract

Background: Abdominal pain in children can represent benign aetiologies and true life threatening emergencies. Aetiologies of paediatric abdominal pain vary geographically, and have not been studied in acute care settings in Tanzania.**Aim:** To describe the clinical profiles and outcomes of paediatric patients presenting with abdominal pain to the EMD-MNH.**Methodology:** This was a prospective cohort study of children aged 1mo-18yrs presenting with abdominal pain at the EMD-MNH. A case report form (CRF) was used to collect data on a convenience consecutive sample of patients from June to December 2016. The CRF included demographics, clinical presentation, management, diagnoses, disposition, and 24-hour, seven-day and three-month mortality. Data was summarised using descriptive statistics and analysed using counts, percentages, median; inter quartile range, relative risk,Mann-Whitney U test and logistic regression model was applied. **Results:** Total of 1855 children were screened, of which 184 (9.9%) children meeting the inclusion criteria were enrolled. The median age was 3.5yrs (IQR 1.3-7.0 yrs). 124 (67.4%) were male. 138 (75.0%) were referred from peripheral hospitals. Top EMD diagnoses were hernia, intra-abdominal malignancy and sickle cell disease. Most common interventions provided at the EMD were

intravenous fluids 57 (30.9%), antibiotics 55 (29.9%) and analgesia 43 (23.4%). From the EMD, 37 (20.1%) were discharged home, 83 (45.1%) were admitted to medical wards and 48 (26.1%) to the surgical wards. Overall, 16 (8.7%) of these children underwent an operation. 24-hour, 7-day and 3-month mortality were 1.1%, 6.5% and 14.4%, respectively. Overall in hospital mortality was 9.8%.**Conclusion & Recommendations:** Abdominal pain is a common complaint amongst paediatric patients presenting to the EMD-MNH. This presentation was associated with significant morbidity and mortality as evidence by very high admission rate, need for surgical intervention and an overall mortality rate of nearly 10%. Further studies and quality improvement efforts should focus in identifying aetiologies, risk stratification, and appropriate interventions optimize outcomes.

181. Said,K.S.(2017). Determinants of unintended pregnancy among youth at Fuoni health center urban west Zanzibar.Muhimbili university health and allied science.

Abstract

Background: Unintended pregnancy is defined as the pregnancy either mistimed or unwanted pregnancy at the time of conception. Women change behaviors at the period of antenatal to postnatal as well as increase the morbidity and mortality rates. Unintended pregnancy has been associated with the failure of contraceptive use and unmet need for family planning. The youth is a transitional period from childhood to adulthood between the ages of 15-24 year, where physical and mentally are still immature. Youth are more susceptible to unwanted pregnancy, which can lead them to induced abortion and increase number of morbidity and maternal mortality rate.**Objective:** To assess the determinants of unintended pregnancy among Youth at Fuoni Health Center Zanzibar. Specifically, the study was trying to examine the factors like social demographic characteristics and contraceptive knowledge and uses.**Methodology:**The study was descriptive cross-sectional design. Design simply Characterized by descriptive survey where the participant filling the questionnaire. It was conducted at Fuoni Health Center involved pregnant youth between the ages of 15 - 24years visited ANC at Fuoni Health Center. All respondents provided written consent.**Result:** The majority of respondent revealed that 97.8% were Muslim and had started sexual intercourse in the age of 19-20 years (55.6%) of respondents were unplanned pregnancy among of the group age of 20-24years were in the group of two or more children. Also about 94(52.20%) of women attended at facility had planned pregnancy while 86(47.80%) had unplanned pregnancy. Out of 94 (52.2%) p -value 0.025 of respondent were found to have more likelihood having unintended pregnancies.**Conclusion:** Age between 20-24 years were found have high likelihood of having unintended pregnancy. Most reasons of getting unintended pregnancy were incorrectly use of contraceptive methods, have no decision making power in their marriage.**Recommendations:**Local Government leaders have to plan small groups in their society to provide health education concern on uses of family planning.

182. Salim, S.A. (2017). Factors contributing neonatal sepsis: a cross sectional study at paediatric wards in Mnazi mmoja hospital in Zanzibar, Tanzania.Muhimbili university health and allied science.

Abstract

Introduction: Globally in 2013, 6.3 million children of below 5 years of age died of infections, most of them were during the neonatal period. Tanzania is not exceptional on losing newborns due to infections including sepsis. A study conducted in Northern part of Tanzania found that, up to 15.4% of neonatal hospital admissions were attributable to infections including sepsis (Mmbaga et al., 2012). Medically, sepsis is known as the presence in a newborn baby of a bacterial blood stream infection (BSI) such as meningitis, pneumonia, pyelonephritis, or gastroenteritis. When sepsis occurs in neonates it is known as neonatal sepsis (Dellinger et al., 2013). This study was carried out to generate a pool of knowledge on factors contributing to neonatal sepsis in newborns.**Methods:** This was a cross sectional study employing quantitative research method. We used a structured questionnaire to interview the respondents. The population of this study was mothers admitted with their children in neonates' ward at Mnazi Mmoja Hospital Zanzibar. Descriptive analysis was done to get baseline characteristics of study participants. Logistic regression was done to assess factors contributing to neonatal sepsis. A P-value of < 0.05 in this study was considered to be significantly associated with the factors under investigation.**Results:** This study recruited 230 participants, of these majority were married 181(78.7%) and mostly (45.2%) were of the age group 26-35 years. Mothers who were aware of neonatal sepsis, were 40.0% and only 40.7% of those who were aware of it had good knowledge about the signs and symptoms. Also 37.0% of newborns whose mothers were recruited in this study were having neonatal sepsis. This study highlighted the use of mashed leaves of 'muarubaini', honey, oil of black seeds as the potential contributing factors to sepsis. We saw that newborns whose mothers delivered at home (n=35) were almost ten times more likely to develop sepsis as compared to those who delivered in health facility (n=188). This study also showed that newborns are almost eleven times more likely to develop sepsis if delivery was conducted by traditional birth attendants as compared to that conducted by a Nurse midwife.**Conclusion:** The study revealed that 37.0% of newborns whose mothers were recruited in this study were having neonatal sepsis.The practice of home deliveries conducted by traditional birth attendants is likely to result in more sick newborns with sepsis. Overall, awareness and knowledge about the signs and symptoms of neonatal sepsis among mothers is low.

183. Salim, S.S. (2017). Perceptions of women of reproductive age on modern family planning at Wete district, pemba.Muhimbili university health and allied science.

Abstract

Background: Despite the fact that family planning (FP) services are easily accessible at no cost in all levels of health facilities of the Government of Unguja and Pemba islands, the acceptance and utilization of FP services are very low. The Tanzanian Demographic Health Survey (TDHS) of 2015 found that only 11.2% of women in Pemba used family planning and among them only 9.1% used a modern method of family planning. The problems of low utilization of modern family planning cause rapid increase of population in the area of the study.**Aim:** This study aims to explore perceptions of women of reproductive age on the access, use, social cultural and economic factors associated with the use of modern family

planning in Wete District Pemba. **Methods:** An exploratory descriptive research design was conducted in Wete District, North region Pemba. Thirty eight (38) participants aged 20-49 years old were conveniently recruited for the study. Four (4) focus group discussions were used to collect data and thematic analysis guided analysis of the data. **Result:** The study revealed that modern family planning is available in all Public Health facilities in this district but unavailable in private facilities. Women had positive and negative perceptions about modern family planning. Women who had positive perceptions, commonly used them and felt that modern family planning were good for limiting number of children and for better health of mother and the child. However, those who had negative perceptions did not use modern family planning, and they were perceived to cause bad side effects. Further, socio-cultural factors such as low decision making power for women on the use of methods and therefore depended on their husband and in laws. Religious beliefs also influenced women on the use of modern family planning. **Conclusion:**Women inWete District do not use modern family planning methods because of the socio-cultural beliefs. Family planning methods were available in all public health facilities but were unavailable in the private health facilities. **Recommendation:** Ministry of Health, Zanzibar through RCH Program to establish programs that would empower women to be able to make own decisions on the use of FP and ensure availability of FP in all health facilities especially private ones.

184. Salim,Z.A. (2017). Factors contributing to birth asphyxia in newborn babies at Mnazi-mmoja hospital in Zanzibar.Muhimbili univarsity health and alliade science.

Abstract

Background: Birth asphyxia continues to present a major clinical problem worldwide and becomes alarming which has long-term impacts on health outcomes in children's life. Birth asphyxia is the one of the commonest causes of neonatal morbidity and mortality in developing countries. Knowledge of factors contributing to birth asphyxia may prevent this fatal condition by regular assessment and monitoring of the progress of labor. **Aim:** The aim of this study was to assess factors contributing to birth asphyxia in newborn babies at Mnazi Mmoja hospital (MMH) in Zanzibar.**Materials and methods:**Descriptive retrospective study design was used that employed quantitative approach. In this study, simple random sampling method was used, whereby, 399 files of pregnant mothers who delivered from Jan 2016 to March 2017 were reviewed; lottery method was used to select the sample size. Data abstraction forms were used to collect information from women's files; the following aspects were addressed: Social demographic characteristics (age, marital status, and mother's occupation), maternal factors (number of antenatal visits, parity, last antenatal records (Haemoglobin level, blood pressure, time of admission), existing maternal health problems, apgar score) and Institutional factors (frequency of Fetal Heart Rate (FHR) assessment, mode of delivery, birth attendants, frequency of contraction monitoring and vaginal examination).**Results:** A total of 144 (36%) out of 399 neonates were found to have birth asphyxia. Factors that were found to be statistical significant in contributing to birth asphyxia were prolonged labor (p=0.001), prematurity (p=0.000), improper fetal heart rate assessment (p=0.000), being delivered by doctors (p=0.000) and Vaginal delivery (p=0.000).Though, in logistic regression results revealed that vaginal delivery (95% CI: 3.372 – 14.747, p< 0.001),

being delivered by midwife (95% CI: 0.901 – 2.511, p< 0.118) and prolonged labour (95% CI: O.374-1.163, p=0.151) contributing in birth asphyxia. However age, parity, mother's occupation, number of antenatal visits, existing maternal health problems, contraction monitoring and vaginal examination didn't show any statistical significant.**Conclusion:** Results show that most factors contributing to birth asphyxia are preventable if there is early identification of risk factors during antenatal care and intrapartum care.**Recommendation:** On job training on importance of regular assessment and monitoring of progress of labor and delivery is needed in order to ensure good outcome of the mothers and their babies so that to reduce or prevent birth asphyxia which cause most neonatal mortality rate.

185. Samali, A. (2017). Predictors of mortality among multidrug resistance tuberculosis patients admitted at Kibong'oto hospital from 2009-2016. Muhimbili university health and allied science.

Abstract

Background: Treatment of Multi Drug Resistant-Tuberculosis (MDR-TB) in many patients represents the last opportunity for cure. In spite of significant investments to improve availability of chemotherapy and effective treatment options, still a significant proportion of patients die during the course of their treatment. Understanding the factors leading to early death following diagnosis and treatment of MDR-TB is important for TB programmes to improve the way they identify and manage patients and help to guide targeted interventions to improve overall survival. **Objective:** To estimate mortality rate and determine predictors of mortality among MDR-TB patients admitted at Kibong'oto hospital, Tanzania. **Methodology:** A retrospective cohort study was done at Kibong'oto hospital among all patients diagnosed and admitted with MDR-TB between 2009 and 2016. Individual and clinical information was abstracted from patient medical records, In-depth interviews were also done to supplement quantitative data. Incidence of mortality was calculated using Kaplan Meier method and Cox regression was modeled to identify predictors of death during MDR-TB treatment adjusting for potential confounders. Hazard ratios and their 95% confidence intervals are presented. Significant level was set at $\alpha = 5\%$.Results: A total of 583 patients were recruited with a mean age of 37.41(standard deviation = 13.62). 68.1% were men, 77.47% had a previous TB history,59.06% reported experiencing a drug adverse effect and 37.43% had other co-morbidities mainly HIV (35.49%) and anemia (9.21%). The mortality rate was 15.3%. After adjusting for other factors, mortality in MDR TB patients was significantly associated with nutrition (HR =2.90; 95%CI: 1.26-6.69) and anemia (HR = 3.03; 95% CI: 1.60-5.73).**Conclusion:** In spite of improvements in provision of care and treatment for MDR-TB, a modest rate in deaths still occurs that can be explained by poor nutritional status. Monitoring co-morbid conditions like anemia and malnutrition is important to increase survival amongst MDR-TB patients. There is a need to strengthen nutrition units in health facilities offering TB services in the country.

Keywords: Mortality, Predictors, Multidrug Resistance Tuberculosis, MDR TB, Tanzania

186. Sangeti, S.O. (2017). Bacteremia associated with central venous catheterization and their antibiogram among patients on hemodialysis therapy at Muhimbili national hospital – Dar es salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Background: For patients on maintenance hemodialysis therapy, vascular-associated infections contribute significantly to frequent morbidity and related mortality. To date, there is paucity of data in Tanzania on the magnitude of bacteremia associated with central venous catheterization, isolation of underlying bacterial etiologic agents and determining their respective antimicrobial susceptibility pattern.**Objective:** To determine the prevalence of bacteremia associated with central venous catheterization, bacterial etiologic agents and antimicrobial susceptibility pattern among patients on hemodialysis at Muhimbili National Hospital – Dar es Salaam.**Methodology:** A cross-sectional descriptive hospital based study was conducted for a period of 6 months involving patients receiving hemodialysis therapy via central venous catheters at Muhimbili National Hospital. A structured questionnaire was used to collect socio-demographic data, clinical characteristics and laboratory parameters of the participants. Two sets of blood samples (8mls each) for aerobic culture were collected aseptically from a central venous catheter and peripheral venopuncture (opposite to the central line), inoculated in the blood culture bottle broth and incubated in automated blood culture machine (BD- BACTEC FX 40). Time difference to positivity was noted and bacteria identification and susceptibility testing were performed according to standard guidelines. Data was analyzed using SPSS version 23.0; continuous variables were summarized as means and standard deviation, categorical variables as frequencies and proportions. Multivariate analysis for teasing out independent risk factors was determined using logistic regression model.**Results:** Out of 109 patients, 39 patients (35.7%) had significant positive blood cultures. Staphylococcus albus was the commonest isolate (35.9%), followed by E.coli(25.6%), S.aureus(15.4%), P. aeruginosa(12.8%) and K. oxytoca(10.3%). Proportion of resistant isolates for Staphylococcus aureus and Staphylococcus albus to various tested antibiotics wereas follows; penicillin (66.7% & 78.6%), trimethoprim-sulfamethoxazole (100% & 85.7 %), gentamicin (0% & 28.6%), ciprofloxacin (14.3% & 16.7%), clindamycin (0% & 7%) and cefoxitin (0% & 0%) respectively. For Escherichia coli and Klebsiella oxytoca, respective resistant isolates patterns were to; amoxillin/clavulanic acid (100% & 100%), trimethoprim-sulfamethoxazole (100% & 100%), meropenem (0% & 0%), ceftriaxone (10% & 50%) and ceftazidime (20% & 25%) respectively. All pseudomonas isolates were resistant to aztreonam and amoxillin/clavulanic acid and 20% resistant to piperacillin and meropenem. No pseudomonas isolates were susceptible to piperacillin/tazobactam. Independent predictors for bacteremia associated with central venous catheterization were; catheter duration of 30 days or more [OR 10.2, 95% CI (2.6-40.6), p=0.001], catheterization at femoral site [OR 6.7(3.2-10.8), p=0.042] and both fever within the last 48 hrs; [OR 6.1(1.7-21.6), p=0.005] and fever within the last 1 month; [OR 9.6 (2.6-34.9), p=0.001].**Conclusion and recommendations:**Bacteremia associated with central venous catheterization is common among patients undergoing hemodialysis at MNH and both gram negative and gram positive bacteria are responsible etiological agents. The isolated

underlying bacteriologic agents show rampant resistance to commonly prescribed antibiotics including drug combinations which have proven potency to other types of infections. Further, temporary catheters that are in use 30 days after insertion, femoral venous catheterization and fever are independent predictors for bacteremia among these patients.We strongly recommend that due to multi-drug resistant isolates, blood cultures should be taken promptly from all patients suspected to have bacteremia associated with central venous catheterization. Further, we recommend that practitioners avoid femoral site catheterization, limit temporary catheter use for hemodialysis to less than 30 days since insertion and to aggressively investigate and treat fever in these patients

187. Sangey, T.I. (2017). Rradiological pattern of upper limb fractures among patients attending Muhimbili orthopaedic institute.Muhimbili university health and allied science.

Abstract

Introduction: The upper extremities are the second most common musculoskeletal injuries following lower extremities in the emergency department. Over the past few years due to economic and demographic variation, prevalence of upper extremities fractures has increased with simultaneously increase in relative mortality. The study aimed to describe fracture patterns of upper extremity long bones and its associated mechanism of injuries.**Methodology:** This was a hospital based descriptive cross sectional study, conducted at MOI from August 2016 to February 2017. A structured questionnaire was used to collect clinical information and radiologic findings from radiographs were extracted. SPSS (version 20) was used for data analysis, Chi-square test was used and P-value of 0.05 was considered statistically significant.**Results:**A total of 210 patients participated in the study. Male to female ratio was 2.6:1. Majority of fractures were observed in age group 0-15. Fall from height and slip were the common mechanisms of injuries observed in age group 0-15 and RTA was observed in young adults age group 16-30 and 31-45. Radius was the most frequently fractured bone (39.3%) and humerus was the least fractured (26.7%). Distal segments of both radius and ulna were most commonly fractured with prevalence of 57.1% and 51.5% respectively. For humerus, middle segment was commonly fractured at 41.3%. Simple transverse fracture pattern was the most prevalent (51.8%), followed by oblique fractures (28.6%), comminuted fractures (11.8%) and the least common was segmental fractures (1.8%). Humerus fracture was significantly associated with RTA (p=0.019) and significantly not associated with sport (p=0.0032). The radius fracture was significantly associated with RTA (p=0.001), sports (p= 0.002) and slip (p=0.005). Ulna fracture was not significantly associated with any mechanism of injury.**Conclusion:**Children 0-15 years were commonly involved, mainly due to fall from height or slip. Humerus fractures were associated RTA and significantly not associated with sports. Radius fractures were associated with RTA, sports and slip. No injury mechanism associated with ulna fractures.

188. Sarkar, A. (2017). Imaging pattern of cerebral ring enhancing lesions in patients referred for brain MRI at Muhimbili national hospital.Muhimbili university health and allied science.

Abstract

Background: Ring-enhancing lesions of the brain are commonly encountered abnormalities on neuroimaging.Differentiating lesions by ring enhancement poses a diagnostic challenge as there are various pathologies causing ring enhancement from imfections,tumours,inflammation to vascular causes. Therefore use of advanced diagnostic techniques of Magnetic resonance imaging (MRI), such as diffusion-weighted(DW) magnetic resonance imaging, apparent diffusion coefficient(ADC) mapping, perfusion-weighted MRI, magnetic resonance spectroscopy may help in differentiating between different types of ring enhancing lesions. Less is known on MRI patterns of brain ring enhancing lesions at our set up. Therefore this study aimed at determimning magnitude and pattern of ring enhancing lesions among patients referred for brain MRI at Muhimbili National Hospital. Broad **objective:** To determine the imaging pattern of cerebral ring enhancing lesions in patients referred for brain MRI at Muhimbili National Hospital from June 2016 to March 2017.**Methodology:**A hospital based descriptive cross sectional study, involving 116 patients was conducted at radiology department, Muhimbili National Hospital from June 2016 to March 2017for patients with cerebral ring enhancing lesions on MRI. Consenting patients were included in the study. A structured questionnaire was used for recording patients' demographics, clinical information and imaging findings. Data analysis was done using the Statistical Package for Social Sciences (SPSS) 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:** Of the 116 patients participated in this study, 55.2% were males and 44.8% were females. More than half of the patients (54.3%) are within the age range of 31 to 60 years. Ring enhancement was found more commonly in patients with brain tumours (50%) followed by infections (24%).The types of ring enhancing lesions were most commonly due to glioblastoma multiforme (34.5%) followed by abscess (10.3%),lymphoma (9.5%),demyelinating disease (9.5%) and less commonly by radiation necrosis (1%). The most common wall enhancement pattern(71.6%) was the thick/irregular/nodular/incomplete pattern of enhancement most common lesions with this pattern were GBM (87.5%), sub acute infarct (85.7%),tuberculomas (75%) hematomas (72.7%) and demyelinating diseases(72.7%) Almost twenty eight percent (28.4%) of ring enhancing lesions had thin regular walls; these were abscess (75%) and Neurocysticercosis(100%).**Conclusion:** Patients of all age group were affected with cerebral ring enhancing lesions.Tumors were the most common. These had characterisitic thick irregular enhancing pattern with variable diffusion. Abscess and NCC were the most common lesions with thin regular wall enhancing with central true restricted diffusion in abscesses and none on NCC. Contrast ehancement pattern and Diffusion weighted imaging can be used to differentiate between different types of ring enhancing lesions. **Recommendation:** Apart from assessing patients' conventional MRI sequences it is essential to also employ the DW images and MR scpectroscopy to narrow the differential diagnosis of cerebral ring enhancementlesions. Biopsy remains the main modality to establish the diagnosis. More researches are needed in this area to compare MRI patterns andhistological types of ring enhancing lesions for accurate diganosis and better patient management.

189. Sebit,H.M. (2017). Pregnancy outcome among internally displaced women in Juba, South Sudan.Muhimbili university health and allied science

Abstract

Background: Conflict and displacement substantially affect maternal reproductive health and increases the risk of maternal and neonatal morbidity and mortality. South Sudan is one of the countries with the highest maternal mortality rate with 16 women dying daily due to pregnancy related complications. By the end of December 2013 about 2.2 million South Sudanese people were internally displaced (IDP) out of whom 180 000 were residing in UN bases because of internal conflicts. This study focuses on pregnancy outcomes among Internally Displaced Women in South Sudan.**Objective:**To determine the maternal and fetal outcomes among internally displaced women (IDW) in UN House IDPs camp who became pregnant during the time of internal conflicts.**Methodology:**A descriptive cross sectional study was conducted in UN House IDP Camp in Juba from September to November 2016. Women who became pregnant during the time of internal conflict were interviewed about their immediate past pregnancy outcomes. Additionally, the women were interviewed on reproductive health and gender violence matters. Interviews were guided by a structured questionnaire. Data were entered in the computer and analyzed by using SPSS software version 20. 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. The permission to conduct study in the camp was obtained from UNMISS and International medical Corp (IMC).**Results:** A total of 300 internally displaced women participated in the study and completed their interviews, giving a response rate of 100%. IDP women interviewed aged between 18-37 years with mean age of 24.9±3.6. Majority of the women (81%) had booked to antenatal Clinic during immediate past pregnancy and 89% of them attended at least four times. About a quarter (23.7%) of women had experienced gender violence. Poor maternal outcome events were reported by 34.7% of women and 23% of newborns had poor outcome events. Almost two thirds of IDP women did not use family planning. More than a half (52. %) of the participants had poor pregnancy outcome of the immediate past pregnancy which was independently associated with, low level of education and early ANC booking.**Conclusion:** Poor pregnancy outcomes were common among internally displaced women in more than half of immediate past pregnancies. Being unmarried, early ANC booking and poor education was among important independent factors behind the outcomes.

190. Sembua, C.L.F. (2017). Determinants of recurrent diarrhoea disease among children of under-five years residing in Tandale ward.Muhimbili university health and allied science.

Abstract

Background: Recurrent diarrhea among under-five children is a serious public health problem in Tanzania as it contributes much to under-five morbidity and mortality and overall disease burden in the country. The prevalence of diarrhea recurrence among under-five children in this study was 37% which is higher than that obtained from Kinondoni DHI records (22%) before the study. Limited studies have been conducted on diarrhea recurrence within the country; most of them were focused on the single episode of diarrhea. This

descriptive cross-sectional study was conducted to determine the prevalence of recurrence diarrhea among under-five children in Tandale ward.**Broad objective:** To determine the prevalence of recurrence diarrhea and factors associated with it among under-five children in Tandale ward from July 2016 to June 2017.**Materials & methods:** A cross sectional study was conducted with a sample of 420 households with under- five children in Tandale Ward.Both purposive and simple random sampling technique was used to select the study population. Data were collected by using observation checklist and interviewer administered questionnaire. Mothers/caretaker of under-five was asked the questions on diarrhea recurrence of under five children in his/her household. A chi squared test was used to determine the association between independent and outcome variables and it was considered significant if P-value is less than 0.05. Univariate and Multivariate logistic regression technique was used to determine independent predictors for recurrent diarrhea among under-five children. **Results:** A total of 420 households with mother/care takers who had under-five children were recruited into the study. Out of 420 caretaker, 343(81.7%) were child's mothers The mean age of the care givers were 30 years (SD±9.89), with a range of 17 to 49 years. The majority of them 308 (73.3%) had attained a primary level of education and most reported to be housewives. The prevalence of recurrent diarrhea was found to be 37. Under-five children whose caretaker age was between 18-20 were 2 times more likely to diarrhea recurrence compared to older age (AOR=2.30, 95%CI=1.23-4.31), whereby under-five children live in a household with large number of people were 2 times more likely to diarrhea recurrence than those in a small size (AOR=2.336,95%CI=0.873-6.247) and those under-five children who live in Kwatumbo area/street was 4.39 times more likely to suffer diarrhea recurrence compare to those who live in Sokoni are/ street (AOR = 5.39 (95% CI 3.08-9.44) . Those **Conclusion:** The findings in this study shows high prevalence of recurrent diarrhoea (37.8 %) Reducing congestion and overcrowding in the household will reduce the high prevalence of diarrhea recurrence in under-five children in Tandale ward Kinondoni. Waste water from overflowing toilets and soak away pits being spread all over the ground. This indicates that the ground is highly contaminated with feces. Children may ingest feces from the ground during playing and crowing on the ground. Also it is habit of children to consume some amount of soil, now for the case of Tandale they consume microorganisms contained in it. **Recommendation:** According to the findings of the study other studies should be conducted in the same area by detailed description of the methodology to find out extent of environment contamination by microorganisms from the fecal matter and suggest for the better way to remediate the environment. Health intervention programmers including increase priority in waste water management and reducing congestion and overcrowding in the household will reduce the high prevalence of diarrhea recurrence in under-five children in Tandale ward Kinondoni.

191. Setebe, T.J. (2017).Workplace factors influencing performance of nurses: a case of nurses at labour wards in Dar es salaam regional referral hospitals.Muhimbili univarsity health and alliade science.

Abstract

Background: Nurses' performance is critical because it has an immediate impact on health service delivery and ultimately on population health. Nursing and midwifery professions can transform the way health actions are organized and how health care is delivered if they are regulated and well supported. Despite rising global attention on health care delivery systems strengthening; there is a dearth of information on the reasons for inadequate nurses' performance. **Objective:** The aim of this study was to assess workplace factors that influence nurses' performance working at labour wards, in Dar es Salaam regional referral hospitals.**Method:** A qualitative case study design that applied descriptive approach was used to conduct this study between May and June, 2017 in Amana, Mwananyamala and Temeke regional referral hospitals. A purposive sample of 22 nurses was recruited. Data were collected through interview with key informants, by using a semi structured interview guide and recorded by audio tape, then transcribed verbatim, analyzed using qualitative content analysis. **Results:** The study presented workplace factors in four categories; including availability, competence, productivity and responsiveness. Burnout, inadequate payment and irregular schedule of roster are factors influencing nurses' absenteeism. Teamwork, motivation and information and communication are factors enhancing nurses' responsiveness. Inadequate of staff, insufficient of medical supplies and drugs, poor working conditions and increased workload are factors affecting nurses' productivity. Continuous Professional Development, Guidelines, Leadership characteristics and Supportive supervision are factors enhancing nurses' competence. **Conclusion:** The workplace factors influencing nurses' performance goes beyond the nurses' desirability to provide services. This forced them not to meet the required standards. The government and other development partners should improve in resources availability and allocation; also should support and motivate nurses to improve the

192. Shang'a, E.Y. (2017). Assessment of post-operative pain management among patient's undergoing lower limb surgery at Muhimbili orthopedic institute Dar es salaam Tanzania.Muhimbili university health and allied science.

Abstract

Background: Lower limb surgery is a common operative procedure in both general surgery and orthopedic practice. Postoperative pain (POP) after orthopedic surgery is more difficult to manage and is often associated with the highest POP scores. In sub-Saharan Africa (SSA), motor traffic accidents (MTA) are the most common cause of trauma and therefore lower limb surgery is very common. Patients undergoing lower limb surgery often suffer from inadequate pain management despite of the increasing advancement in POP management and development of pain control modalities. Studies from both developed and developing countries have revealed high prevalence of POP and poor patient satisfaction. Assessment of POP management and patient satisfaction is important in order to improve medical service. In Tanzania there is limited information regarding lower limb POP management and patient satisfaction hence this study aim to provide evidence for improving POP management in the clinical settings. **Objectives:** The objective was to assess the postoperative pain management Materials and Methodology: This was a clinical based descriptive cross-sectional study. One hundred and forty eight (148) patients aged 18 years and above who underwent lower limb

surgeries at Muhimbili Orthopedic Institute, from24th July 2016 to 24th December 2016 were recruited.Pilot tested structured questionnaire was used to collect social demographic, post- operative medication and clinical data. Data were analyzed using the SPSS V.20. Chi-square was used to detect differences in the frequencies of categorical characteristics and statistical significance was set at P ≤0.05**. Results:** Sixty nine (69%) of the participants were male with mean age of 36.99±15.7 years. Immediately after surgery, majority of the patients were reported to have mild pain (76.4%), few moderate pain (23.6%), and none reported severe pain (0%). At 24 hours' post-operative, higher proportion of patients were having moderate pain (52.7%) followed by those who were experiencing severe (43.9%) and 7.4% mild pain. At 48 hours post-operative, majority of participants had mild pain (54.7%), (39.9%) moderate pain and again small percentages were having severe pain (1.4%).Upon 48 hours, most of the patients were not satisfied (69%)while only minor proportion were satisfied with POPM. High proportions of patients who were satisfied with postoperative pain management received a combination of analgesia with different frequency of drug administration, different route compared to those who received single analgesic intramuscular 8hourly and 12hourly. Following the first 24hours, large proportions of the participants were given Diclofenac alone compared to those who received Tramadol alone or combination of Diclofenac and Paracetamol. Intramuscular route was a leading route of drug administration compare to intravenous and combination with different route, most of the drugs were given 8hourly compare to those which were given 12hourly or in combination with different frequency. **Conclusions:** Pain severity was moderate to severe at 12hours to 24hours post-operative. Pain management was not satisfactory post operatively to most patients. It was observed multimodal analgesia favored good post-operative pain management.

193. Shayo, F.K. (2017). Microalbuminuria in patients with chronic obstructive pulmonary diseases attending pulmonology clinic at Muhimbili national hospital, Dar es salaam, Tanzania. Muhimbili university health and allied science.

Abstract

Background: Extra pulmonary co morbidities particularly cardiovascular diseases (CVD) are common and significant in chronic obstructive pulmonary disease (COPD). Extra pulmonary involvement often contributes to exacerbations, frequent hospital admissions and high mortality. COPD patients do die more due to extra-pulmonary than COPD itself. Microalbuminuria gives an important evidence of endothelial dysfunction in COPD patients. Using microalbuminuria, early detection and therefore appropriate management of the subclinical extra pulmonary involvement in COPD patients will help in reducing morbidity and mortality**. Objective:** To determine the prevalence of microalbuminuria and severity correlates in COPD patients attending the MNH pulmonology clinic, Dar es Salaam Tanzania **Methodology:** A cross-sectional descriptive study was conducted from July 2016 to December 2016. Study participants were consecutively recruited from the MNH Pulmonology Clinic. A structured questionnaire was used to collect social demographic factors and clinical parameters from the study participants. Lung functions were assessed by means of the Easy One™ spirometer. Post bronchodilator spirometry value of FEV1/FVC<70% confirmed COPD diagnosis. COPD severity was classified according to the

Global initiative for Obstructive Lung Disease (GOLD) guidelines 2015. Microalbuminuria was tested on early morning spot urine using CYBOW 12MAC microalbumin strips. UAlb was defined by Urine albumin to Creatinine ratio (ACR). Statistical Package for Social Sciences (SPSS) version 20 was used for data analysis.**Results**:Of the 104 enrolled COPD patients, 58 were known COPD and 46 were newly diagnosed COPD patients. The 46 newly diagnosed COPD patients underwent post bronchodilator COPD severity classification. Out of 104 participants, 16(15.4%) had co-morbid CVD, twenty-five (24.0%) had microalbuminuria and 26(29.8%) macroalbuminuria. The proportion of macroalbuminuria was significantly higher in COPD patients with history of co morbid CVD than those without; (81.2% vs. 20.5%, $p < 0.001$). On the other hand microalbuminuria was significantly lower in those with CVD than those without CVD; (25.0% vs. 18.8%, $p<0.001$). The new 46 COPD patients underwent post bronchodilator COPD severity classification of whom, 60.9% (95%CIs 46.1–73.9) had moderate COPD and 30.4% (95%CIs, 17.9-49.0) severe COPD. Microalbuminuria increased significantly with COPD severity ($p=0.049$).**Conclusion:**Microalbuminuria was prevalent in patients regardless of coexistence of co morbid CVD. Microalbuminuria risk increased significant with COPD severity or with the decreased level of FEV1% predicted. Exclusion of other conditions that could give microalbuminuria was limited to history rather than laboratory markers. Therefore the degree of microalbuminuria may be overestimated. A few study participants had co morbid CVD based on medical history. Microalbuminuria seemed to be an important biomarker for the prediction of cardiovascular diseases in COPD patients. Detection of microalbuminuria will help to provide early treatment of these extra-pulmonary co-morbidities like CVD and consolidating the COPD management and therefore delaying progression of the disease and death. This is an important study in our country - Tanzania especially in this era of rapid emerging non communicable diseases on very limited health facilities.

194. Shedafa, R. (2017). Stability indicating assay method for determination of lamivudine and tenofovirin fixed dose combination tablets formulations and selection of their packaging materials. Muhimbili university health and allied science.

Abstract

Background: A simple, precise, accurate, and rapid HPLC method with PDA detectorhas been developed and subsequently validated for the simultaneous determination of tenofovir disoproxil fumarate (TDF) and lamivudine (3TC), in their combined tablet dosage form. Selections of the packaging containers has been performed by testing the container closure and permeability, because moisture permeability and a loose closure system might allow a significant gain of moisture into container and this could lead to significant loss of potency of drug that is sensitive to moisture and as well promote growth of microorganisms. **Aim:** of the study This study describes the development and validation of a stability indicating HPLC method for the analysis of lamivudine and tenofovir disoproxil fumarate and their degradants in fixed dose combination tablets. The study also describes the selections of packaging containers for the lamivudine and tenofovir. **Methods:** The HPLC method used a Reprosil®-pur basic C18 column (250 mm × 4.6 mm I.D., 5 µm) maintained at 30°C, methanol and a mixture of buffers (2.3 g/L ammonium dihydrogen phosphate and 1.32 g/L of diammonium

hydrogen phosphate, pH 3.9) for gradient elution at a flow rate of 1.0 mL/min, and UV detection at 270 nm. Good separation of tenofovir disoproxil fumarate and lamivudine and their potential impurities obtained during forced degradations was achieved. The determination of rate of moisture permeability was achieved by assessing closure systems of plastics as per USP method. The plastic bottles were randomly selected from three different manufacturer designated as A, B and C. Results During validation of the developed HPLC method, linealityof the calibration line was achieved over the concentration range of 80-120 µg/mL for both active ingredientswith r2> 0.995 for lamivudine and 0.998 for tenofovir. The accuracy of 99.8 % for lamivudine and 99.3 % for tenofovir disoproxil fumarate confirmed the accuracy of the method for the simultaneous determination of both drugs in the fixed-dose combination. Sufficient separation of potential degradants was achieved thus describe the method as stability indicating. The plastic bottle selected from manufacturer A and B met the USP specifications and regarded as tight containers for the packaging of LT product**.** **Conclusion**: The developed gradient HPLC method for the simultaneous determination of LT, in a pharmaceutical dosage form is specific, precise, accurate, linear and robust and can be conveniently used by quality control outfits to determine the contents of LT simultaneously in routine and stability samples. Containers from manufacturer A and B met the USP specifications, hence, could be used as primary packaging materials for 3TC and TDF fixed dose combination tablets which are known to be moisture sensitive.

195. Shidende, P.D. (2017). Challenges associated with the use of client service charter among healthcare providers in korogwe, tanga, Tanzania.Muhimbili university health and allied science.

Abstract

Background: The establishment of Client Service Charter (CSC) in the country aims to empower clients to know their rights, and hence making them to demand quality and standard health services. Since initiation of CSC in Korogwe, the pace of its use has not been satisfactory. **Objective**: The aim of this study was to assess challenges associated with the use of CSC among health care providers in Korogwe district Council, Tanga, Tanzania. **Methods:** This was a cross sectional descriptive study design using quantitative approach. A sample of 146 healthcare providers working in maternity wards was obtained using simple random sampling (probability) techniques. Data were collected by using interviewer administered questionnaire. Data analysis was done using SPSS version 21 to obtain descriptive statistics and chi square test was used to show associations between variables. The results with a p-value of <0.05 and confidence interval of 95% were considered statistically significant. **Results:** Majority (66.4%) of the participants were women; aged between 30 and 50 years old. Almost half (53.4%) were nurse midwives; 55.5% reported working experience of less than 10 years, and most (62.3%) were from Korogwe district hospital. Most HCPs (62.3%) were aware about the use of CSC. The major source of information about CSC was seminars/clinical meetings as quoted by 53.9%.Awareness about Korogwe CSC was high among males (P<0.05); those HCPs aged above 50 years old (P<0.05); and among doctors (P<0.05).Majority (61.1%) of HCPs had not received any form of training about Korogwe CSC. More doctors (47.8%) than other professions were recorded

to receive CSC trainings.Almost three quarter (76.7%) of HCPs did not use CSC in their daily work. After initiation of Korogwe CSC, about43.8% of HCPs thought that the services improved, and only half thought that CSC was useful. However, majority thought that CSC did not facilitate work, was not realistic, and there was no enough budget and technology/material to disseminate CSC provisions. **Conclusion:** Generally, HCPs were aware of CSC existence in Korogwe DC. Working experience did not reflect the use of CSC. Lack of training, motivation and budget among HCPs were the main challenges for unsatisfactory use of CSC in Korogwe.

196. Sijaona, J. (2017). Assessment of delay in diagnosis and treatment of multi-drug resistant tuberculosis: magnitude and associated institutional barriers.Muhimbili university health and allied science.

Abstract

Background: Multi-drug-resistant tuberculosis (MDR-TB) is a serious public health concern in Tanzania. Currently, however, there is a still large gap in management of MDR-TB with respect to detection, laboratory diagnosis and starting treatment. Nonetheless, there has been a substantial increase in the contribution of molecular testing which has reduced the delay in diagnosis dropping to the current 34 days from 269 days in 2013. Yet, TB related mortality attributable to the delay in diagnosis and treatment remains high at an estimated 6.4% (WHO, 2014). Several studies have explored socio-economic and patient related factors that contribute to delays in diagnosis and treatment of MDR-TB. However, little is known on the role of institutional barriers in explaining delays observed in diagnosis and treatment of MDR-TB, particularly in the Tanzanian context. **Objectives:** The main objective of this study was to assess the magnitude of MDR-TB diagnosis and treatment delays and associated institutional barriers to diagnosis and treatment. **Methodology:** This was a cross sectional study that used both retrospective and explorative designs. Data was obtained by using quantitative and qualitative approaches. On the quantitative part, the MDR-TB patient data was collected from the registers and files kept at KIDH and at CTRL. The qualitative component of the study involved interviewing pre determined health facility superintendents, heads of TB units, laboratory managers and regional TB and Leprosy Coordinators in three regional referral hospitals in Dar es Salaam. Analysis was manually conducted and ethical issues were observed. **Results:** The study revealed a serious problem of delay in establishing diagnosis of MDR-TB as well as in initiating treatment to the already confirmed MDR-TB patients. From this study, it was found that 50% (n=192) had their MDR-TB diagnosis delayed. It took an average duration of 94 days (SD = 74.2 days) for the patient to be sent for DST diagnosis and receiving results. When a sample is sent for Gene Xpert diagnosis, the result is obtained after 11 days (SD = 32 days). Moreover, there was late initiation of treatment for 59 % of confirmed MDR-TB patients. The average duration between MDR-TB laboratory diagnosis by using DST method and starting treatment was about 83 days (SD=122 days). But when diagnosis is done by using Gene Xpert method, treatment was found to start after 40 days (SD=34 days). Institutional barriers such as financial difficulties, shortage of staff, poor clinical and laboratory capacity, poor adherence to guidelines and inadequate managerial and coordination efforts have been found to be associated with these

delays. **Conclusion:** The magnitude of MDR-TB diagnosis and treatment delay in Tanzania is still high in spite of the increasing number of patients who are tested by using different diagnostic methods. The duration from testing and receiving result and starting treatment has not decreased despite adopting modern techniques like Gene Xpert, Hain or LPA.**Recommendation:** There is a need of paying attention to the factors contributing to the delays, including those in the healthcare system. That is, interventions targeting late diagnosis and treatment of MDR-TB should take the identified institutional barriers into account.

197. Stanslaus, B. (2017) Pattern, clinical presentation and management of mandibular fractures among motorcycle crash victims attended at Muhimbili national hospital, Dar-es-salaam, Tanzania.Muhimbili university health and allied science.

Abstract

Objective: To determine the pattern, clinical presentation and management of mandibular fractures among motorcycle crash victims attended at Muhimbili National Hospital,Tanzania.**Study design:** This was a descriptive cross-sectional hospital-based study.

Setting: This study was conducted at the Oral and Maxillofacial Surgery and Emergency Medicine Departments as well as in Oral and Maxillofacial Surgery wards 23 and 24 of the Muhimbili National Hospital (MNH).Study population: All patients who attended at the Oral and Maxillofacial Surgery Department, Emergency Medicine Department and those admitted in wards 23 and 24 of the Muhimbili National Hospital with oral and maxillofacial injuries following motorcycle crashes.**Methodology:** All patients with oral and maxillofacial injuries were interviewed using specially designed structured questionnaire. The interview enquired about socio-demographic information, place where injury took place, time of injury, factors related to crash occurrence, safety measures, whether a victim was a rider, passenger or pedestrian. Later, the patients were clinically examined and details of the examination included clinical presentation, type and site of maxillofacial fracture and site of mandibular fracture. Radiological investigations included plain radiography and computed tomography (CT) where necessary to confirm the fracture. The findings were recorded on a designed clinical form.Data was entered into a computer and analyzed using SPSS programme version 20.0. The obtained data was coded, cleaned and transformed by recording and grouping. Descriptive analysis included computation of percentages, frequency of occurrence, mean and cross tabulations of variables of interest. Inferential analysis included computation of Chi-Square test to compare proportions for possible association. A p-value of <0.05 was used as a cut-off level for significance. **Results:**A total of 178 patients, who included 155 (87.1%) males and 23 (12.9%) females with a male-to-female ratio of 6.7:1 were included in this study. The age range was from 9 to 54 years with a mean age of 27.06 ±6.66 years. The age groups 21-30 and 31-40 years were the most affected. Unavailability of road signs reported by 99 (55.6%) participants contributed to significant proportion of the motorcycle crashes. Most common mechanism of injury was motorcycle-motor vehicle collisions 66 (37.1%), followed by motorcycle-motorcycle collision 56 (31.5%). The motorcyclists (61.2%) sustained injuries than the passengers (31.5%). The peak time for injury was at night 86 (48.3%), followed by evening hours 48 (27%), midday 26 (14.6%) and morning hours was

the least affected 18 (10.1%). The most common site of mandibular fracture was the symphysis 65 (36.5%) followed by the parasymphysis 55 (30.9%), condyle 45 (25.3%) and the angle 40 (22.5%). The commonest combination of mandibular fractures included the symphysis and condyle 23 (12.9%) followed by the symphysis and angle 11 (6.2%). Almost 98.3% of the patients received pain management and 97.2% were prescribed with prophylactic antibiotics. Surgical wound debridement and suturing was done in 42.1% and 48.3% respectively for the soft tissue injuries. Most patients with mandibular fractures were treated by closed reduction (eyelet wiring, arch bars with IMF), 90 (50.6%) and only 38 (21.3%) were treated by open reduction and internal fixation.

198. Suleiman, A.R. (2017). Muhimbili University of health and allied sciences department of parasitology and medical entomology.Muhimbili university health and allied science. Abstract

Introduction: Uwandani is among the hotspots of transmission of Schistosoma haematobium infection in Zanzibar, and a recent study observed persistence of high prevalence of urinary schistosomiasis transmission despite repeated rounds of Mass Drugs Administration. **Aim:** This study was aimed at investigating the current prevalence and intensity of infections, and determine factors contributing to the persistence of high prevalence and intensity among school children. Thus, community knowledge, perceptions and risk factors for contracting schistosomiasis were assessed to identify knowledge gaps that need to be addressed in order to strengthen efforts of the control and elimination of urinary schistosomiasis. **Methods:** The study adopted both quantitative and qualitative approach, and convenience and purposive sampling techniques were used to select study participants. A cross-sectional study involving 300 primary school children, aged 6 -15 years, was conducted in primary school. Data were collected using a structured questionnaire and filtration technique was used to detect S. haematobium eggs in 10 ml of urine. A Chi square test was used to assess the association between variables. Study also involved 30 in-depth interviews with parents and teachers, 4 Focus group discussions with adult community members and 8 group discussions with the students. Data was audio recorded transcribed, coded and thematically analysed using Health belief model and grounded theory approach. **Results:** The overall prevalence in school children was found to be 11%. Infection was more common in children ≥ 13 years and in males. The proportion of children with heavy intensity of infection was 48.4% among infected school children and intensity was higher in children ≥ 13 years, and also higher in males than females. Low level of awareness, lack of correct knowledge about schistosomiasis and frequent contact with water from the ponds were observed to contribute in the persistence of diseases transmission**. Conclusion:** The study managed to identify gaps in the knowledge on the causes, route of transmission, misperceptions and control practices. To address these, there is a need for implementing regular and sustainable MDA and systematic health education on schistosomiasis control.

199. Tarimo, P.R. (2017). Characterization of enteric and blood pathogens and associated factors among patients presenting with typhoid fever like symptoms in Buhigwe district Kigoma Tanzania.Muhimbili university health and allied science.

Abstract

Background: Typhoid fever is a life threatening waterborne and food borne illness caused by bacterium Salmonella typhi. Approximately 21 million cases and 222 000 typhoid-related deaths occur annually worldwide. People living in Buhigwe district for couple of years have been experiencing seasonal outbreak of fever and gastrointestinal illness of unknown origin similarly to that of typhoid fever.Broad **objective:** The aim of this study was to characterize enteric and blood pathogens among patients presenting with typhoid fever like symptoms in Buhigwe district.Material and **Methods:** This was cross-sectional designed health facilities based study conducted in Buhigwe district. Four health facilities was selected randomly form Kajana, Muyama, and Muzenze and Songambele wards. After systematic sampling of study participants blood and stool sample were collected and analyze using Real Time Polymerase Chain Reaction (PCR).Questionnaires were used to collect information on factors associated with enteric and blood pathogens. Collected data was analyzed using Epi info version 3.5.1, Stata and excel statistical software.**Results:** Total of 246 participants were enrolled into the study. Their age range from 1to 82 years with 72.8% female. Majority of them were farmers (63.8%). Thirty five percent aged less than 16 years old. Participants presenting with typhoid fever like symptoms were having multiple pathogens. Blastocystis, Enteroagrigative Escherichia Coli (EAEC), Giardia and malaria were the most prevalent enteric and blood pathogens. Drinking untreated water was significantly associated with enteric infections AOR (95%CI) =2.8(1-7.8). Not having insecticide treated bed net was associated with getting malaria infection AOR (95%CI) =3.5(1.4-8.8).Living in Kajana ward was significant associated with both getting malaria and enteric infections AOR (95%CI) = 2.3(1-4), AOR (95%CI) =8(2.7-23.9) respectively. Getting schistosomiasis infection was significant associated with washing clothes in open water bodies AOR (95%CI) =2.2(1.2-4.0).**Conclusions:** Malaria, schistosomiasis, giardiasis and to a lesser extent other enteric and blood pathogens may commonly be present in patients presented with typhoid fever like symptoms or in patients suspected of typhoid fever. Poor personal hygiene practices, not having mosquito bed net and taking shower or washing clothes in open water bodies was significant associated with getting enteric infections, malaria and schistosomiasis infections respectively.

200. Tembo, F. (2017).Assessment of knowledge and practice on sedation outside the operating theaters at Muhimbili national hospital, Dar es salaam, Tanzania, 2016.Muhimbili university health and allied science.

Abstract

Background: Sedation is the administration of sedatives to the patients planned for diagnostic and therapeutic procedures so as to reduce anxiety and fear. Most of the sedation providers are non-anesthesiologists. Sedation is supposed to be given by experienced and skilled personnel to avoid complications. Proper monitoring during the sedation procedure will make the practice efficiently, detect the complications and be able to manage the complications. Involvement of anesthesiologists and the use of trained non anesthesiologist doctors can lead into the better practice of sedation. **The aim of the study:** The aim of the

study was to assess providers' knowledge, and practice towards sedation outside the operating theater at MNH from May to July 2016.**Methodology:** This was a hospital based descriptive cross sectional study which was done at MNH in the departments of Emergency medicine, Radiology (CT-scan and MRI), Psychiatry, Gastroenterology, Emergency department, and Dental unit. The study population was 110 sedation practitioners outside operating theaters. The information obtained was providers' age, sex, experience, duration of the practice, pre-sedation assessment form, completion of data monitoring form, use of protocol, monitoring during sedation, use of oxygen, use of assistant, use of resuscitation equipment, training in resuscitation, training in sedation, knowledge on pharmacology of drugs, type of the drugs used and route of administration and complications was obtained by an interview with eligible consented sedation providers using a modified standard questionnaire adopted by Fanning. Data were entered and analyzed using SPSS version 20.**Results:** Nineteen percent of the study participants had high knowledge on pharmacology of the drugs. Approximately, 34.5% of the study participants used protocol for sedation, 18% did pre- sedation assessment of patients and 9.1% used monitoring data form during sedation. About thirty three percentage used oxygen during sedation while 35.5% had completed ACLS with only 31% of them had valid certificates. Fewer study participants (15.5%) underwent formal training prior to using sedation. Monitoring technique was poor and none used ETCO2. Diazepam was found to be the most commonly used sedative. Intravenous route was used by most study participants (45.5%).**Conclusion:** Despite providing sedation outside the operating theaters, majority of the sedation providers had poor knowledge and practice.

201. Thidor, G.T.Y. (2017). Knowledge, attitude and practice on prevention of mother-to-child transmission of HIV among pregnant women attending antenatal care at juba teaching hospital, south Sudan.Muhimbili university health and allied science.

Abstract

Background: Mother-to-child transmission (MTCT) of HIV remains the main and leading source of HIV infection among infants and children. It accounts for 90% of infancy and childhood HIV infection; hence prevention in this context has a big impact in controlling the spread of the HIV within this group. MTCT of HIV can happen during pregnancy, labour, delivery and breastfeeding period. Women's knowledge on HIV/AIDS is an important component in PMTCT services coverage. Therefore knowledge and awareness on PMTCT of HIV has an impact on services uptake. **Objectives:** To assess level of knowledge, attitude and practice of prevention on mother-to-child transmission (PMTCT) of HIV among pregnant women attending antenatal care at Juba Teaching Hospital. **Methodology:** A hospital based cross sectional study was conducted at Juba Teaching Hospital, Maternal and Child Health Clinic within the period of November to December, 2015. Data were collected using a structured questionnaire given to pregnant mothers who were eligible and consented for the study participation. The information was then summarized into SPSS version 20, for windows and analyzed. Frequency distribution and two way tables were used to present and summarize the data. A p value of <0.05 was considered statistically significant. **Results:** A total of two hundred and fifty one (251) pregnant women consented to participate in the study

and were enrolled and interviewed at the MCHC in Juba Teaching Hospital. The mean age of the mothers was 25.67, with the standard deviation of ±5.52 years, with the youngest being 15 years and the oldest 41 years Majority of them were married (88%), participants with no formal education were more than one-third (39.1%). More than a half (53.4%) of the participants were unemployed. One-third (30.7%) of the participants had sufficient knowledge on when to start PMTCT prophylaxis. Half of the pregnant women (51%) showed positive attitude toward PMTCT on HIV preventive measures. Two hundred and thirty one participants (92%) had received counseling for HIV, with (78.4%) of them reported being tested for HIV.**Conclusion:**The study identified that, participants 'knowledge on HIV/AIDS was moderate, specific knowledge on MTCT, MTCT risk factors during breastfeeding, and PMTCT prophylaxis was also found to be moderate. Half of the participants showed positive attitude towards PMTCT services utilization. Majority of participants reported had received counseling, but one third did not go for testing, condom use was low among positive clients. **Recommendations:** Improvement of counseling sessions to pregnant women attending ANC at JTH is needed, as to increase their acceptance to services utilization. Doubling effort to achieve the goals of PMTCT among pregnant women is needed. Also there is a need of conducting a similar study at national level, as this study was conducted in JTH and it did not reflect or represent the other settings across the country.

202. Tryphone, N.J.(2017). Cervical cancer screening: knowledge and perceptions of women of reproductive age attending Mnazi mmoja hospital, Ilala municipal, Dar es salaam.muhimbili university health and allied science.

Abstract

Background: Cervical cancer is the third common cancer among women worldwide, about 500,000 new cases are identified for the first time to have cervical cancer and 250,000 deaths occur every year. **Aim:** is to describe the knowledge and perceptions of cervical cancer screening among women of reproductive age attending Mnazi Mmoja Hospital in Ilala Municipal, Dar-es –Salaam. Materials and Methods: A cross sectional descriptive research used to collect data at Mnazi Mmoja Hospital in Ilala Municipal. Participants were 184 women of reproductive age (15-49 years) attended reproductive and child health care clinics. A structured questionnaire was used to gather information and data were analyzed by using Statistical Package for Social Sciences (SPSS) version 20 software package. Chi-square test was used to find out the significance differences between variables and p- value of less than 0.05 was considered significant in this analysis. **Results:** Most of respondents were aware about cervical cancer 152 (82.6%) and screening 149 (81%). Majority of women (54.3%) did not know the standard time for frequencies of cervical cancer screening that is every three years for the VIA test negative women and every year for women diagnosed to have precancerous lesion. Further, more than half (54.3%) claimed that cervical cancer screening (CCS) is performed after every six months. The association between demographic characteristics and knowledge of CCS, age of respondents (p- value 0.041) and marital status (p- value 0.004) found to be statistically significant association ($p<0.05$). Also association between demographic characteristics and perceptions of CCS, only marital status (p- value 0.021) and level of education (p- value 0.002) showed statistically significant

(p<0.05).**Conclusion:** The findings revealed limited knowledge, on how often VIA test is needed to be done for screening of cervical cancer and about when the interval cancer screening is being done. Lack of awareness of the services provision and shortage of medical advices were the barriers reported for poor uptake of VIA test among the respondents. **Recommendations:** Extensive health education programs to the public should be done to improve public knowledge with an emphasis that VIA test is the best standard for prevention of cervical cancer. Further research study should be conducted using mixed methods to explore the hindrance of women to perform cervical cancer screening to prevent the condition.

203. Wambura, K. (2017). Assessment of noise induced hearing loss and related factors among tobacco processing industry workers, Morogoro Tanzania.Muhimbili univarsity health and alliade science.

Abstract

Background: Processed tobacco is the main form of tobacco exported from Tanzania and contributing to the national income. Tobacco processing use machines which emits noise higher than 85dBA resulting into increased risk of developing NIHL among workers. The study in Malaysia found 23% incidence rate of developing NIHL among tobacco industry workers. In Tanzania NIHL has been documented among workers in different sectors but not tobacco processing workers. **Objective:** To determine proportion of NIHL and its determinants among workers in the tobacco processing industry in Morogoro Tanzania.

Material and Methods: A cross sectional study was conducted among 240 tobacco processing industry in Morogoro municipality and 240 controls. Study participants were proportionately randomly sampled from job section (strata). NIHL was estimated by recently calibrated audiometric set up composed of Tremetrics RA 300 S/No. 123410 audiometer in amtronix AX 1 min sound booth. An interview administered questionnaire with closed and open end questions was used to explore information from respondents. Noise exposure and control information were explored from respondents, occupational health and safety operational documents, walk through observation and ambient noise scan. Data analysis was done using SPSS version 20.**Results:** NIHL affected 1.25% of exposed respondents and non among controls, the affected were male permanent workers. The highest noise level of 94dBA was recorded at the dust remover machine while within the process plant 92dBA was the highest noise measured. Occupational health and safety supervision, warning signs, hearing protection devices (HPDs) and hearing monitoring were the control practices in place. The reported HPDs practice among respondents was 81.7% (n=240) while observed HPDs practices ranged between 71.4-100%. **Conclusion:** There was a small proportion of NIHL among tobacco processing industry workers all from the permanent employees a findings attributed to influence of noise control practices, hearing monitoring in particular which can result into filtering out with abnormal audiograms in pre-employment audiometry for seasonal employees.

204. William, T. (2017). Care of critically ill patients during inter-hospital transportation: a descriptive study in Dar es salaam, Tanzania.Muhimbili Univarsity Health and Alliade Science.

Abstract

Background: Inter-hospital transfer (IHT) of critically ill patients (CIPs) may save lives, but it is a challenging process as it exposes them to various complications such as hypoxia, hypotension, bradycardia/tachycardia, arrhythmias, aspiration and cardiac arrest. However, little is known about care given when transporting such patients. Aim: To assess and describe the care provided to CIP during transportation from peripheral public hospitals to the tertiary referral hospital, Muhimbili National Hospital (MNH) in Dar es Salaam, Tanzania. Methodology: A cross-sectional descriptive design, employing a quantitative approach was used. The study recruited 130 escorting personnel transporting CIP to MNH via the Emergency Medicine Department (EMD). Results: Majority of the 130 respondents were non-qualified personnel Enrolled Nurse 38.5% (50) and Health Attendants 32.3% (42), with only 8.5% who had received ambulance training. Knowledge about Basic Life Support (BLS) and Advanced Cardiovascular Life Support (ACLS) was low 45.4% (59) and 6.2% (8) respectively among the escorting personnel. There was a little monitoring of patient's oxygen status, respiratory rate, heart rate, and blood pressure during transportation, with no documentation provided. Among the critically ill patients, 17.7% required airway support, and 8.7% received it. Many (67) patients required oxygen; however 12 were escorted with oxygen. While 9/14 ambulances had a functional oxygen cylinder, only three had suction and one contained a portable monitor. Challenges identified by the escorting personnel included; Lack of essential equipment, lack of consumables, insufficient ambulance training and transporting more than one patient in the ambulance. Conclusion: CIP are escorted mostly by non-trained and non-qualified personnel, namely Enrolled Nurses and Health Attendants. Care/monitoring provided to such patients is suboptimal: Contributing factors include lack of a specialized transport team, lack of formal training, and minimal knowledge about BLS and ACLS. Moreover, this inadequate monitoring is also compounded by a lack of essential, required equipment and supplies in the ambulance. Recommendations: Improvement of patient safety and care during IHT requires a multi-faceted approach to educate escorting personnel and ensure fully equipped ambulances are available.

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