MUHIMBLI UNIVERSITY OF HEALTH AND ALLIED SCIENCES (MUHAS)

1ST SCIENTIFIC CONFERENCE

KUNDUCHI BEACH HOTEL, DAR ES SALAAM, TANZANIA

MAY 2-4, 2013

Conference Secretariat

Directorate of Continuing Education and Professional Development
P.O.BOX 65001
Dar es Salaam
Tel: +255 22 2152431.
E-mail: dce@muhas.ac.tz, conference@muhas.ac.tz

In commemoration of its 50th Anniversary (1963-2013) Muhimbili University of Health and Allied Sciences (MUHAS) is organizing its first scientific conference. This conference provides a forum for researchers, practitioners, decision makers, representatives of special groups, media and trainers to share research findings and experiences in health and health related issues. This conference will take place at Kunduchi Beach hotel in Dar es Salaam, Tanzania from 2nd – 4th May, 2013.

Conference theme

The theme of the conference is "Health Research Towards Poverty Alleviation". The theme is timely in the sense that Tanzania like many other developing countries is implementing various strategies aiming at alleviating poverty including the National Strategy for Growth and Poverty Reduction Strategy (NSGRS), commonly known as MKUKUTA. The government is also committed to achieve the Millennium Development Goals (MDGs), which include among others: halving extreme poverty rates (MDG 1), reducing infant mortality rates (MDG 4), combating HIV/AIDS, Malaria and other diseases (MDG 6), promoting gender equality and empowering women (MDG 3) and improving maternal health (MDG 5). This conference aims therefore to set a forum to discuss health research findings on the achievements and challenges facing the implementation of different strategies towards poverty alleviation in Tanzania and beyond.

In addition to the main them of the conference there will be four sub-themes and one symposium on different subjects. The sub-themes and symposium will cover the following subjects:

1. Emerging major health challenges

2. Crisis on human resource for health

3. Translating health research findings into policy and practices

4. Progress in addressing health related MDGs

Guest of Honour

The Conference will be officially opened by His Excellency, Dr. Mohamed Gharib Bilali, the Vice President of the United Republic of Tanzania on Thursday, May 2nd 2013 at 9:00 am

Programme and Book of abstracts

The programmme and book of abstracts provide a guided glance to the papers and posters to be presented and displayed respectively during the various sessions of the conference. The papers are divided into the sub-themes of the conference.

Conference Organizing Committee

1. G. Kwesigabo
2. S. Massawe
3. F.Mhalu
4. D.Mloka
5. G. Furmence
6. I. Kida
7. J. Killewo
8. E.Iyamuya
9. D. Gasarasi
10. A. Kamuhabwa
11. F. Kahabuka
12. M. Bakari
13. A. Kiwara
14. K. Malima
15. A.Nko
16. E. Lwoga
17. M.Moshi
18. E. Innocent
19. E. Kaale
20. S. Kaaya

CONFERENCE AT A GLANCE

TIME	THURSDAY 2ND MAY 13	FRIDAY 3RD MAY 13	SATURDAY 4TH MAY 13
08:00 – 09:00	REGISTRATION AND POSTER MOUNTING	REGISTRATION AND POSTER MOUNTING	REGISTRATION AND POSTER MOUNTING
09:00 – 09:30	OPENING CEREMONY 09:00 – 10:30	PLENARY SESSIONS PAN AFRICANISM AND AFRICAN RENAISSANCE 09:00 – 10:30	PARALLEL SESSIONS MDG, EHC, TRP
09:30 – 10:00			PARALLEL SESSIONS MDG, EHC, TRP
10:00 – 10:30			PARALLEL SESSIONS DISCUSSION
10:30 – 11:00	TEA BREAK	TEA BREAK	TEA BREAK
11:00 – 11:30	PARALLEL SESSIONS MDG, HRH, EHC, TRP	PARALLEL SESSIONS MDG, EHC, TRP	CLOSING CEREMONY
11:30 – 12:00	PARALLEL SESSIONS MDG, HRH, EHC, TRP	PARALLEL SESSIONS MDG, EHC, TRP	
12:00 – 12:30	PARALLEL SESSIONS DISCUSSION	PARALLEL SESSIONS DISCUSSIONS	KEY:
12:30 – 13:00	LUNCH 12:30 – 14:00	LUNCH 12:30 – 14:00	MDG: Progress in addressing health related millennium goals
13:00 – 13:30			HRH: Crisis on human resources for health
13:30 – 14:00			EHC: Emerging major health challenges
14:00 – 14:30	PARALLEL SESSIONS MDG, HRH, EHC, TRP	PARALLEL SESSIONS MDG, EHC, TRP	TRP: Translating health research findings into policy and practices
14:30 – 15:00	PARALLEL SESSIONS MDG, HRH, EHC, TRP	PARALLEL SESSIONS MDG, EHC, TRP	
15:00 – 15:30	PARALLEL SESSIONS DISCUSSIONS	PARALLEL SESSIONS DISCUSSIONS	
15:30 – 16:00	NUTRITIONAL BREAK	NUTRITIONAL BREAK	
16:00 – 16:30	PARALLEL SESSIONS MDG, HRH, EHC, TRP		
16:30 – 17:00	PARALLEL SESSIONS MDG, HRH, EHC, TRP		
17:00 – 17:30	PARALLEL SESSIONS DISCUSSIONS		

CONFERENCE PROGRAMME

DAY 1

OPENING CEREMONY

TIME	TITLE OF PRESENTATION
08:00-09:00	Registration and Poster viewing
09:00 -11:00	Opening Ceremony
10:30 - 11:00	TEA BREAK

PARALLEL SESSIONS

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: MKAPA 1 HALL

THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF M LESHABARI

RAPPORTEUR: DR. D. MLOKA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Gender context of sexual violence and HIV sexual risk behaviors amongst married persons in Iringa region, Tanzania (Nyamhanga T)
11:10- 11:20	Cytokine and Transcriptome profiles reveal Non-specific and Sex Differential Effects with Diphtheria, tetanus, whole cell-pertussis combined vaccine and measles vaccine (Noho-Konteh F)
11:20- 11:30	Indoor Air Pollution, Social Inequality and Acute Respiratory Diseases in Children of Tanzania. (Bukalasa J)
11:30- 11:40	Epilepsy following simple febrile seizure in a rural community in Tanzania; a community based observational cohort study (Matuja W)

TIME	
11:40- 11:50	The prediction of biological behaviour of prostatic adenocarcinoma in Tanzanian patients: a Gleason score-based follow-up (Rugwizangoga B)
11:50- 12:00	Microbiological contamination of cereal based weaning food in Dar es Salaam and Arusha regions. (Rushunju G)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: MKAPA IIHALL

THEME: CRISIS ON HUMAN RESOURCE FOR HEALTH

CHAIR: PROF. A. KIWARA

RAPPORTEUR: DR. G. FURMENCE

TIME	TITLE OF PRESENTATION
11:00- 11:10	Strengthening the Training Institution Information System for improved HRH production in Tanzania - (Sukums F)
11:10- 11:20	Human resource for health crisis a major challenge to health sector reforms: shortages or maldistribution? (Semakafu A)
11:20- 11:30	Open access perceptions and behavior of health sciences faculty and roles of information professionals in Tanzania(Lwoga E)
11:30- 11:40	Promoting Student Centered Learning in Tanzania (Kwesigabo G)
11:40- 11:50	Dentistry in Tanzania: a rare profession in need of more thrust in improving oral health (Simon E)
11:50- 12:20	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: KAMBARAGE HALL

THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. B. LEMBARITI

RAPPORTEUR: DR. M. LYIMO

TIME	TITLE OF PRESENTATION
11:00- 11:10	Challenges to the implementation of health sectordecentralization in Tanzania: experiences from KongwaDistrict council. (Frumence G)
11:10- 11:20	The Role of Evidence in Decision-Making Processes for Essential Medicines in Developing Countries: A Case Study in Tanzania (Thomas A.)
11:20- 11:30	Perceived barriers to access availablehealth services among men who have sex with men in Dar es salaam 2012 – (Magesa D)
11:30- 11:40	Deciding to join CHF: The Role of Clients and Managers Perceptions (Amani A)
11:40- 11:50	Risk Distribution across Multiple Health Insurance Funds in Rural Tanzania (Chomi E)
11:50- 12:00	Citation Analysis of Theses and Dissertations as a Measure of Web Resources Usage at Muhimbili University of Health and Allied Sciences(Chande R)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: KIKWETE HALL

THEME: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. K. PALLANGYO

RAPPORTEUR: DR. I.KIDA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Determinants of place of delivery among pregnant mothers in Kongwa district. (Semali I)
11:10- 11:20	Appraisal of in-service training among maternal and neonatal health workers in rural settings of southern Tanzania (Kakoko D)
11:20- 11:30	Malaria and First Trimester Pregnancy Loss in Lindi Region, Tanzania (Ng'walali P)
11:30- 11:40	Continuity of ANC, and PMTCT services in Morogoro, Tanzania (Kilewo C)
11:40- 11:50	Coverage, quality and equity of maternal and newborn health services in a rural area of Morogoro in Tanzania (Killewo J)
11:50- 12:00	Quality of intrapartum care in primary health care facilities in two rural districts in south east Tanzania (Massawe S)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 14:00 -16.00

PARALLEL SESSION: KAMBARAGE HALL

SUB-THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF J KILLEWO

RAPPORTEUR: DRT. MSELLE

TIME	TITLE OF PRESENTATION
14:00- 14:10	Health Research Ethical review in Tanzania: the role of NatHREC and Institutional Review Boards (IRBs) (Ikingura J)
14:10- 14:20	Space Dimensions and Provision of Social Basic Needs to Determine Diarrheal Risks in Slums: A Cross-Sectional Study in Matyazo Urban Informal Settlements, in Rwanda - (Uwizeye D)
14:20- 14:30	Dietary protein-calorie supplementation increases levels of sialic acid in breast milk from HIV-positive Tanzanian mothers (Lyimo M)
14:30- 14:40	Household and Health Facility Factors Influencing enrolment in Community Health Fund (Amani A)
14:40- 14:50	Impact of Implementation of the TRIPS Agreement on Antiretroviral Drugs Importation into Tanzania (Shemdoe G)
14:50- 15:00	Seroprevalence of Toxoplasma gondii infection in health blood donors at Eastern Zone Blood Transfusion Services (EZBTS) in Dar es Salaam, Tanzania (Lema F)
15:00- 15:30	Discussion
15:30 - 16:00	BREAK

Thursday, May 2nd, 2013, 14:00 -16.00

PARALLEL SESSION: KIKWETE HALL

THEME: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF F.MHALU

RAPPORTEUR: DR K. MALIMA

TIME	TITLE OF PRESENTATION
14:00- 14:10	Socio-cultural issues related to pregnancy, birth preparedness and emergency readiness in Rural Tanzania. A qualitative study (August F)
14:10- 14:20	Adverse Side Effects of Hormonal Contraception, a Critical Barrier to Uptake and Use in Rural Tanzania: A Qualitative Study (Chebet J)
14:20- 14:30	Client's satisfaction with health facility delivery care services and associated factors. The case of Lindi and Mtwara rural districts, Southern Tanzania (Mpembeni R)
14:30- 14:40	Women's perceptions on antenatal, delivery and postpartum services in rural Tanzania (Mahiti G)
14:40- 14:50	Quality management role in improving skilled birth attendance in Tanzania (Shupa S)
14:50- 15:00	Factors affecting enrolment into CTCs among Mothers infected with HIV/AIDS in Morogoro Rural District (Mruma H)
15:00- 15:30	Discussion
15:30 - 16:00	BREAK

Thursday, May 2nd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA I HALL

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF F KAHABUKA

RAPPORTEUR: DR H NABURI

TIME	TITLE OF PRESENTATION
14:00- 14:10	Preferences of non-financial incentives and appreciation appraisal among health workers in Lindi district, southern Tanzania(Kakoko D)
14:10- 14:20	Diagnostic pattern of 60,000 adult and pediatric patients seen in the new full capacity emergency department at Muhimbili National Hospital, Dar essalaam Tanzania(Sawe H)
14:20- 14:30	Prevalence of Erectile Dysfunction and associated factors among diabetic men attending diabetic clinic at MNH-(Mutagaywa R)
14:30- 14:40	Overweight, obesity and perceptions about body weight among primary school children in Dar es Salaam, Tanzania(Muhihi A)
14:40- 14:50	The state of emergency medicine in the United Republic of Tanzania: challenges and opportunities in Emergency health care systems development(Mfinaga J)
14:50- 15:00	Cytoskeletal anomaly: implications in cancer pathogenesis (Russa D)
15:00- 15:30	Discussion
15:30 - 16:00	BREAK

Thursday, May 2nd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA II HALL

SUB-THEME: CRISIS ON HUMAN RESOURCE FOR HEALTH

CHAIR: DR. KWESIGABO

RAPPORTEUR: T NYAMHANGA

TIME	TITLE OF PRESENTATION
14:00- 14:10	Human resource for health crisis a major challenge to health sector rerforms: shortages or maldistribution?Kiwara A
14:10- 14:20	Addressing the human resource for health crisis: the lost in transition (LOTTA) syndrome - Sirili N
14:20- 14:30	Private public partnership (PPP) on trial: training higher level human resources for health (HRH) in Tanzania. Nyongole O
14:30- 14:40	The milleneum development goals post 2015: challenges in human resource development for the pharmacy sector in Tanzania- Sirili N
14:40- 15:10	Discussion
15:10- 16:00	BREAK

Thursday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION: KAMBARAGE HALL

SUB-TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. D. NGASSAPA

RAPPORTEUR: DR T. MSELLE

TIME	TITLE OF PRESENTATION
16:00- 16:10	Risk factors for VIA positivity and determinants of screening attendances in Dar es Salaam, Tanzania(Kahesa C)
16:10- 16:20	Human papillomavirus prevalence and type distribution in 3603 HIV-positive and HIV-negative women in the general population of Tanzania (Mwaiselage J)
16:20- 16:30	Establishing capacity of mosquito-borne disease control at MUHAS to bridge academia and community needs (Innocent E)
16:30- 16:40	Public-Private Partnership (PPP) Financing: An overviewof the service agreement financing in the health sector in Tanzania (Chitama D)
16:40- 16:50	Suitability of Rapid PSA Test for Prostate Cancer Screening in Tanzania (Ligoha D)
16:50- 17:00	Predicting intention to design communication strategy prior to developing Television spots (Kisisiwe Y)
17:00- 17:30	Discussion
	END OF DAY ONE

Thurday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION:

SUB-THEME:PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. S. KAAYA

RAPPORTEUR: DR. D.MLOKA

TIME	TITLE OF PRESENTATION
16:00- 16:10	Online/offline ICT pilot platform to support coordination in health data management in East Africa (Kaale E)
16:10- 16:20	A study of antimicrobial activity, acute toxicity and cytoprotective effect of a polyherbal extract in a rat ethanol-HCl gastric ulcer model (Moshi M)
16:20- 16:30	Challenges and strategies on the Use of ICT in higher learning institutions: A case study of MUHAS (Sukums F)
16:30- 16:40	Effect of Annona formulations on mosquito and non-target invertebrates in laboratory and semi-field condition (Kisanga A)
16:40- 16:50	Development of an enteric coated 20 mg omeprazole tablets formulation (Ng'wananogu R.)
16:50- 17:00	Assessment of adherence to multidosing artemether-lumefantrine drug combination in a rural community in Tanzania (Minzi O)
17:00- 17:30	Discussion
	END OF DAY ONE

Thurday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION:

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: DR.D. GASARASI

RAPPORTEUR: DR.I.KIDA

TIME	TITLE OF PRESENTATION
16:00- 16:10	Sexual Violence Against Female and Male Children and related health conditions in The United Republic of Tanzania (Kwesigabo G)
16:10- 16:20	Iron, calcium and zinc content of locally processed cereal-based complementary foods in Tanzania (Rushunju G)
16:20- 16:30	Exploring dentine hypersensitivity among adult patients attending dental treatment in Dar Es Salaam, Tanzania (Minja A)
16:30- 16:40	Dental caries among children and adolescents of Sub-Saharan Africa: Trends and future perspective - A review study (Mbawalla H)
16:40- 16:50	Youth unemployment, community mob violence, and Ruka Juu in Dar es Salaam, Tanzania (Outwater A)
16:50- 17:20	Discussion
17:00- 17:30	**END OF DAY ONE**

Thurday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION: MKAPA II HALL

SUB-THEME:CRISIS ON HUMAN RESOURCE FOR HEALTH

CHAIR: PROF. N.MBEBATI

RAPPORTEUR: DR. G. FRUMENCE

TIME	TITLE OF PRESENTATION
16:00- 16:10	Improving Quality and Quantity of Skilled Health Workers through proactive staff recruitment and retention measures: lessons from Lindi and Mtwara regions- (Mwangu M)
16:10- 16:20	Challenges and strategies on the Use of ICT in higher learning institutions: A case study of MUHAS (Sukums F)
16:20- 16:30	First steps towards inter-professional health practice: An educational experiment in rural Bagamoyo district (Leshabari S)
16:30- 16:40	Manual Laparoscopic Skills Development Using a Low Cost Trainer Box in Tanzania(Beard J)
16:40- 16:50	Inspiring Medical Students into the Profession: Cadaveric Dissection Stress and Coping Strategies at MUHAS(Russa D)
16:50- 17:20	Discussion
17:00- 17:30	**END OF DAY ONE**

Friday, May 3rd , 2013, 08:00 -10.30

PLENARY SESSION: KIKWETE HALL

THEME: PAN AFRICANISM AND AFRICAN RENAISSANCE

CHAIR: PROF. E. LYAMUYA

RAPPORTEUR: T.NYAMHANGWA

TIME	TITLE OF PRESENTATION
08:00-08:30	Registration and Poster viewing
09:00 -09:20	Key note speech pan africanism related to health – (Hon Dr. Salim Ahmed Salim)
09:20-09:35	Malaria: The African Dilemma (Prof Zul Premeji)
09:35- 09:50	HIV/AIDS and the emerging Pandemic threat (Prof J. Killewo)
09:50- 10:05	Establishing centres for excellence in Health research and training in Africa(Prof FMhalu)
10:05 - 10:30	Discussion
10:30 - 11:00	TEA BREAK

PARALLEL SESSIONS

Friday, May 3rd , 2013, 11:00 -12.30

PARALLEL SESSION: MKAPA HALL I

THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: DRS. LESHABARI

RAPPORTEUR: DR. D. RUSSA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Aflatoxin contamination of cereal based weaning food in Dar es salaam and Arusha regions(Rushunju G)
11:10- 11:20	Dust and respiratory health among male and female workers in Tanzania dusty industries-NUFU support(Mamuya S)
11:20- 11:30	Aetiology of fever in children attending Korogwe District Hospital, Tanzania. (Mahende C)
11:30- 11:40	Partnership in governing Implementation of Emergency Obstetric Care(Mkoka D)
11:40- 11:50	Prevalence, risk factors and awareness of high blood pressure and hyperglycemia in Mafia island, October 2011(Muhamedhussein MS)
11:50- 12:00	Community Perceptions of Rape and Child Sexual Abuse in Rural Tanzania(Muzdalifat A)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd , 2013, 11:00 -12.30

PARALLEL SESSION: KIKWETE

THEME: SESSION APROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. M. ABOUD

RAPPORTEUR: DR. J. MASALU

TIME	TITLE OF PRESENTATION
11:00- 11:10	Quality Maternal and Newborn Care (QUALMAT): Preliminary experience with the introduction of computer based Clinical Decision Support System (CDSS) in rural primary health care facilities in Lindi district (Massawe S)
11:10- 11:20	Cluster-RCT of a community health worker intervention to improve antenatal care and PMTCT uptake and retention in Dar es Salaam (Geldsetzer P)
11:20- 11:30	Impact of Antenatal Care Content on the Continuum of Care. The Case of Morogoro Region, Tanzania (Mpembeni R)
11:30- 11:40	Intrapartum and postpartum severe maternal morbidity in St Francis Hospital, Tanzania: annual incidence, associated risk factors and outcome- (Mtawali M)
11:40- 11:50	Kangaroo mother care a six month experience at maternal and new born health (Silas R)
11:50- 12:00	Utilization and Contents of Antenatal Care (ANC) in Southern Tanzania (Wangwe P)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd, 2013, 11:00 -12.00

PARALLEL SESSION: MKAPA HALL II

THEME: SESSION B: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. S MASSAWE

RAPPORTEUR: DR. T.MSELLE

TIME	TITLE OF PRESENTATION
11:00- 11:10	Evaluation of HIV antigen and antibody combination ELISAs for diagnosis of HIV infection in Dar es salaam, Tanzania, 2012. (Urio J)
11:10- 11:20	Prevalence and risk factors for skin diseases among ARV naive HIV infected pregnant women (Shayo G)
11:20- 11:30	Intermittent preventive therapy and treatment of malaria during pregnancy: a study of knowledge among pregnant women in Rufiji District, Southern Tanzania (Mutagonda R)
11:30- 11:40	Liver enzyme abnormalities and associated risk factors in HIV patients on Efavirenz-based HAART with or without Tuberculosis co-infection in Tanzania (Mugusi S)
11:40- 11:50	Nutritional deficiencies among HIV-infected children receiving care at Dar Dar Pediatric clinic in Dar es Salaam, Tanzania (Modlin C)
11:50- 12:00	Virological outcome in patients failing clinically or immunologically on first line ART at Mbeya, Tanzania (Mgaya J)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd, 2013, 11:00 -12.00

PARALLEL SESSION: KAMBARAGE HALL

THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. D. NGASSAPA

RAPPORTEUR: DR. A. MWAKIGONJA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Public Private Partnership in Health in Tanzania: Exploringthe Emerging Institutional Structures. (Mwangu M)
11:10- 11:20	Health workers' knowledge and attitudes towards computerapplications in rural African health facilities (Sukums F)
11:20- 11:30	Drug Cost implications of Treating HIV/ AIDS Patientswith Mental Illness at Muhimbili National Hospital, Tanzania. (Mtenzi J)
11:30- 11:40	Evaluation of Acute Flaccid Paralysis Surveillance System in Border Regions, 2009-2011, Tanzania(Bintabara D)
11:40- 11:50	Magnitude of Cardiovascular Diseases and Risk FactorsAmong Salary Earners In Zanzibar – (Ali Omari A)
11:50- 12:00	Evaluation of Laboratory Based Multi Drug ResistantTuberculosis (MDR TB) Surveillance System at MuhimbiliNational Hospital- (Lema N)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA I HALL

THEME: SESSION APROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF F KAHABUKA

RAPPORTEUR: Dr M. LYIMO

TIME	TITLE OF PRESENTATION
14:00- 14:10	Agents of Change: Comparing HIV-related risk behavior of people attending ART clinics in Dar es Salaam with members of their social networks (Kaaya S)
14:10- 14:20	Integration of HIV counseling and testing into routine ANC: implications for quality of care (Kilewo C)
14:20- 14:30	Burden and determinants of severe anemia among HIV-infected adults in a large urban HIV programme, Tanzania- (Makubi A.)
14:30- 14:40	Interlaboratory cross validation of a chromatographic method for determination of lumefantrine in human plasma-a proficient capacity assessment of bioanalytical laboratories in East Africa (Minzi O)
14:40- 14:50	Risk factors for anaemia among HIV-infected patients at Muhimbili National Hospital (Mgassa A)
14:50- 15:00	Prevalence and severity of ADRs among patients using default first line ARV combinations in Mbeya (Rueben W)
15:00- 15:30	Discussion
15:30 - 16:00	NUTRITIONAL BREAK/ END OF DAY TWO

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA II HALL

SUB-THEME: SESSION BPROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. M. MOSHI

RAPPORTEUR: DR. H. MALIMA

TIME	TITLE OF PRESENTATION
14:00- 14:10	Quality of Antenatal Care Counseling in Morogoro, Tanzania (Mpembeni R)
14:10- 14:20	Chest radiographic patterns among HIV+ and HIV- adults with PTB at Mwananyamala hospital tb clinic – (Balowa M)
14:20- 14:30	Cluster-randomized controlled trial of the World Health Organization's Option A versus Option B for the prevention of mother-to-child transmission of HIV in Dar es Salaam (Sando D)
14:30- 14:40	Quality of partograph recordings and perinatal outcomes at Muhimbili National Hospital, Tanzania- (Mdoe P)
14:40- 14:50	Morbidity after anterior iliac crest harvest for reconstruction of the mandible after ablative surgery for treatment of aggressive odontogenic (Simon E)
14:50 -15:00	Validity of Clinical and Immunologic Monitoring to Detect Virologic Failure in HIV Infected Children on Antiretroviral Therapy (Mgelea E)
15:00- 15:30	Discussion
15:30 – 16:30	NUTRITIONAL BREAK/ END OF DAY TWO

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: KAMBARAGE HALL

SUB-THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. A.KIWARA

RAPPORTEUR: DR. H. NABURI

TIME	TITLE OF PRESENTATION
14:00- 14:10	The Role Of Malaria Rapid Diagnostic Test On The Management Of Fever Amongst Children In Kisarawe District, Coast Region 2009 (Lyimo S)
14:10- 14:20	Achievements and Challenges of Resource Allocation for Health in a Decentralized System in Tanzania: Perspectives of National and District Level Officers(Nyamhanga T)
14:20- 14:30	Attitudes and Practices on HIV Screening among Secondary School Students in Ilala District, Dar es Salaam, Tanzania(Laswai O)
14:30- 14:40	Do Universities in East and Central Africa have Capacity for Health Systems Research?(Simba D)
14:40- 14:50	Seroprevalence of Hepatitis B among pregnant women and associated risk factors, Moshi Municipality, Tanzania, 2012(Boniface P)
14:50 -15:00	Measles Outbreak in Kilosa District, Tanzania 2012: A case for epidemiological pattern dynamic(Rogath S)
15:00- 15:30	Discussion
15:30 – 16:30	NUTRITIONAL BREAK/ END OF DAY TWO

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: KAMABARAGE

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF. S. MASSELLE

RAPPORTEUR: DR. D.MLOKA

TIME	TITLE OF PRESENTATION
14:00- 14:10	The head nodding syndrome – Clinical classification and possible causes (Matuja W)
14:10- 14:20	Rapid and Simple Detection of FakeCialis Tablets by Physical inspection, Visible-Near Infrared Spectroscopy and Thin Layer Chromatography Technology (Shariff M)
14:20- 14:30	Pistia stratiotes (L.) in open water shallow wells: water contaminants and human diseases in Tanzania(Bagarama FM)
14:30- 14:40	Prevalence and determinants of overweight and obesity among primary school children in Dar es Salaam, Tanzania(Muhihi A)
14:40- 14:50	Respiratory symptoms and inflammation among block workers in Kilimanjaro volcanic mine sites, Tanzania(Simon M)
14:50- 15:00	The role of Onchocerca volvulus in the development of epilepsy in a rural area of Tanzania(Conig R)
15:00- 15:30	Discussion
	NUTRITIONAL BREAK/ END OF DAY TWO

DAY 3

PARALELL SESSIONS

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION: MKAPA I HALL

THEME: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF.L.LESHABARI

RAPPORTEUR: DR. J. MASALU

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Challenges facing the conduct of HIV Vaccine Trials in Tanzania (Mhalu F)
09:10- 09:20	DarDar 2-A: Macronutrient deficiencies among HIV-positive women with tuberculosis in Dar Es Salaam, Tanzania (Maghoe A)
09:20- 09:30	Awareness of side effects of antiretroviral therapy among patients attending Care and Treatment Clinic at Mbeya Referral Hospital August 2012 (Mwamelo K)
09:30- 09:40	Hearing impairment in HIV-infected individuals in Tanzania (Maro I)
09:40- 09:50	Application of quantitative second-line drug susceptibility testing at a multidrug-resistant tuberculosis hospital – Tanzania (Mpagama S)
09:50-10:00	Sources of community health worker motivation: A qualitative study in Morogoro Region, Tanzania (Greensapn J)
09:50-10:30	Discussion
10:30-11:00	TEA BREAK

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION: KAMBARAGE HALL

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF. S. MASSELLE

RAPPORTEUR: DR. E. CHOMI

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Enrolment and logistical challenges in conducting HIV vaccine trial in Dar es Salaam, Tanzania (Ngatoluwa M)
09:10- 09:20	Cervical cytomorphological changes amongst HIV-infected women attending care and treatment clinic at Muhimbili National Hospital, Dar es Salaam, Tanzania – (Mwakigonja A)
09:20- 09:30	Pharmacokinetic studies in tuberculosis patients: Studies in Northern Tanzania (Semvua H)
09:30- 09:40	Bacteriological Profile of Black pepper and Paprika sold in Ilala District, Dar es Salaam (Mloka D)
09:40- 10:10	Discussion
10:30-11:00	TEA BREAK

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION: MKAPA II HALL

SUB-THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF M MOSHI

RAPPORTEUR: A ANNAELI

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Performance of HIV Drug Resistance Surveillance System C in Tanzania, 2008-2012 (Munda CM)
09:10- 09:20	TLC for pharmaceutical analysis in resource limited countries: setting up an interlaboratory cross validation study Kaale E
09:20- 09:30	The Current Status of Nylon teeth belief in Tanzania (Mugonzibwa E)
09:30- 09:40	Implementation of artemether-lumefantrine treatment policy for malaria at health facilities in Tanzania (Mugoyela V)
09:40- 09:50	Maternal health cost and efficiency of services in selected health facilities in lindi and Mtwara rural districts in Tanzania(Saronga H)
09:50- 10:00	Health care seeking behaviour and utilisation in a multiple health insurance system: does insurance affiliation matter(Chomi E)
10:00-10:30	Discussion
10:30-11:00	TEA BREAK

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION:

THEME: SESSION APROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. S. ABOUD

RAPPORTEUR: DR. A. JOACHIM

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Virological outcome in patients failing clinically or immunologically on first line ART at Mbeya, Tanzania(Mgaya J)
09:10- 09:20	Temporal trends of molecular markers associated with artemether-lumefantrine tolerance/resistance in Bagamoyo District, Tanzania(Malmberg M)
09:20- 09:30	Cord Levels of Inflammatory Cytokines Predict Severe Malaria Risk during Early Childhood(Kabyemela E)
09:30- 09:40	Resistance to Severe Plasmodium Falciparum Malaria in African Children(Gonçalves B)
09:40- 09:50	Epidemiology of intestinal schistosomiasis in selected localities along the shores of Lake Tanganyika, Tanzania(Bakuza J)
09:50- 10:20	Discussion
10:30-11:00	TEA BREAK

A. CLOSING CEREMONY

TIME	TITLE OF PRESENTATION
11:00-11:20	Overview (Prof M Mhalu)
11:20-11:30	Remarks from VC Prof E.Kaaya
11.30-12:00	Closing address (Hon. Minister of Health and Social WelfareHon. Dr.H. Mwinyi
	END OF CONFERENCE

CONFERENCE PROGRAMME

DAY I

OPENING CEREMONY

TIME	TITLE OF PRESENTATION
08:00-09:00	Registration and Poster viewing
09:00 -11:00	Opening Ceremony
10:30 - 11:00	TEA BREAK

PARALLEL SESSIONS

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: MKAPA I HALL

THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF M LESHABARI

RAPPORTEUR: DR. D. MLOKA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Gender context of sexual violence and HIV sexual risk behaviors amongst married persons in Iringa region, Tanzania (Nyamhanga T)
11:10- 11:20	Cytokine and Transcriptome profiles reveal Non-specific and Sex Differential Effects with Diphtheria, tetanus, whole cell-pertussis combined vaccine and measles vaccine (Noho-Konteh F)
11:20- 11:30	Indoor Air Pollution, Social Inequality and Acute Respiratory Diseases in Children of Tanzania. (Bukalasa J)
11:30- 11:40	Epilepsy following simple febrile seizure in a rural community in Tanzania; a community based observational cohort study (Matuja W)
11:40- 11:50	The prediction of biological behaviour of prostatic adenocarcinoma in Tanzanian patients: a Gleason score-based follow-up (Rugwizangoga B)
11:50- 12:00	Microbiological contamination of cereal based weaning food in Dar es Salaam and Arusha regions. (Rushunju G)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: MKAPA IIHALL

THEME: CRISIS ON HUMAN RESOURCE FOR HEALTH

CHAIR: PROF. A. KIWARA

RAPPORTEUR: DR. G. FURMENCE

TIME	TITLE OF PRESENTATION
11:00- 11:10	Strengthening the Training Institution Information System for improved HRH production in Tanzania - (Sukums F)
11:10- 11:20	Human resource for health crisis a major challenge to health sector reforms: shortages or maldistribution? (Semakafu A)
11:20- 11:30	Open access perceptions and behavior of health sciences faculty and roles of information professionals in Tanzania(Lwoga E)
11:30- 11:40	Promoting Student Centered Learning in Tanzania (Kwesigabo G)
11:40- 11:50	Dentistry in Tanzania: a rare profession in need of more thrust in improving oral health (Simon E)
11:50- 12:20	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: KAMBARAGE HALL

THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. B. LEMBARITI

RAPPORTEUR: DR. M. LYIMO

TIME	TITLE OF PRESENTATION
11:00- 11:10	Challenges to the implementation of health sectordecentralization in Tanzania: experiences from KongwaDistrict council. (Frumence G)
11:10- 11:20	The Role of Evidence in Decision-Making Processes for Essential Medicines in Developing Countries: A Case Study in Tanzania (Thomas A.)
11:20- 11:30	Perceived barriers to access availablehealth services among men who have sex with men in Dar es salaam 2012 – (Magesa D)
11:30- 11:40	Deciding to join CHF: The Role of Clients and Managers Perceptions (Amani A)
11:40- 11:50	Risk Distribution across Multiple Health Insurance Funds in Rural Tanzania (Chomi E)
11:50- 12:00	Citation Analysis of Theses and Dissertations as a Measure of Web Resources Usage at Muhimbili University of Health and Allied Sciences(Chande R)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 11:00 -12.30

PARALLEL SESSION: KIKWETE HALL

THEME: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. K. PALLANGYO

RAPPORTEUR: DR. I.KIDA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Determinants of place of delivery among pregnant mothers in Kongwa district. (Semali I)
11:10- 11:20	Appraisal of in-service training among maternal and neonatal health workers in rural settings of southern Tanzania (Kakoko D)
11:20- 11:30	Malaria and First Trimester Pregnancy Loss in Lindi Region, Tanzania (Ng'walali P)
11:30- 11:40	Continuity of ANC, and PMTCT services in Morogoro, Tanzania (Kilewo C)
11:40- 11:50	Coverage, quality and equity of maternal and newborn health services in a rural area of Morogoro in Tanzania (Killewo J)
11:50- 12:00	Quality of intrapartum care in primary health care facilities in two rural districts in south east Tanzania (Massawe S)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Thursday, May 2nd , 2013, 14:00 -16.00

PARALLEL SESSION: KAMBARAGE HALL

SUB-THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF J KILLEWO

RAPPORTEUR: DRT. MSELLE

TIME	TITLE OF PRESENTATION
14:00- 14:10	Health Research Ethical review in Tanzania: the role of NatHREC and Institutional Review Boards (IRBs) (Ikingura J)
14:10- 14:20	Space Dimensions and Provision of Social Basic Needs to Determine Diarrheal Risks in Slums: A Cross-Sectional Study in Matyazo Urban Informal Settlements, in Rwanda - (Uwizeye D)
14:20- 14:30	Dietary protein-calorie supplementation increases levels of sialic acid in breast milk from HIV-positive Tanzanian mothers (Lyimo M)
14:30- 14:40	Household and Health Facility Factors Influencing enrolment in Community Health Fund (Amani A)
14:40- 14:50	Impact of Implementation of the TRIPS Agreement on Antiretroviral Drugs Importation into Tanzania (Shemdoe G)
14:50- 15:00	Seroprevalence of Toxoplasma gondii infection in health blood donors at Eastern Zone Blood Transfusion Services (EZBTS) in Dar es Salaam, Tanzania (Lema F)
15:00- 15:30	Discussion
15:30 - 16:00	BREAK

Thursday, May 2nd, 2013, 14:00 -16.00

PARALLEL SESSION: KIKWETE HALL

THEME: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF F.MHALU

RAPPORTEUR: DR K. MALIMA

TIME	TITLE OF PRESENTATION
14:00- 14:10	Socio-cultural issues related to pregnancy, birth preparedness and emergency readiness in Rural Tanzania. A qualitative study (August F)
14:10- 14:20	Adverse Side Effects of Hormonal Contraception, a Critical Barrier to Uptake and Use in Rural Tanzania: A Qualitative Study (Chebet J)
14:20- 14:30	Client's satisfaction with health facility delivery care services and associated factors. The case of Lindi and Mtwara rural districts, Southern Tanzania (Mpembeni R)
14:30- 14:40	Women's perceptions on antenatal, delivery and postpartum services in rural Tanzania (Mahiti G)
14:40- 14:50	Quality management role in improving skilled birth attendance in Tanzania (Shupa S)
14:50- 15:00	Factors affecting enrolment into CTCs among Mothers infected with HIV/AIDS in Morogoro Rural District (Mruma H)
15:00- 15:30	Discussion
15:30 - 16:00	BREAK

Thursday, May 2nd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA I HALL

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF F KAHABUKA

RAPPORTEUR: DR H NABURI

TIME	TITLE OF PRESENTATION
14:00- 14:10	Preferences of non-financial incentives and appreciation appraisal among health workers in Lindi district, southern Tanzania(Kakoko D)
14:10- 14:20	Diagnostic pattern of 60,000 adult and pediatric patients seen in the new full capacity emergency department at Muhimbili National Hospital, Dar essalaam Tanzania(Sawe H)
14:20- 14:30	Prevalence of Erectile Dysfunction and associated factors among diabetic men attending diabetic clinic at MNH-(Mutagaywa R)
14:30- 14:40	Overweight, obesity and perceptions about body weight among primary school children in Dar es Salaam, Tanzania(Muhihi A)
14:40- 14:50	The state of emergency medicine in the United Republic of Tanzania: challenges and opportunities in Emergency health care systems development(Mfinaga J)
14:50- 15:00	Cytoskeletal anomaly: implications in cancer pathogenesis (Russa D)
15:00- 15:30	Discussion
15:30 - 16:00	BREAK

Thursday, May 2nd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA II HALL

SUB-THEME: CRISIS ON HUMAN RESOURCE FOR HEALTH

CHAIR: DR. KWESIGABO

RAPPORTEUR: T NYAMHANGA

TIME	TITLE OF PRESENTATION
14:00- 14:10	Human resource for health crisis a major challenge to health sector rerforms: shortages or maldistribution?Kiwara A
14:10- 14:20	Addressing the human resource for health crisis: the lost in transition (LOTTA) syndrome - Sirili N
14:20- 14:30	Private public partnership (PPP) on trial: training higher level human resources for health (HRH) in Tanzania.Nyongole O
14:30- 14:40	The milleneum development goals post 2015: challenges in human resource development for the pharmacy sector in Tanzania- Sirili N
14:40- 15:10	Discussion
15:10- 16:00	BREAK

Thurday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION: KAMBARAGE HALL

SUB-TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. D. NGASSAPA

RAPPORTEUR: DR T. MSELLE

TIME	TITLE OF PRESENTATION
16:00- 16:10	Risk factors for VIA positivity and determinants of screening attendances in Dar es Salaam, Tanzania(Kahesa C)
16:10- 16:20	Human papillomavirus prevalence and type distribution in 3603 HIV-positive and HIV-negative women in the general population of Tanzania (Mwaiselage J)
16:20- 16:30	Establishing capacity of mosquito-borne disease control at MUHAS to bridge academia and community needs (Innocent E)
16:30- 16:40	Public-Private Partnership (PPP) Financing: An overviewof the service agreement financing in the health sector in Tanzania (Chitama D)
16:40- 16:50	Suitability of Rapid PSA Test for Prostate Cancer Screening in Tanzania (Ligoha D)
16:50- 17:00	Predicting intention to design communication strategy prior to developing Television spots (Kisisiwe Y)
17:00- 17:30	Discussion
	END OF DAY ONE

Thurday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION:

SUB-THEME:PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. S. KAAYA

RAPPORTEUR: DR. D.MLOKA

TIME	TITLE OF PRESENTATION
16:00- 16:10	Online/offline ICT pilot platform to support coordination in health data management in East Africa (Kaale E)
16:10- 16:20	A study of antimicrobial activity, acute toxicity and cytoprotective effect of a polyherbal extract in a rat ethanol-HCl gastric ulcer model (Moshi M)
16:20- 16:30	Challenges and strategies on the Use of ICT in higher learning institutions: A case study of MUHAS (Sukums F)
16:30- 16:40	Effect of Annona formulations on mosquito and non-target invertebrates in laboratory and semi-field condition (Kisanga A)
16:40- 16:50	Development of an enteric coated 20 mg omeprazole tablets formulation (Ng'wananogu R.)
16:50- 17:00	Assessment of adherence to multidosing artemether-lumefantrine drug combination in a rural community in Tanzania (Minzi O)
17:00- 17:30	Discussion
	END OF DAY ONE

Thurday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION:

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: DR.D. GASARASI

RAPPORTEUR: DR.I.KIDA

TIME	TITLE OF PRESENTATION
16:00- 16:10	Sexual Violence Against Female and Male Children and related health conditions in The United Republic of Tanzania (Kwesigabo G)
16:10- 16:20	Iron, calcium and zinc content of locally processed cereal-based complementary foods in Tanzania (Rushunju G)
16:20- 16:30	Exploring dentine hypersensitivity among adult patients attending dental treatment in Dar Es Salaam, Tanzania (Minja A)
16:30- 16:40	Dental caries among children and adolescents of Sub-Saharan Africa: Trends and future perspective - A review study (Mbawalla H)
16:40- 16:50	Youth unemployment, community mob violence, and Ruka Juu in Dar es Salaam, Tanzania (Outwater A)
16:50- 17:20	Discussion
17:00- 17:30	END OF DAY ONE

Thurday, May 2nd, 2013, 16:00 -17.30

PARALLEL SESSION: MKAPA II HALL

SUB-THEME:CRISIS ON HUMAN RESOURCE FOR HEALTH

CHAIR: PROF. N.MBEBATI

RAPPORTEUR: DR. G. FRUMENCE

TIME	TITLE OF PRESENTATION
16:00- 16:10	Improving Quality and Quantity of Skilled Health Workers through proactive staff recruitment and retention measures: lessons from Lindi and Mtwara regions- (Mwangu M)
16:10- 16:20	Challenges and strategies on the Use of ICT in higher learning institutions: A case study of MUHAS (Sukums F)
16:20- 16:30	First steps towards inter-professional health practice: An educational experiment in rural Bagamoyo district (Leshabari S)
16:30- 16:40	Manual Laparoscopic Skills Development Using a Low Cost Trainer Box in Tanzania(Beard J)
16:40- 16:50	Inspiring Medical Students into the Profession: Cadaveric Dissection Stress and Coping Strategies at MUHAS(Russa D)
16:50- 17:20	Discussion
17:00- 17:30	END OF DAY ONE

CONFERENCE PROGRAMME

DAY 2

Friday, May 3rd , 2013, 08:00 -10.30

PLENARY SESSION: KIKWETE HALL

THEME: PAN AFRICANISM AND AFRICAN RENAISSANCE

CHAIR: PROF. E. LYAMUYA

RAPPORTEUR: T.NYAMHANGWA

TIME	TITLE OF PRESENTATION
08:00-08:30	Registration and Poster viewing
09:00 -09:20	Key note speech pan africanism related to health – (Hon Dr. Salim Ahmed Salim)
09:20-09:35	Malaria: The African Dilemma (Prof Zul Premeji)
09:35- 09:50	HIV/AIDS and the emerging Pandemic threat (Prof J. Killewo)
09:50- 10:05	Establishing centres for excellence in Health research and training in Africa(Prof FMhalu)
10:05 - 10:30	Discussion
10:30 - 11:00	TEA BREAK

PARALLEL SESSIONS

Friday, May 3rd , 2013, 11:00 -12.30

PARALLEL SESSION: MKAPA HALL I

THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: DRS. LESHABARI

RAPPORTEUR: DR. D. RUSSA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Aflatoxin contamination of cereal based weaning food in Dar es salaam and Arusha regions(Rushunju G)
11:10- 11:20	Dust and respiratory health among male and female workers in Tanzania dusty industries-NUFU support(Mamuya S)
11:20- 11:30	Aetiology of fever in children attending Korogwe District Hospital, Tanzania. (Mahende C)
11:30- 11:40	Partnership in governing Implementation of Emergency Obstetric Care(Mkoka D)
11:40- 11:50	Prevalence, risk factors and awareness of high blood pressure and hyperglycemia in Mafia island, October 2011(Muhamedhussein MS)
11:50- 12:00	Community Perceptions of Rape and Child Sexual Abuse in Rural Tanzania(Muzdalifat A)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd , 2013, 11:00 -12.30

PARALLEL SESSION: KIKWETE

THEME: SESSION APROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. M. ABOUD

RAPPORTEUR: DR. J. MASALU

TIME	TITLE OF PRESENTATION
11:00- 11:10	Quality Maternal and Newborn Care (QUALMAT): Preliminary experience with the introduction of computer based Clinical Decision Support System (CDSS) in rural primary health care facilities in Lindi district (Massawe S)
11:10- 11:20	Cluster-RCT of a community health worker intervention to improve antenatal care and PMTCT uptake and retention in Dar es Salaam (Geldsetzer P)
11:20- 11:30	Impact of Antenatal Care Content on the Continuum of Care. The Case of Morogoro Region, Tanzania (Mpembeni R)
11:30- 11:40	Intrapartum and postpartum severe maternal morbidity in St Francis Hospital, Tanzania: annual incidence, associated risk factors and outcome- (Mtawali M)
11:40- 11:50	Kangaroo mother care a six month experience at maternal and new born health (Silas R)
11:50- 12:00	Utilization and Contents of Antenatal Care (ANC) in Southern Tanzania (Wangwe P)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd, 2013, 11:00 -12.00

PARALLEL SESSION: MKAPA HALL II

THEME: SESSION B: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. S MASSAWE

RAPPORTEUR: DR. T.MSELLE

TIME	TITLE OF PRESENTATION
11:00- 11:10	Evaluation of HIV antigen and antibody combination ELISAs for diagnosis of HIV infection in Dar es salaam, Tanzania, 2012. (Urio J)
11:10- 11:20	Prevalence and risk factors for skin diseases among ARV naive HIV infected pregnant women (Shayo G)
11:20- 11:30	Intermittent preventive therapy and treatment of malaria during pregnancy: a study of knowledge among pregnant women in Rufiji District, Southern Tanzania (Mutagonda R)
11:30- 11:40	Liver enzyme abnormalities and associated risk factors in HIV patients on Efavirenz-based HAART with or without Tuberculosis co-infection in Tanzania (Mugusi S)
11:40- 11:50	Nutritional deficiencies among HIV-infected children receiving care at Dar Dar Pediatric clinic in Dar es Salaam, Tanzania (Modlin C)
11:50- 12:00	Virological outcome in patients failing clinically or immunologically on first line ART at Mbeya, Tanzania (Mgaya J)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd, 2013, 11:00 -12.00

PARALLEL SESSION: KAMBARAGE HALL

THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. D. NGASSAPA

RAPPORTEUR: DR. A. MWAKIGONJA

TIME	TITLE OF PRESENTATION
11:00- 11:10	Public Private Partnership in Health in Tanzania: Exploringthe Emerging Institutional Structures. (Mwangu M)
11:10- 11:20	Health workers' knowledge and attitudes towards computerapplications in rural African health facilities (Sukums F)
11:20- 11:30	Drug Cost implications ofTreating HIV/ AIDS Patientswith Mental Illness at Muhimbili National Hospital, Tanzania. (Mtenzi J)
11:30- 11:40	Evaluation of Acute Flaccid Paralysis Surveillance System in Border Regions, 2009-2011, Tanzania(Bintabara D)
11:40- 11:50	Magnitude of Cardiovascular Diseases and Risk FactorsAmong Salary Earners In Zanzibar – (Ali Omari A)
11:50- 12:00	Evaluation of Laboratory Based Multi Drug ResistantTuberculosis (MDR TB) Surveillance System at MuhimbiliNational Hospital- (Lema N)
12:00- 12:30	Discussion
12:30 - 14:00	LUNCH

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA I HALL

THEME: SESSION APROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF F KAHABUKA

RAPPORTEUR: Dr M. LYIMO

TIME	TITLE OF PRESENTATION
14:00- 14:10	Agents of Change: Comparing HIV-related risk behavior of people attending ART clinics in Dar es Salaam with members of their social networks (Kaaya S)
14:10- 14:20	Integration of HIV counseling and testing into routine ANC: implications for quality of care (Kilewo C)
14:20- 14:30	Burden and determinants of severe anemia among HIV-infected adults in a large urban HIV programme, Tanzania- (Makubi A.)
14:30- 14:40	Interlaboratory cross validation of a chromatographic method for determination of lumefantrine in human plasma-a proficient capacity assessment of bioanalytical laboratories in East Africa (Minzi O)
14:40- 14:50	Risk factors for anaemia among HIV-infected patients at Muhimbili National Hospital (Mgassa A)
14:50- 15:00	Prevalence and severity of ADRs among patients using default first line ARV combinations in Mbeya (Rueben W)
15:00- 15:30	Discussion
15:30 - 16:00	NUTRITIONAL BREAK/ END OF DAY TWO

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: MKAPA II HALL

SUB-THEME: SESSION BPROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. M. MOSHI

RAPPORTEUR: DR. H. MALIMA

TIME	TITLE OF PRESENTATION
14:00- 14:10	Quality of Antenatal Care Counseling in Morogoro, Tanzania (Mpembeni R)
14:10- 14:20	Chest radiographic patterns among HIV+ and HIV- adults with PTB at Mwananyamala hospital tb clinic – (Balowa M)
14:20- 14:30	Cluster-randomized controlled trial of the World Health Organization's Option A versus Option B for the prevention of mother-to-child transmission of HIV in Dar es Salaam (Sando D)
14:30- 14:40	Quality of partograph recordings and perinatal outcomes at Muhimbili National Hospital, Tanzania- (Mdoe P)
14:40- 14:50	Morbidity after anterior iliac crest harvest for reconstruction of the mandible after ablative surgery for treatment of aggressive odontogenic (Simon E)
14:50 -15:00	Validity of Clinical and Immunologic Monitoring to Detect Virologic Failure in HIV Infected Children on Antiretroviral Therapy (Mgelea E)
15:00- 15:30	Discussion
15:30 – 16:30	NUTRITIONAL BREAK/ END OF DAY TWO

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: KAMBARAGE HALL

SUB-THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF. A.KIWARA

RAPPORTEUR: DR. H. NABURI

TIME	TITLE OF PRESENTATION
14:00- 14:10	The Role Of Malaria Rapid Diagnostic Test On The Management Of Fever Amongst Children In Kisarawe District, Coast Region 2009 (Lyimo S)
14:10- 14:20	Achievements and Challenges of Resource Allocation for Health in a Decentralized System in Tanzania: Perspectives of National and District Level Officers(Nyamhanga T)
14:20- 14:30	Attitudes and Practices on HIV Screening among Secondary School Students in Ilala District, Dar es Salaam, Tanzania(Laswai O)
14:30- 14:40	Do Universities in East and Central Africa have Capacity for Health Systems Research?(Simba D)
14:40- 14:50	Seroprevalence of Hepatitis B among pregnant women and associated risk factors, Moshi Municipality, Tanzania, 2012(Boniface P)
14:50 -15:00	Measles Outbreak in Kilosa District, Tanzania 2012: A case for epidemiological pattern dynamic(Rogath S)
15:00- 15:30	Discussion
15:30 – 16:30	NUTRITIONAL BREAK/ END OF DAY TWO

Friday, May 3rd, 2013, 14:00 -16.00

PARALLEL SESSION: KAMABARAGE

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF. S. MASSELLE

RAPPORTEUR: DR. D.MLOKA

TIME	TITLE OF PRESENTATION
14:00- 14:10	The head nodding syndrome – Clinical classification and possible causes (Matuja W)
14:10- 14:20	Rapid and Simple Detection of FakeCialis Tablets by Physical inspection, Visible-Near Infrared Spectroscopy and Thin Layer Chromatography Technology (Shariff M)
14:20- 14:30	Pistia stratiotes (L.) in open water shallow wells: water contaminants and human diseases in Tanzania(Bagarama FM)
14:30- 14:40	Prevalence and determinants of overweight and obesity among primary school children in Dar es Salaam, Tanzania(Muhihi A)
14:40- 14:50	Respiratory symptoms and inflammation among block workers in Kilimanjaro volcanic mine sites, Tanzania(Simon M)
14:50- 15:00	The role of Onchocerca volvulus in the development of epilepsy in a rural area of Tanzania(Conig R)
15:00- 15:30	Discussion
	NUTRITIONAL BREAK/ END OF DAY TWO

DAY 3

PARALELL SESSIONS

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION: MKAPA I HALL

THEME: PROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF.L.LESHABARI

RAPPORTEUR: DR. J. MASALU

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Challenges facing the conduct of HIV Vaccine Trials in Tanzania (Mhalu F)
09:10- 09:20	DarDar 2-A: Macronutrient deficiencies among HIV-positive women with tuberculosis in Dar Es Salaam, Tanzania (Maghoe A)
09:20- 09:30	Awareness of side effects of antiretroviral therapy among patients attending Care and Treatment Clinic at Mbeya Referral Hospital August 2012 (Mwamelo K)
09:30- 09:40	Hearing impairment in HIV-infected individuals in Tanzania (Maro I)
09:40- 09:50	Application of quantitative second-line drug susceptibility testing at a multidrug-resistant tuberculosis hospital – Tanzania (Mpagama S)
09:50-10:00	Sources of community health worker motivation: A qualitative study in Morogoro Region, Tanzania (Greensapn J)
09:50-10:30	Discussion
10:30-11:00	TEA BREAK

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION: KAMBARAGE HALL

SUB-THEME: EMERGING MAJOR HEALTH CHALLENGES

CHAIR: PROF. S. MASSELLE

RAPPORTEUR: DR. E. CHOMI

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Enrolment and logistical challenges in conducting HIV vaccine trial in Dar es Salaam, Tanzania (Ngatoluwa M)
09:10- 09:20	Cervical cytomorphological changes amongst HIV-infected women attending care and treatment clinic at Muhimbili National Hospital, Dar es Salaam, Tanzania – (Mwakigonja A)
09:20- 09:30	Pharmacokinetic studies in tuberculosis patients: Studies in Northern Tanzania (Semvua H)
09:30- 09:40	Bacteriological Profile of Black pepper and Paprika sold in Ilala District, Dar es Salaam (Mloka D)
09:40- 10:10	Discussion
10:30-11:00	TEA BREAK

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION: MKAPA II HALL

SUB-THEME: TRANSLATING HEALTH RESEARCH FINDINGS INTO POLICY AND PRACTICES

CHAIR: PROF M MOSHI

RAPPORTEUR: A ANNAELI

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Performance of HIV Drug Resistance Surveillance System in Tanzania, 2008-2012 (Munda CM)
09:10- 09:20	TLC for pharmaceutical analysis in resource limited countries: setting up an interlaboratory cross validation study Kaale E
09:20- 09:30	The Current Status of Nylon teeth belief in Tanzania (Mugonzibwa E)
09:30- 09:40	Implementation of artemether-lumefantrine treatment policy for malaria at health facilities in Tanzania (Mugoyela V)
09:40- 09:50	Maternal health cost and efficiency of services in selected health facilities in lindi and Mtwara rural districts in Tanzania(Saronga H)
09:50- 10:00	Health care seeking behaviour and utilisation in a multiple health insurance system: does insurance affiliation matter(Chomi E)
10:00-10:30	Discussion
10:30-11:00	TEA BREAK

SATURDAY, MAY 4TH, 2013, 08:00-12:00

PARALLEL SESSION:

THEME: SESSION APROGRESS IN ADDRESSING HEALTH RELATED MDGs

CHAIR: PROF. S. ABOUD

RAPPORTEUR: DR. A. JOACHIM

TIME	TITLE OF PRESENTATION
08:00- 09:00	Registration and Poster viewing
09:00- 09:10	Virological outcome in patients failing clinically or immunologically on first line ART at Mbeya, Tanzania(Mgaya J)
09:10- 09:20	Temporal trends of molecular markers associated with artemether-lumefantrine tolerance/resistance in Bagamoyo District, Tanzania(Malmberg M)
09:20- 09:30	Cord Levels of Inflammatory Cytokines Predict Severe Malaria Risk during Early Childhood(Kabyemela E)
09:30- 09:40	Resistance to Severe Plasmodium Falciparum Malaria in African Children(Gonçalves B)
09:40- 09:50	Epidemiology of intestinal schistosomiasis in selected localities along the shores of Lake Tanganyika, Tanzania(Bakuza J)
09:50- 10:20	Discussion
10:30-11:00	TEA BREAK

A.CLOSING CEREMONY

TIME	TITLE OF PRESENTATION
11:00-11:20	Overview (Prof M Mhalu)
11:20-11:30	Remarks from VC Prof E.Kaaya
11.30-12:00	Closing address (Hon. Minister of Health and Social Welfare Hon. Dr.H. Mwinyi
	END OF CONFERENCE

ABSTRACTS

CRISIS ON HUMAN RESOURCE FOR HEALTH

Title: Inspiring Medical Students into the Profession: Cadaveric Dissection Stress and Coping Strategies at MUHAS

Author(s): A.D. Russa[1] and N. L. Mligiliche[2]

Institution(s): 1Department of Anatomy, Muhimbili University of Health and Allied Sciences, Dar es Salaam Tanzania & 2Medical Education, Weill Cornell Medical College in Qatar, Doha Qatar

Background: Experiences during learning influence mastery of the competencies during the training and in actual practice. The sight and the dissection of the human dead body (cadaver) in the subject of anatomy early in the medical training has been said to dissuade students to abhor the medical profession during training and in the future clinical practice career.

Objectives: This study aimed appraising the Tanzanian first year medical students at MUHAS on emotional and physical stress during cadaver dissection and coping strategies. We also sought the students' experiences and attitude on the effective of the dissection sessions as compared with conventional teaching methods in the anatomy learning.

Methods: 169 students completed a self-administered questionnaire that assessed emotional and physical symptoms encountered during cadaver dissection, it also asked for the coping strategies. The questionnaire Frequency distributions were used to summarize demographic variables, symptoms and coping strategies. A p-value of ≤0.05 was considered significant.

Results: Majority of students were males. 52.7% of the students had seen a dead body prior dissection. 78.7% were fearful and anxious at the beginning, but there was a significant decrease towards the end of dissection course (p-valuerior exposure to a dead body significantly lowered the levels of stress. Curiosity, prior mental preparedness, pressure and help from the anatomy staff were the most common coping strategies. Only one in 4 students reported philosophy/religious convictions as a coping strategy. And about one in ten students reported that dissecting a human body interfered with their religious views (10.1%).

Conclusion: Cadaver dissection can be highly challenging and threating; we encourage mentors to appropriately institute better coping strategies. Alternative teaching methods using ICT e.g. 3D imaging can reduce the cadaveric stress to students.

Title: THE MILLENEUM DEVELOPMENT GOALS POST 2015: CHALLENGES IN HUMAN RESOURCE DEVELOPMENT FOR THE PHARMACY SECTOR IN TANZANIA

Author(s): Kiwara, Angwara D (Prof),Nyongole, Obadia (Dr), Sirili, Nathanael

Institution(s): MUHAS

Background

The pharmacy sector in Tanzania is compounded by many challenges for its thriving. There has been an increase in consumption of over the counter drugs and many reported cases of counterfeit and expired drugs. According to MoHSW (2007) the country was having 5241 pharmacies and retail drugs shops. WHO (2011) states that many low-income countries' face a scarcity of Medicines in the Public sector and hence forcing them to the private sector in which the price of medicine is averaged to be five to fourteen times higher varying from countries.

Post 2015 MDGs will feature health goals 4, 5, 6 and target 8E. Achievements will depend on accessibility to pharmaceuticals, and skilled human resources. Currently the Pharmacy sector is private driven.

Objective:

Carrying out an analysis of training and distribution of Pharmacists to determine undergraduate output, postgraduate level capacity building, availability in pharmacy industry and their impact on MDGs performance.

Methods

A desk review of Pharmacy graduate and postgraduate training records for the period 1992-2010 was done. Survey of the available Pharmacists in 117 districts, fourteen (14) major NGOs and the available Training institutions in mainland Tanzania was done.

Results

Training graduate level Pharmacists is done locally and abroad. Locally the School of Pharmacy MUHAS trained. For the period 1992-2010, 454 Bachelor Pharmacists graduated: 163 female and 331 males. Only 9 Masters graduated-1.98% of the first degrees: 3 males 6 females; 3 PhDs completed: 2 females and 1 male. 67 trained abroad - 45 Bachelor level, 21 Masters, one PhD.

A total of 208 Pharmacists were found in this survey with only 95 in 117 districts. Majority are servicing public and private hospital pharmacies, managing retails and NGOs as sales persons or dispensers. Functional link with the pharmaceutical industry is minimal.

A postgraduate trained group but fully engaged as faculty includes 19 PhDs and 7 Masters in the School of Pharmacy and 9 PhDs and 3 Masters in the Institute of Traditional Medicine at MUHAS.

Conclusion

Very few Pharmacists have undergone postgraduate training –only 1.98% of pharmacy graduates and very few are available in districts. The chances of Tanzania performing better in MDG post 2015 in the pharmaceutical sector are very low unless a well thought out strategy is put in place to train postgraduate pharmacists.

Title: PRIVATE PUBLIC PARTNERSHIP (PPP) ON TRIAL: TRAINING HIGHER LEVEL HUMAN RESOURCES FOR HEALTH (HRH) IN TANZANIA.

Author(s): Nyongole, Obadia (Dr), Mkoka Dickson (Mr), Kiwara Angwara (Prof)

Institution(s): Muhimbili University of Health and Allied Sciences

Background: A major emphasis in the ongoing health sector reforms in Tanzania is PPP in all aspects. Whether it has worked or not is a subject of speculation. This paper sets out to examine this subject matter with a focus on HRH training at a graduate level.

Objectives: Examine to what extent PPP has worked at graduate HRH training in Tanzania.

Methods: Analysis of reports from five health Universities in Tanzania with a focus on MDs, DDS and B.Pharm trained for the period 2001 to 2010

Results: Between 2001 and 2010 five institutions trained these graduate HRH. They included a public institution (MUHAS), Private faith based (KCMC and BUCHS) and private for profit (IMTU and HKMU). For the past ten years during which PPP was a major policy agenda MUHAS was the only institution training DDS and B.Pharm. It trained 332 (100%) B.Pharm and 188 (100%) DDS. It also trained 1,285 MDs or 64% of all MDs trained locally. If the three degrees are combined the total trained is 2,542. MUHAS- trained 1,805 (71%). KCMC trained 233 (9.16%); IMTU 218 (8.57%); HKMU 232 (9.12%); BUCHS (2.12%). The private for profit group trained 450 of the 2,542 (17.69%) or 25% those trained by MUHAS. This is a major challenge for the PPP.

Conclusion: The PPP policy in Tanzania is under a serious trial. It has not worked at this level as expected. For every four graduates from the public institution only one graduated from the private for profit group. This has been the case despite government subvention. If the policy is to be consummated a closer reexamination is needed to nudge the PPP pundits for more definitive action plan.

Title: HUMAN RESOURCE FOR HEALTH CRISIS A MAJOR CHALLENGE TO HEALTH SECTOR RERFORMS: SHORTAGES or MALDISTRIBUTION?

Author(s): Semakafu Avemaria (Dr), Nyongole Obadia (Dr), Kiwara Angwara (Prof)

Institution(s): Muhimbili University of Health and Allied Sciences

Background: In the 1990s Tanzania embarked on Health Sector Reforms aiming at improving health services in the country. In these reforms the District became the focal point for planning and implementation. Trained HRH are the drivers of effective and efficient planning and leadership. In this context this paper seeks to examine the distribution of graduate HRH by July 2011 in the country to assess the HRH capacity at the district level.

Objectives: Determine the pattern of graduate HRH distribution in the country by July 2011.

Methods: An analysis of key HRH distribution reports from all the regions, districts, training institutions, NGOs and the MOHSW was done to establish who was where by July 2011.

Results: From 2001 to 2010 a total of 2248 MDs, 198 DDS and 399 B.Pharms were trained locally and abroad both in public and private institutions. The distribution of this HRH was as follows: The focus of this study i.e. the district level has the following numbers of graduates: 309 (13.75%) MDs, 32 (16.16%) DDS and 95 (23.8%) B.Pharms. At the regional and specialized hospitals the numbers were: 508 (22.6%) MDs, 45 (22.73%) DDS and 64 (16.04%) B.Pharms. At the training schools (not Universities): 51 (2.27%) MDs and 14 (3.5%) B.Pharms. At the level of major health related NGOS the numbers were: 67 (2.98%) MDs, 5 (1.25%) B.Pharms and 4 (2.02%) DDS.

Conclusion: This survey covered all possible locations of three key graduates - MDs, DDS, and B.Pharms -in the health sector. There is skewed distribution away from the districts towards urban areas. The district is therefore impaired in planning. Those lost in transition are approximately 45% of the total trained.

Title: ADDRESSING THE HUMAN RESOURCE FOR HEALTH CRISIS: THE LOST IN TRANSITION (LOTTA) SYNDROME

Author(s): Sirili, Nathanael (Dr),. Kiwara, Angwara (Prof), Elisa Honsia (Dr)

Institution(s): i.Muhimbili University of Health and Allied Sciences ii. Mbeya Referral Hospital

Background: Tanzania is experiencing a serious HRH crisis. Shortages are 87.5% and 67% in private and public hospitals respectively. Mal distribution and brain drain compound the shortage. Traditionally suggested solutions: train more, motivate or tailor curricula.

This paper addresses 'lost in transition syndrome' and how it drives the crisis. This includes analyzing what happens to the graduate in the period: graduation-internship-appointment.

Objectives: Improving knowledge on the HRH crisis by analyzing the graduation-internship-appointment (GIA) period

Methods: Structured interviews with post intern graduates and employment permits review covering five years to determine how the GIA period contributes to the HRH crisis.

Results: Attrition and HRH loss are evident within GIA. There is no adequate coordination between producer and employer. Internship depended on the graduates applying for internship at will. This provides significant delay and escape. It allows rejection of "labeled graduates" by some hospitals. Graduates do "other things" for up to a year after graduation. Accommodation and "salaries" are initial problems. Accommodation is sought with friends, relatives or in risky places. "Salaries" are delayed for up to six months. These challenges push some to seek employment elsewhere. There are delays in recruitment post internship. 2006 permission for recruitment allowed only 80 out of 218 MD graduates (37.7%). For DDs allowed were 7 out of 27 graduates (25.03%). 2008 permission for MDs was 265 out of 310 graduates (85.48%), for B.Pharm permission was for 44 of 47 graduates. 2009 permission for MD was 190 out of 330 graduates (57.58%), 2010 permission for MD was for 249 out of 408 graduates (61.03%).

Conclusion: The graduation-internship-appointment period nurtures LOTTA. It contributes significantly to the HRH crisis in Tanzania. The solution to this is within reach. Establish better HRH management system.

Title: Human Resources for Health training in Tanzania: Addressing the Epidemiological transition and Vision 2025.

Author(s): Kiwara, Angwara D (Prof),Sirili, Nathanael (Dr),Flumence Gasto (Dr),

Institution(s): Muhimbili University of Health and Allied Sciences

Background: Appropriately trained Human Resources for Health (HRH) are key inputs in the realisation of high quality livelihood, the first attribute of Tanzania's Development Vision 2025. Training should build capacity to manage the emerging epidemiological transition (non-communicable diseases) to attain vision 2025. Understanding of social determinants of health as the primary driver of the transition is critical. Non-communicable diseases: cardiovascular disorders, cancers, diabetes; the persistent infectious and parasitic diseases constitute this transition.

Objectives: To determine what proportion of time is provided for courses related to social determinants of health by analysing medical schools' curricula in Tanzania

Methods: A desk review of five medical schools curricula in Tanzania was done to determine proportion of time allocated for courses related to social determinants of health. A literature review to find out the magnitude of non communicable diseases was done.

Results: **Current curricula of graduate HRH is germ theory dominated focusing** on bacteria, viruses, and parasites as the primary causes of ill health. 70% of the curricula address the biomedical model and how to manage respective diseases. Currently, 80% of global deaths related to NCDs occur in the developing countries driven by social determinants. Social determinants, however, are given 10% of the curricula time for Physicians. This paper suggests Social Determinants of health and the Vicious Circle model as an input in the improvement of training. The circle shows in a dynamic manner that biomedical model training is not able to build capacity to manage problems of the epidemiological transition.

Conclusion: The current medical school curricula provide minimum time for the social determinants. Its graduates will not be able to manage the epidemiological transition and so vision 2025 can't be attained.

Title: Strengthening the Training Institution Information System for improved HRH production in Tanzania

Author(s): Sukums, Felix; Budoya,Christian; Kalisti,Eleuteri;Nyella, Edwin

Institution(s): MUHAS,EnterSoft Systems,EnterSoft Systems,MUHAS

Background: Managing health workforce is one of the important tasks within the health sector that can be accomplished by the application of information systems. In Tanzania the ministry of health and social welfare (MOHSW) is mandated to oversee the planning, production, distribution, and management of human resource for health. It has been a challenge for MOHSW to collect, analyse, utilize, and share health training institutions(HTIs) information such as courses offered, required and available employees and assets, students enrolment and capacities, production.

Objectives: To devise an efficient and effective method of managing and utilizing THIs information for informed decision making.

Methods: In order to achieve this undertaking MOHSW in collaboration and with support from Japan International Cooperation Agency (JICA) and with consultation from EnterSoft Systems Ltd developed and implemented a Training Institution Information System (TIIS). Open and free software technologies were opted while deploying the system in a web based three-tier architecture. Prototyping techniques were utilized to quickly and easily gather requirements and inputs from the users. The national rollout of the system was done in five phases from 2009 to 2012. The activities done were system installation, operational and data utilization trainings and support supervision.

Results: The system has been rolled out to 134 HTIs and about 321 officials were trained. Four support supervision visits and onsite trainings were conducted. About 90% of the data about the TIs has been collected and is being used at both the central and institution level to inform decision making process. A total 432 officials were trained in order to build capacity to utilize the data for planning, management and development of their institutions.

Conclusion: The system has been perceived useful and easy to use. It has availed important information required for decision making in various aspects to oversee health workforce production, distribution, and teaching environment. Several challenges were encountered during the course of system introduction including lack of ICT supportive environment such as equipment, internet connectivity, IT support staff, and computer skills among users. Follow-up is being made to ensure smooth running of the system.

Title: Challenges and strategies on the Use of ICT in higher learning institutions: A case study of MUHAS

Author(s): Sukums, Felix;Nyella, Edwin;Chambuso,Mhina

Institution(s): MUHAS

Background: Introduction of information and communication technologies (ICT) services in education sector has had an impact on educational and training needs, both in terms of the content and the delivery of educational and training services. As a result, Universities from both developed and developing countries are challenged with an enormous need to integrate ICT into their corporate strategies, organization and educational processes. The introduction of ICT at MUHAS was based on ad hoc needs accomplishment. This made unplanned growth of ICT infrastructure and services. There were no strategic plans to introduce ICT services in the core functions of the University. Nonetheless, clear understanding of the current users' needs and perceptions, the challenges and opportunities provided by ICT is an important step towards effective and strategic use of ICT in enhancing teaching and learning processes.

Objectives: To explore ICT usage challenges and needs among MUHAS staff and students

Methods: This study was conducted at MUHAS in 2009/2010 employing both quantitative and qualitative techniques. Questionnaires were administered to the sample size of 340 people randomly and purposefully selected from the population. SPSS version 17 was used to record, clean and analyse the collected data. The descriptive statistics was used to assess the distribution of the variables among the study population.

Results: Out of 340 samples 216 responded which is 63.7%. Mean age was 29.7years (range 19-68). Staff (both academic and administrative) were 27.3 % (n=59) while 72.7% (n=157) were students (undergraduate and postgraduate). 53% indicated to have attended computer training. Respondents rated their computer skills as low (23.1%), moderate (66.7%) and high (10.2%). With regards to users' satisfaction with ICT services provided only 19% were satisfied whereas 42.6% and 38.4% were unsatisfactory and undecided respectively. Inhibitors to an effective ICT usage in teaching and learning were reported to be inadequate computers (42%), slow and unreliable internet services(40% vs 27%), lack of ICT training and inadequate ICT staff and support were reported by 18% and 15% respectively.

Conclusion: Respondents perceived the use of ICT in teaching and learning as an important undertaking. A holistic and participatory approach is required to address challenges encountered by the ICT users.

Title: DENTISTRY IN TANZANIA: A RARE PROFESSION IN NEED OF MORE THRUST IN IMPROVING ORAL HEALTH"

Author(s): Gasto Flumence (Dr),Sirili Nathanael (Dr), Angwara Kiwara (Prof), Elison N Simon (Dr)

Institution(s): Muhimbili University of Health and Allied Sciences

Background: The National Health Policy; MDG six and Vision 2025 emphasize Oral Health as a prerequisite for Health and well being. Planning and Strengthening Oral Health includes training adequate and highly qualified HRH to manage and provide the required services. This paper sets out to investigate training of Dental Surgeons (DDS) graduates and postgraduates (M.Dent) in the country for the period 1992 to 2010 in an attempt to draw conclusions on the future of Dentistry in the country and asses realization of its roles in well being.

Objectives: To determine numbers and distribution of graduate and postgraduate Doctors of Dental Surgery trained in the country for the period 1992 to 2010.

Methods: Analysis of Training and HRH records from the Health University and districts respectively over the period covered 1992-2010.

Results: Only MUHAS trains DDS inTanzania. For the past 19 years 247 graduated. From 1992 to 2000 an average of 7 graduated yearly. 2001 to 2010 the number rose to 19 yearly. By July 2011 out of 117 districts surveyed there were 83 districts in mainland Tanzania without a DDS after 22 years of training. In the same period only 14 graduated with an MDent.For the years 2005, 2007 and 2008 only one MDent graduated. 1992 to 2000 and 2009 there was none. Of the total graduates only 1 in 20 did postgraduate at MUHAS. In the same period 275 M.Med graduated from MUHAS. Of these 17.42% or 1 in every 5 did postgraduate.

Conclusion: Dentistry is an "endangered species". The numbers trained are far too small to enable the profession reproduce itself or play a significant role in Oral Health and so well being. A " Marshall plan" is needed to revitalize this discipline.

Title: Promoting Student Centered Learning in Tanzania

Author(s): Gideon Kwesigabo[1], David Urassa[1], Vera Ngowi[1], James Wolff[2], Robert Schadt[2], Prudence Merton[3], Richard Waddell[3], Lisa Purvis[3], Mark Splaine[3] and Karen Tombs[3]

Institution(s): MUHAS

Background: Cognitive science indicates that traditional teaching methods like lecturing are inadequate to prepare students to meet the complex challenges facing society. Partnership activities have focused on facilitating faculty skills development and curriculum redesign to actively engage students in their learning and develop stronger analytical and problem solving skills.

Objectives: The School of Public Health and Social Sciences (SPHSS) of Muhimbili University formed a partnership with Dartmouth College and Boston University School of Public Health (D/BU) to improve public health education in Tanzania. The goals of the project are to revise current curriculum from knowledge to competency based and to develop a program for faculty excellence at SPHSS.

Methods: The partnership collaborated to design a student-centered core curriculum for master's candidates in all graduate programs at SPHSS. One of the key components is to prepare faculty to develop and teach with case studies. D/BU and SPHSS conducted a two-day workshop for 35 faculty to provide guidelines for case development and prepare and pilot-teach cases for their core curriculum.

Results: In the workshop faculty considered the rationale and challenges of case teaching at SPHSS and created guidelines for their development. Eight cases for the new core were developed and pilot-taught. Faculty consultations formed the basis for building necessary case development and teaching skills and understanding the situational factors affecting case teaching at SPHSS.

Conclusion: Teaching with cases provides one important way of transitioning from a teacher-centered to a student-centered, interactive, and problem-based learning environment. To make this transition effective, the partnership is building faculty expertise not only in case teaching but in other student-centered, interactive teaching methodologies. This workshop modeled for faculty a student-centered method in a predominately teacher-centered, lecture environment and it could easily be replicated in other settings.

Title: Open access perceptions and behaviour of health sciences faculty and roles of information professionals in Tanzania

Author(s): Lwoga, Edda Tandi

Institution(s): MUHAS

Background: Open access offers opportunities for health sciences faculty to conduct research, educate students, monitor public health, and integrate current best evidence from research into clinical policy and care delivery. However, the uptake of contributions to OA publications is low in Africa, including Tanzania

Objectives: To investigate the faculty's awareness, perceptions and use of open access, and the role of information professionals in supporting open access (OA) scholarly communication in Tanzanian health sciences universities

Methods: A cross sectional survey was conducted. Semi-structured interviews were conducted with 16 librarians, while questionnaires were physically distributed to 415 faculty members in all eight Tanzanian health sciences universities, with a response rate of 71.1%.

Results: Most faculty members were aware about OA issues. However, .a small proportion of faculty's research materials was made available as OA. Senior faculty with proficient technical skills were more likely to use open access than junior faculty. Major barriers to OA usage were related to ICT infrastructure, awareness, skills, author-pay model, and copyright and plagiarism concerns. Interviews with librarians revealed that there was a strong support for promoting OA issues on campus, however, this positive support with various open access–related tasks did not translate into actual action.

Conclusion: This is the first comprehensive and detailed study focusing on the health sciences faculty's and librarians' behaviours and perceptions of open access initiatives in Tanzania, and reveals findings that are useful for planning and implementing open access initiatives in other institutions with similar conditions.

Title: First steps towards inter-professional health practice: An educational experiment in rural Bagamoyo district

Author(s): Sebalda Leshabarii, Lindsey A. Lubbockii, Herbert Kaijageiii, Willbrord Kalalaiv, Gary Koehlerv, Siriel Massawevi, Projestine Muganyizivi, Sarah B. Macfarlanevii, and Patricia S. O'Sullivanviii

Institution(s): MUHAS and UCSF

Background: Inter-professional collaboration is believed as critical to providing better protective interventions to patients' care by bringing multiple perspectives.

Objectives: To explore the value of inter-professional training for Medical University students.

Methods: Four teams each included a medical student, a nursing student, a pharmacy student and environmental sciences student participated. The MUHAS faculty leaders randomly assigned students to the teams before leaving for Bagamoyo, introduced members to one another, and explained the expectations, objectives, and tasks. Faculty asked students to consider how, through their respective professions, they could enhance the quality of the district hospital patient care and what they learned about practicing with other professionals. In Bagamoyo's district hospital, student teams and MUHAS faculty leaders (one of whom supervised each team) spent the day in the labor or pediatric wards or antenatal or pediatric clinics. Faculty, in consultation with hospital staff, selected a single patient for which each student team could make an assessment, conduct a complete history, and develop a plan of action. After a day working together, each team presented its case to the entire group of faculty and students.

Results: The students demonstrated acquisition of an introductory level of a collaborative practice competency through joint examination of the patient using an inter-professional lens. They expressed increased respect for their colleagues' knowledge as a result of using a collective, inter-professional approach to each case. Students demonstrated sub-competencies calling for expressing one's knowledge and opinions with clarity and respect, listening in an active way, and encouraging opinions from other team members. The students wrote reports with balanced contributions from each profession and tied the perspectives together in a plan indicating that they placed high value on quality patient care.

Conclusion: This pilot learning experience revealed the vision and benefits of collaborative practice hence calling for further studies

Title: Improving Quality and Quantity of Skilled Health Workers through proactive staff recruitment and retention measures: lessons from Lindi and Mtwara regions.

Author(s): Mughwira Mwangu[1], and Tumaini Nyamhanga[1]

Institution(s): 1 School of public health and social sciences, Muhimbili University of Health and Allied Sciences, Box 65454, Dar Es Salaam, Tanzania.

Background: The problem of inadequate trained health staff in Mtwara and Lindi regions is quite critical estimated at 65% shortage. In an attempt to address the problem a study was commissioned by GIZ/EPOS to look into the possible innovative ways of increasing the availability of trained health staff deployed in the two regions.

Objectives: The aim of this study was to document the existing best practices in staff recruitment and retention in local councils in Lindi and Mtwara with the intention of formalizing and popularizing them in all councils in Lindi and Mtwara

Methods: A qualitative study was carried out involving key actors in staff recruitment at council level in the Southern Zone and other councils outside the Zone. In-depth interviews were done with identified key informants among health staff working in councils and Health Training Institutions in the Southern Zone. Secondary data from council documents on staff recruitment and retention were used.

Data analysis was done descriptively while simple tables were used to show some quantitative variables

Results: Results show that the shortage of trained health workers continues to be a critical problem in the South as has been documented in many other studies. The study has also shown that some council have developed some coping mechanisms to increase the number of trained health staff through proactive recruitment and retention.

Conclusion: The study concludes that there are good practices of staff recruitment and retention by some council in the Southern Zone and elsewhere that are worth adopting and adapting by other councils in order to reduce the problem of HRH for health crisis in their councils.

Title: Manual Laparoscopic Skills Development Using a Low Cost Trainer Box in Tanzania

Author(s): Beard Jessica, Akoko Larry (presenting), Mwanga Ally, Mkony Charles, O'Sullivan Patricia

Institution(s): MUHAS, UCSF

Background: Although laparoscopy has become the standard treatment for many surgical conditions in wealthy countries, it is rarely utilized in resource-poor settings. Despite access to laparoscopic equipment and interest in skills acquisition among surgeons, opportunities for training in laparoscopy are minimal at the Muhimbili.

Objectives: To explore the feasibility and effectiveness of guided practice using a low cost laparoscopic trainer on the development of laparoscopic skills by surgeons in a resource-poor setting,

Methods: This was a prospective trial involving a pretest/posttest single sample design. Study participants completed a background survey and pretest on the 5 McGill Inanimate System for Training and Evaluation of Laparoscopic Skills (MISTELS) tasks using a low cost simulator developed and validated previously at the University of California-San Francisco. Upon completion of a 3 month guided practice course, participants were again tested on the MISTELS tasks and completed an exit survey.

Results: Fourteen participants completed the course. Most of the subjects were surgical residents (64.3%). Only 2 participants (14.2%) had previous laparoscopic training and baseline laparoscopic surgical experience was limited to intra-operative observation only. Study subjects practiced the MISTELS tasks for an average of 8.67 hours (range: 4.75-15.25) over the three-month course. On the posttest, participants improved significantly in performance of each of the MISTELS tasks (p

Conclusion: We have demonstrated the feasibility and effectiveness of training with a low cost laparoscopic trainer box in Tanzania. Study participants achieved impressive posttest scores on the 5 MISTELS tasks with minimal baseline laparoscopic exposure. We feel that guided training by an expert was key in ensuring correct technique during practice sessions.

Emerging Major Health Challenges

Title: Dust and respiratory health among male and female workers in Tanzania dusty industries-NUFU support

Author(s): Simon Mamuya, Magne Bratveit, Bente Moen

Institution(s): Muhimbili University and Bergen University

Background: The project on dust and respiratory health among was conducted between July 2007 and 2011 by University of Bergen and MUHAS. Respiratory disorders due to dust exposures are increasing especially in developing countries

Objectives: To build capacity of MUHAS faculties to enable them train and conduct research in the area of OHS by assessing the dusty industries on exposure and respiratory health

Methods: Suitable candidates were recruited from Tanzania to pursue MPhil and PhD programs at University of Bergen. Dusty industries such as Cement, Sisal and coffee were identified. Cross sectional studies were conducted. Respiratory questionnaire was administered among workers. Lung function indices were captured by spirometers well calibrated. Dust samples were collected using SKC pumps on Celulose acetate and PVC filters. Dust was analysed in the laboratory in Eurofins Finland and Lulea University in Sweden. SPSS with various statistical tests were performed for assessing the relationship between exposure and respiratory symptoms .A criterion for significant differences was assumed when p value was less than 0.05.

Results: A total of 13 scientific manuscripts were published in international journals. One female Tanzania completed PhD successfully, and another female and a male Tanzanians to complete PhD in autumn 2013. Significantly high dust and endotoxin levels were noted to among sisal and coffee dust samples. High respiratory symptoms were also noted among workers in dust factory compared to referent factories. Reduced lung functions among workers in dust industries were also noted.

Conclusion: The North South cooperation contributed towards capacity building for Occupational Health and Safety for Muhimbili University, and Tanzania at large. Dust control mechanisms to be instituted so as to safeguard the health of workers in dusty industries.

Title: Prevalence of Erectile Dysfunction and associated factors among diabetic men attending diabetic clinic at MNH

Author(s): Mutagaywa, Reuben

Institution(s): MUHAS

Background: There has been an increase in the prevalence of erectile dysfunction (ED) in the general population. This increase has been attributed to by several factors including Diabetes Mellitus (DM)

Objectives: To determine the prevalence of ED and associated factors among diabetic men attending diabetic clinic at MNH

Methods: This was prospective cross-sectional study, conducted among 312 consecutively recruited diabetic male (Mean age = 51.33 years) for the period of 8 months. Data were collected using a structured questionnaire consisting several demographic variables, clinical aspects variables and International Index of Erectile Function questionnaire.

Descriptive statistics were calculated to describe the study population and check for initial associations at univariate level. Multivariate logistic regression was used to identify and quantify predictors of ED .Variables that were entered in the equation were duration of DM, type of DM, history of:- smoking, alcohol, stroke, and peripheral neuropathy; monofilament score, being hypertensive, lipid profile, fasting blood sugar, level of Glycosylated hemoglobin and Ankle Brachial Index score while controlling for other demographics.

Results: The prevalence of ED was found to be 55.1%. Forty patients (12.8%) had mild dysfunction, 45 (11.5%) moderate and 87 (27.9%) severe dysfunction.

Prevalence was higher (78%) in men ≥60 years (p filament test, and evidence of peripheral vascular disease were highly significantly associated with ED. History of:-smoking, drinking alcohol, and stroke were also significantly associated with ED. On multivariate logistic regression the predictors of ED were found to be old age (odds ratio [OR] = 7.1, 95% CI 1.2-40.7), evidence of peripheral neuropathy ([OR] =5.9, 95% CI 1.6-21.3), and evidence of peripheral vascular disease ([OR] =2.5, 95% CI 1.2-5.3). This study also showed that ED was highly statistically significant associated with other sexual domains.

Conclusion: Study showed prevalence of ED is high among DM patients. Interventions aimed at prevention, early diagnosis and detection of DM and its complications, and adherence to treatment to prevent complications should be implemented.

Title: TEENAGE PREGANCY IN RURAL TANZANIA: PERCEIVED CAUSES, CONSEQUENCES AND ACTIONS FROM PARENTS AND THE GOVERNMENT

Author(s): BIHONDO BERTHA

Institution(s): NIMR

Background: Background:

Teenage pregnancy is significant public health problem that usually results to untoward outcomes such as school dropouts, family and social disharmony also pregnancy complications to mention few, such as fistula and severe bleeding. We conducted a study to determine perceived causes of teenage pregnancies in rural Tanzania and the resulting consequences in particular actions taken by parents and government.

Objectives: To asses the causes and effects of teenage pregnancy in rural areas in Tanzania.

Methods: Methodology:

We selected Sangabuye area, which is in the Ilemela one of the rural district of Mwanza Region. In this study, we interviewed 50 participants that include teachers, students and community leaders using a structured questionnaire that contained questions on teenage pregnancy, perceived causes and actions taken by parents and government to reduce teenage pregnancy in schools. We asked about reproduction education and friendliness of parent to their daughters.

Results: Findings:

We observed that the main perceived cause of teenage pregnancy is poverty in families (68%). Other perceived causes in the order of frequency-included temptation to posses luxury things (12%),lack of communication on reproductive health issues between parents and their daughters (10%), single parent family (6%).

Conclusion: Conclusion:

Families should provide basic needs to their family members especially girls who are under 18 years. In addition, the respective ministries should make efforts to introduce syllabus and curriculum in school on reproductive health issues. We need to find ways that would allow in-school pregnant girls to continue with studies.

Title: Rapid and Simple Detection of FakeCialis Tablets by Physical inspection, Visible-Near Infrared Spectroscopy and Thin Layer Chromatography Technologies

Author(s): Maajar Shariff and Eliangiringa Kaale

Institution(s): Muhimbili University of Health and Allied Sciences , School of Pharmacy, Tanzania, Family Health Interantional and Supply Chain Management System

Background: Fake medicines from illegal distribution channels area serious problem in developing countries. Different high profile medicines, such as erectile dysfunction drugs,frequently are faked

Objectives: The aim of the study was to explore high throughput screening methods for qualitative detection of fake Cialis tablets, and determine whether they contained the correct drug.

Methods: We investigated the feasibility of information rich visible-NIR reflectance measurements with multivariate calibration for mathematical data processing combined with physical inspection and TLC for consistency assessment of Cialis® 20 mg tablets as tools for fake detection

Results: Differences in Cialis tablets packing material were noted between registered genuine Cialis and suspected fake products. Differences in size, shape and colour was paramount. Discriminant analysis (DA) based on Mahalanobis distance (MD) has been applied successfully for spectral discrimination, with5/9 failing batches. Further investigation with TLC failed Mererani, Buguruni and Manzese samples. The Mererani Cialis did not contain a trace of Tadalafil, the active ingredient in Cialis tablets. Further TLC evaluation revealed Merarani Cialis sample to contain very high concentrations of Sildenafil, the active ingredient in Viagra. The Buguruni Cialis sample containedTadalafil but also had significant amounts of other unknown impurity which calls for further investigation. In addition to the official medicine outlets, the study revelled that guest houses, night clubs and bars are potenial outlets for fake medicines.

Conclusion: In a resource challenged settings, fake products can be conclusively determined by a combination of simple assessment technologies namely, physical inspection, Visible-Near Infrared reflectance spectroscopy, and Thin Layer Chromatography; techniques and technologies which are more robust and sustainable. Authorities should consider extending post marketing surveillance to non-conventional medicine outlets on ad hoc basis.

Title: Pistia stratiotes (L.) in open water shallow wells: water contaminants and human diseases in Tanzania

Author(s): Fabian M.Bagarama[*], Amos E.Majule[2], Filson M.Kagimbo[3]

Institution(s): [1]Special Program Department, Tumbi Agricultural Research Institute, P.O. Box 306, Tabora, Tanzania [2],Institute of Resource Assessment (IRA), University of Dar es Salaam, P.O Box 35097,Dar es Salaam, Tanzania 3Crop science Department, Tumbi Agricultural re

Background: Water lettuce (Pistia stratiotes (L.) invasion of shallow open water wells is common in semi-arid Tabora region in Tanzania. There is no documented information on the quality of water and the associated healthy implications of P.stratiotes loaded open wells.

Objectives: The objectives were (a) to assess water contaminants in shallow open water wells (b) to study the influence of P.stratiotes on increasing potential human diseases.

Methods: The study was carried out at Tumbi-Mapula, Tumbi Kibaoni and Farm-Myamwezi villages in Tabora Municipality in western Tanzania S 050 04'06.6'' E 0320 41' 56.8''Elevation 1159 meters above sea level.
Ground survey of wells was conducted during the rainy and dry seasons. Causes of water contamination identified include; organic matter inflows, physical collapse of well banks, soil erosion materials, animal dung, human excreta, and inorganic fertilizer and pesticides residues

Results: P.stratiotes was found to be the micro-habitat for Bulinus africana and Biomphalaria pfeifferi vectors Schistosoma haemotobium and S. mansoni respectively. The daily feeding habits of snails on P.stratiotes was recorded. Human diseases data for a population of 4361 people was recorded from the health centre. Results of this study show that 80% and 10% of the studied wells were microhabitats for B.africana and B.pfeifferi snails respectively. The shallow water wells are also breeding grounds for mosquitoes. Cases of Malaria disease and water borne diseases were 27.08 and 5.68% respectively.

Conclusion: Malaria is the number one disease while, water borne diseases occupy the fourth place in importance.Monitoring water quality for safe use in agriculture should be supplemented with assessment of diseases transmitting agents in environments where underground water is extensively used in semi-arid environments like this studied area in Tanzania.

Title: The role of Onchocerca volvulus in the development of epilepsy in a rural area of Tanzania

Author(s): REBEKKA CONIG, AMIR NASSRI, MICHAEL MEINDL, WILLIAM MATUJA, ASLAM R. KIDUNDA, VERA SIEGMUND, GISELA BRETZEL, THOMAS LOSCHER, LOUISE JILED – AALL, ERICH SCHMUTZHARD and ANDREA SYLVIA WINKLER

Institution(s): Innsbruck Medical University, Ludwig-Maximilians-University, Muhimbili University of Health and Allied Sciences, Mahenge District Hospital

Background: Several reports indicate high prevalence of both onchocerciasis and epilepsy in some regions of Africa. This raises the question of whether these diseases are associated.

Objectives: We therefore investigated people with epilepsy and /or onchocerciasis living in an area in Tanzania endemic for Onchocerca volvulus(O.onvolvulus

Methods: We collected clinical information, skin snips, and blood from 300 individuals, and cerebrospinal fluid (CSF) from 197. Participants were allocated to 4 groups consisting of people with epilepsy and onchocerciasis (n=135), those with either epilepsy (n-61) or onchocerciasis only (n=35), and health individuals (n=69). Samples were evaluated for microfilaria, IgG4 antibodies against O. volvulus, O. volvulus antibody index (CSF/serum), and CSF routine parameters. Polymerase chain reaction (PCR) was performed on skin snips and CSF.

Results: No difference was found in microfilarial density between participants with and without epilepsy (P=0.498).The antibody index was raised in 2 participants. CSF PCR was negative in all samples tested

Conclusion: Our results do not give evidence of a relationship between O. volvulus and epilepsy. Despite the fact that 2 participants had raised antibody index, the existence of cerebral onchocerciasis caused by migration of micrefilariae into theCSF appears unlikely. However, to date unexplored reactions to the infestation with O. volvulus causing epilepsy cannot excluded.

Title: Bacteriological Profile Of Ground Black Pepper And Paprika Sold In Retail Outlets Of Ilala District,Dar Es Salaam Tanzania.

Author(s):D Mloka

Institution(s): School of Pharmacy, Muhimbili University of Health and Allied Sciences,

Background:Spices have been used for centuries in Tanzania for both their flavoring and preservation ability of foods. As with other raw agricultural-based food ingredients they may becontaminated with microbial pathogens. Drying may prevent the growth of some pathogens; it does not guarantee their elimination.

objective: To determine the bacteriological profile of ground black pepper and paprika spices sold in retail outlets of Ilala district, Dar es Salaam.

Methods: Ground black pepper and Paprika spice samples from three major markets (Karikoo, Ilala Boma, and Buguruni)and two supermarkets in Ilala District were sampled between May and December 2012, at intervals of 1-2 weeks apart. The samples were analyzed using standard microbiological techniques for identification of coliforms, enumeration and antimicrobial susceptibility testing.

Results: One hundred twenty two samples (75%) out of 162 yielded microbial growth. The mean Cfu was 5.1×10^6 and 8.8×10^5 cfu/ gm for Black pepper and Paprika samples respectively. The mean coliform counts were 2.8×10^4 cfu/ gm (0.2 – 9.9×10^4 coliform count/ gm) for both Black pepper and Paprika samples. The bacterial isolates identified were 22.8% E.coli, 11.1% Pseudomonas Aeruginosa, 14.6% Klebsiella spp., 9.4% Salmonella spp., 18.7% Shigella spp., 9.4% Proteus spp., 6.4% Serratia spp., 5.2% Staphylococci epidemidis and 7.6% Pseudomonas stutzeri.

Susceptibility testing was conducted 57 isolates. Gentamicin resistance was detected in 10% of E.coli (MIC 0.125-2ug /ml), 75% of Proteus spp. (0.5-4ug/ml) 50% of Serratia spp. (0.25-4ug/ml), 20% of Shigella spp. (0.125-2ug/ml), and 20% of Pseudomonas spp. (0.06-2ug/ml). Resistance to Kanamycin observed in 50% of Serratia isolates (1.56-12.5ug/ml). Resistance to Chloramphenicol wasobserved in 50% of E.coli (1-32ug/ml), 62.5% of Klebsiella spp. (0.5-32ug/ml), and 20% of Shigella spp. (2-32ug/ml) isolates. All isolates of Proteus, Klebsiella and 75% of Serratia were resistant to Ampicillin (2-15.6ug /ml). All isolates of Salmonella were susceptible to all antimicrobials tested .

Conclusion:paprika and black pepper and sold at markets in Ilala district are highly contaminated coliform bacteria and thus poses a potential source of food borne illnesses with drug resistant bacteria in immune compromised individuals.

Title: The head nodding syndrome – Clinical classification and possible causes

Author(s): Andrea S.Winkler, Katrin Friedrich, Rebekka Konig, Michael Meindl, Raimund Helbok, Iris Unterberger, Thaddaeus Gotwald, Jaffer Dharsee, Sanddp Velicheti, Aslam Kidunda, Louise jilek – Aall, William Matuja and Erick Schmutzhard

Institution(s): Ulm university, Lutheran hospital Manyara, Muhimbili university of Health and allied Sciences, Aga khaan Hospital, Mahenge District Hospital, University of British Columbia, Muhimbili Natioanl Hospital

Background: In the 1960s in Tanzania, L. Jilek-Aall observed a seizure disorder characterized by head nodding (HN). Decades later, "nodding disease" reminiscent of what was seen in Tanzania, was reported from Sudan.

Objectives: To date this seizure disorder has not been classified and possible causes still re-main obscure.

Methods: In a prospective study in southern Tanzania, we evaluated 62 patients with HN. Selected patients underwent blood (n = 51) and cerebrospinal fluid (CSF) (n = 48) analyses. Others were chosen for MRI (n = 12) and EEG (n = 10).

Results: Seizure type was classified as "head nodding only" and " head nodding plus," the later being combined with other types of seizure (n = 34). During HN, consciousness was impaired in 11 patients (17.7%) and supportive signs of epileptic seizures were described by 15 (24.2%) patients. Precipitating factors were confirmed by 11 (17.7%) patients. Fifty-six (90.3%) patients had at least one relative with epilepsy. EEG confirmed interictal epileptic activity in two patients and unspecific changes in four patients. MRI showed hippocampus pathologies (n = 5) and gliotic changes (n =5). Skin polymerase chain reaction (PCR) positivity for Onchocerca volvulus was significantly associated with lesions on MRS. However, PCR of the CSF was negative in all cases.

Conclusion: We present a comprehensive clinical description of the "UN syndrome," possibly a new epilepsy disorder in sub-Saharan Africa. MRI lesions and their association with positive skin PCR for O.volvulus despite negative PCR of the CSF is in triguin and deserves attention. Furthermore, the high prevalence of hippocampus sclerosis and familial clustering of epilepsy may point toward other potential pathogenetic mechanisms.

Title: EPILEPSY FOLLOWING SIMPLE FEBRILE SEIZURE IN A RURAL COMMUNITY IN TANZANIA; A COMMUNITY BASED OBSERVATIONAL COHORT STUDY

Author(s): W.B.P. MATUJA and M.FATAKI

Institution(s): Muhimbili University of Health and Allied Sciences

Background: fever is thought to play a role in inducing recurrent seizures in children

Objectives: To study the outcome of subsequent epilepsy following a single uncomplicated febrile seizure in a cohort of children aged 6 months to 6 years followed up for 10-year period

Methods: : Following door-to-door interview children aged between 6months and 6 years were identified in each household and history of seizures was obtained from the head of household. Children with a single uncomplicated febrile seizure were further evaluation by a team of specialists. The primary health workers made follow-up at home every 6 months for children who neither reported neither to the health worker nor at the existing health facilities. The study team scrutinized recorded features of recurrent seizures and invited the children and parents for further evaluation whenever data was deemed insufficient.

Results: A total of 6522 children aged 6 months to 6 years lived in the study area. Of these 213 (3%) had experienced one uncomplicated febrile seizures. At the end of 10 years follow-up period 145(65%) were still living in the study area. Of these 44 (30%) had developed epilepsy gibing an equivalent of cumulative incidence rate of 3.8 per 100 person years. The age of onset of first uncomplicated FS between the ages of 2-5 years was significantly associated with the development of later epilepsy in comparison to other ages. The number of recurrent febrile seizures significantly influenced the development of later epilepsy. A positive family history of epilepsy did not significantly influence the development of later epilepsy.

Conclusion: Cumulative incidence of epilepsy in rural Tanzanian children following a single uncomplicated FS was small but higher than that reported in developed countries. This risk was influenced independently by the number of recurrent FS, family history of FS, and the age of onset of the first ever FS

Title: Community Perceptions of Rape and Child Sexual Abuse in Rural Tanzania

Author(s): Abeid Muzdalifat, Muganyizi Projestine, Olsson Pia, Axemo Pia

Institution(s): MUHAS, Uppsala University

Background: Violence against women and children is increasingly recognized as a specific health and human rights issue. In Tanzania it is estimated that 20% of adult women, 28% of girls and 13% of young boys experienced sexual violence

Objectives: The aim of the study was to explore important socio-cultural factors or norms that may perpetuate rape or child sexual abuse or hinder the disclosure of events, provision of care and support to sexual violence survivors in Morogoro, Tanzania

Methods: Five focus group discussions were conducted with adult community members obtained through purposively sampling technique. The focus group discussions were recorded, transcribed verbatim and analyzed using qualitative content analysis

Results: Four themes emerged summarizing their perceptions of rape. The theme " change in social dynamics" entails perceptions of how modernity has influenced peoples behaviour and perpetuated rape events, while " community passivity,shame and fear" reflects lack of community's cooperation with the legal system due to shame and fear of involvement. Under the theme " legal system weaknesses" highlights the systemic weaknesses that may negatively affect legal proceedings and withdrawal from their cases, and " plea for community education on sexual violences" reflects on the need for educating the community to raise awareness on sexual violences and their roles as preventive agents

Conclusion: Addressing the identified challenges may promote health seeking behaviour and improve care among survivors of sexual violence, while changes in social and cultural norms are needed for the prevention of sexual violences.

Title: Prevalence, risk factors and awareness of high blood pressure and hyperglycemia in Mafia island, October 2011

Author(s): Muhamedhussein MS and Manji KP

Institution(s): Muhimbili University of Health and Allied Sciences

Background: Hypertension and Diabetes Mellitus are rapidly emerging throughout the world. These are chronic illnesses with high morbidity and mortality. Risk factors are contributed by nature and nurture. Primary prevention, adequate treatment and prevention of complications is of utmost importance.

The prevalence of Hypertension in Africa ranges from 11-47%. In Tanzania, there was a prevalence of 30% in males and 28.6% in females, 20% of hypertensive subjects were aware, 10% were receiving treatment and 1% had controlled blood pressure.

The prevalence of Diabetes Mellitus ranges from 0-16% in Africa. The prevalence of Diabetes Mellitus in rural Tanzania among males and females was 1.7% and 1.1% respectively.

Objectives: To determine the prevalence and assess risk factors, awareness, treatment and control of high blood pressure and hyperglycemia.

Methods: A total of 570 adults were interviewed and assessed in terms of anthropometric measurements, blood pressure and random blood glucose. Data was analyzed using SPSS(Version 17).

Results: A greater proportion(27%) of study subjects were aged 41-50 years, the male to female ratio being 1.05:1. Elevated blood pressure was seen in 49.5% of the participants while elevated RBG was seen in 9.2% of study subjects.

Of the 118 participants who were aware of being hypertensive, 57.6% were on medication and 28.8% had controlled blood pressure.

Out of the 9.2% with elevated RBG, 46.2% were known diabetics. Of the known diabetics, 80% were on medication but only 20% had their blood glucose controlled.

Conclusion: Alarming rates of High blood pressure and Hyperglycaemia combined with lack of awareness makes the situation more dangerous. For many, this was the first time they measured their blood pressure and glucose and thus, initial diagnoses. There is a need to create awareness and intervene appropriately.

Title: Partnership in governing Implementation of Emergency Obstetric Care

Author(s): Dickson Ally Mkoka

Institution(s): Muhimbili University of health and Allied Sciences

Background: Many health policies developed internationally often become adopted at national level and are implemented locally. A decentralized district health system led by a district health management team becomes responsible for implementing such policies.

Objectives: This study aimed at exploring the experiences of district health management team in implementing Emergency Obstetric Care (EmOC) and identifies emerging governance aspects that need immediate attention for effective health policies implementation.

Methods: The study used a qualitative approach in which data was obtained from thirteen individual interviews and one focus group discussion (FGD).Interviews were conducted with members of the district health management team, district health service board and NGO representatives. Documentary reviews and observation was done to supplement the data. All the materials were analysed using qualitative content analysis approach.

Results: It was reported that implementation of EmOC was a process accompanied by achievements and challenges. Achievements included increased institutional delivery, increased number of ambulances, training service providers on EmOC and building new rural health centre for comprehensive emergency obstetric care. Challenges were related to governance issues at different levels including delay in disbursement of funds from the central government, shortage of health workers, unclear mechanisms for accountability, lack of incentives to motivate overburdened staffs and lack of working guidelines for partnership.

Conclusion: Implementing EmOC is a process accompanied by challenges that need multiple partners approach to address them. However to have effective partnership, the roles and responsibilities of each partner should be well stipulated in a clear working framework within the district health system.

Title: Indoor Air Pollution, Social Inequality and Acute Respiratory Diseases in Children of Tanzania

Author(s): JOSEPH BUKALASA

Institution(s): TPRI

Background: Investigate how indoor air pollution and social inequality can affect health status of children

Objectives: The overall aim of this thesis was to investigate how indoor air pollution and social inequality can affect health status of children

Methods: The data were collected in all region of Tanzania including Zanzibar and Pemba in the year 2007-2008 by the Demographic health Survey (DHS) and 1200 children below the age of 5 years were participated in the study together with their mothers. The study design was cross sectional study using the questionnaires developed by DHS and the mothers were asking if their children have Acute Respiratory Infection (ARI). The data were analyzed by stata 10.

Results: Children from poor families were 482 and 31.1% had the cough while in the rich families 451 children participated in the study and 20.4 have cough. Also 2964 mothers were from poor households and 95.9% were using wood as the source of energy for the domestic purposes whereby 2997 mothers were from rich households and only 63.0% were using wood as a source of cooking fuels. The results show that children from households with electricity 16.2% had cough/fever while children from households without electricity 27.7% had cough/fever and their odds ratio was 17 (0.9-3.2) at 95% CI.

Conclusion: The social inequality and indoor air pollution due to the cooking fuels were major causes of ARI. The difference in the income was due to social inequality and as the result the children from the low income (poor) were suffering more in Acute Respiratory Infections (ARI) compare to children from high income (rich).

Title: Aetiology of fever in children attending Korogwe District Hospital, Tanzania.

Author(s): Mahende, Coline; Ngasala, Billy; Lemnge, Martha; Premji, Zul

Institution(s): NIMR and MUHAS

Background: There is scarcity of data and knowledge of causes of febrile illnesses other than malaria in the country. Malaria has been declining across Sub Saharan Africa; but number of febrile cases at health facilities remain high hence the need to establish evidence-based common causes of fever.

Objectives: To determine systematically the common aetiology of fevers in children aged between 2 months and 59 months attending outpatient clinic at Korogwe District Hospital.

Methods: This is a hospital based case-control study recruiting children aged 2 and 59 months with complaints of fever (cases, n=861); and control subjects (no fever, n=861) of matched age and sex. For all case subjects, blood testing is done for identification of Plasmodium species, human immunodeficiency virus (HIV), aerobic culture, infection markers, kidney and liver function tests. Urine and stool cultures are performed for selected cases. Throat and nasal swabs and faecal samples are collected from all case and control subjects for molecular analysis of respiratory pathogens and enteric viruses respectively. A chest X-ray is done if pneumonia is suspected.

Results: For the period of Jan 2013 to 14 Mar 2013, 173 cases and 95 controls have been recruited. The common causes of fever have been: 65% acute respiratory infection [24% URTI, 42% pneumonia], 12% gastroenteritis, 8.1% urinary tract infection [28% E.coli], 2% bacteraemia [S. typhi (3) and S. pneumoniae (1)], 1% malaria, 1% HIV infection and 7% other infections. At this stage, X% causes of fever is still unknown. (More preliminary data will be available during presentation in May 2013)

Conclusion: Proportion of each infection (parasitic, bacterial and/or viral), non-infectious fevers and fevers of unknown origin will be determined. Findings from this study will contribute towards better management of febrile illnesses including Malaria.

Title: MICROBIOLOGICAL CONTAMINATION OF CEREAL BASED WEANING FOOD IN DAR ES SALAAM AND ARUSHA REGIONS

Author(s): Gration Benny Rushunju

Institution(s): National Food Security Division, MAFC, PO Box 9192, Dar es Salaam

Background: Over two decades ago, World Health Organization recognized that infant diarrhoea was a critical public health problem and that the epidemiological link between contaminated food and the resulting diarrhoea had been established and confirmed contaminated weaning food is a major risk factor in the cause of diarrhoea and associated malnutrition. Pathogenic microbes when ingested through contaminated food or water or by any other means become injurious to our health, and sometime result into loss of lives or permanent disabilities. The importance of microbial contaminants in transmitting food borne diseases and number of children suffering from diarrheal diseases make further studies on maintaining good food hygiene practices in infant food processing important.

Objectives: This work aimed to evaluate microbial contamination of cereal based weaning foods marketed in Arusha and Dar es Salaam regions.

Methods: The pour plate method with nutrient Agar and Brilliant Green culture media was used to determine the total bacterial loads and coliforms. One gram of each of sample was suspended into 9 ml of sterile distilled water in a McCartney bottles and serially diluted up to 10-8. All analyses were done in duplicate and incubation was done in an aerobic incubator for 48 h at 37°C.

Results: Overall microbial contamination was higher than the permissible levels in over 80% of all samples, with mean contamination of 1.7×10^8 CFU/ g. Microbial contamination ranged from 1.5×10^2 to 4.45×10^9 CFU g-1. Coliforms count above the 10 CFU g-1 maximum permissible levels was recorded in 95 % of all samples with a mean 2.3×10^5 CFU g-1.

Conclusion: cereal- based weaning foods were found to be highly contaminated with microbial contaminants, suggesting the role of poor hygiene processing in transmitting diarrheal diseases among infants if precautions are not taken during preparation.

Title: Pharmacokinetic studies in tuberculosis patients: Studies in Northern Tanzania

Author(s): Semvua Hadija1*, Mtabho Charles[1], van den Boogaard Jossy[2], Kisanga Elton[1], Aarnoutse Rob[2], Kibiki Gibson[1]

Institution(s): [1]Kilimanjaro Clinical Research Institute (KCRI), KCMC Moshi-Kilimanjaro, Tanzania. [2]Department of Pharmacy, Radboud University Nijmegen Medical Centre (RUNMC), Nijmegen, The Netherlands.

Background: Sub-Saharan Africa has a high tuberculosis incidence and mortality, however pharmacokinetic data from sub-Saharan Africa are limited.

Objectives: The aim was to determine the pharmacokinetic characteristics of firstline TB drugs, to explore the possibilities of using saliva instead of plasma for TB drug monitoring and to evaluate the effect of rifampicin on the pharmacokinetic of AtriplaR.

Methods: Intensive pharmacokinetic sampling was conducted to describe the pharmacokinetic parameters of isoniazid, rifampicin, pyrazinamide and ethambutol. Samples were taken at (t=0) and 1, 2, 3, 4, 6, 8, 10, 12, and 24 hours. Plasma concentrations were quantified using validated HPLC assays, and pharmacokinetic parameters were determined by noncompartmental methods.

Results: Twentyfive TB patients were enrolled. The geometric mean Cmax of isoniazid was 2.8 mg/L, rifampicin 8.9 mg/L, pyrazinamide 38.2 mg/L and ethambutol 3.3 mg/L. Cmax was below the reference range for isoniazid and for rifampicin .The ratios (saliva/plasma) concentrations median (IQR) were 10.7% (6.6-13.4%) and 62.8% (48.5-78.9%) for rifampicin and pyrazinamide respectively. Significant correlation (R) of 0.833 and 0.893 was observed both at p value less than 0.001. The inter-individual variability were 5.83% and 4.04% while the intra-individual variability was 57.28% and 30.29% for rifampicin and pyrazinamide respectively. The AUC0-24h for AtriplaR were slightly higher when co-administered with TB drugs. The GMR + 90% CI were 1.08 (0.90-1.30), 1.13 (0.98-1.38) and 1.05 90.85-1.29), respectively. No SAE and adverse events were generally mild.

Conclusion: In these studies low level of rifampicin was observed, this is a concern because low rifampicin levels may be associated with worse treatment outcome. Therefore more knowledge is needed about concentration-effect relationships for TB drugs to be able to interpret the potential consequences of this finding.

Title: AFLATOXIN CONTAMINATION OF CEREAL BASED WEANING FOOD IN DAR ES SALAAM AND ARUSHA REGIONS

Author(s): Gration Benny Rushunju

Institution(s): National Food Security Division, MAFC, PO Box 9192, Dar es Salaam

Background: Aflatoxin (B1, B2, G1 and G2) are the potent toxic, mutagenic, heterogenic and carcinogenic metabolites produced by species of Aspergillus flavus, A. paraciticus and A. nomius in food and feed, especially maize, oil seeds and their products, both at pre and post harvest conditions. Among the four, AFB1 has been extensively studied and has shown to be the most potent toxic of all aflatoxins and they were classified as No.1 human carcinogens. The presence of these toxins in food may pose significant health hazards in human and therefore monitoring its occurrence is of paramount importance.

Objectives: To assess the occurrence and contamination level of aflatoxins in locally processed cereal-based complementary foods marketed in Dar es Salaam and Arusha regions.

Methods: High Performance Liquid Chromatographic method was used in aflatoxin analysis. Extraction, clean-up and purification were done by using Mycosep® Aflapat Immunoaffinity columns and all procedure followed manufacturer's instruction. Chemicals used were all of highest analytical HPLC grade.

Results: sixty four samples of cereal based complementary foods were obtained from producers and sellers and analyzed for aflatoxins. Analysis indicated in 29 (40.4%) samples, Aflatoxin was not detected, and in 38(59.4%) samples, aflatoxin was detected with concentration ranging from 0.1 to 23.2 µg kg-1. And the mean aflatoxin contamination was 9.80 µgkg-1. Nineteen (30%) samples were contaminated beyond the permissible limit for total aflatoxin infant foods. Aflatoxin B1 was detected in 35 samples (55%) with a mean 1.6 µg/kg (range: 0.1-10.9). The level of aflatoxin B1 indicated that 51% of samples had B1 between 0.1 and 5.0 µg/kg, and two samples (3.3%) had AFB1 well beyond the national set maximum tolerable limit.

Conclusion: The cereal-based diets of Tanzanian infants could pose significant health risks with the level of aflatoxins observed if close monitoring is not effected, including HBV immunization of infants.

Title: Dental caries among children and adolescents of Sub-Saharan Africa: Trends and future perspective - A review study

Author(s): Mbawalla, Hawa Shariff

Institution(s): MUHAS

Background: The state economy, politics, society and cultural development affect health directly through health system and indirectly through its impact to socio-behavioural influence on oral health and diseases. Dental caries (DC) as among non-communicable diseases is prone these changes.

Objectives: Focusing on studies published from 1980 to 2012 among children and adolescents of Sub-Saharan Africa region, this review aim to describe patterns (severity-mean DMFT, prevalence), distribution and trend of dental caries among SSA children and adolescents. Secondly, identify its futures perspective and way forward.

Methods: Review of studies reporting on prevalence, socio-demographic and behavioural distribution of dental caries among children of SSA from 1980 to 2012 was conducted.

Results: Prevalence and severity of dental caries is 13.9% to 45.3% and mean DMFT 0.14 to 1.2. The DMFT had higher proportion of DT (Decayed Teeth) component, insignificant proportion of FT (Filled Teeth) component. Higher mean DMFT were reported among groups of children with lower prevalence of dental caries. Girls, urban dwellers, SES affluent, those from educated parents and older adolescents were more likely to have caries than their counterparts. Poor oral hygiene expressed as accumulation of plaque and reporting dental visit is associated with higher OR for dental caries.

Conclusion: Despite great variations revealed, DC among SSA adolescents is at lower level by international STDs and has concentrated in mouth of the few and the socio-demographic disadvantaged children and adolescents. Well thought theory and evidence based intervention, aiming into oral health promotion and prevention that is focus into population are proposed for improved oral health state of SSA adolescents.

Title: Cytokine and Transcriptome profiles reveal Non-specific and Sex Differential Effects with Diphtheria, tetanus, whole cell-pertussis combined vaccine and measles vaccine

Author(s): Noho-Konteh, Fatou [1]; Adetifa, Jane [1]; Le, My Thanh [1]; Barker, Frances [1]; Cox, Momodou [1]; Drammeh, Abdoulie [1]; Kampmann, Beate [1]; van der Sande, Marianne [II]; van der Klis, Fiona [II]; Rowland-Jones, Sarah [1]; Whittle, Hilton [1]; Forster, Thorsten [III]; Dickins

Institution(s): [1] MRC Laboratories, Fajara, The Gambia; [II] National Institute for Public Health & the Environment, Bilthoven, The Netherlands; [III] Division of Pathway Medicine, University of Edinburgh, Scotland, UK

Background: Many commonly used vaccines were developed empirically, and there is poor understanding of how they work. There is increasing evidence that vaccines may have non-specific effects (NSE). Broadly, live vaccines such as measles vaccine (MV) are beneficial, whereas inactivated vaccines such as diphtheria, tetanus, pertussis vaccine (DTwP) might be less beneficial. Furthermore, when administered simultaneously the beneficial NSE are lost with females more susceptible than males. These soluble markers (cytokines), being of both innate and adaptive signaling will allow the dissection of specific and NSE through pathway analysis.

Objectives: To investigate the immunological effects of co-administering MV with DTwP compared to giving them alone and analyse for evidence of NSE and sex-differential effects.

Methods: 303 children were randomised to one of three vaccine schedules to be given at 9 months of age; Group 1: MV; Group 2 DTwP + MV; Group 3 DTwP alone. Children were bled at 9 months and 4 weeks later. Females and males were randomized separately. Assays included overnight whole blood cultures, flow cytometry for intracellular cytokines (ICS), measles and DTwP Ab assays, and whole human genome microarray analysis.

Results: Distinct male / female differences and NSE were found in cytokines in culture supernatants and ICS responses. DTwP vaccinated females show a marked down-regulation of interferon response pathways by transcriptome profiling compared to males who up-regulate developmental pathways and RNA transcription complex.

Conclusion: This study shows evidence of sex differences and NSE in response to vaccines and that combining MV with DTwP alters the immune profile.

Title: Cytoskeletal anomaly: implications in cancer pathogenesis

Author(s): A.D. Russa[1,3], E.H. Suluba[1], A.R. Mwakigonja[2] and Y. Satoh[3]

Institution(s): [1] Department of Anatomy and [2] Depatment of Pathology, Muhimbili University of Health and Allied Sciences, School of Medicine, Dar es Salaam, Tanzania and [3] Department of Anatomy (Cell Biology Group) and Advanced Medical Science Center, Iwate Medical Univer

Background: The hallmark of cancer is an uncontrolled cell division process via various processes. The cytoskeletons are important structural proteins involved in the regulation of cellular functions including this crucial cell division machinery. The majority of cancer therapeutics act on the cytoskeletons. However the contribution of the anomalous cytoskeleton in the cancer pathogenesis is poorly understood—or at least fragmented.

Objectives: To investigate the role of the cytoskeletons in C2+ influx into the cell and their impact on cell prolifetion and growth derangements

Methods: We used cytoskeleton-modifying drugs and immunofluorescence techniques to assess the contribution of the different cytoskeletal elements in Ca2+ signaling—a versatile pathway which is virtually inactivated during mitosis and in cells treated with anti-neoplastic drugs. Paclitaxel and nocodazole were used to disassemble the microtubule network of the cells. Calyculin A and acrylamide were used to disrupt the actin and intermediate filaments respectively. Microscopic examination was performed using the LSM 510 (Zeiss, Germany) laser scanning microscope.

Results: Nocodazole and paclitaxel treatment completely obliterated the Ca2+ influx of the cells. The drugs also arrested the majority of the cells (about 90%) in the mitosis-like stage with many aneuploidic features. Actin fibers and the intermediate filaments disruption did not seem to influence the cell growth process. The versatile Ca2+ signaling pathway was neither affected by the actin nor the intermediate filament disruption.

Conclusion: These findings indicate that cytoskeletal anomaly may account, to a great extent, for the neoplastc pathogenesis at subcellular level. Therefore, anti-neoplastic drugs targeting the cytoskeletal machinery disruption should be emphasized.

Title: Sexual Violence Against Female and Male Children and related health conditions in The United Republic of Tanzania

Author(s): Gideon Kwesigabo, David Urassa, Anna Kessy, Kevin J. Vagi, Kathryn A. Brookmeyer, R. Matthew Gladden, Laura F. Chiang, Andrew Brooks, Myo-Zin Nyunt, James A. Mercy, Linda L. Dahlberg, Multi-Sectoral Task Force

Institution(s): MUHAS

Background: Sexual violence against children is a global human rights and public health issue that has a profound impact on emotional, behavioural, and physical health throughout development. There is little national information on the prevalence of sexual violence against children on which to base policy and programmatic actions

Objectives: Determination of magnitude and health related conditions for sexual violence among girls and boys 13-24 years in Tanzania

Methods: A national probability split sample of 13-24 year olds, (female and male), the sampling frame consisting of enumeration areas, structured questionnaire administered after informed consent. Logistic regression was conducted to determine risk factors. Experience of violence was measured for three time periods: lifetime, prior age 18 and in 12 months prior the survey.

Results: Overall 3,739 were conducted in both Tanzania mainland and Zanzibar, 908 and 891 females and males for mainland, 1,060 and 880 for females and males for Zanzibar (year 2009-10). Response rate 93.8%. Almost 3 in 10 females 27.9% (95%CI 24.0-32.2) and 13.4% (11.1-16.1) of males experienced some form of sexual violence before turning 18 years of age. The most common type of childhood sexual violence reported was unwanted touching (16% (12.9-19.6) and 8.7% (6.3-11.3) of females and males, respectively) followed by attempted unwanted intercourse (14.6% (12.4-17.0) and 6.3%(4.8-8.2) of females and males, respectively). Approximately 5.5% (3.7-7.9) of females and 2.2%(1.2-4.0) of males reported that they had been physically forced to have intercourse before turning 18. Females experiencing sexual violence were at an increased risk of STD/I adjusted odds ratio 2.39(1.13-5.07), have anxiety 2.26(1.47-3.47) and increased alcohol consumption 4.3(2.1-9.0), while males were at an increased risk of STD/I 2.34-1.1-5.14) and anxiety 1.72(1-3.02).

Conclusion: Magnitude of sexual violence is high, with health consequences in both sexes, efforts/interventions that have already started to address this problem should continue and evaluation done from time to time to gauge the progress of these interventions

Title: Exploring dentine hypersensitivity among adult patients attending dental treatment in Dar Es Salaam, Tanzania

Author(s): Minja, Alex; Carneiro, Lorna; Anthony, Severine

Institution(s): Muhimbili University of Health and Allies Science

Background: Dentine hypersensitivity (DH) has been defined as short or transient sharp pain of a rapid onset that arises from exposed dentine due to enamel loss and or denudation of cementum. This unpleasant condition is multifactorial in nature with a worldwide prevalence ranging from 3% to 57%. Data on prevalence of DH in Tanzania is lacking

Objectives: To determine the prevalence of dentine hypersensitivity among adult patients attending dental treatment in Dar Es Salaam and to provide baseline data for Tanzania

Methods: This hospital based cross-sectional study was conducted between July and September 2012. It involved 323adults aged 18 years and above attending dental treatment in public dental clinic in Dar es Salaam. Self administered structured questionnaire was used to gather subject's socio-demographic particulars and information related to dentine hypersensitivity. Clinical examinations of subjects determined prevalence of DH

Results: The male and female ratio of the 323 participants was approximately one (1:1.1) with age range of 18-72 years. Level of awareness on DH was 88.2%. About two thirds (63.2%) of subjects perceived that they had DH. Of the predisposing practices related to reported DH cigarette smoking was found to be statistically significant (p= 0.007).

From the clinical examination, the prevalence of DH was 46.4% with predominance of males [79 (52.7%)] and age group of 30-49 years [68 (46%)] Among other oral conditions diagnosed during clinical examination, attrition, abrasion, erosion, gingival recession, periodontal pocket and plaque accumulation were commonly found together with DH and significantly related with it (p≤ 0.05). Of the participants with dentinal sensitivity, most [122 (59.5%)] have not taken any action and those who visited the dentist were [54 (43.5%)]

Conclusion: The reported prevalence of DH is extremely high in comparison to other studies worldwide. Also males had slightly higher prevalence than females and age group most affected was 30-49 years

Title: Youth unemployment, community mob violence, and Ruka Juu in Dar es Salaam, Tanzania

Author(s): Outwater, Anne; Mgaya, Edward

Institution(s): Muhimbili University of Health and Allied Sciences

Background: In Africa the highest crime rates were reported from Swaziland, Tanzania and Zimbabwe; 63% of respondents reported victimization in the previous year. More than other nationalities, Tanzanians perceived such crimes as very serious. Theft and burglary were considered very serious events for 75% and 84% of Tanzanian respondents respectively.

Mob violence as a reaction to petty theft has been recorded in many countries. The victims of mob violence are almost always male youth without regular employment killed publicly by citizens. About 50% of all homicides in DSM are caused by mob violence.

Objectives: The aim of this study is to decrease incidence of mob violence through increased well being.

Methods: Data were collected quantitatively through a surveillance questionnaire and qualitatively through in-depth interviews and a focus group discussion.

Results: The mean age of those who died from mob violence was 27.5 years. No non-Tanzanians were killed by mob violence. 73% died in the ward in which they lived.

The occupations of 74% were unemployed (32), thief (62), or unknown (58). Another 16% were classified as street vendors. Many such youth are moving back and forth between rural and urban areas searching for a way to earn money.

The reason behind mob action was theft in 87% cases. The youth were often thieving to meet familial obligations. The perpetrators were good citizens – raia mwema. Some community members were against murder in principle, but the overwhelming desire was to live peacefully. At the family level, the deaths caused confusion, loss, and sometimes relief.

Conclusion: A major challenge facing youth is finding sustainable livelihoods. Many at-risk youth could be part of Tanzania's Kilimo Kwanza initiative. Ruka Juu -Young Farmers in Business is a promising entrepreneurs' program developed by Fema. This approach will be extended to high risk youth who are connected to rural areas.

Title: Diagnostic pattern of 60,000 adult and paediatric patients seen in the new full capacity emergency department at Muhimbili National Hospital, Dar essalaam Tanzania.

Author(s): HR Sawe[1], JA Mfinanga[1], TA Reynolds[1,2] N LoBue[3], VMwafongo[1]

Institution(s): Emergency Medicine department, Muhimbili University of health and allied sciences[1] University of California, San Francisco (UCSF)[1,2]; Abbott Fund Tanzania[3]

Background: The first dedicated Emergency Department in Tanzania was established in 2010 at Muhimbili National Hospital (MNH) which is primarily a National referral hospital. Since there are no pre-facility emergency medical services in the area, acutely ill and injured patients are often brought to the ED by family, police, and good Samaritans.

Objectives: To describe the most common diagnoses and basic demographics of patients seen during the first two years of the first full-capacity emergency department in Tanzania

Methods: Handwritten patient logbooks containing basic demographics and primary diagnoses for patients seen at the emergency department from February 2010 through December 2011 were retrieved. Clinical Classifications Software (CCS) multi-level was used for diagnostic categorizations.

Results: During the 23 months period, the total number of patients seen in the emergency department was 58887 with male to female ratio of 1.5. The underfives represented 13% and adults were 69%. The top five disease categories for all age groups were trauma 25%, infectious 17%, Mental health 7%, Neoplasm 5% and pregnancy related 2%. In under five patients, infection was the most common disease category at37%, In all patients below 18, infectious disease (28%) and trauma (23%)were common, while in adult patients the most frequent diagnosis was trauma (25%) and infectious disease was less common (14%).

Conclusion: A dedicated emergency department in an urban setting in Tanzania sees a high volume of patients, including a substantial proportion of children and very young children. Injuries and infectious diseases were very common in all age groups, and mental health disorders were common in adults. Infectious disease is the most frequent broad category of disease in children, and traumatic disease is the most frequent in adults.

Title: The state of emergency medicine in the United Republic of Tanzania: challenges and opportunities in Emergency health care systems development

Author(s): JA Mfinanga [1] HR Sawe[1] B.A. Nicks[3] TA Reynolds[1,2], VMwafongo[1]

Institution(s): Emergency Medicine department, Muhimbili University of health and allied sciences[1] University of California, San Francisco (UCSF) [1], [2] Wake Forest School of Medicine, Winston-Salem, NC, USA[3]

Background: Medical resources are limited in Tanzania infectious disease such as HIV, malaria and the increase in the incidence of non-communicable diseases (NCDs), impacting morbidity and mortality there is an obvious need for specialized Emergency care services in the country

Objectives: To describe the state of emergency care in Tanzania and the strategies created to develop emergency care infrastructure

Methods: Review of emergency care related burden of diseases, emergency care infrastructure and health care system in the country. Information was gathered trough emergency medicine association of Tanzania (EMAT) which conducted a survey of emergency care services, programs and resources within the country. Data was also sought from (AFEM) data base.

Results: Currently at most hospitals, emergency patients are cared for in Emergency Centres (ECs) staffed with rotating personnel who are neither trained nor equipped to provide complete resuscitative care. The first Emergency Medicine residency in the country was initiated in Muhimbili University of Health and Allied Sciences (MUHAS) in 2010 and will produce its first graduates in 2013. In 2011, a dedicated Emergency Nursing curriculum was introduced at MNH. The Emergency Medical Association of Tanzania (EMAT), the first Emergency Medicine professional society in the country, was formed and ratified by the Ministry of Health in 2011. EMAT has been given a mandate to develop feasible initiatives for the dissemination of emergency care training to district and sub-district facilities and the development of emergency care services within and outside the hospital.

Conclusion: In Tanzania significant gaps still exist in the capacity for emergency medical care including deficits in human resources, essential equipment and infrastructure. The training of emergency Medicine Specialist, Dedicated Emergency care in nurses, and the development of a professional Emergency care society (EMAT) are the positive signs of changes to come in health care

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Title: IRON, CALCIUM AND ZINC CONTENT OF LOCALLY PROCESSED CEREAL- BASED COMPLEMENTARY FOODS IN TANZANIA

Author(s): Gration Benny Rushunju

Institution(s): National Food Security Division, MAFC, PO Box 9192, Dar es Salaam

Background: : Iron, Calcium and Zinc are the essential micronutrients for infant and child growth and development including cognitive development. Iron, zinc plus other essential vitamins have been shown to influence the host resistance mechanism, thus altering the susceptibility to infectious diseases especially to infant and children. Thus complementary food formulation is essential for balancing nutrients and plays a vital role in the all round growth and mental health of children.

Objectives: The aim of this study was to determine the micronutrient (Fe, Ca and Zn) content in locally processed cereal-based complementary foods.

Methods: Sixty-four samples of cereal-based complementary foods were obtained from retails shops and supermarket in Arusha and Dar es Salaam cities, and transported to the laboratory and stored in a cool and dry environment until they were analyzed. Minerals (iron, calcium and zinc) were determined by atomic absorption spectrophotometer (Model UNICAM 919, UK) using the AOAC (1995) procedure (Method 968.08). Absorbance for Fe, Ca and Zn were determined at wavelengths of 248.3, 422 and 213 nm, respectively.

Results: Overall, the mean iron, zinc and calcium content were 10.98 ± 3.20, 10.67 ± 2.50 and 171.11 ± 21.54 mg/ 100 gram respectively. Iron content ranged from 5.95 to 20.93 mg/100 g whereas zinc and calcium ranged from 3.42 - 16.39 and 22.39 - 112.49, respectively. All food samples had zinc content above the minimum level of 2.42 mg/100 g for food intended for feeding infants and young. About 55% of all sample contained the minimum recommended level of iron content in food intended for infant feeding (10 mg/100 g) and less than 10% of food samples had calcium above recommended levels..

Conclusion: Locally produced complementary foods could be a good source of essential micronutrients to meet infant requirements for proper growth and health if prepared under hygienic conditions.

Title: Respiratory symptoms and inflammation among block workers in Kilimanjaro volcanic mine sites, Tanzania

Author(s): Mamuya, Simon Henry

Institution(s): Environmental and Occupational Health Department, School of Public Health and Social Sciences, MUHAS

Background: Volcanic building blocks have been exploited extensively by the population living in the East African Region for many years. The miners use poor hand tools which produce dust that may contribute to respiratory health problems.

Objectives: To assess respiratory inflammation and symptoms among volcanic block workers in Kilimanjaro

Methods: A cross sectional study was undertaken in 2010 involving 91 male and female workers.

Fractional exhaled nitric oxide (FENO) as a marker of airway inflammation were measured with a NIOX MINO device among non-smoking, exposed workers (n=38) and controls (n=39). Personal samples of total dust (n=28) were collected in the breathing zone of the miners. Data was analysed by chi square and logistic regression for categorical variables while linear regression was used for continuous variables. The criterion for significant association was P

Results: Mine workers had significantly higher prevalence of acute cough and red eyes compared to controls. Higher prevalences of chronic respiratory symptoms were also noted among mine workers compared to controls, though not statistically significant. Exposed male workers had higher mean values of FENO than control males (27.9 ppb vs. 16.9 ppb, respectively). Among females there was a slight, non-significant difference between exposed and control. The ANOVA Boniferroni test showed statistical significant difference in mean FENO between workers cutting and shaping volcanic blocks and controls (P=0.005). Logistic regression analysis showed that exposed miners had significantly higher odds of FENO>25ppb compared to controls [OR=5.4 95CI (1.6-18.9)], while controlling for age and sex.

Conclusion: The study showed significant association between volcanic dust exposure, acute respiratory symptoms and increased FENO, indicating inflammatory responses in the respiratory system. There is a need for longitudinal study support any causal relationships between volcanic dust exposure and respiratory inflammation

Title: Overweight, obesity and perceptions about body weight among primary school children in Dar es Salaam, Tanzania

Author(s): Mpembeni Rose, Muhihi Alfa, Njelekela Marina, Anaeli Amani, Chillo Omary, Kubhoja Sulende, Lujani Benjamin, Maghembe Mwanamkuu, Ngarashi Davis

Institution(s): Department of Biostatistics, Muhimbili University of Health and Allied Sciences, Dar es Salaam; Clinical Trial Unit, Africa Academy for Public Health, Dar es Salaam; Ifakara Health Institute, Ifakara, Morogoro; Department of Physiology, Muhimbili Univers

Background: The increasing prevalence of overweight and obesity among children has become public health concern. Body image perception is an important factor in weight control.

Objectives: To determine the prevalence of overweight and obesity and assess perception about body weight among primary school children in Dar es Salaam.

Methods: Sociodemographic characteristics and lifestyle information including perception about body weight were recorded through questionnaire. Height and weight were measured following standard procedures.

Results: Prevalence of overweight and obesity was 9.8% and 5.2% respectively. The prevalence of overweight and obesity was significantly higher among girls, 13.1% and 6.3% than among their peer boys 6.3% and 3.8% (P=0.0314). One-third (33.3%) of the children perceived their body weight as overweight or obese. Among overweight and obese boys (n=21), majority (61.9%) correctly perceived their weight as overweight or obese while (28.6%) and (9.5%) perceived their body weight as normal and underweight respectively. As for overweight and obese girls (n=44), nearly three-quarter (65.9%) correctly perceived their weight as overweight or obese while (34.1%) perceived their body weight as normal and none perceived her weight as underweight. The differences between perceived and actual body weight by BMI were statistically significant for both boys and girls.

Conclusion: Not all overweight and obese children have correct perception of their body weight. Target educational programs about overweight and obesity and associated health effects may be relevant among primary school children to decrease overweight and obesity in Tanzania.

Title: Prevalence and determinants of overweight and obesity among primary school children in Dar es Salaam, Tanzania

Author(s): Muhihi Alfa, Mpembeni Rose, Njelekela Marina, Anaeli Amani, Chillo Omary, Kubhoja Sulende, Lujani Benjamin, Maghembe Mwanamkuu, Ngarashi Davis

Institution(s): Clinical Trial Unit, Africa Academy for Public Health, Dar es Salaam; Ifakara Health Institute, Ifakara, Morogoro; Department of Biostatistics, Muhimbili University of Health and Allied Sciences, Dar es Salaam; Department of Physiology, Muhimbili Universi

Background: The prevalence of overweight and obesity has increased dramatically among children and has become public health concern. However, there is paucity of data on overweight and obesity among school children in Tanzania.

Objectives: To determine the prevalence and determinants of obesity among primary school children in public and private schools in Dar es Salaam.

Methods: Anthropometric and blood pressure measurements of 446 children aged 6-17 years were taken using standard procedures and socio-demographic characteristics of children determined using a structured questionnaire. BMI and WHR were calculated from the data. Multivariate logistic regression was used to identify determinants of obesity among primary school children in Dar es Salaam.

Results: The mean age of the participants was 11.1±2.0 years. The mean BMI, SBP and DBP was 16.6±4.0 kg/m2), 103.9±10.3mmHg and 65.6±8.2mmHg respectively. The prevalence of obesity in children (>95th percentile for age and sex) was 5.2%. Obese children had significantly higher mean age P=0.0416), systolic and diastolic blood pressures (all P

Conclusion: Children from urban schools and girls were proportionately more obese compared to their counterparts. These findings suggest the need for preventive measures targeting children above 10 years in urban settings and address socioeconomic factors of parents.

Title: Preferences of non-financial incentives and appreciation appraisal among health workers in Lindi district, southern Tanzania

Author(s): Kakoko, D.C.V., Leshabari, M.T., Massawe, S.N., Mpembeni, R., Saronga, H., Sukums, F., Wangwe, P

Institution(s): MUHAS

Background: Provision of incentives is very crucial for improving performance among health workers. This is particularly so with maternal health care providers who need extra diligence and commitment in their work

Objectives: To conduct a systematic literature review regarding non-financial incentives and to determine maternal health service workers' preferences of non-financial incentives and appreciation.

Methods: A cross-sectional qualitative study was conducted in Lindi district in 2009. 31 health workers were interviewed through semi-structured in-depth interviews. Study participants were sampled purposefully. Data were analysed qualitatively using the content analysis approach.

Results: Available literatures provide a range of non-financial incentives including those given or intended for health workers. In the interviews, non-financial incentives that were preferred by health workers in maternal and neonatal care services included; recognition of work and achievement, team building, supportive supervision and feedback, improved leadership, improved communication, provision of job description and induction, as well as access to training. Even though some of the participants reported that their work was appreciated by the employer, supervisors and community members, others were of the views that ir work was not adequately appreciated.

Conclusion: Non-financial incentives for and appreciation of work well done by health workers are important aspects that can contribute to the filling of the "know-do" gap particularly in resource constrained rural and remote settings.

Title: The pattern of prognostic indicators among women with breast cancer undergoing modified radical mastectomy

Author(s): [1]H Rabiel, [2]NAA Mbembati, [2]AR Mwakigonja, [3]LEK Lema

Institution(s): MUHAS

Background: Breast cancer represents the most common cancer in women in the world. It is the second most common malignancy among females in sub-Saharan African countries including Tanzania, the leading cancer being that of uterine cervix. In Tanzania, data on prognostic indicators is lacking.

Objectives: To determine the pattern of prognostic indicators among women with breast cancer undergoing modified radical mastectomy at Muhimbili National Hospital and Tumaini Hospital, Dar es Salaam.

Methods: All patients with clinical stage I-III disease between April 2011 and January 2012 were enrolled in the study after being scheduled for mastectomy. The surgical specimen consisting of mastectomy tissue and axillary lymphnodes was submitted to the histopathology laboratory to determine grade, type, nodal status and margins status. Data collection was done using a structured questionnaire and analyzed using SPSS software.

Results: During 10months of study, 348 patients were admitted with breast cancer. Eighty six (86) patients met the inclusion criteria to the study. Most of our patients (61%) had T4b disease, 75.6% had positive axillary nodes where 42.7% had 4-9 (N2 disease). The commonest histological type was invasive ductal carcinoma (91.9%). Lobular carcinoma, medullary and mucinous carcinoma together accounted for only 8.1%. Eighty three percent (83.7%) of our patients presented with stage III, 16.3% with stage II disease, and none at stage I. The intermediate and high grade tumor accounted for 73.5%. Twenty five percent (25%) of our patients had positive surgical margins with 25% positive base following MRM.

Conclusion: Most breast cancer patients treated surgically at MNH present with a stage III disease have been shown to have unfavorable prognostic indicators

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Title: Achievements and Challenges of Resource Allocation for Health in a Decentralized System in Tanzania: Perspectives of National and District Level Officers

Author(s): Nyamhanga, Tumaini[1], Frumence, Gasto[1], Mughwira Mwangu1 & Anna-Karin Hurtig[2].

Institution(s): [1]Department of Development Studies, School of Public Health and Social Sciences, Muhimbili University of Health and Allied Sciences, Tanzania. [2] Epidemiology and Global Health, Umea International School of Public Health, Umea University, Umea, Sweden

Background: Currently most countries worldwide distribute resources on the basis of relative needs of care, that is – they follow the principle of population health approach to resource allocation. The basic principle of such formulae is that public sector health care resources should be apportioned between districts according to the relative need for health services in each district.

Objectives: The goal of this study was to identify achievements and challenges of resource allocation process in decentralized health system in Tanzania as perceived by national and district level officers.

Methods: Data were collected through in-depth interviews with 25 key persons involved in policy, planning and management aspects for allocation of financial resources from the central government to local government districts. Data were analyzed manually using a qualitative content analysis.

Results: The study has identified achievements and challenges of resources allocation in a decentralized health system of Tanzania. The achievements include: the design and use of needs-based resource allocation formula; reduced resource allocation inequalities between rural and urban districts; and a wide discretion by the district council to mobilize and utilize health insurance funds and user fees. Identified challenges include: disbursed funds fall far short of centrally determined budget ceilings, and the funds are sent late; Council Health Management Teams develop budget but restricted on percentage allocated to different levels – including severe under-funding of disease prevention and health promotion initiatives at the community level.

Conclusion: This study has identified achievements that should further be nurtured and challenges that should be worked on for improvement of the decentralized health system. we recommended that equitable allocation of resources should go beyond recurrent costs for delivery of health services.

Title: ENROLMENT AND LOGISTICAL CHALLENGES IN CONDUCTING HIV VACCINE TRIAL IN DAR ES SALAAM, TANZANIA

Author(s): Ngatoluwa Mary, Munseri Patricia, Bakari Muhammad, Mhalu Fred, Tarimo Edith, Sandstrom Eric

Institution(s): Muhimbili University of Health and Allied Sciences, and Department of clinical Sciences and Education Sodersjukhuset, Karolinska institute, Stockholm, Sweden

Background: The participation of sub-Saharan countries in HIV vaccine clinical trials is important in the fight against HIV and AIDS. Experiences from earlier trials are expected to influence the design and performance of subsequent trials. Following the completion of HIVIS-03 and TaMoVac-01 trials in Dar Es Salaam, Tanzania

Objectives: To report on the comparative enrolment and logistical challenges between the two trials

Methods: The HIVIS-03 trial was conducted between February 2007 and February 2010 recruited 60 volunteers from the Police force in Dar Es Salaam. The subsequent TaMoVac-01 trial in Dar Es Salaam has recruited 62 volunteers from Police force, Prisons force, and youths at the youths clinic. Regular and numerous sessions containing study details were provided to the Police, Prisons and youth communities prior enrollment

Results: Whereas enrollment of volunteers into the HIVIS-03 trial took 12 months (Feb 2007-Feb 2008), that of the TaMoVac -01 trial took 13 months (Mar 2010 to April 2011). In HIVIS-03 study 177 volunteers were screened to get 60 volunteers while in the TaMoVac-01 study 235 volunteers were screened to obtain 62 volunteers. The screened: enrolled ratio was 3:1 in the HIVIS-03 trial, while in the TaMoVac-01 trial the ratio was 4:1. Enrolment challenges The recruitment of female volunteers was a big challenge in the HIVIS-03 trial, but this was relatively easy in TMV-01 trial, largely due to the inclusion of youths from youth clinic. Misconceptions in the Police force remain an obstacle to recruitment despite being involved in earlier HIVIS-03 trial whereby regular information sessions were held. Adherence to schedules, as a result of competing prioritization of employment requirements Logistical challenges Difficulties in communication with volunteers who did not possess mobile phones. Pregnancy during the trial period.Limited space for conducting clinical trial. Abnormal laboratory and ECG results

Conclusion: Enrolment and logistic challenges continued in HIV vaccine trials despite of previous trials done. Community awareness is very important as well as getting correct information.

Title: GENDER CONTEXT OF SEXUAL VIOLENCE AND HIV SEXUAL RISK BEHAVIORS AMONGST MARRIED PERSONS IN IRINGA REGION, TANZANIA

Author(s): Nyamhanga Tumaini

Institution(s): MUHAS

Background: Previous studies in Tanzania (WHO, 2005 and McCloskey, 2005) have exposed the existence of physical and sexual violence against women. However, little is known about the gender context of sexual violence and whether it is associated with high risk sexual behavior which may be contributing to the transmission of HIV – particularly so in marriage.

Objectives: This study sought to examine the relationship between gender attitudes on one hand and sexual violence and associated high risk sexual behavior on the other, among married/ cohabiting persons.

Methods: This study was carried out using both quantitative and qualitative approaches of data collection. Qualitative and quantitative data were collected using FGD guide and a structured questionnaire respectively. Predictor variable was sexual violence and outcome variable is high risk sexual behavior (non-use of condom during penile vaginal / penile anal sex, having sex while drunk, sex with non-regular/ marital partner).

Results: The findings have revealed that men consider their wives as sexual objects. And consequently, women in marriage are forced to have sex even when they do not want to. One hundred and six (26.7%) of the women study sample, pointed out that they were sexually abused, i.e they were made to have sex when they did not want to in the twelve months preceding the study.

Furthermore, more than half (52.8%) of the female respondents who were made to have sex when they did not want to also admitted that their spouses did engage in sexual intercourse with extramarital partners (p

Conclusion: In conclusion, this study has demonstrated that a substantial proportion of women experience physical and sexual violence. And their HIV risk is high because their husbands engage in unprotected intra- and extra marital sex. Further that this ugly scenario is attributed to deeply rooted masculinity attitudes that view a married woman as her husband's property and sexual object. It is recommended that there is need to have couple counseling program for healthy sexual relationships in marriage

Title: Cervical cytomorphological changes amongst HIV-infected women attending care and treatment clinic at Muhimbili National Hospital, Dar es Salaam, Tanzania

Author(s): Amos R. Mwakigonja [1], Liset Maria M. Torres[1], Henry A. Mwakyoma[1], Ephata. E. Kaaya[1]

Institution(s): [1] Department of Pathology, Muhimbili University of Health and Allied Sciences (MUHAS), P.O. Box 65001, Dar es Salaam, Tanzania

Background: HIV infected women appear to have a higher rate of persistent infection by high risk types of human papillomavirus (HPV) strongly associated with high-grade squamous intraepithelial lesions (HSIL) and invasive cervical carcinoma.

Objectives: To determine the frequency and HIV/HPV association of cervical cancer and HSILin HIV patients

Methods: HIV-seropositive, women ≥18 years of age were recruited Muhimbili National Hospital (MNH) between 2005 and 2006. HIV seronegative, women recruited from the Cervical Cancer Screening unit (CCSU) at ORCI were used as controls. Pap smears were collected for routine cytodiagnosis and P53 immunohistochemistry (IHC). Cervical lesions were classified according to the Modified Bethesda System.

Results: A total of 170 participants from the two centers were recruited including 50 HIV-seronegative controls from the CCSU. Ages ranged from 20–66 years (mean 40.5 years) for cases and 20–69 years (mean 41.6 years) for controls. The age group 36–45 years was the most affected by HIV (39.2%, n = 47). Cervicitis, squamous intraepithelial lesions (SIL) and carcinoma constituted 28.3% (n = 34), 38.3% (n = 46) and 5.8% (n = 7) respectively among cases, and 28% (n = 14), 34% (n = 17) and 2% (n = 1) for controls, although this was not statistically significant (P-value = 0.61). IHC showed that p53 was not detectable in HPV + Pap smears and cell blocks indicating possible degradation.

Conclusion: The frequency of SIL and carcinoma appeared to be higher among HIV-infected women on HAART compared to seronegative controls and as expected increased with age. HIV seropositive patients appeared to present earlier with SIL suggesting a role of HIV in altering the natural history of HPV infection and cervical lesions.

ABSTRACTS

Progress in addressing Health Related MDG

Title: Epidemiology of intestinal schistosomiasis in selected localities along the shores of Lake Tanganyika, Tanzania

Author(s): Bakuza Jared[123], Denwood Matthew[1], Mable Barbara[1], Nkwengulila Gamba[2] and Hagan Paul[4]

Institution(s): [1]College of Medical, Veterinary & Life Sciences, University of Glasgow, G[12] [8]QQ UK [2]College of Natural & Applied Sciences, University of Dar es Salaam, P.O Box 35065, Dar es Salaam Tanzania [3]Faculty of Science, Dar es Salaam University College of Educat

Background: Intestinal schistosomiasis due to Schistosoma mansoni poses a major public health problem in Tanzania. Despite that, its distribution and transmission risk factors are not well known, particularly in the country's western areas.

Objectives: This study was initiated to: 1) determine the current infection levels of S. mansoni in Gombe National Park and the neighbouring villages of Mwamgongo, Bugamba, Kiziba and Mtanga; and 2) relate the infection prevalence and intensity to locality, host sex and age.

Methods: Between January and September 2010, stool samples were collected from 235 children and 171 adults and examined for parasite ova using the Kato-Katz technique.

Results: S. mansoni infection was recorded at an overall prevalence of 45% across study sites, ranging from 19% at Mtanga to 68% at Mwamgongo. The mean intensity was 18 eggs per Kato Katz slide, ranging from 1 to 225 eggs and a median of 8 eggs. Generalised Linear Models were used to analyse parasite data, applying binomial distribution models for prevalence and Zero-inflated negative binomial (ZINB) for intensity. A hierarchical analysis for the best fitting model indicated that host sex did not influence infection variation, while age and site interacted strongly. The analysis showed significant variation of S. mansoni prevalence between age groups, which also depended on site. ZINB analysis results showed also that egg counts significantly varied between age groups and across study sites.

Conclusion: These findings indicate a high infection of intestinal schistosomiasis in the study area, suggesting that the distribution of the disease in the country could be more widespread than previously thought. They also confirm that the infection of intestinal schistosomiasis in the area is focal, with marked variations between adjacent villages. The wide implications of these findings and the observed variation in S. mansoni infection between age groups and study sites are discussed.

ABSTRACTS

Title: Quality management role in improving skilled birth attendance in Tanzania

Author(s)Samwel Shupa[1], Jennie Jaribu[1], Joanna Schellenberg[2], Cathy Green[2,] Yovitha Sedekia[1], Tanya Merchant[2], Stefan Peterson[2], Fatuma Manzi[1]

Institution(s): Ifakara Health Institute Tanzania, P.O. Box 78373, Dar es Salaam,London School of Hygiene and Tropical Medicine, UK,Karolinska Institutet, Sweden

Background

The pace of reduction in maternal and newborn mortality is still slow. The Expanded Quality Management Using Information power (EQUIP) study in Tanzania and Uganda aims to improve maternal and newborn health using quality management approach powered by local data at community, health facility and district levels. Here we report findings of quality management activities done at community, district level and primary health facilities in Tandahimba district, Southern Tanzania

Aim

The quality improvement (QI) work aims to increase the uptake and utilization of health care. Particulary, it addresses the major challenges towards improving maternal and newborn health.

Method

Quality management using collaborative approach is employed at health facility, community and district level. Learning sessions are conducted every three months where teams are impacted with quality improvement (QI) knowledge associated with the introduction of a new change topic area that is intended to address maternal and/ or newborn health. New indicators are introduced after every three months. The QI activities are linked to locally defined and collected data to measure if the changes have led to improvements. Teams are facilitated in defining their own "problem" and "change ideas" based on analysis of their own routine data. Quality improvement work is centered in Plan-Do-Study-Act (PDSA) cycles.

Results

Early findings have documented improvements on the proportion of women giving birth at the health facility, post caesarean section sepsis management, post natal care coverage, prevention of post partum hemorrhage, birth asphyxia and community knowledge on maternal and newborn danger signs.

Conclusion

The study implies that the use of quality management approaches in a collaborative manner has potentials to increase uptake of effective intervention and improve service quality. Linkages to QI at health facility, community and district level further increases this potential.

Title: Women's perceptions on antenatal, delivery and postpartum services in rural Tanzania

Author(s): Gladys Reuben Mahiti[1], Dickson Mkoka[2], Columba Mbekenga[2], Anna-Karin Hurtig[3], Angwara Dennis Kiwara[1], Isabel Goicolea[3]

Institution(s): [1]School of Public health, Muhimbili University of Health and Allied Sciences, Dare es Salaam, Tanzania [2] School of Nursing, Muhimbili University of Health and Allied Health Sciences, Dare es Salaam, Tanzania. [3]Division of Epidemiology and Global Health,

Background: Maternal health care provision remains one of the main challenges in developing countries. Despite the fact that reduction of maternal mortality has been a global health priority, progress to other MDGs is not good. From a rights approach to health, maternal mortality is a sign of States' failure to their female citizens to enjoy the highest standard of maternal health.

Objectives: The aim of the study was to explore perceptions of the postpartum women towards maternal health services in Kongwa district, Tanzania

Methods: Qualitative data was gathered from fifteen FGDs with postpartum mothers in Kongwa district, Dodoma, Tanzania. Data was transcribed verbatim. We used open code software programme for coding process. Qualitative content analysis was used to analyze data.

Results: Mothers perceive that, maternal health services are beneficial during pregnancy and delivery. However, awareness of the complications during postpartum and the role that medical services could play during that stage was poor. Ambivalence regarding quality of services offered such as health workers' attitude to patients, their shortage and materials resource shortages such as drugs and equipment and barriers such as transport, and TBAs use for accessing maternal health services' were also revealed

Conclusion: Women perceive that, maternal health care services could be beneficial during pregnancy and delivery. However, awareness of the complications during postpartum and the role that medical services could play during that stage was poor. The Ministry of Health and social welfare (MOHsw), NGOs and CSOs should sensitize the community on the importance of routine visits to postpartum care. The quality of services was low. The MOHsw should procure drugs and needful equipment in rural areas. Penalizing certain attitudes and practices of staff should be better implemented. Transportation to health facilities is a great challenge. The Ministry of works and transport should improve infrastructure in rural areas.

Title: MATERNAL HEALTH COST AND EFFICIENCY OF SERVICES IN SELECTED HEALTH FACILITIES IN LINDI AND MTWARA RURAL DISTRICTS IN TANZANIA

Authors: Saronga Happiness, Duysburgh Els, Dalaba Maxwell, Savadogo Germain, Tonchev Pencho, Dong Hengjin, Sauerborn Rainer, Loukanova Svetla

Institution(s): University of Health and Allied Sciences; Ghent University,Beligium; Navrongo Health Research Center, Ghana; Centre de Recherche en Santé de Nouna, Burkina Faso; University Hospital , Bulgaria; Zhejiang University School of Medicine, China; University of Heidelberg, Germany

Background: Cost studies are paramount in demonstrating how resources have been spent and identifying opportunities for more efficient use of resources.

Objectives: The objectives of this study are to assess the actual dimension and distribution of costs of providing maternal and newborn care (MNC) services and to analyze the determinant factors for efficient service provision in selected rural primary health care facilities in Tanzania in order to inform health policy and planning.

Methods: This is a retrospective quantitative cross-sectional study conducted in 11 health facilities in Mtwara and Lindi rural districts. Cost analysis for 2009 was done using step down cost accounting technique. Unit costs, inputs divided by outputs, in this study reflect efficiency of service provision. Reported personnel workload is described. Multivariate regression analysis on the drivers of observed unit costs and determinant factors for efficient service provision was also conducted.

Results: The study health facilities spent on average 7USD per capita in 2009. Fewer resources were spent for service provision at dispensaries than at health centers as expected. Personnel contributed highly to total costs, about 44%. Staff reported to have spent on average 8% and 10% of their time providing ANC and childbirth services respectively, with a wide variation between the facilities. ANC and normal childbirth consumed about 11% and 12% of total facility resources respectively. On average unit costs were rather high, 16 USD (range 2.8-59.4) per ANC visit and 79.4 USD (range 32.7-211.5) per childbirth. The unit costs show relative efficiency differences between the health facilities in providing MNC services. Efficiency in ANC is explained by number of staff, structural quality of care, process quality of care and perceived quality of care. Population- staff ratio and structural quality of basic emergency obstetric care services highly explain childbirth efficiency while perceived quality of care has no influence on childbirth efficiency.

Conclusions: High variability in unit costs between and within these rural health facilities shows differences in efficiency of provision of services, thus opportunity for efficiency improvement. Taking into consideration client heterogeneity, quality improvements are possible and necessary. This will stimulate utilization of MNC services in the resources constrained health facilities.

Title: Agents of Change: Comparing HIV-related risk behavior of people attending ART clinics in Dar es Salaam with members of their social networks

Authors: Sylvia F. Kaaya[1], Gilly Arthur[2], Hellen Siril[3], Keith McAdam[4], Donald Ainebyona[1], MagreatSomba[1], Elspeth McAdam[4], Kicki Oljemark[4], James Todd[5], Irene Andrew[3], Alice Simwinga[3], NeemaMleli[1], SamwelMakongwa[1], Yuanyuan Liu[6], Jeffrey Lienert[6], Sabina Haberlen[2], Mary C. Smith Fawzi[6]

Institution(s): CTS Global Inc, assigned to the U.S. Centers for Disease Control and Prevention,Dar es Salaam, Tanzania[1],Management and Development for Health,Dar es Salaam, Tanzania[2],Namweza Center, United Kingdom and Sweden[3],London School of Hygiene and Tropical Medicine, Mwanza, Tanzania[4], Harvard Medical School, Boston, USA[5]

Background: People living with HIV (PLWH) receiving treatment have potential to promote HIV awareness, prevention, and demand for care in their communities. However, little is known about their risk behaviors and HIV knowledge compared to those who are not living with HIV.

Objective: To compare PLWH and members of their social networkwith respect to socio-demographic characteristics, risk behaviors, and otherpsychosocial factors.

Methods: The Agents of Change (AOC) intervention to empower PLWH to become "change agents" (CAs) (n=567)in their community through raising their own self esteem, confidence, and assertiveness, is being rolled-out through a stepped wedge randomized trial in a clinical care setting in Dar es Salaam. AOC participantsrecruited members of their social network (NMs) (n=395) to participate in baseline and follow-up interviews.Descriptive analysis was performed on this preliminary data at baseline comparing socio-demographic factors, self-esteem, sexual risk factors, and social support for CAs versus NMs (SASv.9.2).

Results: CAs were more likely to not complete primary school (9% vs. 4%, p=0.0008) and be unemployed (29% vs. 13%, p<0.0001) than their NMs. Also, CAs reported limited social supportwith finances (83%) and transport (82%). More than 45% of CAs demonstrated depressed mood and 57% reported depressive symptoms affected their daily activities. However, NMs were more likely than CAs to have unprotected sex (59% vs. 37%, p<0.0001) and to have perpetrated physical abuse in the past six months (10% vs. 5%, p=0.03).

Conclusion: Findings suggest that PLWHreceiving ART have lower rates of risk behaviors than their NMs, despite reporting unemployment, depression, and unmet need for social support. From a role model perspective, PLWH hold potential as behavior change agents for preventing HIV transmission in their communities. Providing group sessions to improve social support and reduce depressive symptoms may enhance their capacity to assume this leadership role.

Title: A study of antimicrobial activity, acute toxicity and cytoprotective effect of a polyherbal extract in a rat ethanol-HCl gastric ulcer model

Author(s): Moshi Mainen J, Haule Emmanuel E , Nondo Ramadhani , MwangomoDennis T ,

Institution(s): Department of Biological and Preclinical Studies, Institute ofTraditional Medicine, Muhimbili University of Health and Allied Sciences, P.O. Box 65001, Dar es Salaam, Tanzania

Background: The decoction of the aerial parts of Rhynchosia recinosa (A.Rich.) Bak. [Fabaceae] is used in

combination with the stem barks of Ozoroa insignis Del. (Anacardiaceae), Maytenus

senegalensis (Lam.) Excell. [Celastraceae] Entada abyssinica Steud.ex A.Rich [Fabaceae]

and Lannea schimperi (Hochst.)Engl. [Anacardiaceae] as a traditional remedy for managing

peptic ulcers.

Objectives: This study reports on an evaluation of the polyherbal extract for efficacy in a rat model of peptic ulcers

Methods: Methods

A mixture of aqueous ethanol extracts of the five plants at different doses was evaluated for protection of Sprague Dawley rats against acidified ethanol gastric ulceration , in comparison with 40 mg/kg body wt pantoprazole. Evaluated was also done for brine shrimp toxicity and acute toxicity in mice.

Results:The polyherbal extract caused a dose-dependent protection against acidified ethanol ulceration of rat gastric mucosa, reaching 81.7% mean protection as compared to 87.5% protection by 40 mg/kg body wt pantoprazole. Despite Ozoroa insignis being toxic to mice at doses above 1000mg/kg body wt, the other plant extracts and the combined extract of the 5 plants were tolerated by mice up to 5000 mg/kg body wt. The brine shrimp test results showed the same pattern of toxicity with Ozoroa insignis being the most toxic (LC50 = 10. 63 μg/ml). Phytochemical tests showed that the combined extract of the five plants contained tannins, saponins, steroids, cardiac glycosides, flavonoids and terpenoids. Flavonoids, tannins and terpenoids are known to have antioxidant activity.

Conclusion: The results support the use of the polyherbal extract in traditional medicine for management of peptic ulcers. However, the doses of the crude extracts showing protection of the gastric mucosa are too large for realistic translation to direct clinical application, so further studies using bioassay guided fractionation are needed to establish evidence for clinical application.

Title: Online/offline ICT pilot platform to support coordination in health data management in East Africa

Author(s): Eliangiringa Kaale[1] ,Eugenia Rinaldi[4], Grace Thoithi[2], Richard Odoi Adome[3] Marisa De Rosa[4]

Institution(s): [1].School of Pharmacy, Muhimbili University, Tanzania [2]. School of Pharmacy, University of Nairobi, Kenya [3].School of Health Sciences, Makerere University, Uganda [4]. CINECA, Bologna, Italy

Background: As Clinical Research becomes global and Clinical Trials increasingly move from wealthy countries to developing countries, there is a growing need to strengthen capacity for health research in the less wealthy countries.

Objectives: The objective of MEDISHARE was to create a pilot ICT platform to collect demographic, clinical, and therapeutic and laboratory data on patients with HIV infection, TB and malaria in order to determine and monitor the long-term clinical outcome of patients across east Africa.

Methods: MEDISHARE, by providing adequate IT tools, aims at creating high standard local competences to enable epidemiological and pharmaco-epidemiological data analysis and to elaborate fundamental information for health policy makers at national level.

Results: A central and shared IT knowledge platform to provide high-quality data for local and global health research systems has been created. Medishare has collected epidemiological for more than 15,000 patients' data on HIV/AIDS, Malaria and TB in Kenya, Uganda and Tanzania.

The platform was designed to fit the needs of Africa, where Internet is not always available. The peculiarity of Medishare is that all data are in one central database across countries and across diseases thus allowing integrated analysis and reports. Despite the Internet discontinuity in Africa, data can be collected by virtue of a synchronization system that sends data to the central database only when Internet is available.

Conclusion: The platform has successfully been used to support health data management but it also offers e-learning and communication tools to support Clinical Research in Africa

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Title: CHEST RADIOGRAPHIC PATTERNS AMONG HIV+ AND HIV- ADULTS WITH PTB AT MWANANYAMALA HOSPITAL TB CLINIC

Author(s): Dr. Balowa Musa Baraka, MD, MMED RAD

Institution(s): MUHAS

Background: Tuberculosis is important global health problem caused by Mycobacterium tuberculosis.

Objectives: This study aimed to determine differences in chest radiographic patterns among PTB patients with and without HIV co-infection

Methods: Newly diagnosed consented AFB+ PTB patients were randomly selected, undergone CXRs, which were read by double blinded researcher and radiologist and radiographic patterns were documented upon reader agreement. HIV testing was done and CD4 counts determined among HIV/PTB co-infected

Results: A total of 170 patients were included among them 100 were males and 70 were females. Prevalence of PTB/HIV co-infection was 31.8%, occurring significantly among females (51.4% vs 18.0%, p-value=0.000). HIV/PTB co-infected patients had lesser cavities (44.4% vs 61.2%, p=0.040) and lesser alveolar consolidation (64.9% vs 81.7%, p=0.04). HIV/PTB co-infected patients had more left and bilateral lung nodules 85.2% vs 60.9% (p=0.023) and 70.4% vs 37.5% (p=0.004) respectively, more miliary nodules (44.4% vs 15.6%, p=0.003), more left upper, mid and lower zone nodules 59.3% vs 34.4% (p=0.028), 77.8% vs 54.7% (p-value=0.039) and 66.7% vs 34.4% (p=0.005) respectively. HIV/PTB co-infected patients with CD4 > 200µmol/l had more right mid zone consolidation (40.0% vs 4.5%, p=0.007).

Conclusion: Prevalence of HIV among PTB patients is still high (31.8%). Pulmonary cavities and alveolar consolidation are highly associated with negative HIV status. HIV positive patient with smear positive PTB were more likely to have left or bilateral pulmonary nodules, milliary nodules and left upper, mid and lower zone nodules. Right mid zone consolidation in HIV patients was associated with CD4 counts > 200µmol/l. No radiographic pattern was highly associated with severe immunosuppression.

Title: Title: Cord Levels of Inflammatory Cytokines Predict Severe Malaria Risk during Early Childhood

Author(s): Edward Kabyemela[1,2], Bronner P. Goncalves[3], D. Rebecca Prevots[4], Robert Morrison[1], Whitney Harrington [1], Gwamaka Moses[1], Jonathan Kurtis[5], Michal Fried[1,3], Patrick E. Duffy[1,3]

Institution(s): Malaria Program, Seattle Biomedical Research Institute, SEATTLE, WA, USA. [2]Muhimbili University of Health and Allied Sciences,

Background: Severe malaria risk varies between individuals. Although factors such as human genetics, parasite virulence and environmental factors can all contribute to variations in risk, most of this variation remains unexplained

Objectives: Here, we examined the hypothesis that cytokine profiles at birth reflect inter-individual differences that persist and influence malaria parasite density and disease risk throughout early childhood.

, IL-4, IL-5, IL-6 and IL-10) were measured at birth (cord blood; N=783) and during subsequent routine follow-up visits (peripheral blood) for children enrolled between 2002 and 2006 into a longitudinal birth cohort in Muheza, Tanzania. Children underwent blood smear and clinical assessments every 2-4 weeks, and at the time of any illness☐Methods: Cytokine levels (TNF-☐, IFN-☐, IL-1

and TNF-☐ (but not other cytokines) correlated with levels of the same cytokine measured at routine visits during early life (P☐Results: Cord blood levels of all cytokines were positively correlated with each other (Spearman rank correlation). Cord levels of IL-1 (0.60 (0.39-0.92), P = 0.02), TNF-☐ (0.68 (0.45-1.03), P = 0.07; Cox regression).☐during follow-up (adjusted hazard ratio [HR] (95% CI)): IL-1

and TNF-☐ levels observed at birth are related to future cytokine levels as well as the risk of severe malaria in early life. The effect on severe malaria risk may be due in part to the effect of inflammatory cytokines to control parasite density. Further study is needed to identify the factors that influence the fetal cytokine profile, as well as interventions that might target these factors to improve malaria outcomes during early childhood.☐Conclusion: IL-1

Title: Title: Resistance to Severe Plasmodium Falciparum Malaria in African Children

Author(s): Bronner P. Gonçalves[1,2], Chiung-Yu Huang[3], Robert Morrison[4], Sarah Holte[5], Edward Kabyemela[4], D. Rebecca Prevots[2], Michal Fried[1,4,] Patrick E. Duffy[1]

Institution(s): [1] Laboratory of Malaria Immunology & Vaccinology, National Institute of Allergy and Infectious Diseases, NIH [2]Laboratory of Clinical Infectious Diseases – Epidemiology Unit, National Institute of Allergy and Infectious Diseases, NIH [3]

Background: Severe Plasmodium falciparum malaria is a major cause of pediatric mortality. Understanding factors involved in development of severe malaria during childhood may guide the development of anti-disease vaccines.

Objectives: The competing hypothesis is that immunity to severe malaria results is qualitatively different from mild malaria, and more rapidly acquired for other reasons. There is also a prevailing dogma that immunity to severe malaria is acquired after one or two exposures to mild malaria

Methods: We enrolled mother-infant pairs at birth in Muheza-Tanzania, an area with intense malaria transmission. We monitored P. falciparum malaria morbidity in this longitudinal cohort of 882 children from birth up to age 4 years

Results: 102/882 children experienced severe malaria, but only 3 suffered more than 2 episodes. More than half of first severe malaria events occurred after a child's second infection. Although on average parasite levels were higher when children had severe disease rather than mild disease, most (67/102) children experienced high density infection with no more than mild symptoms either before or after having severe malaria. Severe malaria incidence rapidly decreased after infancy, while incidence of high density infection (>100,000 parasites/μl blood) remained stable. Infections before and after severe malaria episodes had similar parasite densities. Bed nets, maternal malaria, malaria season, and sickle trait modified severe malaria risk, and also modified parasite density during infections.

Conclusion: Taken together, the data suggest that severe malaria cannot be explained by parasite burden alone, and that factors involved in immune-pathogenesis such as parasite virulence or host inflammation play key roles. Similarly, the diverging rates of severe malaria and high density infection indicate that acquired immunity to severe malaria is not explained by improved control of parasite density, and therefore might target distinct antigens or processes involved in severe syndromes.

Title: Malaria and First Trimester Pregnancy Loss in Lindi Region, Tanzania

Author(s): Ng'walali PM [1], Kabyemela EA[2], Premji Z[3], Kitinya JN

Institution(s): [1]Department of Histopathology, [2]Department of Clinical Chemistry, [3]Department of Parasitology, School of Medicine, Muhimbili University of Health Sciences, Dar es Salaam, Tanzania

Background: In sub-Saharan Africa, about 25 million pregnant women are at risk of Plasmodium falciparum infection every year. The true prevalence of malaria infection in early pregnancy, its effects and outcome have not been clearly described. Morphological changes in malaria related to early abortions, stillbirths and premature deliveries have yet to be fully characterized in the placenta and fetus.

Objectives: 1). To determine the prevalence of malaria infection in early pregnancy. 2). To characterize morphology changes in the fetus and placenta in stillbirths, and their relationship to placental malaria infection.

Methods: Pregnant women presenting with abortions and stillbirths were enrolled into the study after informed consent. A blood sample was obtained for Rapid Diagnostic Test and a thick and thin smears were taken for microscopic and species identification of malaria parasites. Placental tissues and fetal tissues evacuated for abortion or obtained by needle biopsy of liver in stillbirths were histologically studied as snap frozen sections or fixed in 10% neutral buffered formal saline.

Results: total of 36 cases were enrolled between October 2011 and June 2012. Of these 5 did not have material for histological examination leaving 31for analysis. All peripheral blood smears were negative and 3 of the cases were positive with the rapid diagnostic test. Nine cases showed presence of placental malaria infection in tissue sections. Two cases showed few mononuclear cells with pigment in inter-villous space indicating chronic infection. Seven others showed a pigment deposition score of grade I in inter-villous fibrin.

Conclusion: We found evidence of malaria infection in 29% of first trimester abortions in a rural African area of Tanzania. These infections were mild and chronic. Their contribution to pregnancy loss is currently unclear. Study involving a larger sample size is recommended in this area of malariology.

Title: POLYPHENOLIC COMPOUNDS WITH ANTI-AGES ACTIVITY ISOLATED FROM CLUSIACEAE PLANTS OF TANZANIAN ORIGIN

Author(s): Magadula JJ[1]*, Mbwambo ZH[1], Gatto J[2], Derbré S[2], Guilet D[2], Richomme P[2]

Institution(s): [1]Institute of Traditional Medicine, Muhimbili University of Health and Allied Sciences, P.O. Box 65001, Dar es Salaam, Tanzania. 2PRES LUNAM, Université d'Angers, EA 921 SONAS, 16 Bd Daviers, 49045 Angers, France

Background: A series of polyphenolic compounds are well reported to be synthesized in different genera of the family Clusiaceae [1,2]. These compounds displayed different biological activities including malaria, HIV, cancer, oxidation stresses, etc

Objectives: In this study, we aimed to investigate the Advanced Glycation End-products (AGEs) activity of crude extracts and compounds from three Clusiaceae plant species namely Garcinia semseii, G. volkensii and Allanblackia ulugurensis. The AGEs are known to be involved in the progression of numerous pathologies such as diabetes, atherosclerosis or neurological diseases.

Methods: Their anti-AGEs activities were evaluated using a recently developed automated screening assay [3].

Results: With the objective of finding molecules with inhibitory effects on AGEs formation, we isolated and identified several polyphenolic compounds exhibiting phloroglucinol moieties [e.g. polyprenylated benzophenones, such as guttiferone F (1)] or biflavonoids [such as morelloflavone (2)].

Conclusion: With the objective of finding molecules with inhibitory effects on AGEs formation, we isolated and identified several polyphenolic compounds exhibiting phloroglucinol moieties [e.g. polyprenylated benzophenones, such as guttiferone F (1)] or biflavonoids [such as morelloflavone (2)].

Title: Temporal trends of molecular markers associated with artemether-lumefantrine tolerance/resistance in Bagamoyo District, Tanzania

Author(s): Maja Malmberg[1*], Billy Ngasala[2], Pedro E Ferreira[1,3], Erik Larsson[1], Irina Jovel[1,4], Angelica Hjalmarsson[1], Max Petzold[5,] Zul Premji[2], José P Gil3,[6], Anders Björkman[1], Andreas Mårtensson[1,7]

Institution(s): [1]Malaria Research, Department of Medicine,

Background: Development and spread of Plasmodium falciparum resistance to artemisinin-based combination therapy (ACT) constitutes a major threat to recent global malaria control achievements. Surveillance of molecular markers could act as an early warning system of ACT-resistance before clinical treatment failures are apparent.

Objectives: The aim of this study was to analyse temporal trends of established genotypes associated with artemether-lumefantrine tolerance/resistance before and after its deployment as first-line treatment for uncomplicated malaria in Tanzania 2006

Methods: The aim of this study was to analyse temporal trends of established genotypes associated with artemether-lumefantrine tolerance/resistance before and after its deployment as first-line treatment for uncomplicated malaria in Tanzania 2006

Results: There was a statistically significant yearly increase of pfmdr1 N86, 184F, D1246 and pfcrt K76 between 2006-2011 from 14% to 61% (yearly OR=1.38 [95% CI 1.25-1.52] pctively. Unlike for the pfmdr1 SNP, a significant increase of pfcrt K76 was observed already between 2004-2006, from 26% to 49% (OR=1.68 [95% CI 1.17-2.40] p=0.005).From 2006 to 2011 the pfmdr1 NFD haplotype increased from 10% to 37% (OR=1.25 [95% CI 1.12-1.39] p

Conclusion: The temporal selection of molecular markers associated with artemether-lumefantrine tolerance/resistance may represent an early warning sign of impaired future drug efficacy. This calls for stringent surveillance of artemether-lumefantrine efficacy in Tanzania and emphasizes the importance of molecular surveillance as a complement to standard in vivo trials

Title: Quality of partograph recordings and perinatal outcomes at Muhimbili National Hospital, Tanzania

Author(s): Mdoe P.F, Massawe S

Institution(s): MUHAS, Muhimbili National Hospital

Background: The management of labor using partograph is the standard way of improving both maternal and perinatal outcomes. The partogram increases the quality and regularity of all observations on the fetus and the mother in labor and aids early recognition of problems in both mother and fetus. One third of stillbirths takes place during delivery and is largely avoidable.

Objectives: To assess the quality of partogram recordings and compare with fetal outcomes among women delivering at Muhimbili National Hospital.

Methods: A cross-sectional study was conducted from 1st September to 30th November 2011. Partographs of women delivered at the hospital were reviewed immediately after delivery. Using checklist recordings of parameters the progress of labour, fetal outcome (Apgar score at 5 minute, still birth and admission to neonatal ward for special care) and immediate maternal outcomes (PPH, perineal tear, visceral injuries following cesarean section) were assessed. Partograph recordings were judged as standard if standard as per standard protocols.

Results: Partograph was used for all women admitted with spontaneous labor. 1,051 partographs were reviewed during the study time. Majority (79.5%) had spontaneous vaginal delivery and 18.6% delivered by cesarean section. Only 8.9% of partographs had all parameters with standard recordings. The most unrecorded parameter was maternal pulse rate. Most (81.4%) of partographs had substandard recording of uterine contractions.

There were 53 newborns with Apgar score less than 7 at 5 minutes and 17 fresh stillbirths. Substandard fetal heart rate recording was significantly associated with Apgar score less than 7 at 5 minute and with stillbirths (P-value associated with Apgar score less than 7 at 5 minute and with stillbirths (P-value

Conclusion: This study as other studies conducted as where found high proportion of substandard partogram recordings. Supportive supervision and on job training on correct use of partograph is recommended as a way of improving labor monitoring and improved fetal and maternal outcomes.

Title: Prevalence and risk factors for skin diseases among ARV naive HIV infected pregnant women

Author(s): Shayo Grace [i], Moshiro Candida [i], Msamanga Genhard[i], Mugusi Ferdinand [i], Chalamilla Guerino [ii], Spiegelman Donna [iii], Hawkins Claudia [iii,iv], Fawzi Wafaie [iii]   Correspondence: Grace A Shayo, MD, MMED. Muhimbili University of Health

Institution(s): Muhimbili University of Health and Allied Sciences Dar es Salaam Tanzania[i], Management Development for Health [MDH] Dar es Salaam Tanzania [ii], Harvard School of Public Health, Boston, Massachusetts, U.S.A [iii], Feinberg School of Medicine, Northwes

Background: Reduced cell mediated immunity associated with pregnancy may cause a flaring or exacerbation of some skin conditions. Little is known about the magnitude of and risk factors for skin diseases among Human Immunodeficiency Virus (HIV) infected antiretroviral therapy (ARV) naïve pregnant women.

Objectives: We aimed at investigating the magnitude of and the risks for skin conditions in HIV infected antiretroviral therapy (ARV) naïve pregnant women.

Methods: Cross sectional study of 1078 HIV infected ARV-naïve pregnant women was conducted in Dar es Salaam, Tanzania. Skin diagnoses were mainly clinical. Blood was drawn for CD4 count, hemoglobin, plasma vitamin A and E levels. Log-binomial regression models were used to explore factors associated with the outcomes.

Results: About 81% of the women were in World Health Organization (WHO) HIV stage I. Median CD4 count was 405 ×106 cells /L. The prevalence of any skin disease was 18%. Fungal (11%) and viral infections of any type (5 %) were the most common skin conditions. Skin infections were nearly 3 fold more common in HIV stage III, (95% CI 1.51-4.63) compared to stage I. Fungal infections were nearly 2 fold common among single, divorced and widowed women than among married women; (95% CI 1.16-2.68), nearly 3 fold common among women in HIV stage III (95% CI 1.19 – 6.67) compared to stage I. Genital ulcers were significantly more common among women whose source of income was their own and among those in WHO HIV stage III.

Conclusion: The burden of skin diseases was relatively low. Advanced HIV stage was associated with a range of skin conditions. CD4 cell count was not related to skin prevalence.

Title: DEVELOPMENT OF A GENERIC FORMULATION OF PEADIATRIC 20MG ZINC TABLETS

Author(s): E. Kaale, P. Tibalinda, A. Bhalani, M. Chambuso

Institution(s): Pharm R&D Lab, The School of Pharmacy, Muhimbili University of Health and Allied Sciences, Dar Es Salaam ,Tanzania

Background: In 2002, WHO defined zinc deficiency as one of the major risk to a child's health. In this report Zinc deficiency was linked to 10% of diarrhoea and accounts for 0.8 million deaths yearly.

A joint statement by WHO and UNICEF published in 2004 at Geneva encouraged the wide spread use of zinc supplementation and low osmolarity oral rehydration salts for the management of diarrhoea in under-five's.

Objectives: The purpose of this study was to develop and optimize tablet formulation of Zinc Sulphate Monohydrate which shall be used for treating diarrhoea in children under five.

Methods: The study began with pre-formulation experiment to determine the chemical compatibility between the active and the excipients. Titration method for assay was also verified to ensure it gives reliable results. Three different super disintegrants, Sodium Starch Glycolate, CMC-CL and PVP-CL, were used for study at three concentrations 6%, 9% and 12%.

The tablets were produced using single punch press by mixing with appropriate adjuvant for producing tablets with desired characteristics. Tablets so prepared were put to various quality checks as prescribed by the IP.

Results: The results of mini-validation and pre-formulation were within the acceptance criteria. This helped in ensuring that the assay method would give us reliable results and excipient are compatible with active ingredient.

PVP-CL gave the most optimum results with maximum hardness of the tablet and least disintegration time. The weight variation improved when proportion of strawberry powder was increased to 20%.

Conclusion: PVP-CL was chosen to be the optimum super-disintegrant with 20% of strawberry powder

Title: Quality Maternal and Newborn Care (QUALMAT): Preliminary experience with the introduction of computer based Clinical Decision Support System (CDSS) in rural primary health care facilities in Lindi district

Author(s): Massawe S, Sukums F, Wangwe P, Mpembeni R, and QUALMAT Collaborators- University of Heildeberg

Institution(s): MUHAS

Background: Quality Maternal and Newborn (QUALMAT) project is multicentre collaborative intervention study implemented in Burkina Faso, Ghana, and Tanzania in collaboration with the Universities of Heidelberg in Germany, Ghent in Belgium, and Karolinska Institute in Sweden

Objectives: To improve the quality maternal and newborn care through the implementation of two interventions, namely i). Computer based Clinical Decision Support System (CDSS) and ii) Performance based incentives to health providers working in primary health care facilities.

Methods: The study was conducted in Lindi rural district and Mtwara rural as the control. After baseline data collection all health providers from six health centers in Lindi were trained on the use of CDSS for the management of clients during antenatal, intra-partum and immediate postpartum period. Each facility was provided with a laptop installed with the CDSS. The facilities were visited regularly to provide supportive supervision and monitoring of CDSS use. Post intervention data collection will be done after one year of intervention.

Results: Forty providers including four members of the District Health Management team (CHMT) were trained. Use of CDSS was initiated in May 2012 and the first four months were used for piloting that enabled us to identify and correct errors in data entry. So far the staff shows enthusiasm to use computer and the CDSS. About 1442 pregnant women have been managed using the CDSS, including 919 first visits and 523 revisits and 666 deliveries. We have observed progressive improvement in data quality, improvement in client-provider interaction including counseling on danger signs and on birth plan and emergency preparedness, improved documentation, and increase on correct use of partograph during labour. Challenges include, inadequate computer skills, how to sustain the motivation of providers who perceive CDSS as extra work and in addition there is a constant need for retraining due to frequent staff turnover.

Conclusion: It is feasible to introduce CDSS technology to remote rural health facilities for improved quality of care. However, the challenges of inadequate computer skills, supportive supervision, and provider motivation have to be addressed.

Title: Virological outcome in patients failing clinically or immunologically on first line ART at Mbeya, Tanzania

Author(s): J. Mgaya[1]), P. Kishimbo[2]), P.Edwin1), Dickson Bensong[3]), L. Maganga[1]), A. Kroid[4]),O. Salehe[2]) T. Lennemann[4]

Institution(s): Mbeya Referral Hospital, Mbeya, Tanzania 1) Mbeya Medical Research Center, Mbeya, Tanzania [3]) Walter Reed Southern Highlands HIV/AIDS Care Program, Mbeya, Tanzania 4) Ludwig Maximilian University, Munich, Germany

Background: In African HIV treatment programs, virological failure rate estimated to be around 7.1 per patient year. Clinical and Immunological Failure Criteria alone are not sufficient to detect virologic treatment failure. They underestimate virological failure, and lead to unnecessary treatment switches.

With HIV-PCR available through the PEPFAR program, The Mbeya Referral Hospital has adopted a targeted viral load approach to manage patients failing clinically or immunologically on antiretroviral therapy. Patients undergo viral load measurement to confirm treatment failure prior to therapy switch

Objectives: To determine outcome of the targeted viral load approach in patients on first line failing antiretroviral therapy.

Methods: 300 HIV viral load tests were performed on patients on first line treatment visiting the routine services of Mbeya Referral Hospital between Aug 2011 and Sept 2012, were assessed

Results: Patients received a viral load test after a median of 4 years on first line treatment. Male patients were slightly older (median of 43 y) than female patients (41Y), but time on treatment did not differ. 69% of the patients met at least one documented criteria of immunological or clinical failure at the time of testing, most of them (61%) failing immunologically and 17% also showing clinical failure. Nevertheless, despite clinical or immunological failure criteria, 44,3% of patients tested showed complete virological suppression with a viral load below 50K/ml, while further 23,3% of patients showed a viral load below 5000k/ml. Only in 32%, high level replication with a median of 129508 Copies/ml. could be detected

Conclusion: Through the targeted viral load approach, unnecessary treatment switch can be prevented in 64% of patients. Nevertheless, low level replication under treatment requires further differentiation between insufficient adherence and beginning of virological resistance

Title: Socio-cultural issues related to pregnancy, birth preparedness and emergency readiness in Rural Tanzania. A qualitative study

Author(s): Furaha August* Andrea B. Pembe, Edmund Kayombo, Pia Axemo, Elisabeth Darj

Institution(s): MUHAS and Uppsala University

Background: Globally in 2010, 287 000 women died during and following pregnancy and childbirth. Almost all of these deaths occurred in low-resource settings. Interventions such as skilled care and access to emergency obstetric care have been shown to be effective. Birth preparedness and emergency readiness has been advocated as one of the components of the interventions

Objectives: The aim of this study was to explore customs, taboos and practices during pregnancy and labour that influence birth preparedness, childbirth and utilization of emergency obstetric care services in Rural Tanzania

Methods: Twelve focus group discussions were conducted in the community with group of elderly men and women as well as young men and women who had experienced childbirth. Audio recordings were transcribed verbatim. translated into English and analyzed using qualitative content analysis

Results: Generally when women become pregnant they go the clinic for antenatal care. Women prefer to hospital for childbirth, but poverty is mentioned as cause of not giving birth in hospital facilities for those who do not go. They lack money to buy the necessary items that were required during childbirth, high transportation cost and distance.During emergencies they to go the hospital, but they discussed a lack of preparedness, because transport and persons for blood donation are not be prepared in advance.Husbands are reluctant to escort their partners to attend antenatal clinic, for fear of being tested for HIV was a barrier for utilization of maternal health care services.

Conclusion: This study has showed that there is motivation to seek care in health facilities during emergencies and antenatal care. However poverty contributes to poor birth preparedness and emergency readiness. Male involvement is not practiced. There is a need to educate the community on the importance of birth preparedness, emergency readiness, and the need for male involvement in maternal health.

Title: Intrapartum and postpartum severe maternal morbidity in St Francis Hospital, Tanzania: annual incidence, associated risk factors and outcome.

Author(s): Mgonja Miriam [i], Horne Andrew [ii], Massawe Siriel [i], Mbaruku Godfrey [iii], Alexander Mathew [iii], Warner Pamela [ii]

Institution(s): [i] Muhimbili University of Health and Allied Sciences, P.o.Box 65001, Tanzania ,[ii] University of Edinburgh, Scotland , [iii] Ifakara Health Institute,Tanzania

Background: Prevention ofmaternal death requires a better understanding of the epidemiology and outcome of various forms of severe maternal morbidity (SMM).

Objectives: To estimate the annual incidence of intra partum and postpartum SMM at St Francis Referral Hospital in Kilombero district, Tanzania with associated demographic and obstetric factors as well as the maternal and fetal outcome.

Methods: Retrospective case series study using hospital records of maternities who were admitted at St Francis Hospital from July 2008 to June 2009

Results: The incidence of intra partum and postpartum SMM among all deliveries was 19.2% (95% CI18-20%). The incidence of intra partum SMM was 17.2% (95% CI 16-18%), the rate being higher among primigravidae, teenagers and unmarried women (P, eclampsia, severe preeclampsia, postpartum hemorrhage and puerperal sepsis. Neonatal death was more common among women with intra partum SMM. Maternal mortality was four-fold greater among women admitted in critical condition than among other women.

Conclusion: There is a lot more to be done in the prevention of maternal mortality since most of intrapartum and postpartum conditions could be prevented through professional care and with involvement of the community. Thus continuingto partner with and educate the community in birth preparedness and complication readiness measures are of great priority.

Title: Coverage, quality and equity of maternal and newborn health services in a rural area of Morogoro in Tanzania CONFERENCE THEME: B[(ii)]

Author(s): Japhet Killewo

Institution(s): Muhimbili University of Health and Allied Sciences

Background: Integrated packages of maternal and newborn health services provided from pregnancy to postpartum periods, have been shown to correspond to significant reductions in morbidity and mortality. While the technical interventions are known, challenges remain in appropriately packaging and implementing service delivery across the continuum of care equitably, at high coverage, and without compromising quality.

Objectives: The objectives of the study was to: 1) describe the coverage of MNH care in Morogoro region in Tanzania; 2) to assess the quality of MNH care by the level of health facility where it was received (hospital, health center, or dispensary); and 3) to assess the equity of MNCH service receipt

Methods: As a part of the evaluation of the Morogoro Integrated program, a baseline household survey was conducted in August and September 2011. Two-stage cluster sampling was used to randomly select a sample of 1971 recently-delivered women from the catchment areas of 9 intervention and 9 comparison health facilities. The survey questionnaire measured coverage of routine maternal and child health services, location of service delivery, and the quality of care and counseling received during routine visits.

Results: The coverage of ANC-1 was high (86%), but coverage rates decreased for ANC-4 (68%), facility delivery (66%), and postnatal care (22%). Dispensaries, the lowest level of service provision in the health system, were found to be a major source of care for ANC (45% of all women), delivery (25%), and postnatal care (10%). Women receiving care at dispensaries were less likely to receive some key interventions during ANC and delivery, such as counseling on health behaviors. Utilization of dispensary services was highest among poorer families, which were found to be more likely to live in an area where a dispensary is the closest health facility.

Conclusion: Due to their importance in serving the poor, dispensaries should be improved to provide high quality service during ANC, delivery d postnatal periods.

Title: Nutritional deficiencies among HIV-infected children receiving care at Dar Dar Pediatric clinic in Dar es Salaam, Tanzania

Author(s): Chelsea Modlin, B.A.[1]; Helga Naburi, M.D,MPH.[2,3]; Kristy Hendricks Sc.D., R.D.[4]; Goodluck Lyatuu M.D.[3]; Josephine Kimario R.D.[3]; Lisa V. Adams, M.D.[1]; Paul Palumbo, M.D.[1]; C. Fordham von Reyn, M.D.[1]

Institution(s): [1]Infectious Disease and International Health, Geisel School of Medicine at Dartmouth, Hanover, NH; [2]Muhimbili University of Health and Allied Sciences, Dar es Salaam Tanzania; [3]DarDar Programs, Dar es Salaam, Tanzania; [4]Hood Center for Children and Famili

Background: Poor nutrition has been associated with impaired immunity and accelerated disease progression in HIV- infected children

Objectives: To determine the nutritional status of children enrolled in a pediatric care program

Methods: We surveyed HIV-infected Tanzanian children enrolled in a pediatric care program that provided routine nutritional counseling and vitamin supplementation. We obtained anthropometric measurements and determined 24-hour macronutrient and micronutrient intakes and food insecurity. Values were compared to recommended nutrient intakes based on age and gender.

Results: We interviewed 48 children age 2-14 years: median age 6 and 60% female. The median weight-for-height z-score for children ≤ 5 years was 0.69 and BMI-for-age z-scores for children >5 was -0.84. CD4% values were: ≤15% = 15 (31%), 16-25% = 16 (33%) and >25% =17 (35%). Macronutrient evaluation showed that 29 (60%) children were deficient in dietary intake of energy; deficiency was more common in older children (p=0.004). Micronutrient evaluation shows that over half of study subjects were deficient in dietary intake of vitamin A, vitamin D, vitamin E, thiamine, riboflavin, niacin, folate, vitamin B12, and calcium. Food insecurity was reported by 20 (58%) caregivers.

Conclusion: The diets of many HIV-infected children at a specialized treatment center in Tanzania do not meet recommended levels of macro- and micro-nutrients despite nutritional counseling. Food insecurity was a contributory factor. Enhanced dietary counseling and provision of macro- and micro-nutrient supplements will be necessary to achieve optimal nutrition for most HIV-infected children in resource-poor regions.

Title: Integration of HIV counseling and testing into routine ANC: implications for quality of care

Author(s): Charles kilewo

Institution(s): MUHAS

Background: Mother to child transmission of HIV/AIDS is the second most common cause of HIV transmission in Tanzania. Knowledge of HIV status allows pregnant women to take action to protect their babies from HIV, to access treatment for themselves, and to plan for their future needs. With the introduction of Focused Antenatal Care in 2002, HIV counseling, testing, treatment and prevention services were integrated into routine pregnancy care services throughout Tanzania. Despite the near universal attendance of any ANC, little is known about the continuity of HIV services initiated during pregnancy.

Objectives: The goal of this analysis is to explore the continuity of HIV services received during routine antenatal care

Methods: Study findings stem from a household survey conducted in 4 districts of Morogoro Region, Tanzania from August to November 2011 as part of the Morogoro Evaluation Project. A total of 1,971 recently delivered women were asked to provide details on knowledge and care seeking during pregnancy, delivery, and postpartum periods

Results: Survey findings indicate that 86% of recently delivered women attended one or more antenatal clinics, although only 78% of these individuals received counseling on HIV during ANC; constituting a missed opportunity for 22% of women. Of those women counseled on HIV during ANC, 84% were tested for HIV. Once tested, reported receipt of results was nearly universal (97%). However, only 77% of those tested reportedly received counseling on HIV test results. When stratified by location, dispensaries were the preferred source for ANC (45%). However, the proportion of women who received HIV counseling during ANC was nearly 10% lower in dispensaries than other facilities. For women that did receive HIV counseling, a higher proportion of dispensary patients (56%) received testing as compared to health centers (45%) and hospitals (48%). Overall findings suggest that strategies should be developed to improve the quality of HIV and PMTCT counseling, particularly in dispensaries and specifically of test results.

Conclusion: Emphasis should be placed upon increasing coverage of partner testing and additional strategies should be developed to improve coverage of HIV testing for postpartum mothers and infants.

Title: Liver enzyme abnormalities and associated risk factors in HIV patients on Efavirenz-based HAART with or without Tuberculosis co-infection in Tanzania

Author(s): Sabina Mugusi[1,2], Eliford Ngaimisi[3,4], Mohamed Janabi[5], Omary Minzi[4], Muhammad Bakari[5], Klaus-Dieter Riede[l6], Juergen Burhenne[6], Lars Lindquist[7], Ferdinand Mugusi[5], Eric Sandstrom1, Eleni Aklillu[3*]

Institution(s): MUHAS, MNH, KI

Background: Drug induced liver damage is major cause of morbidity and mortality among HIV patients.

Objectives: To investigate the timing, incidence, clinical presentation, pharmacokinetics and pharmacogenetic predictors for antiretroviral and anti-tuberculosis drug induced liver injury (DILI) in HIV patients with or without TB co-infection.

Methods: : A total of 473 treatment naïve HIV patients (253 HIV only and 220 with HIV-TB co-infection) were enrolled prospectively. Plasma efavirenz concentration and CYP2B6*6, CYP3A5*3, *6 and *7, ABCB1 3435C/T and SLCO1B1 genotypes were determined. Demographic, clinical and laboratory data were collected at baseline and up to 48 weeks of antiretroviral therapy. DILI case definition was according to Council for International Organizations of Medical Sciences (CIOMS). Incidence of DILI and identification of predictors was evaluated using Cox Proportional Hazards Model.

Results: The overall incidence of DILI was 7.8 % (8.3 per 1000 person-week), being non-significantly higher among patients receiving concomitant anti-TB and HAART (10.0%, 10.7per 1000 person-week) than those receiving HAART alone (5.9%, 6.3 per 1000 person-week). Frequency of CYP2B6*6 allele (p=0.03) and CYP2B6*6/*6 genotype (p=0.06) was significantly higher in patients with DILI than those without. Multivariate cox regression model indicated that CYP2B6*6/*6 genotype and anti-HCV IgG antibody positive as significant predictors of DILI. Median time to DILI was 2 weeks after HAART initiation and no DILI onset was observed after 12 weeks. No severe DILI was seen and the gain in CD4 was similar in patients with or without DILI.

Conclusion: Antiretroviral and anti-tuberculosis DILI does occur in our setting

Title: Effect of high-dose vs standard-dose multivitamin supplementation at the initiation of HAART on HIV disease progression and mortality in Tanzania: a randomized controlled trial.

Author(s): Isanaka S, Mugusi F, Hawkins C, Spiegelman D, Okuma J, Aboud S, Guerino C, Fawzi WW.

Institution(s): HAVARD, MUHAS and MNH

Background: Large randomized trials have previously shown that high-dose micronutrient supplementation can increase CD4 counts and reduce human immunodeficiency virus (HIV) disease progression and mortality among individuals not receiving highly active antiretroviral therapy (HAART)

Objectives: To test the hypothesis that high-dose multivitamin supplementation vs standard-dose multivitamin supplementation decreases the risk of HIV disease progression or death and improves immunological, virological, and nutritional parameters in patients with HIV initiating HAART.

Methods: A randomized, double-blind, controlled trial of high-dose vs standard-dose multivitamin supplementation for 24 months in 3418 patients with HIV initiating HAART patients were given of daily oral supplements of vitamin B complex, vitamin C, and vitamin E at high levels or standard levels of the recommended dietary allowance

Results: The study was stopped early in March 2009 because of evidence of increased levels of alanine transaminase (ALT) in patients receiving the high-dose multivitamin supplement. At the time of stopping, 3418 patients were enrolled (median follow-up, 15 months), and there were 2374 HIV disease progression events and 453 observed deaths (2460 total combined events). Compared with standard-dose multivitamin supplementation, high-dose supplementation did not reduce the risk of HIV disease progression or death. The absolute risk of HIV progression or death was 72% in the high-dose group vs 72% in the standard-dose group (risk ratio [RR], 1.00; 95% CI, 0.96-1.04). High-dose supplementation had no effect on CD4 count, plasma viral load, body mass index, or hemoglobin level concentration, but increased the risk of ALT elevations (1239 events per 1215 person-years vs 879 events per 1236 person-years; RR, 1.44; 95% CI, 1.11-1.87) vs standard-dose supplementation

Conclusion: In adults receiving HAART, use of high-dose multivitamin supplements compared with standard-dose multivitamin supplements did not result in a decrease in HIV disease progression or death but may have resulted in an increase in ALT levels.

Title: HEARING IMPAIRMENT IN HIV-INFECTED INDIVIDUALS IN TANZANIA

Author(s): Isaac Maro[1], Ndeserua Moshi [2], Odile Clavier [3,] Todd MacKenzie [4], Robert Kline-Schoder [3], Jed Wilbur [3], Robert Chambers [3], Abigail Fellows [4], Benjamin Jastrzembski [5], John Mascari [4], Muhammad Bakari [2], Mecky Matee [2], Frank Musiek [6], Richard Waddell [4], C

Institution(s): [1]DarDar Health Study, Dar es Salaam, Tanzania, [2]MUHAS Tanzania, [3]Creare, Inc., Hanover, NH, [4]Geisel School of Medicine at Dartmouth, Hanover, NH, [5]Harvard Medical School, Boston, MA, [6]University of Connecticut, Storrs, CT,

Background: Recent data suggest that individuals with HIV/AIDS develop hearing problems. The nature of the hearing loss (middle ear, cochlea, central nervous system) and its relationship to treatment is not known. We are currently performing a study of hearing parameters in a cohort of HIV-infected adults and children in Tanzania compared to a group of HIV negative controls.

Objectives: [1]. To determine prevalence of abnormal central and peripheral hearing among HIV-positive patients in Tanzania compared to HIV-negative controls. [2]. To determine the nature of any hearing loss and understand its relationship to medications, TB co-infection or other factors.

Methods: Pure-tone thresholds, distortion product otoacoustic emissions (DPOAEs), tympanometry and a gap detection test were performed using a laptop-based hearing testing system on 664 individuals (100 in the U.S., plus 554 in Dar es Salaam Tanzania including 385 HIV+, 169 HIV-, 169 ART- and 267 ART+ subjects). Subjects completed a video and audio questionnaire about their hearing as well as a health history questionnaire.

Results: No effects of TB treatment were seen. HIV+ individuals had reduced DPOAE levels compared to HIV-negative individuals, but their hearing thresholds and gap detection thresholds were similar. Within the HIV+ group, those on ART reported significantly greater difficulties detecting speech-in-noise, and were significantly more likely to report that they had difficulty understanding speech than the ART- group. The ART+ group had a significantly higher mean gap detection threshold compared to the ART- group.

Conclusion: The fact that the ART groups did not differ in measures of peripheral hearing ability (DPOAEs, thresholds), but that the ART+ group had significant more trouble understanding speech and had higher gap detection thresholds, points to a central processing disorder as a cause of the hearing findings.

Title: DEVELOPMENT OF DAR-UJI NUTRITIONAL SUPPLEMENT AND ITS ACCEPTANCE

Author(s): Josephine Kimario[1], Zohra Lukmanji[1], Kristy Hendricks[2] C. Fordham von Reyn[2], Muhammad Bakari[1], Richard Waddel[2], Albert Magohe[1]

Institution(s): 1Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania; 2Geisel School of Medicine at Dartmouth and Dartmouth-Hitchcock Medical Center, New Hampshire, USA

Background: Maintaining adequate energy intake and optimal nutrition to enhance immune system and slow disease progression among HIV infected persons remain a major challenge in developing countries including Tanzania

Objectives: To develop culturally acceptable energy and protein dense nutrition supplement with local foods to be used in [2] randomized controlled trials among HIV positive women

Methods: 1st stage: Several porridges, each with different ingredients (composed using Tanzania Food Composition tables), RUTF and RUCT were prepared to meet specified nutrient composition goals. Their acceptability, mode of delivery and barriers to consumption were determined through three focus discussions involving a total of 13 women.

2nd Stage: Taste tasting of these formulae was done to paste, biscuits and DAR- UJI. Ten women were involved. Questions asked were similar to those of the focus group discussions. Women tasted each of them and indicated their preference. Responses were used to identify the most appropriate DAR-UJI

Results: DAR-UJI is currently being used in two nutrition intervention studies conducted at DarDar. It is packed in 250g packets each with 1057 calories and 41 g of protein, one packet to be consumed every day.

DAR-UJI has been observed to be well accepted by majority of participants in both studies with 48 breastfeeding women with HIV and 33 Tb/HIV co-infected women. More than half have been found to have consumed all given 30 packets per month and the rest 25 -28 packets

Conclusion: These preliminary observations imply DAR-UJI to be culturally acceptable and nutritionally appropriate.

Title: Application of quantitative second-line drug susceptibility testing at a multidrug-resistant tuberculosis hospital -Tanzania

Author(s): Mpagama SG [1, 2], Houpt ER [3], Kibiki GK [2] and Heysell SK [3]

Institution(s): [1].Kibong'oto National Tuberculosis Hospital, Kilimanjaro, Tanzania [2].Kilimanjaro Clinical Research Institute, Kilimanjaro Christian Medical Centre, Moshi, Tanzania [3]. University of Virginia, Charlottesville, Virginia, USA

Background: Lack of rapid and reliable susceptibility testing for second-line drugs used in the treatment of multidrug-resistant tuberculosis (MDR-TB) may limit treatment success.

Objectives: Describe the potential application of quantitative susceptibility testing at KNTH and offer preliminary recommendations for expansion of targeted drug-susceptibility testing for treatment optimization of drug-resistant TB in Tanzania.

Methods: Mycobacterium tuberculosis isolates from patients referred to Kibong'oto National TB Hospital in Tanzania for second-line TB treatment underwent confirmatory speciation and susceptibility testing. Minimum inhibitory concentration (MIC) testing on MYCOTB Sensititre plates was performed for all drugs available in the second-line formulary. Isolates were considered borderline susceptible if the MIC was at or one dilution lower than the critical concentrations established for the MYCOTB Sensititre platform.

Results: Of 22 isolates from patients referred for second-line TB treatment, 14 (64%) were MDR-TB and the remainder had other resistance patterns. MIC testing found 3 (14%) isolates resistant to ethionamide and another 8 (36%) borderline resistant. In contrast, para-aminosalicylic acid was fully susceptible in 18 (82%). No isolate had ofloxacin resistance, but 10 (45%) were of borderline susceptible. Amikacin was fully susceptible in 15 (68%) compared to only 11 (50%) for kanamycin. Ten (71%) of MDR-TB patients had at least one medication that could have been modified (median 2; maximum 4). The most common modifications were a change from ethioniamide to para-aminosalicylic acid, and the use of higher dose levofloxacin.

Conclusion: Quantitative second-line susceptibility testing can inform and alter MDR-TB management in Tanzania. Further operational studies are warranted.

Title: Effect of Annona formulations on mosquito and non-target invertebrates in laboratory and semi-field condition

Author(s): Agnes Carol Kisanga[1] Ester Innocent[2a] Nkwengulila Gamba[1] William Nnandi Kisinza[3] and Ahmed Hassanali[4]

Institution(s): 1 Department of Zoology and Wildlife Conservation, University of Dar es salaam, 2Department of Biological and Pre-Clinical Studies, Institute of Traditional Medicine, Muhimbili University of Health and Allied Sciences, 3National institute for Medical Resea

Background: Studies reveal that plant species from family Annonaceae particularly the genus Annona have biopesticides properties that offer alternative to synthetic ones. Annona squamosa leaf formulations from two regions of Tanzania

Objectives: Coastal region and central region were evaluated against laboratory reared An. gambiae s.s. and C. quinquefasciatus at laboratory and wild collected anopheline and culicine larvae in mosquito sphere. Impact of environmental parameters on the efficacy of the formulations and impact of the formulations on survival of non-target fauna were assessed

Methods: Percentage larvae reduction was done by using Mullas' formula. Mortalities were statistically analyzed by one-way analysis of variance (ANOVA) and Student t-tests with p xcel.

Results: In the laboratory leaf powder from both regions were equally effective against anopheline and culicine at day 4. In semi-field study both formulations showed high efficacy against anopheline larvae reaching 100% and 89% larvae reduction in 4 days post exposure for leaf powder from central and coastal regions respectively. The activity of both formulations against culicine larvae was significantly lower in the semi-field environment. The formulations had no significant impact on the physico-chemical parameters of water from which larvae was collected. The formulations had minimal effects on survival of ten selected non-target invertebrates except for some members from order Ephemeroptera (Mayflies) where the formulation exhibited ≥85% mortality.

Conclusion: Formulations have proved to be efficient in semi-field environment with low impact on other non-target biota

Title: DarDar 2-A: Macronutrient deficiencies among HIV-positive women with tuberculosis in Dar Es Salaam, Tanzania

Author(s): Albert Magohe[1] ,Muhammad Bakari[1], Joyce Wamsele[1], Todd MacKenzie[2], Isaac Maro[1], Josephine Kimario[1], Shahid Ali[2], Shima Dowla[2], Kristy Hendricks[2,] Zohra Lukmanji[1], Nyasule Majura Neke[1], Richard Wadde[II2], Mecky Matee[1], Kisali Pallangyo[1], C. Fordham von Reyn

Institution(s): [1]Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania; [2]Geisel School of Medicine at Dartmouth and Dartmouth-Hitchcock Medical Center, New Hampshire, USA

Background: Tuberculosis places additional nutritional demands on women with HIV infection. However, only limited data are available from developing countries on the nutritional status of HIV-positive women with tuberculosis.

Objectives: To assess anthropometric characteristics, dietary intake, and food insecurity among HIV infected women in Tanzania

Methods: We enrolled HIV-positive women with newly diagnosed tuberculosis in Dar es Salaam, Tanzania and assessed anthropometric characteristics, dietary intake, and food insecurity. Energy and protein intake were determined using Tanzania Food Composition Tables, and compared to dietary recommendations for persons with HIV and tuberculosis to estimate deficits. Patients were re-evaluated after 4-6 months of tuberculosis treatment

Results: Among 43 women at baseline median CD4 count was 209 (range 8-721), and 19 (44%) had a CD4dian food insecurity score was 6. Median kcal/day was 1693 (range 1290-2633) compared to the 2658 estimated need; median deficit was 875 kcal (range -65-1278). Median gm protein/day was 42 (range 27-67) compared to the 77-estimated need; median protein deficit was 35 gm (range 10-50). Median weight gain among 29 patients after 4-6 months was 6 kg.

Conclusion: HIV-positive women with tuberculosis have substantial 24-hour deficits in both energy and protein intakes, report significant food insecurity, and frequently fail to gain weight on tuberculosis treatment. Enhanced dietary education together with macronutrient supplementation of 1000 kcal with 40 g protein may be required to improve health outcomes in these women.

Title: Validity of Clinical and Immunologic Monitoring to Detect Virologic Failure in HIV Infected Children on Antiretroviral Therapy

Author(s): Edward M Mgelea, MD, MMED[1], Rodrick Kisenge, MD, MMED, PhD[1] and Said Aboud, MD, MMED, PhD[2].

Institution(s): [1]Paeditrics and Child Health, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania, United Republic of; [2]Microbiology and Immunology, Muhimbili University of Health and Allied Sciences.

Background: Two million children are living with human immunodeficiency virus (HIV) worldwide, the majority in sub-Saharan Africa, South and Southeast Asia. In Tanzania, 160,000 children have HIV and more than 11,000 are on antiretroviral therapy (ART). Currently, response to treatment is monitored by clinical and immunologic parameters. The validity of these criteria to detect virologic failure is not well documented.

Objectives: To determine the validity of clinical and immunological monitoring in detecting virological failure among HIV- infected children on ART in Dar es Salaam, Tanzania.

Methods: Children attending ART clinics in Dar es Salaam from August 2011 to March 2012 were screened. Those on ART for at least 6 months were included in the study. Patients were considered to have virological failure if viral load was >400 copies/mL. Immunologic failure was defined as CD4 count below baseline after at least 6 months of ART or a fall of CD4 count to less than 30% of the peak level. Clinical failure was defined as a new or recurrent WHO clinical stage III or IV event after at least 6 months on ART.

Results: We screened 485 children; 218 met inclusion criteria. The average age was 10.6 years and the mean duration on ART was 40.9 months.124 (57.1%) had virological failure. Clinical and Immunologic criteria had sensitivity and specificity of 12.9% and 90.3%, 22.6% and 73.1% respectively. The combination of clinical and immunologic monitoring had a sensitivity of 25.8% and specificity of 69.9%. Children who received nevirapine based regimens were more likely to have virological failure compared to those on efavirenz and protease inhibitor regimens (OR=2.0,95%CI(1.20-3.64)p=0.03).

Conclusion: This study showed more than half of the children had virological failure. The clinical and immunological criteria performed poorly in identifying treatment failure in HIV- infected chidren on ART. Expanding access to viral load testing will help improve outcomes.

Title: DEVELOPMENT OF AN ENTERIC COATED 20 MG OMEPRAZOLE TABLETS FORMULATION

Author(s): R.Ng'wananogu[1], L.Babyebonela[1],M. Njegere[1,2] ,C.Migoha[1,2] ,C.Haefele[4],E. Kaale[1,3], C.Bonsman [4]

Institution(s): [1]. Pharm R & D Laboratory-School of Pharmacy-MUHAS, Dar es Salaam, Tanzania [2.] Tanzania Food and Drug Authority [3]. Medicinal Chemistry, School of Pharmacy-MUHAS, Dar es Salaam, Tanzania [4] . Action Medeor, Toenisforst, Germany

Background: Omeprazole is a proton pump inhibitor used in the treatment of dyspepsia, peptic ulcer disease (PUD), gastroesophageal reflux disease (GORD/GERD) and Zollinger-Ellison syndrome. It degrades in the stomach acidic condition and slightly soluble in water hence poor dissolution, these challenges make its formulation expensive

Objectives: The aim is to develop a generic Omeprazole 20 mg tablets by inclusion of a cheaper solubilizing agent, Sodium Dodecyl Sulphate (SDS) .

Methods: Three batches of Omeprazole 20 mg tablets were produced by wet granulation method. The granules were sieved and transferred to the Fluidized Bed Drier for drying. In-process quality control for obtained tablets was tested for weight variation, hardness, friability, disintegration and dissolution. The USP method applied was validated.

Results: :The percentage omeprazole release obtained at 45 minutes of the dissolution process for the three batches were 78.2%,81.7%,83.8%.The USP requirement is not less than 75%.The UV Spectrophotometer assay method used for the dissolution profile of Omeprazole ware done and involved specificity, precision, linearity and accuracy. The relative standard deviations for the intra and inter day precision ware 1.5% and 2.9% respectively. A good linear relationship was established within the concentration range of 2.2ng/µl to 26.4 ng/µl with good correlation coefficient (r2 =0.9984).The accuracy was 98.89 ± 3.89%.

Conclusion: The omeprazole tablets can be formulated using SDS as a solubiliser. This will enable the local manufacturers to produce tablet at minimum cost. We recommend further studies on development of an acid stable coating formulation.

Title: Awareness of side effects of antiretroviral therapy among patients attending Care and Treatment Clinic at Mbeya Referral Hospital August 2012

Author(s): Mwamelo Kim

Institution(s): Muhimbili University of Health and Allied Sciences, PO Box 65001, Dar es Salaam

Background: BACKGROUND: HIV has been transformed into a chronic illness; as such the patient should have enough knowledge about the illness, the medications required and symptoms of medication toxicity. Awareness of the fact that side effects are transient or can be controlled by other medication can prove to be crucial in improving adherence. In some cases early detection of symptoms of adverse effects can be life saving.

Objectives: To determine awareness of side effects of antiretroviral drugs among patients as well as to determine the proportion of patients who reported to have experienced side effects.

Methods: A descriptive cross-sectional study was done, with a sample of 395 adult clients attending Mbeya Referral hospital CTC as outpatients. Hospitalized patients, patients on anti TB drugs, post exposure prophylaxis and prevention of mother to child transmission regimens were excluded. Ethical clearance was obtained from MUHAS, and permission was obtained from the administration at Mbeya Referral Hospital. A Swahili questionnaire was used as the data collection tool; data was analyzed using SPSS version 16.

Results: 71.6% of patients were aware that antiretroviral drugs have side effects. Patients with formal education, older patients and patients who had experienced a side effect along the course of therapy were more aware. 49.9% of patients reported having experienced side effects due to ART.

Conclusion: The awareness of side effects of ART among patients is still low. All patients should receive pre-treatment counseling; including the potential side effects of antiretroviral therapy in addition to adherence and lifestyle counseling.

as: none

Title: Kangaroo mother care: A six month experience at Muhimbilli National Hospital

Author(s): Silas R, Mtei C, Munuo N, Nyange S, Shuma A, Kitera W, Iddi T, Lyimo R, Chazi M, Patel S

Institution(s): Muhimbilli National Hospital

Background: Kangaroo Mother Care (KMC) is one of the evidence-based and cost-effective child health interventions that contribute to reduction in neonatal mortality; it serves as an alternative to conventional (incubator) care for Low birth weight (LBW) infants.

In 2002, the KMC services were introduced in 10 developing countries such as Ethiopia, Ghana, India, Malawi, Mali, Nepal, Nigeria, Rwanda, Tanzania and Uganda.

In Tanzania, currently there are approximately 27 KMC units all around the country and 5 of these are in Dar es Salaam, located at CCBRT, MNH, Mwanyamala hospital, Amana hospital and Mlandizi health center, MNH, KMC unit is the youngest, it was started in August 2012.

Objectives: To share 6 months experience of KMC at MNH

Methods: Using excel sheet, a summary of KMC data was retrieved from the KMC hard copy records, covering a period from August 2012 to February 2013. Data included number of admission for each month for babies with birth weight 1000grams. Other information included length of hospital stay, age and weight at discharge.

Results: Total of 153 low birth weight babies were admitted to KMC between August 2012 and February 2013. Majority (83%) had birth weight >1000grams. Average weight gain during stay in KMC was between 41 grams to 990 grams per month. Average age at discharge is 2-3 months, with the average weight ranging from 1570 to 2100grams. Only 8 (5.2%) of LBW in KMC unit became sick and readmitted to the newborn unit, and no death has been reported in KMC unit since its inception.

Conclusion: Early findings shows that kangaroo mother care is a safe practice and can be used as a step down unit for low birth weight neonates who need to achieve recommended weight as criteria for discharge from the hospital.

Title: The prediction of biological behaviour of prostatic adenocarcinoma in Tanzanian patients: a Gleason score-based follow-up

Author(s): Rugwizangoga, Belson; Vuhahula, Edda; Kitinya, N James

Institution(s): Muhimbili University of Health and Allied Sciences School of Medicine, Department of Pathology, P.O.Box 65001 Dar es Salaam, Tanzania

Background: Prostate cancer is the most prevalent urological condition and second lethal cancer in men. It affects Blacks more than Whites and Asians. A number of prognostic markers have been established to assist in the prediction of the diseases progression. Nevertheless, the correlation between Gleason score and biological behaviours has not been investigated in Tanzania.

Objectives: To determine the role of Gleason score in the prediction of the biological behaviour of prostate adenocarcinoma in Tanzanian patients, in order to improve patients' management.

Methods: Study area and sampling: Muhimbili National Hospital (MNH) is the main diagnostic hospital in Tanzania. We retrieved cases of prostatic adenocarcinoma diagnosed at MNH from January 2005 to December 2006. Retrospective follow-up was done over 60 months using patients' files; 214 out of 256 cases were retained.

Laboratory methods: wax-embedded tissue blocks retrieved in MNH Pathology Laboratory archives were sectioned and stained with Haematoxylin and Eosin (H&E) to determine Gleason score, without knowledge of clinical data.

Statistical methods: Data entry and analysis were done through Statistical Package for Social Sciences (SPSS) 16.0. Statistical significance of variable association was assessed by P value

Results: Prostatic adenocarcinoma was found in 34.73% of prostate specimens. Mean age was 70.46 (42-96) years. There was poor documentation on clinical stage, patient follow-up and prostate cancer reporting standards. All cases in our study were acinar adenocarcinoma; advanced stage and higher grade prostatic adenocarcinoma predominated. Gleason score correlated with age, pre-treatment serum PSA levels, average tumour extent in tissue, tumour stage and survival.

Conclusion: Gleason score accurately predicts the biological behaviour of prostatic adenocarcinoma in Tanzania and should serve a predictor of tumour stage, average extent in tissue and prognosis, thus playing a crucial role in prostate cancer management. Standard documentation and prophylactic education should be implemented.

Title: Assessment of adherence to multidosing artemether lumefantrine drug combination in a rural community in Tanzania.

Author(s): * Minzi O[1], Sasi P[2] , Ngasala B[3], Maige S[4]

Institution(s): [123] Muhimbili University of Health and Allied Sciences ,[4] Medical stores department Tanzania

Background: Adherence to multi-dosing of artemether lumefantrine (ALu) drug combination taken for 3 days may be difficult especially in the rural community.

Objectives: To determine the extent of adherence to prescribed doses of Alu in a rural community 6 years after switching from single dose SP to multidosing ALU

Methods: This was a prospective community-based study conducted at Bagamoyo district involving 150 malaria patients. Every patient found to be malaria positive by microscopy was prescribed ALu and followed to homes on day 3 for interview and pill count. Venous blood samples (2ml) for measurement of blood Lumefantrine concentrations and blood slides were collected on day-7 at the dispensary. The extent of adherence by pill count and patient self-report methods and their association with drug plasma concentration was determined.

Results: Non adherence was due to taking fewer doses (20.8%) and untimely dosing (72.2%). Ignoring the timing of drug intake, the proportion of patients who were adherent raises to 79.2%. By pill count, 29/122 (23.8%) of the patients were found to be non-adherent, while (14.4.0%) had Lumefantrine level -7 parasite clearance was achieved despite poor adherence and even those with sub-therapeutic day-7 blood Lumefantrine concentrations.

Conclusion: Adherence in this rural community was relatively low. Non adherence was mainly due to untimely intake of doses rather than missing doses. Taking a drug much earlier or so much later (>4 hrs) affects the drug pharmacokinetics and could impact therapeutic outcomes. The clearance of parasites despite poor adherence and even with sub-therapeutic day-7 blood Lumefantrine concentrations leaves a room of clinical pharmacology discussion.

Title: EVALUATION OF HIV ANTIGEN AND ANTIBODY COMBINATION ELISAs FOR DIAGNOSIS OF HIV INFECTION IN DAR ES SALAAM, TANZANIA, 2012.

Author(s): URIO LOVENESS JOHN

Institution(s): MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES (MUHAS)

Background: Fourth generation HIV screening assays permit simultaneous detection of HIV antigens and antibodies and reduce the diagnostic period on average by seven days. New antigen/antibody combination ELISAs have been introduced for screening of blood donors and clinical samples and are commercially available. A new antigen/antibody combination HIV ELISA, Enzygnost HIV Integra II, has been introduced in the market since 2009, and has never been evaluated. Currently, there is validated national HIV ELISA testing algorithm in place

Objectives: To evaluate performance and operational characteristics of HIV-antigen/antibody combination ELISAs as well as to formulate HIV ELISA testing algorithms that could be used as an alternative HIV testing strategy for laboratory diagnosis of HIV infection in Tanzania

Methods: Laboratory-based evaluation of Enzygnost HIV Integral II Ag/Ab, Murex HIV Ag/Ab and Vironostika HIV Uniform II Ag/Ab was conducted using blood samples from blood donors, VCT, ANC and HIV care and treatment centre. INNO-LIA HIV I/II immunoblot was used as a confirmatory test. Seroconversion activity was evaluated by Panel AU PRB945

Results: Of 596 serum samples 209(35.1%) were confirmed HIV positive. Sensitivity was 100%(95%CI;98.3-100%) for all the three HIV ELISAs. The specificity for Enzygnost HIV Integral II and Murex was 100%(95%CI;99.1-100%). Vironostika had initial specificity of 99.2%(97.4-99.7) and 99.5%(95%CI;98.2-99.9%) after repeat testing.. Enzygnost HIV Integral II detected HIV infection seven days since first bleed whereas Murex detected first bleed in day 13 and Vironostika detected first bled in day 15. Mean OD/CO values of HIV positive samples on all the combination assays were above 10 by 13.7(5.3-31.0), 12.2(5.2-16.0), 15.5(12.1-29.0) for Enzygnost, Murex and Vironostika respectively. Samples which gave false positive reactions on Vironostika had mean ratio of 5.7(1.3-16.5)

Conclusion: All the three antigen/antibody ELISA assays had highest sensitivities and specificities. Combination of two HIV antigen/antibody based ELISA assays can be used as an alternative confirmatory testing strategy with an advantage of reduced diagnostic window period for screening of donated blood at National, Zonal blood transfusion centres and in HIV diagnosis

Title: Risk factors for anaemia among HIV-infected patients at Muhimbili National Hospital.

Author(s): Mgassa A, Lyimo M, Mugusi F

Institution(s): MUHAS

Background: Human Immunodeficiency Virus (HIV) infection is associated with significant haematological abnormalities.

Objectives: In this study anaemia and associated risk factors were evaluated among HIV-infected in-patients and outpatients attending the HIV care and treatment clinic of the Medical department

Methods: A standardised questionnaire was used to obtain information on social-demographic characteristics, clinical history, and information on anti-retroviral therapy. Patients were staged according to WHO guidelines and CD4 counts determined. Anaemia was determined from a complete blood count. Iron status was established using transferrin concentration, serum iron and serum ferritin levels, and serum B12 and folate were analyzed. Univariate and multivariate logistic regression were used to determine the association between anaemia and associated risk factors.

Results: A total of 316 HIV-infected patients were recruited. Anaemia was significantly higher among the no income (63.1%) and low income (54%) compared to the medium income (42.4%) and high income (37.5%) patients, p=0.047. Severity of anaemia increased with advanced stage of HIV infection and low CD4 count (p= 0.0001 and p=0.0001 respectively). Patients who were not on any anti-retroviral therapy were found to have higher prevalence of anaemia compared to those on therapy, 68.1% vs 49.3%: with those on AZT containing regimes having a higher prevalence of anaemia 50.3% compared to those on non-AZT containing regimes 47.4% (p=0.0001). Low serum folate and low iron were found to be associated with anaemia (p=0.002 and 0.0001 respectively). On multivariate analysis being anti-retroviral therapy naïve, advanced clinical stage of HIV, low CD4 and iron deficiency were significantly associated with anaemia, p=0.0001.

Conclusion: The risk factors for anaemia among HIV-infected pateints are multifactorial. Treatment of anaemia in HIV infection should include initiating anti-retroviral therapy together with administration of iron and folic acid supplements.

Title: Impact of Antenatal Care Content on the Continuum of Care. The Case of Morogoro Region, Tanzania

Author(s): Mpembeni RNM[1], LeFevre A[3]. Urassa D.[1], Mohan D[3], Kilewo C.[2] and Killewo J.[1]

Institution(s): 1 Muhimbili University of Health and Allied Sciences, School of Public Health and Social Sciences [2] Muhimbili University of Health and Allied Sciences, School of Medicine [3]. Johns Hopkins Bloomberg School of Public Health

Background: Antenatal period marks the entry point of a pregnant woman to the health system and hence is an effective platform to facilitate better use of delivery and PNC services. Previous studies have shown a positive impact of ANC on utilization of delivery care. However these studies focused on the frequency and timing of ANC visits and not on care content.

Objectives: To investigate the impact of ANC care content on the continuum of care

Methods: A cross-sectional study was conducted from August- November 2011. Women who had been pregnant within the past 12 months were interviewed using a structured instrument. ANC content scoring was done based on FANC guidelines and women reports of care received

Results: A total of 1971 women were interviewed. Of these 1926 (97.7%) reported to have attended ANC during pregnancy. Coverage of ANC essential activities ranged from 56% for urine tests to 95% for weight measurement. Only 18% of respondents reported to have received all 14 recommended services while 57% reported to receive at least 10 services. Even after controlling for other predictors, women who received optimum ANC content were twice more likely to utilize delivery care (OR 2.01 95%CI 1.4-2.6) compared to those who received less than optimum care. Utilization of Postnatal care was reported by 23% of which, majority (54%) were among those who received 10 or more essential ANC activities (p

Conclusion: Optimum coverage of essential ANC activities improves utilization of delivery and postnatal care services. We recommend strengthening the capacity of health facilities and health providers to ensure provision of good quality ANC care.

Title: Quality of Antenatal Care Counseling in Morogoro, Tanzania

Author(s): Mpembeni RNM1, LeFevre A[3]. Urassa D.[1], Mohan D.[3], Kilewo C.[2] and Killewo J.[1]

Institution(s): Muhimbili University of Health and Allied Sciences, School of Public Health and Social Sciences [2] MuhimbiliUniversity of Health and Allied Sciences, School of Medicine [3]. Johns Hopkins Bloomberg School of Public Health

Background: Focused Antenatal Care (FANC) was adopted in Tanzania in 2002 with the aim of improving the quality of Antenatal care (ANC). FANC emphasizes strengthening of the information component through individual health education and counseling in order to promote health behaviour and inprove continuum of care. However previous studies have reported low awareness of danger signs and low utilization of delivery and postnatal care services things which throw doubts on the quality of counseling provided to pregnant women during ANC.

Objectives: To assess the quality of antenatal counseling in Morogoro, Tanzania

Methods: A cross sectional study was conducted in 18 facilities in 4 districts in Morogoro. Direct observation of health providers when providing ANC was used to assess the quality of cuonseling. A checklist which was developed based on the National FANC guidelines was used. Exit interviews were conducted to ANC women to determine their perceptions onthe services received.

Results: A Total of 203 observations were made. Duration of ANC consultation was rather short (median 13 minutes.) althoughfirst visit women had significantly longer consultation time compared to repeat visits (p0.05). Reported waiting time was long (median 3.5 hours) and about two thirds of women felt that they waited for too long

Conclusion: Overall quality of ANC counseling was poor. Providers trained on FANC were observed to provide better quality counseling compared to untrained ones.Evaluation ofinnovative counseling strategiesincludingemphasis on group counseling and use of other modalities to increase exposure to critical messages like use of multi media are recommended

Title: Burden and determinants of severe anemia among HIV-infected adults in a large urban HIV programme, Tanzania

Author(s): Makubi Abel et al.

Institution(s): MUHAS, MDH, HSPH

Background: Anemia is common among HIV infected individuals in sub-Saharan Africa, however, studies on the magnitude and determinants of severe anemia in this context are limited.

Objectives: The aim was to determine the prevalence and risk factors for severe anemia, severe microcytic anemia and severe normocytic anemia among HIV-infected adults in Tanzania

Methods: Through a cross-sectional design, baseline data were extracted from a cohort of HIV-infected individuals enrolled between November 2004 and December 2010. We included HIV-infected males and non-pregnant women above 15 years of age with hemoglobin and mean corpuscular volume measurements (MCV) data. Univariate and multivariate analyses were performed to identify the risk factors for severe anemia.

Results: Data from 40,408 patients were analyzed resulting in an overall prevalence of 22% for severe anemia. The risk of developing severe anemia increased by 49% among patients with a BMI of 1.2 mmol/l compared to those with normal renal function. Severe microcytic anemia shared many of the independent risk factors observed for severe anemia overall. Severe normocytic anemia was uniquely increased among patients aged ≥50years, among those with chronic diarrhea, Kaposi's sarcoma and those taking co-trimaxozole.

Conclusion: There was a high prevalence of severe anemia among adults infected with HIV infection. There is a need to have a focused approach of identifying patients with anemia based on the hemoglobin and MCV measurements, and examining the etiology and possible interventions of varying hematologic presentations.

Title: Title: Quality of intrapartum care in primary health care facilities in two rural districts in south east Tanzania

Author(s): Siriel Massawe, Rose Mpembeni, Peter Wangwe, Els Duysburgh

Institution(s): MUHAS and University of Ghent- Belgium

Background: Although Tanzania has made some progress in reducing maternal mortality, the progress has been slow and thus it is considered not on track to achieve MDG5 target by 2015. The maternal mortality is estimated at 454 per 100,000 live births translating to about 8500 maternal deaths annually. Interventions, to reduce maternal and neonatal morbidity and mortality are known are being implemented. However access to these interventions alone does not guarantee improved health outcomes. These will only be achieved if the quality of existing care is sufficiently high to provide adequate management and treatment and to encourage utilization of provided care.

Objectives: To assess the quality of maternal health care in two rural districts before and after intervention

Methods: This study was done as part of a base line – pre-intervention assessment for Quality of maternal care intervention project (QUALMAT), that is ongoing in Lindi (intervention) and Mtwara (control) rural districts. Quality assessment was done using standard checklist for the infrastructure and availability of equipment and supplies, direct observation of care, and client satisfaction survey for the antenatal and delivery care. The quality assessment will be repeated after two years of interventions.

Results: We present the results of the intrapartum aspect of the assessment. None of the facilities provided all the BEmOC services. Low quality scores were observed on care and examination of the woman, monitoring during labour and on counseling. The partograph was used in less than half of the facilities, and correct use of partograph was very low at15%, and 14% in Lindi and Mtwara respectively. There was poor quality of clinical/technical performance on management and treatment of life threatening complications, including antepartum and postparum haemorrage and on screening for danger signs. Quality scores reflecting user's experience of care including client provider interaction were low.

Conclusion: Our findings highlight the need to improve the counseling practices and the clinical and technical performance of health providers, and the need to avail all BEmOC services at primary level facilities.

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Title: Continuity of ANC, and PMTCT services in Morogoro, Tanzania

Author(s): Charles Kilewo[1]; Asha George[2]; Amnesty LeFevre[2]; Diwakar Mohan[2]; Japhet Killewo[1]; Abdullah Baqui[2]

Institution(s): Departments of Obstetrics/Gynecology, Epidemiology and Biostatistics Muhimbili University of Health and Allied Sciences Dar es Salaam, Tanzania [2]. Johns Hopkins Bloomberg School of Public Health, Baltimore, USA Correspo

Background: Mother to child transmission of HIV is the second cause of HIV transmission in Tanzania. Knowledge of HIV status allows pregnant women to t protect their babies from HIV, by accessing focused ANC and PMTCT services which are now intergrated into routine pregnancy care services throughout Tanzania. Despite the near universal attendance of any ANC, little is known about the continuity of ANC and HIV services initiated during pregnancy.

Objectives: The analysis explored the continuity of MNCH care received during routine antenatal care specifically seeking to determine the proportion of women attending ANC who reportedly received HIV & MTCT counseling; HIV Testing; Partner Testing; and subsequent continued with the services in the continuum of MNCH services.

Methods: A household survey was conducted in 4 districts of Morogoro Region, from August to November 2011 as part of the Morogoro Evaluation Project A total of 1,913 recently delivered women were asked to provide details on knowledge and care seeking during pregnancy, delivery, and postpartum periods.

Results: Survey findings indicate that 99% of recently delivered women attended one or more ANC visits, 77% s received counseling on HIV during ANC; and 66% on MTCT constituting a missed opportunity for 23% and 44% of women. Of those counseled during ANC, 84% tested and receipt of results was 97%. However, only 77% received counseling on results. When stratified by location, dispensaries were the preferred place for ANC (45%). However, the proportion of women who received HIV counseling was nearly 10% lower in dispensaries than other facilities. For women that did receive HIV counseling, a higher proportion of dispensary patients (56%) received testing as compared to health centers (45%) and hospitals (48%).

Conclusion: Overall findings suggest that strategies should be developed to improve the quality testing and counseling for PMTCT of HIV particularly in dispensaries..

Title: Functional Antibody responses elicited by HIV-I-DNA priming and boosting with recombinant HIV-MVA in healthy Tanzanian adults

Author(s): Agricola Joachim[1,3], Charlotta Nilsson[3,4] Said Aboud[1] Muhammad Bakari[2], Eligius F Lyamuya[1], Merlin Robb5, Mary Marovich6, Christina Ochsenbauer6, Britta Wahren[3,4] Fred Mhalu1, Eric Sandström[8], Gunnel Biberfeld[3,4], Guido Ferrari[9] Victoria R. Polonis[6] an

Institution(s): MUHAS and the HIVIS study group.

Background: We evaluated HIV antibody (Ab) responses elicited by immunization, in a phase I/II placebo-controlled double blind trial using multiclade, multigene HIV-1-DNA prime boosted with HIV-MVA conducted among healthy volunteers in Tanzania (HIVS03).

Objectives: To determine whether priming with HIV-DNA vaccine and boosting with HIV-MVA elicits functional antibody responses in HIVIS03

Methods: Sixty HIV-uninfected volunteers, randomized into groups of 20 received placebo or I mg HIV-DNA intradermally (id) or 3.8 mg intramuscularly (im). DNA plasmids containing HIV-1 gp160 subtypes A, B, C; rev B; p17/p24 gag A, B and Rtmut B were given at months 0, 1 and 3 using a needle-free Biojector device. HIV-MVA expressing CRF01_AE HIV-1 env, gag, pol was administered im by needle at months 9 and 21. Sera were tested at baseline, two months post-first and four weeks post-second HIV-MVA boosting. HIV Ab responses were tested using pseudoviruses and TZM-bl cells and infectious molecular clones (IMC) in PBMC-based assays. ADCC responses were tested using the flow cytometry GranToxiLux-based assay and IMC infected luciferase based assay.

Results: Neutralizing Ab activity was demonstrated only in the PBMC assay after the second MVA boost in 24 (83%) of 29 vaccinees against the clade CRF01_AE CM235 IMC and in 21 (72%) of 29 vaccinees against clade B SF162-IMC. NK cell depletion from PBMC targets resulted in a significant loss of HIV inhibition by vaccinee sera, indicating a role of Ab-mediated Fc□-receptor function. Vaccine-induced ADCC responses were detected in 21/28(75%) and 27/29 (93%) of the vaccinees using coated and infected target cells respectively after the second HIV-MVA boost. ADCC Ab titers did not differ significantly between id- (median 840, range 300-5400) and im-primed (median 880, range 400-3600) vaccinees (p=0.45).

Conclusion: HIV-DNA priming followed by two HIV-MVA boosts elicited HIV-specific neutralizing and/or ADCC-mediating antibody responses in a high proportion of Tanzanian adults.

Title: Adverse Side Effects of Hormonal Contraception, a Critical Barrier to Uptake and Use in Rural Tanzania: A Qualitative Study

Author(s): Joy Chebet

Institution(s): MUHAS and Havard

Background: Although FP has been shown to be an effective intervention for managing population growth, and promoting MNCH, fear of or experience of adverse side effects remains an important barrier to the sustained use of contraceptives-even more so than geographical access. Though side effects are often mentioned as a barrier to using modern methods of contraception, studies detailing the experience of response to these side effects in East Africa are limited.

Objectives: none given

Methods: During July and August 2011, trained research assistants conducted semi-structured in-depth community-based interviews with recently delivered women, their husbands and opinion leaders across 16 villages in the catchment area of 8 government health centers in four districts of the Morogoro Region of Tanzania. In November and December 2011, twelve facility-based semi-structured interviews with RCH service providers from 3 of the same health centers were conducted. Following data collection, interview transcripts were analyzed using thematic analysis.

Results: Overall, respondent groups viewed FP in a positive light, due to the health and economic benefits associated with limiting births. Across respondent groups side effects associated with family planning were cited most frequently as a deterrent to continuation/uptake of FP methods causing women to never use hormonal methods, discontinue use, switch methods, or use methods incorrectly. Most frequently, prolonged and excessive menstrual bleeding, missed menses, weight gain and concern for a breastfeeding infant's health were cited as side effects by women, husbands and community members. For all respondent groups, use of FP during the postpartum period was viewed as taboo, steaming from concern for a breastfeeding infant health. Use of FP was reinitiated about 40 days post-delivery.

Conclusion: not provided

Title: Initial Clearance and detection of recurrent Plasmodium falciparum infections as assessed by malaria RDT, microscopy and PCR in Tanzanian children following artemether-lumefantrine treatment

Author(s): Aydin-Schmidt Berit[1], Mubi Marycelina[1,2], Morris Ulrika[1], Petzold Max[3], Ngasala Billy[2], Premji Zul[2], Björkman Anders[1] & Mårtensson Andreas[1,4.]

Institution(s): [1]Malaria Research, Department of Medicine-Solna, Karolinska Institutet, Stockholm, Sweden [2]Muhibilli University of Health and Allied Science, Dar es Salaam, Tanzania [3]Centre for Applied Biostatistics, Sahlgrenska Academy, University of Gothenburg, Sweden

Background: The diagnosis of malaria has been a challenge to the health care system in many endemic countries, which forced countries to depend on clinical diagnosis. However, clinical diagnosis is not specific for malaria and often led to over-diagnosis and overuse of antimalarial drugs, contributing to the development and spread of drug resistant parasites. The availability of malaria Rapid Diagnostic Tests (RDT) has provided an opportunity to extend malaria diagnosis to areas beyond the reach of quality microscopy. The most commonly used tests detect the histidine-rich protein 2 (HRP2) and parasite lactate dehydrogenase (LDH) antigen

Objectives: To assess initial clearance and detection of recurrent P. falciparum infection in children treated with ACT using two RDTs compared with microscopy and PCR

Methods: Children with fever and positive for P. falciparum mono infection were followed up on 9 occasions up to 42 days after treatment. At each visit, capillary blood sample was used to perform the following tests: microscopy, two RDTs (HRP2 and LDH based tests) and PCR analysis. Clearance time for antigens, and parasites and DNA were calculated

Results: Fifty three children completed the follow up. The majority of children cleared their parasitemia within two days of treatment as assessed by microscopy and PCR. Mean clearance times for HRP2 and LDH based tests was 21(3-42) and 3(1-7) days respectively. Ten children got re-infections, and the HRP2 and LDH based tests did not detect 8 and 2 of these respectively.

Conclusion: Due to persistence of the HRP2 antigen, HRP2 based RDTs are less suitable for patient follow up compared to LDH based tests

Title: Appraisal of in-service training among maternal and neonatal health workers in rural settings of southern Tanzania

Author(s): Kakoko, D.C., Leshabari, M.T., Massawe, S.N., Mpembeni, R., Wangwe, P., Sukums, F., Saronga, H.P.

Institution(s): MUHAS

Background: In order for maternal and neonatal health workers to provide quality care and meet their communities' changing health care needs, they must regularly get opportunities to attend in-service trainings so as to update their professional knowledge, skills, values and practice

Objectives: To assess in-service trainings of health workers, in terms of participant's selection, their perceptions regarding facilitators' skills, and the fulfillment of trainees' expectations.

Methods: A cross-sectional qualitative study was conducted in Lindi district in 2009. A total of 30health service providers were interviewed through semi-structured in-depth interviews. Study participants were sampled purposefully to include CHMT members; supervisors of health centres; and maternal health care providers. Data was analysed using the content analysis.

Results: Study participants reported to have attended various in-service trainings that were based on contemporary issues in maternal health care. Majority of participants said that there was neither equity nor fairness in the selection of participants for the training, and were of the opinion that selection of health workers for in-service training should be participatory and objective. Most of participants reported that the training fulfilled their expectations because they became more knowledgeable, skillful, confident, and efficient. However, some said that the training was too short and many issues were condensed and overloaded.Majority of participants observed that facilitators had the required knowledge and skills and they used appropriateteaching methods and materials.

Conclusion: Given that in-service training is an essential component of successful health care systems it is important to ensure that training opportunities are given on fair and equal basis. Duration of the training needs also to be carefully considered based on the training content.

Title: Public Private Partnership in Health in Tanzania: Exploring the Emerging Institutional Structures.

Author(s): Mughwira Mwangu[1], Gasto Frumence[1], Dereck Chitama[1], Oberlin Kisanga[2]

Institution(s): 1 School of public health and social sciences, Muhimbili University of Health and Allied Sciences, Box 65454, Dar Es Salaam, Tanzania. [2] Coordinator of PPP GIZ

Background: The government of Tanzania formulated the Public Private Partnership Policy in 2009 with the intention of expanding and improving delivery of public services to the population.

In the health sector, the government has been implementing PPP since 2008 in order to meet the demand for health care and increase access to quality health services especially to the disadvantaged groups in society. Since then various institutional structures (both at central and local levels) have been created to facilitate PPP implementation.

Objectives: The aim of this study was to examine the evolving institutional structures and their roles in facilitating the implementation of the PPP in health services delivery.

Methods: This was an evaluation study that applied in depth interviews with key informants from national, regional, council and health facility levels, supplemented by group discussions with key stakeholders involved in the implementation of SA at various levels. Thematic analytical approach was used to analyze data.

Results: Results indicate that a number of institutional structures both formal and informal have been formed at various levels of the health care delivery system (national, regional, council and health facility levels) to coordinate the implementation of PPP.

Some of the structures are entirely new while others are old but have been given additional responsibility of coordinating PPP activities at their respective levels.

Conclusion: The implementation of PPP has led to the creation of new institutional structures to coordinate the partnership activities. On the other hand the PPP agenda is gradually getting mainstreamed into the existing institutional structures.

Title: Determinants of place of delivery among pregnant mothers in Kongwa district.

Author(s): Innocent Semali, Elia Mmbaga, Anna Kessy

Institution(s): School of public health and social sciences, Muhimbili University of Health and Allied Sciences, Box 65454, Dar Es Salaam, Tanzania.

Background: Globally maternal mortality has declined to 287,000 but remains un-proportionally high in Sub-Saharan Africa. Giving birth in a health facility and or assisted by a trained personnel is an important intervention to reduce maternal mortality. Access to a skilled health care provider during delivery is influenced by household and community factors including social capital. Aim of this study was to determine association of individual and community factors including social capital with place of delivery in Kongwa district.

Objectives: This was a baseline cross-sectional study in Kongwa district among households with children less than one year.

Methods: A total of 702 households with children less than two years from these were randomly selected and both the head of the household and mother were interviewed using different questionnaires. The questionnaires elicited information on community level social capital, place of delivery of the index child, social demographic characteristics, distance to health facility, time to water sources and quality of housing. Using STATA 12 , multilevel multiple logistic regression was done to account for mother and village factors associated with place of delivery.

Results: Factors associated with higher likelihood of delivery assisted by a skilled health care provider were short distance to health facility (OR 1.8; 95% CI=1.1-2.9), mother age less than 30 (OR 1.8, 95%CI 1.1-3.2), mothers high education (OR 1.9; 95%CI 1.2-3.1), high mutual support (OR 3.9,95%CI 1.4-11.3) and high communal action(OR1.9; 95%CI 1.1-3.4). On the other hand, long distance to water source decreased the likelihood (OR 0.4, 95%CI 0.2-0.7).

Conclusion: Delivery assisted by a skilled person was influenced by high education of mother, young age, short distance to facility and village characteristics. Hence, intervention should not only focus on individuals but also on harmonizing village differences which might include promotion of social capital.

Title: Priming with a "simplified regimen" of HIV-1 DNA vaccine compared to a "standard regimen" after boosting with heterologous HIV-1 MVA vaccine in Tanzania – the TaMoVac-01 trial.

Author(s): Munseri, P [1,2,] Kroidl A[3], Nilsson C[4], Moshiro C[1], Aboud S[1], Joachim A[1], Geldmacher C[3], Aris E [5], Buma D[5], Lyamuya E 1, Godoy K4 Maboko L[3], Marovich M[6], Robb M[6], Hoelscher M3, Janabi M [5], Mann P[3], Joseph S[7], Stoehr W[7], Mhalu F [1], Wahren B[4], Biberfeld G[4],

Institution(s): 1 MUHAS, [2] KI, [3]NIMR MMRP, [5] Swedish Institute for Communicable Disease Control, [5]MNH, [6]US Military HIV Research Program , [7]MRCU

Background: The HIVIS-03 trial showed that intradermal priming with 1000ug DNA in 5 injections of 0.1 ml as separate plasmid pools prior to MVA boosting resulted in strong and broad immunogenicity. However that required 5 injections at each immunization.

Objectives: In the TaMoVac-01 we assessed whether a higher concentration of DNA might allow a simpler administration

Methods: The TMV-01 trial recruited 120 (12 placebo) HIV-uninfected volunteers, in Dar es Salaam and Mbeya. Two pools of DNA plasmids (pool1 EnvABC + RevB, pool2 GagAB + RTB) were used for priming, boosting was with MVA CMDR. Volunteers were randomized to three groups of 40, to either two injections of 300ug, one in each arm of DNA with combined plasmids (group IA) or two injections of 300ug with one pool in each arm of DNA (group IIA) "simplified regimens" or five injections, 2 (pool1) and 3 (pool2) injections in the right and left arm respectively, (total 1000ug) of DNA (IIIA) "standard regimen". DNA/Placebo was administered at weeks 0, 4 and 12 by a Biojector device. Boosting with 108 pfu of recombinant MVA/placebo at weeks 30 and 46 was done by a needle intramuscularly. The primary end point was the number of ELISpot responders to Gag and Env, 2 weeks post the last vaccination.

Results: There were no safety concerns. Gag and/or Env response rate was 27/32 (84%) in group IA vs 31/33 (94%) in group IIA (p=0.26). Response rate when comparing the 'simplified regimens' vs 'standard' regimen was 58/65 (89%) vs 32/32 (100%) p=0.09. The median magnitude (IQR) response to Gag was 165 (100,365) SFC/million PBMC vs 210 (120,320), p=0.46 while the magnitude for Env was 150 (92,225) vs 110 (80,160) p=0.17 for the 'simplified' vs 'standard' regimens.

Conclusion: The "simplified vaccination regimen employing a lower dose of combined DNA plasmids pools in 2 injections primed cellular immune responses as well as the "standard" regimen.

Title: Cluster-randomized controlled trial of the World Health Organization's Option A versus Option B for the prevention of mother-to-child transmission of HIV in Dar es Salaam

Author(s): David Sando, Lameck Machumi, Charles Kilewo, Mary Mwanyika-Sando, Till Bärnighausen, Hellen Siril, Irene Andrew, Helga Naburi, Phares Mujinja, David Sando, Ester Mungure, Lucy Magesa, , Pascal Geldsetzer, Nan Li, Donna Spiegelman, Guerino Chalamilla, Wafa

Institution(s): MUHAS, MDH, HSPH

Background: Vertical transmission of HIV remains an important public health problem in Sub-Saharan Africa. The two treatment regimens that are recommended by the WHO for the prevention of MTCT, option A (antenatal AZT for all pregnant women plus Nevirapine for the infant until 6 weeks after cessation of breastfeeding, the current standard of care) and option B (triple antiretroviral therapy during pregnancy and breastfeeding plus Nevirapine for the infant for six weeks after birth) show similar efficacy based on existing evidence.

Objectives: To compare the feasibility, acceptability and costs of the two treatment regimes

Methods: This study engaged a quantitative and nested qualitative performance evaluation of a cluster-randomized controlled trial in two districts of Dar es Salaam. Together, both districts comprised of 60 wards. 32 wards were randomly allocated to Option B (Zidovudine plus Lamivudine plus Efavirenz) and the remaining wards to Option A, which is the current standard of care in Tanzania.

Results: During the first 7 months of the study, we have enrolled 842 HIV-positive pregnant women on Option B, which represents 55% of all HIV-positive pregnant women enrolled in PMTCT in the intervention areas. Thus far, both PMTCT options are well accepted by patients as well as the different cadres of healthcare worker engaged in PMTCT. Yet, there are nuanced differences in feasibility and costs.

Conclusion: The WHO's selection of two PMTCT options is based largely on efficacy considerations. The findings of this study can help guide policymakers in sub-Saharan Africa selecting an option based on cost-effectiveness and feasibility criteria.

Title: Cluster-RCT of a community health worker intervention to improve antenatal care and PMTCT uptake and retention in Dar es Salaam

Author(s): Pascal Geldsetzer, Irene Andrew, David Sando, Mary Mwanyika-Sando, Charles Kilewo, Hellen Siril, , Helga Naburi, Phares Mujinja, Ester Mungure, Lucy Magesa, Nan Li, Donna Spiegelman, Guerino Chalamilla, Wafaie Fawzi, Till Bärnighause

Institution(s): MUHAS, MDH, HSPH

Background: Mother-to-child HIV transmission (MTCT) remains a significant public health challenge in Sub-Saharan Africa (SSA). An important factor that contributes to its persistence is a frequent delay in the first Antenatal Care (ANC) visit and a low overall number of ANC visits.

Objectives: This study aims to determine the effectiveness, cost, feasibility, and acceptability of a Community Health Worker (CHW) intervention to improve ANC uptake and retention.

Methods: A mixed methods performance evaluation of a cluster-randomized controlled trial is currently being conducted in Dar es Salaam. Through randomisation, 36 out of 60 wards were chosen for the CHW intervention while the remaining wards are receiving the standard of care. The key tasks for the cadre of 214 CHWs include 1) conducting home visits to identify pregnant women and refer them to ANC; 2) raising awareness among pregnant women of ANC and prevention of MTCT (PMTCT); 3) providing home visits to keep track of ANC attendance; and 4) following up in those case where women have missed ANC or PMTCT appointments.

Results: Based on data from the first 6 months, CHWs have newly identified 2,987 and visited 7,902 pregnant women. This suggests that CHW household visits appear to be feasible and acceptable to the community. In addition, preliminary results from the first component of a comprehensive performance evaluation of HBCs suggest that around 50% of all households with a pregnant woman and 20% of all households without a pregnant woman in the intervention areas were visited by a HBC during the first 8 months of the study.

Conclusion: The results of this study will provide crucial evidence to policy makers in SSA on the cost-effectiveness of CHWs in improving uptake and retention of ANC and PMTCT services.

Title: Prevalence and severity of ADRs among patients using default first line ARV combinations in Mbeya

Author(s): William M. Reuben and Rainalds R Malele

Institution(s): Ministry of Health and MUHAS

Background: Human Immune Virus /Acquired Immune Deficiency Syndrome has emerged as a serious medical problem in the world. The Government of Tanzania responded by provision of free antiretroviral medicines to patients. The regimens used by then included stavudine, but nowadays no longer used in default first line due to high ADRs. Therefore, a new default combination is practiced (zidovudine, lamivudine and efavirenz). Similarly, regimen has its substitutes (nevirapine, tenofovir and emtricitabine) and the last two substitutes were yet not introduced during the previous study. This change in default first line demands for a follow up study.

Objectives: To assess prevalence and severity of adverse drug reactions among adult patients using new default first line and modified antiretroviral combinations in Mbeya region, Tanzania

Methods: The data for this study was collected retrospectively from Care and Treatment Clinic card (CTC 2) found in each patient's files receiving antiretroviral therapy in Mbeya referral, regional and three district hospitals in the region. ADRs that were reported by patients were documented in the form by clinicians. ADRs were considered as minor if the patient induced with ADR continued with the same medicines or serious when patient was switched to other medications. A study sample of 639 patients files were studied which comprised of; 280(AZT/3TC/EFV), 280(AZT/3TC/NVP) and 79(TDF/FTC/EFV). Analysis was done by SPSS, Chi-square and Fisher's exact tests.

Results: The overall prevalence of ADRs from use of new default first line was: skin rashes (1.07%), peripheral neuropathy (2.14%) and liver toxicity (0.36%). Similarly , the severity was; 1 case of serious liver toxicity, 6 cases of mild peripheral neuropathy, 3cases of dry skin rash and 1 case of mild anaemia.

Conclusion: The findings suggest that the new default first line combination is safer to the old one and therefore recommended.

Title: Factors affecting enrolment into CTCs among Mothers infected with HIV/AIDS in Morogoro Rural District

Author(s): Dr Henry Mruma and Dr. David Urassa

Institution(s): MUHAS

Background: In Tanzania, only 22.2% of those in need of ARV have been enrolled into CTC programs in Tanzania. Barriers to accessing CTCs affect women disproportionately compared to men due to social cultural factors. The entry point to accessing CTC services and linkage to CTC services from PMTCT services is underutilized.

Objectives: This study aimed at finding the factors that affect CTC enrolment of HIV infected mothers after being refereed from PMTCT services. The findings of this study are to help strengthen the continuum of care of HIV services among women.

Methods: A cross sectional study was conducted to 129 HIV infected mothers attending RCH services in Morogoro Rural District, Tanzania, through semi-structured interviews among HIV infected mothers who attended RCH clinics in the study duration, from July to August 2011. Cluster sampling was done to select health facilities. Data was analyzed using SPSS and Excel software

Results: Description of the results: 93 (72.1%) of HIV infected mothers referred from PMTCT to CTC enrolled into CTC services. Social demographic characteristics and transport costs were shown to have no statistical significant association with CTC enrolment. Disclosure of HIV status to spouse, referral counseling given to the mother and the time she was to spend in seeking CTC services, were shown to have a statistical significant association with the outcome of enrolling into CTC services. After the multivariate analysis, disclosure of HIV status to spouse was found to be a significant predictor of CTC enrolment with P value

Conclusion: Disclosure of HIV status to spouse was the only predictor for CTC enrolment.

Title: Sources of community health worker motivation: A qualitative study in Morogoro Region, Tanzania

Author(s): Jesse A. Greenspan[1*]; Shannon McMahon[1]; Joy Chebet[1]; Maurus Mpunga[2]; David Urassa3[;] Peter J. Winch[1]

Institution(s): Johns Hopkins Bloomberg School of Public Health, Institute of Social Work, Department of Labour Studies, Dar es Salaam, Tanzania.   [3] MUHAS

Background: Evidence points to the success of community health workers (CHWs) in addressing health problems at the community level. There is a renewed interest in CHWs in Tanzania, but also a concern that investments in CHW programs may not lead to anticipated benefits due to low motivation of CHWs.

Objectives: This paper presents suggestions for programmers to improve CHW motivation while contributing to the scarce published literature on this topic.

Methods: Data were collected in 2011 in Morogoro Region, Tanzania. Research assistants conducted semi-structured in-depth interviews with 20 CHWs. Interviews were digitally recorded, transcribed, and coded prior to selective translation and thematic analysis.

Results: Four sources of CHW motivation were identified: the individual, the family/household, the community, and the health system. At the individual level, CHWs are predisposed to volunteer work and apply their knowledge to problems of their own, and those of their families and communities. Families and communities motivate CHWs by providing moral, financial, and material support, including supplies, money, and help with farm work. The health system, including the government and its development partners, provide motivation in the form of stipends, supervision, training, and hope for future employment.

Conclusion: (1) Tanzanian CHWs have an intrinsic desire to volunteer, and are often motivated to do unsalaried work because of the support received from their families when other sources of motivation are insufficient. Therefore, it is important for policy makers and program managers to consider the burden that a lack of remuneration imposes on the families of CHWs when devising a package of both financial and non-financial incentives to encourage retention. (2) CHWs' intrinsic desire to volunteer does not preclude a desire for external rewards. Rather, adequate and formal financial incentives and in-kind alternatives would allow already-motivated CHWs to increase the amount of time they devote to CHW work.

Title: INTERLABORATORY CROSS VALIDATION OF A CHROMATOGRAPHIC METHOD FOR DETERMINATION OF LUMEFANTRINE IN HUMAN PLASMA-A PROFICIENT CAPACITY ASSESSMENT OF BIOANALYTICAL LABORATORIES IN EAST AFRICA

Author(s): O[1,] Ngaimisi E[1], Shewiyo D[2], Sasi P[3], Marealle A[1]

Institution(s): [1.]Unit of Pharmacology and Therapeutics, School of Pharmacy, Muhimbili University of Health and Allied Sciences, PO BOX 65013, Dar Es Salaam Tanzania [2]. Directorate of laboratory Services, Laboratory, Tanzania Food and Drugs Authority, P. O. Box 77150,

Background: Bio analytical laboratories in developing countries face challenges including lack of capacity to set and validate analytical methods developed by others.

Objectives: To assess the capacity of Bio-analytical laboratories in emerging countries in setting and validating analytical methods.

Methods: An HPLC method for determination of lumefantrine in human plasma was involved in the assessment. Three bioanalytical laboratories located in Public Medical Universities of Tanzania, Uganda and Kenya were assessed. The method was developed at Analytical Clinical Concept, Leidersbach, in Germany (ACC GmbH). Blinded plasma samples spiked with lumefantrine were provided and the analysis reports were submitted to ACC for evaluation within 6 weeks. Each laboratory was provided with reference standard, internal standard columns and precolumns

Results: The MUHAS Bio analytical (Tanzania) Laboratory met the criteria set by ACC laboratory. The results were within the range set by ACC laboratory and most calibration curves had good linearity with coefficient of correlation always > 0.990. The inter-day precision and accuracy (Relative standard deviation=RD of recovery) were always

Conclusion: This collaborative trial has shown that the MUHAS-Sida Bioanalytical Laboratory has capacity for setting and validating bioanalytical methods developed in other laboratories.

Title: Clients satisfaction with health facility delivery care services and associated factors. The case of Lindi and Mtwara rural districts, Southern Tanzania

Author(s): Mpembeni R., Massawe S., Leshabari M., Wangwe P. et al

Institution(s): MUHAS

Background: High maternal mortality rates still prevail in most developing countries especially in Sub Saharan Africa, including Tanzania with a currently estimated maternal mortality ratio at 454 per 100,000 live births. Skilled attendance during delivery is an effective intervention to reduce maternal deaths. However in Tanzania there is low utilization (51%) of facility deliveries and of skilled attendance (50%) despite a high ANC utilization with 96% attending at least once. This disparity in service utilization needs to be explored. The quality of care, including patient's satisfaction has been shown to be contributing factors

Objectives: To assess women's satisfaction with delivery care services and to determine the factors associated with satisfaction

Methods: As part of the baseline quality maternal health care (QUALMAT) pre-intervention study in, Lindi and Mtwara rural districts, exit interviews to newly delivered mothers in selected primary health care facilities were done using a standard structured instrument

Results: 504 women were interviewed. The majority (92%) reported to be satisfied with the delivery care services. The reported satisfaction varied with different aspects of care ranging from 30% satisfied with labour pains management, to 96% satisfied with the care of the newborn. None of the social demographic variables was significantly associated with satisfaction although a smaller proportion of those with secondary education and parity 2 or lower reported satisfaction.

Conclusion: Majority of women reported satisfaction with delivery care but there were significant variations across different care items. Women experiences and satisfaction with services can be used to inform the health sector to set strategies for improving care quality.

Title: Intermittent preventive therapy and treatment of malaria during pregnancy: a study of knowledge among pregnant women in Rufiji District, Southern Tanzania

Author(s): Ritah Mutagonda[1], Appolinary A.R. Kamuhabwa[*1], Siriel Massawe[2], Rose Mpembeni[3]

Institution(s): [1]Unit of Pharmacology and Therapeutics, School of Pharmacy, [2]Department of Obstetrics and Gynaecology, School of Medicine, [3]Department of Epidemiology and Biostatistics, School of Public Health and Social Sciences, Muhimbili University of Health and Allie

Background: use of sulfadoxine-pyrimethamine (SP) for intermittent preventive therapy (IPT) and artemether-lumefantrine (ALu) for treatment of malaria during pregnancy has been shown to be key strategy in reducing maternal and infant mortality due to malaria

Objectives: To assess the knowledge and awareness of pregnant women regarding the use of sulfadoxine-pyrimethamine (SP) for intermittent preventive therapy (IPT) and artemether-lumefantrine (ALu) for treatment of malaria during pregnancy

Methods: The study was conducted in Rufiji district from March 2011 to September 2011. Four hundred and seventy pregnant women in their 2nd and 3rd trimesters were interviewed when attending ANCs at the selected health facilities. Focus group discussions (FGDs) were also conducted with 46 pregnant women at the health facilities in the district.

Results: More than half (54.3 %) of pregnant women did not know if SP was used for IPT. Most women (76.6 %) did not know the use of SP for IPT in relationship with gestation age. Overall, the results show that most women had very low knowledge about the use of SP for IPT. Forty three (9.1 %) pregnant women reported to have had malaria during their current pregnancies. The antimalarials reported to be used by pregnant women were quinine 18(42.9 %), SP (23.8 %), ALu (21.4%) and sulphamethoxyprazine-pyrimethamine (2.4%). Irrespective of the gestation age of pregnancy, almost all (98.3 %) pregnant women perceived ALu as unsafe drug to be used during pregnancy.

Conclusion: For effective implementation of IPT malaria treatment guidelines during pregnancy, pregnant women should be sensitized and educated on the use and benefits of antimalarial drugs.

Title: Assessment of Knowledge, Attitude and Practice of Voluntary Counseling and Testing for HIV/AIDS among Undergraduate Students at Muhimbili University of Health and Allied Sciences in 2012

Author(s): Brian S. Minja and S Massawe

Institution(s): MUHAS

Background: A significant number of undergraduate students are at an increased risk to HIV infection owing to their age group and high risk behaviors. Their attitudes and practice towards VCT for HIV are of great impact to the burden of HIV/AIDS in the country

Objectives: Assessment of the knowledge, attitude and practice of voluntary counseling and testing (VCT) for HIV/AIDS among undergraduate students at Muhimbili University of Health And Allied Sciences

Methods: A cross sectional study that used a random sample of 383 students and a self administered questionnaire for data collection

Results: A total of 383 undergraduate students were enrolled in the study with a sex ratio of 1:1.07. 71.8% of the students were sexually active and majority had heard about VCT services. 36.3% heard it from mass media that is radio and TV. 84.1% of the respondents understood the importance of VCT services but more than half 51.7% were not ready for a HIV test. The main setback to the uptake among those who were not ready was the fear of knowing ones HIV status.

Conclusion: Majority of the undergraduate students have the knowledge and awareness on VCT and also a positive attitude towards the uptake of the VCT services. The uptake of the VCT services wasn't satisfying with the main barrier being fear to have a positive HIV test.

Recommendation: VCT and HIV/AIDS related programs should be set up in schools which will increase the knowledge and awareness and ultimately uptake of VCT services among students.

Title: Utilization and Contents of Antenatal Care (ANC) in Southern Tanzania.

Author(s): [1]Wangwe, P.J.T.[*], [1]Massawe, S.N., [2]Leshabari, M.T., [3]Mpembeni, R., [2]Saronga, H., [4]Sukums, F., [2]Kakoko, D.C.V,

Institution(s): MUHAS

Background: Adequacy of the contents and timing of Antenatal care in the primary health facilities determines the quality of ANC care and health facility utilization.

Objectives: To determine the baseline utilization pattern of antenatal care in primary health facilities in Tanzania and factors associated with amount and content of antenatal care.

Methods: A cross-sectional study was conducted in Lindi and Mtwara rural districts between August and November 2010. A total of 417 pregnant women were observed while receiving antenatal care (ANC) services. Their ANC cards were cross checked to determine the timing and contents of care provided. The category of service providers available in each health facility was determined by interviewing them using semi-structured in-depth interview and data was analyzed quantitatively using SPSS version 17.

Results: Results: Timing of ANC at first trimester was 7.2% while majority made their visit during the second trimester (59.2%). Only 9.8% made adequate amount of visit while the content of care was found to be adequate, intermediate and inadequate at 44.8%, 48.0% and 7.2% respectively. Majority of the service providers (69.8%) were experienced with more than 6 years in the field, however 30% of the service providers were nurse assistant with less skill in Maternal and Newborn Health.

Conclusion: The Focus Antenatal Care guideline provides a detailed assessment of the adequacy of antenatal care in the primary health facilities. The cadre providing antenatal care, their duration of practice seems to affect the contents of quality of care while timing of ANC is more in the second trimester.

Recommendation: In order to improve quality of care knowledge gap between the cadres has to be bridged especially for those with short duration of practice together with community sensitization on timing of ANC visit.

Translating Health Research Findings into Policy and Practices

Title: Drug Cost implications of Treating HIV/ AIDS Patients with Mental Illness at Muhimbili National Hospital, Tanzania.

Author(s): Mtenzi Joyce[1] and Mloka Doreen[2]

Institution(s): [1]Department of Pharmacy, Muhimbili National Hospital, Dar es Salaam, Tanzania. [2]Department of Pharmaceutical Microbiology , School of Pharmacy, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania

Background: The Ministry of Health and Social welfare (MOHSW) cost sharing policy of 1993, puts a severe financial burden on the government to provide free treatment and care to an estimated 1.8 million HIV/AIDS patients.

Objectives: To determine the drug cost implications associated with the treatment of HIV patients with mental illness as compared to those with HIV alone.

Methods: Electronic Prescription data were retrieved from the MNH JEEVA electronic data base for all the attendees of Muhimbili National Hospital (MHN) HIV Clinic from January 2008 to December 2010. Data was analysed using SPSS and R- Statistical Computing Software.

Results: A total of 1913 (96.7%) patient data were analyzed. Majority of attendees were from Kinondoni District Dar es Salaam (51.2%). The mean age was 43.2 years. Majority of patients were female and married, 69.7% and 51.3%, respectively. First visit to emergency medicine and psychiatry departments contributed 41% and 25% respectively of previously undiagnosed HIV infected persons.

Total cost for ARVs was US$ 804,449.5   Total cost for mental illness drugs for the same study period was US$ 6,943.5. Drugs for mental illness were prescribed drugs to 16.5% of the patients. HIV Patients with mental illness had a significantly higher mean drug expenditure cost per person years of US$ 278. 6 compared to patients with HIV alone at US$ 226.7 (p-value

Conclusion: Mental illness develops in a significant proportion of HIV patients at MNH. Co- morbid HIV/mentally ill patients are a significantly more expensive group with respect to drug costs than patients with HIV alone. First case psychiatry presentation in identifying HIV infected persons strongly advocates that psychiatric care be part and parcel of routine HIV care and treatment programs at MNH.

Title: Medicinal plants used for abortion and inducing/reducing labour pain in Njombe District

Author(s): Authors: Sheila Maregesi and Bestina Mwagike

Aim:

The aim of this study was to document medicinal plants used for abortion and inducement/reduction of labour pain in three villages (Msombe, Imalinyi and Igosi) of Kidagula ward in Njombe district.

Methodology:

Information was collected through questionnaires administered to nine Traditional Healers (THs) and seven Traditional Birth Attendants (TBAs). Both the Tanzania national language (Swahili) and local languages (Bena and Hehe) were used during the interview.

Results:

Nineteen plant species, belonging to twelve families were recorded. For each plant species, Vernacular name(s), plant parts, method of preparation and route of administration were given and identification was done by using herbaria specimens. Most of the plants are used for labour pain management (52.6%) compared to abortifacients (31.6%) while the remaining are used for both (17.8%). Plants with highest frequency of mention were Vernonia amygdalina and Ricinus cimmunis for induction of labour pain and abortion respectively. Leaves were the most preferred plant part (57.9%) followed by roots (15.85%).

Conclusion:

The use of herbs in getting rid of unwanted pregnancies and inducing or reducing labour pain is still in practice. The problem lies on the safety/toxicity of these herbal preparations to the unborn baby and mothers. Studies on pharmacological/toxicity and determination of phytochemical profile have to be conducted. Education for the public on medical hazards pertaining to such practices is essential.

Title: Implementation of artemether-lumefantrine treatment policy for malaria at health facilities in Tanzania

Author(s): i. Mugoyela Veronica   i. Minzi Omarii

Institution(s): MUHAS

Background: The purpose of this study was to compare knowledge on the part of health
workers in public and private health facilities about prescribing and dispensing of an artemether-lumefantrine combination, 3 years after moving from sulfadoxine-pyrimethamine to artemether-lumefantrine as a first-line treatment for nonsevere malaria in Tanzania

Objectives: This study aimed at assessing the implementation of artemether-lumefantrine treatment in Tanzania by measuring knowledge among health workers about artemether-lumefantrine as a first-line malaria treatment, the correct doses, and the need for concomitant food intake 3 years after a policy change in this country

Methods: A cross-sectional survey of a convenience sample of 306 dispensaries and pharmacies was conducted in Dar Es Salaam and the Coast region of Tanzania. Of these, 122 were community pharmacies, 143 were private dispensaries, and 41 were public dispensaries. Specific outcome measures were health workers' knowledge of the new malaria treatment guidelines, recommended doses of artemether-lumefantrine, and food requirements. Results: Nearly all workers in the public dispensaries and about 50% of workers in private dispensaries and community pharmacies were aware of recommended first-line malaria treatment. The difference in the proportion of health workers with adequate knowledge about the new recommended antimalarial medicine in public and private dispensaries was statistically significant (P , 0.0001). There was a higher proportion of workers in public dispensaries who had adequate knowledge about doses of artemether-lumefantrine for adults compared with workers in private dispensaries (P = 0.001). Only 58.0% of respondents were able to state correctly the recommended doses in private dispensaries as compared with 77.0% in public dispensaries. Knowledge about the requirement for a concomitant fatty meal was not significantly different between workers in public and private dispensaries (P = 0.280) or between those working inpublic dispensaries and pharmacies (P = 0.622). Conclusion: Knowledge about the use of artemether-lumefantrine was higher among health workers in public dispensaries than in their counterparts from private health care settings.

Title: Do Universities in East and Central Africa have Capacity for Health Systems Research?

Author(s): Simba, Daudi

Institution(s): Muhimbili University of Health and Allied Sciences

Background: Background: Despite its importance in providing evidence for policy and decision making very few health systems research (HSR) are conducted in low income countries. Schools of Public Health (SOPH) are the target for HSR funding hence the need to strengthen capacity for conducting HSR.

Objectives: This study aimed to determine if SOPH have adequate numbers and qualified staff for HSR; and explore the existence of conducive human resource and financial policies and support for HSR.

Methods: Method: Seven SOPH from six countries in East and Central African countries conducted capacity assessment for HSR in their respective schools in 2011. An adapted self-assessment questionnaire was used, key informant interviews (KII) with HSR stakeholders and document review conducted. Questionnaire was administered to academic staff with interest and or published on health systems. Questions focused on academic members' opinions on capacity of SOPH to engage in HSR, access funding and support HSR. KII involved Deans of respective SOPH and stakeholders from outside the Universities interested in HSR. An interview guide was used focusing on HSR funding and sources of data for the respective organization.

Results: Findings: Questionnaire was administered to 123 academic staff and KII conducted with 88 respondents. Respondents expressed confidence on SOPH adequacy in staffing and skills for conducting HSR. However, staff-output ratios, including technical and consultancy reports, in SOPH were low; ranging from

Conclusion: Conclusion: This study underscores the need for researchers in SOPH in low income countries to form effective multidisciplinary HSR teams to attract local funding. This will foster conducting and disseminating research of local relevance using appropriate media.

Title: The Current Status of Nylon teeth belief in Tanzania

Author(s): Mugonzibwa EA; Mwalutambi S; Kahabuka FK; Kikwilu EN

Institution(s): School of Dentistry, Muhimbili University of Health and Allied Sciences

Background: Since early 1980s, nylon teeth belief has been reported in Tanzania, mainly in Arusha and Singida regions (Mosha et al 1983). In early and late 1990s studies indicated signs of spread of the belief to more regions (Matee et al 1993, Hiza et al 1993, Kikwilu et al 1997). Existence of nylon teeth belief continued to surface in meetings, formal and informal communications in late 1990s, through year 2010.

Objective: To determine the extent of nylon teeth myth and beliefs in the Tanzanian society by geographical area.

Methods: Design was a cross sectional cluster study based on the 6 zones of Tanzania mainland being represented by Manyara, Dodoma, Rukwa, Kagera, Mtwara, and Dar es Salaam regions. Each region was targeted to have 200 respondents stratified by age and sex. Efforts were also made to include teachers, health workers and traditional healers of the sampled catchment area.

Results: A total of 1359 respondents were included in the study. Respondents were aged 16 to 98 years, 61% of the women respondents had primary education or less; 15% were hospital workers, 15% were teachers and 2.2% were traditional healers. While 45% of the total respondents had heard of nylon teeth, most from Kagera region (97%) and most from Mtwara had not (94.%). Nearly half (46%) of the respondents who had heard about nylon teeth thought that the nylon teeth problem is a reality.Regarding treatment trusted for curbing nylon teeth problem, nearly half (48%) disagreed that a child believed to be suffering from nylon teeth can be treated by modern medicine. Most respondents (76% to 83%) reported symptoms that are associated with nylon teeth problem, whereby, diarrhea was reported by 83%, long standing fevers by 81% and difficult in sucking milk from mother's breast by 77%. A larger proportion of females (48%) had heard of nylon teeth problem compared to 41% of males (p= 0.005, $\square2 = 7.749$). Also a larger proportion of males (60%) agreed that nylon teeth can be treated by modern medicine compared to 47% of the females, (p= 0.043, $\square2 = 4.013$). Of the professionals who had heard of the belief and also believe it were nurses (33%), pharmacists (43%), teachers (45%), traditional healers (36%) and other professions (53%).

Conclusion: Nylon teeth belief still exists in regions studied, with extensive variations. Typical of beliefs, hear says overweigh the facts. There are still a big proportion of Tanzanians who do not trust hospital care when it comes to management of nylon teeth especially in hard hit regions. The belief is still based on symptoms that are caused by infectious diseases. Recommendation: Therefore, policy interventions are recommended for the control of the nylon teeth belief.

Title: Attitudes and Practices on HIV Screening among Secondary School Students in Ilala District, Dar es Salaam, Tanzania

Author(s): LASWAI, Olimpia

Institution(s): The University of Dodoma

Background: Great efforts and many interventions have been conducted to combat HIV/AIDS but the surprise is that the disease still continues to spread with alarming effects affecting youth especially in Africa. Many approaches to HIV prevention and care require people to know their status. Though VCT services have now been developed, they are still in limited centres. It is not known whether availability and accessibility to VCT services and centres has significant impact towards VCT seeking attitude.

Objectives: The broad objective was to explore the attitudes and practices of HIV screening among secondary school students in Ilala District Dar es Salaam. The specific objectives were to explore the attitudes of secondary school students towards VCT, explore the factors which promote VCT attendance among secondary school students in Dar es Salaam and to explore the factors which hinder VCT attendance among secondary school students in Ilala District, Dar es Salaam.

Methods: The study was exploratory cross-sectional using qualitative methods and was conducted in Azania and Jangwani secondary schools in Ilala District Dar es Salaam. Data was collected from 13 informants i.e. 5 girls and 8 boys that were above 18years of age. Convenience sampling was used to select the schools. Then purposive sampling to select the participants. Data collection was done through individual interviews using Swahili language. Finally data analysis was done using qualitative content analysis.

Results: When the students were asked whether they have ever heard of VCT, all of them 100% (13) agreed to have heard about it. Concerning whether they thought that VCT is necessary all the respondents 100% (13) agreed that it was necessary. However 46% (6) of the participants in this study did not utilize the services unless they had signs and symptoms suggesting possible HIV infection or when they are told by their partners to test.

Conclusion: This study reveals that health messages about the need to take HIV test are reaching the population and that it takes more than just provision of VCT services for people to utilize them. The challenge now is to focus on making the physical and social climate in the community conducive for more people to go for testing.

Title: Seroprevalence of Hepatitis B among pregnant women and associated risk factors, Moshi Municipality, Tanzania, 2012.

Author(s): P. Boniface, M. Matee[1], J Mghamba[2,3], A Mohamed[2]

Institution(s): [1]Muhimbili University of Health and Allied Sciences (MUHAS), [2]Tanzania Field Epidemiology and Laboratory Training Programme (FELTP), [3]Ministry of Health and Social Welfare

Background: Mother-to-child transmission of hepatitis B virus (HBV) is a major concern because of the associated long-term morbidity and mortality. The presence of hepatitis B e antigen (HBeAg) in a positive HBV pregnant woman is a marker for high viral load and has shown to be associated with a 70-90% risk for perinatal transmission.

Objectives: This study investigated the seroprevalance of Hepatitis B surface antigen (HBsAg) among pregnant women and of HBeAg among positive HBsAg pregnant women to provide opportunities for prevention and control

Methods: A cross-sectional study was conducted among pregnant women attending antenatal clinics at Moshi Municipality between January-March 2012. Blood collected from consenting pregnant women was screened for HBsAg by rapid test strip. Positive samples were subjected to Enzyme linked Fluorescent Assay (BIOMUREX-SA) for HBeAg detection. Data was analyzed using EpiInfo.

Results: A total of 346 pregnant women were recruited, mean age was 24.7 (SD 5.4) years. Out of these 10 (2.9%) had serological evidence of infection with at least one pathogen and 3 (0.8%) had multiple infections. Seven of the 346 pregnant women were positive for HBsAg giving a sero-prevalence of 2.0%. Out of the seven HBsAg seropositive women, one (14.3%) had co-infection with Syphilis and one (14.3%) was positive for HBeAg. Risk factors for HBsAg were age 30-34 yrs (OR 4.9, 95%CI 1.01-24.13), history of mutiple sexual partners in the past year (OR 3.09, 95%CI 1.01-9.42) and ritual scarification (OR 10.1, 95%CI 1.89-54.20).

Conclusion: The seroprevalence of HBsAg among this population of pregnant women lies within the intermediate endemic area of 2-7% as per World Health Organization criteria. The HBV infectivity prevalence found highlights the likehood of perinatal transmssion of Hepatitis B. This might necessitate revision of the existing infant hepatitis vaccination schedule. Integrated package for HIV and Hepatitis B health education is advocated.

Title: Measles Outbreak in Kilosa District, Tanzania 2012: A case for epidemiological pattern dynamic

Author(s): Rogath S. Kishimba[1], A. Richard[1], T. Samuel[1], E. Wilfred[1], M. Mohamed[1,2], S. Sembuche[1], R. Mpembeni[3], J. Mghamba[1,2], P. Mmbuji[1,2]

Institution(s): [1]. Tanzania Field Epidemiology and Laboratory Training Programme (TFELTP) [2]. Ministry of Health and Social Welfare, Tanzania [3]. Muhimbili University of Health and Allied Sciences

Background: Measles is leading cause of childhood mortality for which an effective vaccine was developed almost half a century ago. Global efforts are in place to eradicate the disease and reduce childhood mortality. On 12th March 2012, the Ministry of Health and Social Welfare (MoHSW) received report of 119 suspected measles cases from Kilosa District.

Objectives: A MoHSW team was dispatched with the aim of determining the magnitude and risk factors associated with the outbreak

Methods: Unmatched case-control study was conducted. A suspected case was any person living in Kilosa District from 10th December 2011 with fever and rashes with or without cough or conjunctivitis. Neighbourhood controls were enrolled. Hospital records were reviewed to identify cases and active case finding was conducted.

Results: The index case was a 34 year old female with date of rash onset 10th December 2011. The outbreak persisted until March 2012 when there were 235 cumulative cases and a case fatality rate of 1.7%. The mean age of the cases was 14.74 (SD 15.12) years and majority (59.1%) were above five years. Contact with a measles patient [AOR=4.56, 95% CI: 2.32-8.94], being unvaccinated [AOR=5.37, 95% CI: 2.04-14.14], and living in an overcrowded house[AOR=2.58, 95% CI: 1.11-6.01] were found to be risk factors for measles illness. Estimated vaccine efficacy in all ages and across different age categories was below 80% except for under-five years.

Conclusion: The investigation identified a measles epidemiological pattern dynamic whereby majority of infected individuals were aged above five years. Contacts with infected people, being unvaccinated and living in an overcrowded house were risk factors for contracting measles. Primary and secondary vaccine failure several years ago is the possible reasons for this outbreak. Supplementary immunization for those above five years is needed.

Title: The Role Of Malaria Rapid Diagnostic Test On The Management Of Fever Amongst Children In Kisarawe District, Coast Region 2009

Author(s): Lyimo S, Premji Z, Mosha F

Institution(s): [1].Tanzania Field Epidemiology and Laboratory Training Program [2].Muhimbili University of Health and Allied Sciences [3].   MOHSW-   Field Epidemiology Training Program

Background: Malaria diagnosis continues to be a major challenge in malaria control strategies. Currently, there are three main approaches to laboratory-based diagnosis of malaria, which are Giemsa stain microscopy, Acridine orange (AO) microscopy and rapid diagnostic tests (RDT).

Objectives: The objective of this study was to determine the role of malaria rapid diagnostic test (mRDT) in routine clinical practice for the management of malaria episode amongst children.

Methods: A cross-sectional study of children aged five years and below attending a health care facility due to fever was conducted. Systemic sampling method was used to enroll children and blood samples were collected for mRDT, and smear microscopy. Exit interview was done. Data was analyzed using Epi info 3.5.1.

Results: A total of 290 children, under five years of age, with fever were enrolled for malaria Rapid Diagnostic Test.   Results revealed that RDT has Sensitivity of 94%, Specificity of 96% and Predictive Value Positive of 98%. A total of children 50 (17.2%) had malaria confirmed by RDT and microscopy. There was discordant in microscopy results for readers one (13.8%) and two (17%). For parasite density the liner Coefficient Correlation between two readers was 0.92, an acceptable range. A total of 16(5.5%) children were treated with anti-malarial based on presumptive treatment, while only 50 (17.2%) were positive for malaria by RDT. If there was no RDT treatment would have been to all 290 children with fever.

Conclusion: This study shows that RDT has high sensitivity and specificity. The use of RDT will help to avoid unnecessary treatment with anti-malarial and secondly will help in early treatment of other causes of fever if not due to malaria.

Title: Evaluation of Laboratory Based Multi Drug Resistant Tuberculosis (MDR TB) Surveillance System at Muhimbili   National Hospital

Author(s): Lema, Nsiande Andrew1, Prof. Matee2, Mohamed, Ahmed A1

Institution(s): [1].Tanzania Field Epidemiology and Laboratory Training Program [2].Muhimbili University of Health and Allied Sciences

Background: Tanzania ranks fourteenth among the 22 countries with the highest burden of tuberculosis (TB) worldwide; seeing a 60% increase of TB cases since the HIV/AIDS epidemic debut in the 1980s. The prevalence of HIV among TB cases is estimated at 43%. It is estimated that in new TB patients, the prevalence of Mycobacterium tuberculosis strains resistant to any of the four first-line drugs is 8.3% while the prevalence of multidrug-resistant TB (MDR-TB) is 1.1%. In retreatment patients, the prevalence of any resistance and of MDR-TB was 20.6% and 3.9% respectively.

Objectives: The national MDR-TB surveillance system was assessed to determine if the system is meeting its objectives.

Methods: CDC's guideline for evaluating surveillance systems was used. Review of the surveillance system protocol, reports and data collection tools was done. Interviews were held with 14 laboratory workers at the national level. EpiInfo and Microsoft excel were used for data analysis.

Results: Between 2008 and 2012, 2,527 suspected cases of MDR-TB were reported of which 288 (11.4%) were laboratory confirmed. The mean age was 29 years and 1,560 (61.7%) were male. Ten out of 14 laboratory workers (71.4%) reported that the system uses a simple testing algorithm. There was 95% external quality assurance concordance meeting WHO standards. Majority of the specimen (82%) specimen were in good quality and the predictive value positive was found to be 11.3%. The turnaround-time (TAT) of the system was found to be 60 days for culture and drug sensitivity test by using MGIT technique.

Conclusion: The system was able to pick cases of MDR-TB and was useful to describe the pattern of resistance in the country. The Ministry of Health and Social Welfare should create a comprehensive mechanism for submission of specimens to the national laboratory and prompt feedback of results to reduce the TAT.

Title: Magnitude of Cardiovascular Diseases and Risk Factors Among Salary Earners In Zanzibar

Author(s): Ali, Ali Omar[1], Leyna, Germana2, Mghamba, Janneth1,3

Institution(s): [1]Tanzania Field Epidemiology and Laboratory Training Program[2]. Muhimbili University of Health and Allied Sciences [3]. MOHSW

Background: Cardiovascular diseases (CVD) are a significant cause of global mortality. About 17.1 million people died from cardiovascular disease in 2005, representing 30% of all global deaths. An estimated 7.2 million deaths were due to heart attacks and 5.7 million from stroke. The increase in CVDs and other non-communicable diseases is overwhelming health systems in low and middle income countries; which also face existing Communicable Diseases. In Zanzibar, there is little information to aid prevention and control of NCDs including CVDs.

Objectives: To assess the magnitude of CVDs and risk factors among salary earners in Zanzibar.

Methods: A cross-sectional study was conducted with 333 participants. Sample frame was ministries which were randomly selected from government and private institutions. WHO STEPs survey methodology was used. Data entry and analysis were performed using EpiInfo3.5.1.

Results: The study population consisted of 333 respondents, of which 51.7% were males and 48.3% were females. The prevalence of CVD was 45.3%. In the bivariate analysis, CVD was associated with sex, age, education levels, lifestyle factors and anthropometric and biochemical factors. In the final logistic regression model, males were twice more likely to have CVD compared to females (OR = 2.3, (95%CI: 1.34, 3.94); p=0.003). We also observed that older age (>45 years) had a higher odds of reporting CVD compared to participants who were younger (

Conclusion: CVD is a common health problem among salary earners in Zanzibar that needs to be addressed. Being male, old age and having abdominal obesity appear to be the main risk factors for CVD in this population. More studies and preventive measures in the work places are urgently needed to address this problem.

Title: Evaluation of Acute Flaccid Paralysis Surveillance System in Border Regions, 2009-2011, Tanzania

Author(s): Bintabara, Deogratius[1], Suleiman Zubeda[1], Mghamba, Janneth[1,2], Mmbuji Peter [1,2]

Institution(s): [1]. Tanzania Field Epidemiology and Laboratory Training Programme (TFELTP) [2]. Ministry of Health and Social Welfare, Tanzania

Background: In 1995, Tanzania began polio eradication activities such as routine immunization with oral polio vaccine, national immunization days, and active surveillance for acute flaccid paralysis (AFP). The last case of polio in Tanzania was identified in 1996. Tanzania still has not been certified polio free since a number of regions have not attained the required detection rate.

Objectives: To determine the performance of AFP surveillance system in the border regions of Kagera, Mara, Kigoma, Rukwa and Dar-es-Salaam between 2009 and 2011.

Methods: CDC guidelines for surveillance system evaluation were used. Review of protocols, reports and data collection tools and records was conducted. EpiInfo and Microsoft excel were used for analysis.

Results: Between 2009 and 2011, the system was able to detect 408 AFP cases in the five regions; of which 220(54%) were male, 404(99%) were less than 15 years of age. The non-polio AFP detection rates for Dar es Salaam, Kagera, Kigoma, Mara and Rukwa from 2009 to 2011 were 2.0, 4.2, 3.0, 2.6 and 2.5 per 100,000 children under 15 years respectively. The proportion of districts that met the operation target of reporting at least two cases of non-polio AFP per 100,000 children under 15 years were 66.7% for Dar es Salaam, 66.7% for Kagera, 50% for Kigoma, 80% for Mara and 75% for Rukwa. No polio case was found. Notification of AFP cases was timely with 80.6% of AFP cases notified within 14 days of onset of paralysis.

Conclusion: The system was able to detect AFP cases however a number of districts were unable to achieve the operational target. In order to be certain that Tanzania is polio free, more districts need to achieve the operational target of reporting AFP cases. The MoHSW should sensitize health care workers in poorly performing districts on AFP surveillance.

Title: Formulation of a pediatric Lamivudine, Abacavir and Nevirapine Individualized combination suspension.

Author(s): Tibalinda Prosper [i], Kaale Eliangiringa [i,ii], Haefele-Abah Christine [iii,] Schumacher Fabian [iv, v], Hamacher Harald [iii.]

Institution(s): [i] Pharm R & D Laboratory-School of Pharmacy-MUHAS, Dar es Salaam, Tanzania. [ii] Medicinal Chemistry, School of Pharmacy-MUHAS, Dar es Salaam, Tanzania. [iii] action medeor German Medical Aid Organization, Toenisvorst, Germany. [iv] University Children's Hospit

Background: The Lamivudine, Abacavir and Nevirapine (LAN) liquid formulations have been individually used in the current regimens for the management of HIV/AIDS in pediatric patients. According to the current WHO algorithm for the management of HIV/AIDS, a full regimen should consist of three drugs with different mode of actions taken concurrently as for LAN.

Objectives: Pediatric preparations present a big formulation challenge to the Pharmaceutical industries especially for LAN Combination as Nevirapine is prescribed per body surface area whereas Lamivudine and Abacavir per body weight.

Because of insufficient data, hospitals cannot compound a triple combined antiretroviral suspension. A study was undertaken, in which the challenges of the compounding of LAN, stability and compatibility were scientifically reviewed.

Methods: Three registered tablet formulations were used as starting materials. The composites were prepared from which the aliquots were drawn for the chemical compatibility at 50 °C / 75% relative humidity and in-use stability studies at 30 °C / 75% relative humidity. The analysis was conducted using an in-house developed and validated stability indicating analytical method.

Results: The extemporaneous formulation prepared revealed adequate stability and compatibility for a period of 42 days.

Conclusion: LAN is stable in suspension. These findings will help the hospitals to compound LAN for the children of 3 – 24 Kg, reduce the number of bottles to one per month, increase adherence to the medication and chances to compound other drugs in combination form.

Title: Impact of Implementation of the TRIPS Agreement on Antiretroviral Drugs Importation into Tanzania

Author(s): Georges Shemdoe

Institution(s): Tanzania Commission for Science and Technology (COSTECH)

Background: Investigation on the effect of implementation of the Trade-Related Aspects of Intellectual Property (TRIPS) Agreement on Anti-retroviral (ARV) drugs importation into Tanzania was conducted. The study was descriptive in nature.

Objectives: The aim of the study was to examine the availability and affordability of ARV drugs after implementation of the TRIPS Agreement.

Methods: Data/information was collected from the importation dataset of ARV drugs from the Tanzania Food and Drugs Authority and the National AIDS Control Programme databases from 2002 to 2008. Average exchange rates data were obtained from the report on industrial sector performance. The data on the legal status of the ARV drugs in China and India was collected through Internet. The data collected was analyzed using content analysis. Availability and affordability of the drugs were examined in terms of the quantities and FOB prices.

Results: ARV drugs that were imported before the implementation of the TRIPS Agreement were still being imported after the implementation. From 2003 to 2006 most of the ARV drugs were imported at higher prices from Non-generic drug- compared to those from generic drug manufacturing countries. Thereafter, huge quantities were imported from generic drug manufacturing ones. A price decreasing trend of the ARV drugs over time was observed.

Conclusion: Implementation of the TRIPS Agreement in advanced Developing Countries has not affected the ARV drugs importation of those drugs which was being imported before. The issue now relates to the new antiretroviral drugs which will be invented in the future.

There was a shift from importation of non-generic drugs to generic drugs in the recent years. This was due to the approval of generic ARV drugs by the FDA of USA and the prequalification by WHO which made the generic ARV meet the policies of the donor market and competed well in the ARV drug donor supported programmes

Title: Performance of HIV Drug Resistance Surveillance System in Tanzania, 2008-2012

Author(s): Munda C.M. Elias[1], Bonita Kilama[2], Steven Wiersma[1]

Institution(s): [1].Tanzania Field Epidemiology and Laboratory Training Program [2]. National AIDS Control Program

Background: Tanzania began rapid scale-up of Antiretroviral Therapy (ART) in 2004. Within five years more than 300,000 patients were on treatment. Use of ART is associated with HIV Drug Resistance (HIVDR) even if appropriate regimens are provided. Early Warning Indicators (EWI) from selected sites have been used to monitor ART programme performance. Threshold survey is also used to determine transmitted HIVDR.

Objectives: We evaluated the HIV Drug Resistance surveillance system to determine its performance.

Methods: MMWR CDC guideline for evaluating surveillance system was used. Review of protocol and reports was done and Self-administered questionnaire was administered to stakeholders to evaluate system attributes. Epi info and Microsoft excel was used in data analysis.

Results: The system is acceptable and data is of reasonable quality as all 35 selected health facilities had their EWI data collected and completely filled in electronic forms. However the system is complex as reported by 5/8 (63%) staff. Through the system ART program performance as per the WHO targets is monitored. All sites achieved the WHO target for prescribing practices (100%). The target for Lost to Follow up (70%). However less than 3% of all sites reached the WHO target for ART appointment keeping (80%). Furthermore, the system cannot adequately monitor drug supply continuity.

Conclusion: The system has been able to monitor performance as per WHO targets and the many of the targets have been achieved. However the National Laboratory capacity for genotyping needs to be improved to ensure availability of results of the Threshold survey in order to support monitoring of HIV DR.

Title: Health workers' knowledge and attitudes towards computer applications in rural African health facilities

Author(s): Sukums, Felix; Mensah,Nathan; Blank,Antje; Kaltschmidt, Jens; Haefeli,Walter

Institution(s): University of Heidelberg, Muhimbili University of Health and Allied Sciences, Navrongo Health Research Centre

Background: QUALMAT project has introduced an electronic clinical decision support system (CDSS) for antenatal and delivery care in rural primary health facilities in Burkina Faso, Ghana, and Tanzania.

Objectives: This study aimed to understand providers' computer knowledge, experience, and attitudes prior to the implementation of the system, which are prerequisite for its successful adoption.

Methods: A cross-sectional study with pre-post assessment in intervention and non-intervention sites is being conducted in 24 QUALMAT sites. All providers involved in antenatal care and delivery were invited. A questionnaire with demographic, professional characteristics, previous computer training, computer knowledge/experience, and a five-point Likert statement on computer attitudes was used. Chi-squared statistics for categorical variables was used to examine the relationships between the computer knowledge level and selected variables. One-way analysis of variance (ANOVA) was used to identify relationship of providers' computer attitudes with selected variables.

Results: Of 108 participants 63% were from Tanzania while 37% from Ghana. Mean age was 37.6years and 79% were female. The providers who had some form of computer training were 29% while only 40% indicated to have ever used computers. About 80% were computer illiterate and beginners. Younger nurses had limited basic computer training or exposure during their studies. Educational level, age, and years of work experience were significantly associated to computer knowledge level (p

Conclusion: The providers had low computer knowledge hence intensive computer training and support would be required prior any implementation of an electronic system. The positive attitudes expressed by the providers are promising, strategies such as regular follow-up to identify and address challenges are required through the implementation for successful uptake.

Title: Optimization of HIV and co-morbidities co treatment: Emphasis on pharmacogenetics and drug interactions

Author(s): Eliford Ngaimisi[1], Sabina Mugusi[2], Omary.M.S. Minzi1, Philip Sasi[1], Klaus.D. Riedel[3], Mohamed Janabi[2], Ferdinand Mugusi[1], Walter.E. Haefel[3], Leif Bertilsson[4], Juergen Burhenne[3], Eleni Aklillu[4]

Institution(s): [1.] MUHAS [2.] MNH [3.]Heidelberg University [4.] Karolinska Institutet

Background: HIV/TB co-treatment is complicated by wide inter-individual variations in efavirenz (EFV) exposure

Objectives: We aimed at investigating sources of variation in EFV exposure and their impact on enzyme induction and hepatotoxicity, so as to inform dose optimization.

Methods: We recruited HIV infected patients with tuberculosis (arm2) and without (arm1) both in Tanzania and Ethiopia. Patients took EFV 600mg; and for arm2, rifampicin (RIF) based anti-TB was initiated 4 weeks before HAART. They were followed for 48 (arm1) and 52 (arm2) weeks to collect information on efavirenz exposure, treatment outcomes, liver functional tests and complete blood count at predetermined time intervals. Genotyping for single nucleotide polymorphisms (SNP) in genes encoding EFV metabolizing enzymes and drug transporters (CYP2B6, CYP3A5, UGT2B7 and ABCB1) was done

Results: Among arm1, patients with CYP2B6*1/*1 genotype (fast metabolizers) had significant decrease in EFV exposure between week 4 and 16. Among arm2, only fast metabolizers had significantly lower efavirenz exposure, 4 weeks after HAART, compared to their counterpart in arm 1 indicating that rifampicin induction occurred only in these individuals. ABCB1 c4036A>G SNP was associated with higher EFV exposure at week 4. Ethiopians, even after controlling for genetic and other differences, had lower efavirenz exposure and lower immunological outcomes compared to Tanzanians.

Efavirenz induction of CYP3A4/5 among arm1 was highest (about 5 times) in poor and lowest (about 2 times) in fast metabolizers. After completion of TB therapy, induction dropped to 60% of its maximum, suggesting continued but lower induction of CYP3A4/5 by efavirenz.

Only CYP2B6*6/*6 genotype and hepatitis C co-infection were associated with mild and transient elevation of liver enzymes.

Conclusion: Time on therapy, SNPs in CYP2B6 and ABCB1 and ethnicity should be considered for efavirenz dose adjustments. The SNP, CYP2B6c516G>T, should be considered during dose optimization of concomitant drugs taken with efavirenz

Title: KNOWLEDGE, AWARENESS AND ATTITUDE OF MEDICAL DOCTORS TOWARDS PERIODONTAL DISEASE

Author(s): "Moshy, Jeremiah" "Habib, Zahra"

Institution(s): "MUHAS" "MUHAS"

Background: Periodontal disease and systemic diseases are inter-related, each influencing one another. Adequate knowledge on periodontal disease among medical doctors will enable them to refer their patients to dentists for timely management.

Objectives: This study aimed to assess knowledge, awareness and attitudes of medical doctors towards periodontal disease in Dar-es-Salaam, Tanzania.

Methods: Cross sectional study on medical doctors working at Muhimbili National Hospital in Dar-es-Salaam, Tanzania. The sample size was computed to be 151 and the doctors were handed a structured questionnaire which assessed their knowledge, awareness and attitude towards periodontal disease as and when they were encountered at the hospital. Numbers and percentages were used to present this

Results: Of the 151 questionnaires administered, 124 were returned (response rate of 82.12%). One hundred and eleven (89.5%) medical doctors believed poor oral hygiene was the main cause of periodontal disease, only 49(39.5%) told their patients to brush properly, 47(37.9%) medical doctors believed that there was a bidirectional relationship between periodontal disease and systemic disease and only 35(28.2%) referred all patients with systemic diseases to dentists, 34(27.4%) believed that medical doctors have adequate knowledge regarding periodontal disease and 18(14.5%) believed that the medical curriculum provides enough knowledge regarding periodontal disease.

Conclusion: Medical doctors were found to have inadequate information on periodontal disease. The medical curriculum should be revised to address this.

Title: Health Research Ethical review in Tanzania: the role of NatHREC and Institutional Review Boards (IRBs)

Author(s): Joyce Ikingura and Sia Malekia

Institution(s): National Institute for Medical Research (NIMR)

Background: Health research needs to be conducted following internationally accepted ethical standards that abide to country level ethical guidelines and procedures. Tanzania's Ministry of Health has put in place mechanisms to monitor health research through the Medical Research Coordinating Committee (MRCC) and its subcommittee, the National Health Research Ethics Review Committee (NatHREC) established in 2002. The main functions of NatHREC include: proposals registration applying for ethical clearance, conduct scientific and ethical review and grant national ethical clearance on proposals to protect human participants and oversights both monitoring and coordinating RECs (IRBs).

For the past ten years of NatHREC operations, monitoring of health research has gone through changes and challenges, including: increased number of registered proposals for ethical clearance and reports of cases with unapproved health research conduct. These challenges have called for stocktaking and devised mechanism to ensure effective monitoring. This has led to the enacting of IRBs at Academic and Research Institutions to oversee some of the NatHREC functions.

Objectives: This paper provides guidelines on functions of NatHREC and IRBs at Academic and Research Institutions in Tanzania and procedures guides for structuring and administering IRBs and reviews as well as monitoring research during the implementation phase.

Methods: The study design employed review of NatHREC records, on the functions of registered and approved IRBs in the past ten years.

Results: Mixed perceptions on NatHREC and IRBs the functions were obtained. While a few IRBs realized their roles, others were unaware. However, role delegation to IRBs has ensured better functioning of NatHREC.

Conclusion: The roles of IRBs need to be strengthened and monitored so as to strengthen the national ethical monitoring system for protection of human subjects in Tanzania.

as:

Title: Seroprevalence of Toxoplasma gondii infection in health blood donors at Eastern Zone Blood Transfusion Services (EZBTS) in Dar es Salaam, Tanzania.

Author(s): Lema Furaha [2], Nyambo Thomas [1], and Mselle Teddy [1]

Institution(s): [1]Department of Biochemistry, Muhimbili University of Health and Allied Sciences, PO Box 65427, Dar es Salaam, Tanzania, [2]Department of Microbiology, International Medical and Technological University, PO Box 77594, Dar es Salaam Tanzania

Background: Infection with Toxoplasma gondii (T. gondii) in blood donors could pose a potential risk for transmission in blood recipients. There is scarce information about the epidemiology of T. gondii infection in blood donors in Tanzania. The goal of this study was to determine the prevalence of T. gondii infection and associated socio-demographic characteristics in a population of healthy blood donors at the Eastern Zone Blood Transfusion Services (EZBTS) in Dar es Salaam, Tanzania.

Objectives: To determine the seroprevalence of T. gondii infection among healthy blood donors in Tanzania

Methods: One hundred and sixty (160) blood donors at the EZBTS in Dar es Salaam, the largest centre in Tanzania, were examined for presence of antibodies to T. gondii in November 2011 through April 2012. Blood was tested for both: anti-T. gondii IgG and IgM antibodies by using an enzyme-linked immunoassays (Dialab Gmbh., Neudorf, Austria). Further, the socio-demographic characteristics from each participant were also obtained.

Results: Seventy six (48%) of 160 blood donors had IgG anti-T. gondii antibodies, and all donors were negative for IgM anti-T. gondii, antibodies raised in early phase of infection. The age group of 25–34 years showed a significantly higher frequency of T. gondii infection (p = 0.001), and skilled blood donors had a significantly higher frequency of infection (61.2%) than the unskilled (p = 0.001). Gender, domicile, and other socio-demographic characteristics of blood donors were not associated with T. gondii infection.

Conclusion: The seroprevalence of T. gondii infection in healthy blood donors in Dar es Salaam, Tanzania is high, suggesting the need to include T.gondii screening as a routine pre-transfusion test. The T. gondii infection in Dar es Salaam blood donors increases with age and decreased with level of education.

Title: Health care seeking behaviour and utilisation in a multiple health insurance system: does insurance affiliation matter?

Author(s): Chomi, Eunice[1,2]; Mujinja, Phares;, Enemark, Ulrika;, Hansen, Kristian; [3] and Kiwara, Angwara [1]

Institution(s): [1] Muhimbili University of Health and Allied Sciences; [2] Aarhus University; [3] London School of Hygiene and Tropical Medicine

Background: Many countries striving to achieve universal health insurance coverage have done so by means of multiple health insurance funds covering different population groups. However, existence of multiple health insurance funds may also cause variation in access to health care, due to the differential revenue raising capacities and benefit packages offered by the various funds resulting in inequity and inefficiency within the health system.

Objectives: This paper examines how the existence of multiple health insurance funds affects health care seeking behaviour and utilisation among members of the Community Health Fund (CHF), the National Health Insurance Fund (NHIF) and non-members in two districts in Tanzania.

Methods: Data was collected using household survey in 2010 with a sample of 3290 individuals. The study uses Andersen's model of health care utilisation behaviour and a multinomial logit model to examine the influence of predisposing, enabling and need characteristics on the probability of seeking care and choice of provider.

Results: Generally, insurance is found to increase the probability of seeking care and reduce delays. However, the probability, timing of seeking care and choice of provider varies across the CHF and NHIF members. In addition poor quality of care limits the extent to which health insurance can be used to achieve improved access and financial protection.

Conclusion: Reducing fragmentation is necessary to provide opportunities for redistribution and to promote equity in utilisation of health services. Improvement in the delivery of services is crucial for achievement of improved access and financial protection and for increased enrolment into the CHF.

Title: Establishing capacity of mosquito-borne disease control at MUHAS to bridge academia and community needs

Author(s): Innocent E1, Daniel B[1], Samwel B[1], Kisanga CA[1,2], Hassanali A[3], Kisinza NW[4], Magesa SM[4,5]

Institution(s): Institute of Traditional Medicine (ITM) Muhimbili University of Health and Allied Sciences, [2]Department of Zoology and Wildlife Conservation, University of Dar es salaam, [3]Department of Chemistry, School of Pure & Applied Sciences, Kenyatta University, [4]

Background: Communicating bioscience to the community has always been a difficult task if proper mechanisms are not put in place. In most cases, research findings are not translated into application to be used by community members especially in rural settings. In order to bridge what is being communicated in scientific world to the community, a simple methodology of formulating Annona biopesticide to be used by the community has been developed at the Institute of Traditional Medicine.

Objectives: To adopt bioscience formulation principles and translate them into simple useful formulation for mosquito control of immature mosquitoes.

Methods: Interview was done from the community to identify some useful plant species used for mosquito control. Plant materials were collected and tested in laboratory and semi-field conditions. Standardization was done, followed by formulation using non-economical materials available to the peoples' vicinity. Show case to demonstrate their efficacy was done through training workshops and community feedback meetings.

Results: Awareness and training workshop to exchange ideas with stakeholders on issues pertaining to pest control especially control of malaria vectors using botanicals as a complementary tool in the Integrated Vector Management (IVM) received attention of the policy makers and implementers as well as community members through group sensitization workshop, meetings/discussion and show cases as will be discussed.

Conclusion: Involvement of stakeholders in every developmental stage of the bioprospecting research is of important as they may act as research outcome catalyst and delivery tools to inform others such as policy makers. Furthermore, proper translation of formulations principles by using locally available materials would result in accessible value added botanical pesticides

Title: Public-Private Partnership (PPP) Financing: An overview of the service agreement financing in the health sector in Tanzania

Author(s): Dereck Chitama[1], Gasto Frumence[1], Mughwira Mwangu[1] and Oberlin Kisanga[2]

Institution(s): Dereck Chitama[1], Gasto Frumence[1], Mughwira Mwangu[1] and Oberlin Kisanga[2]

Background: Countries in developing countries face difficulties in providing quality health services that take into account individual and community diversity. This has resulted to the need of involving the private sector, through Public Private Partnership. In Tanzania, the Ministry of health and Social Welfare (MoHSW) has been implementing PPP since 2008. The local government authorities have signed the Service Agreement (SA) under the PPP arrangement with faith-based hospitals; to deliver selected reproductive and child health (RCH) services and receive government's reimbursement for the services delivered.

Objectives: This paper aims to provide an overview of the status of SA financing in Tanzania.

Methods: The study was conducted in selected districts from Tanga, Lindi and Mbeya regions in Tanzania. Secondary data was used for the SA financing arrangement analysis. A descriptive framework for analysis of health care financing arrangement was adopted. The framework provides the structure for the analysis and identifies the key functions or components of a health care financing arrangement, which are revenue collection, pooling of funds and purchasing.

Results: The study found that donors are the largest financiers of the SA accounting for the bigger share of the financial support through the Health Basket Funding (HBF). However, the allocation from HBF is grossly inadequate given the increased number of patients due to SA. Financial support from council own sources remains very minimal. Bureaucratic claiming procedure, delays and inadequate reimbursement to contracted facilities are common.

Conclusion: The SA financing experiences raise critical questions on feasibility, reliability and sustainability of PPP arrangements financing in the health sector in Tanzania. There is need to supplement the current SA financing with other financing sources that are predictable in both shorter and longer terms. Also, purposeful planning for gradual increase of domestic funding of the SA at council level is recommended. as: none

Title: Suitability of Rapid PSA Test for Prostate Cancer Screening in Tanzania

Author(s): Ligoha Daniel[2], Dida Francis[1], and Mselle Teddy[1]

Institution(s): [1]Department of Biochemistry, Muhimbili University of Health and Allied Sciences, PO Box 65001, Dar es Salaam, Tanzania, [2]Department of Biochemistry, University of Dodoma, PO Box 259, Dodoma, Tanzania

Background: Globally, prostate cancer is the commonest male malignancy, and the second leading cause of death in men above the age of 50. Because of delayed diagnosis, patients come to hospital with advanced disease not amenable to treatment. Blood screening for prostate specific antigen (PSA) is used globally for early detection of prostate cancer. This quantitative PSA assay available in few centers in Tanzania is costly, requires expensive equipment, and skilled personnel. Recently, a qualitative (rapid PSA) test has been developed that is cheap, does not require sophisticated instrument and can be used even in remote areas. This test however is currently not available in Tanzania.

Objectives: To assess the accuracy and suitability of rapid PSA test, and determine whether obesity affects the level of PSA among Tanzanian men above 45 years of age.

Methods: Blood samples of one hundred and eighty five (185) men volunteers above the age of 45 from Dar es salaam, Tanzania were analyzed for the presence of PSA qualitatively using the Diaquick (rapid) PSA method, and quantitatively, by Enzyme-Linked Immunoassay (ELISA) method. Additionally, data on BMI, smoking, and alcohol intake and socio-demographic were obtained.

Results: Compared to gold standard (PSA ELISA), the sensitivity of rapid PSA test was 95.23%, and specificity of 82.42%, the positive predictive value (PPV) and negative predictive value (NPV) were 55.55% and 82.42% respectively. The BMI correlated with PSA level (r= 0.908), whereas smoking and alcohol consumption were negatively associated with PSA level, with relative risks of 0.38 and 0.39 respectively.

Conclusion: Rapid PSA test is simple, accurate and reliable, thus, should be introduced for prostate cancer screening in Tanzania. Obesity, smoking and alcohol consumption are risk factors that may interfere with PSA.

Title: Deciding to join CHF: The Role of Clients and Managers Perceptions.

Author(s): Amani Anaeli[1], Ulrika Enemark4, Angwara Kiwara [1], Kristian Hansen[3], Phare Mujinja[2],

Institution(s): [1]MUHAS DS, [2]MUHAS BS, [3] LONDON SCHOOL, [4] AARHUS

Background: Background For more than a decade, CHF promotion has been high on the agenda of the Tanzania government to improve access to health care for population living in rural areas and employed in the informal sector. While a lot of efforts have been invested in initiating the scheme in many districts across the country, membership has persistently remained low. Today, less than 10% of the targeted population are enrolled to CHF in Tanzania. This paper identifies and compares household and managers perceptions to CHF operations and benefits. Furthermore, it investigates the influence of perceptions to household decision to join or not to join the scheme.

Objectives: To investigate household and managers perceptions and their influence in decision to join Community Health Fund

Methods: Methods A case study evaluation was carried on two selected districts namely Mpwapwa and Kongwa. Perceptions were explored through the means of 42 in-depth interviews with household heads and health facility managers. We used content analysis and data triangulation throughout the study to analyse information from respondents.

Results: Results Our study highlight that perceptions to CHF operations and benefits play an important role in shaping decision to enrol. In particular, people justified their decision to join or not to join CHF in relation to their perceptions to effectiveness of CHF operations, satisfaction to the benefits, capacity of health facility to provide services and quality of care. The study suggests that premium paid for CHF is perceived to be fair

Conclusion: Conclusion Our study provides evidence that, decision to enrol in CHF is shaped by multiple perceptions resulted from operations and benefits of the scheme itself. The feasibility of CHF will largely be determined by the degree of understanding of perceptions in designing and implementing of the scheme. This might effectively offset the potential barriers to enrollment and subsequently expand enrollment

Title: Household and Health Facility Factors Influencing Enrolment in Community Health Fund

Author(s): Amani Anaeli[1], Ulrika Enemark[4], Angwara Kiwara [1], Kristian Hansen[3], Phare Mujinja[2],

Institution(s): [1]MUHAS DS, [2]MUHAS BS, [3] LONDON SCHOOL, [4] AARHUS

Background: Background: As part of healthcare financing reform, Community Health Fund (CHF) was established in Tanzania in 1996 to increase access to healthcare services. The scheme was expected to cover 75% of the total national population. Despite being promoted for more than 15 years, the scheme coverage is still less than 10% of the total population. Various scholars have raised concern over the low enrollment rates. This paper explored household and health facility dynamics which influence enrollment in CHF.

Objectives: To explore household and health facility dynamics influencing enrollment to Community Health Fund scheme.

Methods: Grounded theory was used to develop a theoretical model unfolding the relationship between household together with health facilities dynamics and the process of joining or not joining to the CHF. Key informant interviews were carried out to explore experiences of joining and not joining.

Results: Results: Both household and health facilities factors influence decisions to join or not to join CHF scheme. Household factors for joining include desire for financial security in times of illness, frequency of disease episodes, large families and marriage status. The factors affecting the decision not to join include poor understanding of CHF and male domination in household decision making. The health facility level factors that stimulate the decision to join include giving priority to CHF members in service provision, expectations of seeking care, compulsory membership for sick and pregnant.

Conclusion: Conclusion: Household and health facility dynamics play an important role for people to join or not to join CHF scheme. In order to expand enrollment in prepayment schemes, there is a need of addressing household and health facility factors through specific policy which is capable of solving cross cutting issues. The policy should seek to recognise these factors and thereafter fostering voluntary enrollment to the same schemes.

Title: Predicting intention to design communication strategy prior to developing Television spots

Author(s): Kisisiwe, Y.A., Masalu, J.R.

Institution(s): MoHSW, MUHAS

Background: Strategic design is a crucial step in health communication planning process in which theoretically grounded decisions regarding message development, delivery and evaluation are made and laid down as Communication Strategy. But literature suggests that the uptake of this important step in health communication practice is sub-optimal. Thus, the present study sought to examine factors influencing intention to design communication strategy using the Theory of Planned Behavior (TPB)

Objectives: To examine the usefulness of the TPB and the relative contribution of Attitude (A), Subjective Norms (SN) and Perceived Behavioral Control (PBC) in predicting intention to design communication strategy prior to developing TV spots, based on communication practitioners' perspective

Methods: The study was a cross-sectional survey involving 86 communication practitioners residing in Dar es Salaam, Tanzania. Data on the TPB global measures (BI, A, SN and PBC) was collected using 14 items in a self-administered questionnaire. Internal consistence for the TPB measures ranged from Cronbach's alpha coefficients of 0.614 – 0.870. In predicting BI, linear regression analysis was first applied on the TRA components (A and SN), and then on the TPB (A, S and PBC). Coefficient of determination ($R2$) and Standardized Coefficients Beta ($\square$) were used respectively in examining the predictive power of the TRA and the TPB; and the relative contribution of the TPB components

Results: The TPB explained a sizable portion of variance in BI ($R2 = .441$, $p = .000$). Attitude and SN (TRA), accounted for $R2 = .310$ ($p = .000$) while PBC contributed an extra $R2 = .131$ of the variance in BI. PBC ($\square = .427$, $p = .000$) and SN ($\square = .352$, $p = .000$) predicted BI, while A was not significant ($\square = .123$, $p = .189$). PBC emerged as the most important component.

Conclusion: The present study supported application of the TPB in predicting intention to design communication strategy. The TPB provided a better model compared to the TRA, suggesting that the decisions of whether to design communication strategy or not is not under volitional control of communication practitioners. PBC and SN play important role. This information should be considered in formulating policies and strategies for advancing use of proven effective approach in health communication practice

Title: Dietary protein-calorie supplementation increases levels of sialic acid in breast milk from HIV-positive Tanzanian mothers

Author(s): Lyimo MA[1], Housman ML[2], Zain-Ul-Abideen M[2], Hendricks, K[3], Lukmanji Z[4], Mchaki B[4], Maro I4, Magohe A[4], von Reyn CF[3], Connor R[I2]

Institution(s): MUHAS, Giesel School of Medicine Dartmouth

Background: Human breast milk is known to supply nutrients and immune support, which are essential for newborn growth and neurological development. Sialic acid (SA) is a highly conserved component of human milk oligosaccharides known to help prevent attachment of pathogens to the infant intestine. The levels of SA in mammalian milk can be influenced by maternal diet.

Objectives: This study evaluated the impact of a protein-calorie supplement (PCS) on the levels of SA in the breast milk of HIV-positive Tanzanian mothers.

Methods: HIV-positive women were randomized to receive either a micronutrient supplement (MNS) or MNS+PCS during the third trimester of pregnancy and the first 3 months of breastfeeding. Sequential milk samples were collected. Skim milk fractions were analyzed using a commercial ELISA to determine the levels of SA.

Results: A total of 135 milk samples were tested for SA (MNS group, 74 samples; MNS+PCS group, 61 samples). Between 1-3 samples were collected. The highest levels of SA were found in samples collected within the first 30 days of lactation followed by a significant decrease from days 31-200. Mean levels of milk SA in the MNS and MNS+PCS groups did not differ significantly in the first 30 days of lactation. However, significantly higher levels of SA were observed from mothers receiving the MNS+PCS on Days 31-200, suggesting that dietary PCS may help sustain SA levels.

Conclusion: Dietary PCS during late pregnancy and early lactation may help to sustain higher levels of SA in breast milk from HIV-positive mothers after the first month of breastfeeding. These findings have implications for infant health during a critical post-natal period.

Title: Citation Analysis of Theses and Dissertations as a Measure of Web Resources Usage at Muhimbili University of Health and Allied Sciences

Author(s): Rehema Chande-Mallya and Alfred S. Sife

Institution(s): Muhimbili University of Health and Allied Sciences ,Sokoine University of Agriculture

Background: The World Wide Web is an important platform for publishing, exchanging, and retrieving scientific publications such as journals, books, theses, dissertations, research reports and patents, among others. Currently, web-based resources form an important source of information for research as well as scholarly writing and publishing. Postgraduate students are one group of users who are often bound to use web-based resources in their academic works such as theses and dissertations writing

Objectives: This article presents a citation analysis of theses and dissertations to understand the extent to which web resources are used in postgraduate research at Muhimbili University of Health and Allied Sciences (MUHAS).

Methods: Citation analysis is a research method employed in analysis of relationships and patterns between citing and cited documents. Citation analysis was applied in this study because many citations conventions require authors to cite Uniform Resource Locators (URLs) when referencing in their publications. Doctoral theses and masters dissertations submitted at MUHAS Library between 2002 and 2012 were examined and extracted data were analysed using Microsoft Excel

Results: Important findings are presented and several recommendations are provided based on these findings

Conclusion: Important findings are presented and several recommendations are provided based on these findings

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Title: Space Dimensions and Provision of Social Basic Needs to Determine Diarrheal Risks in Slums: A Cross-Sectional Study in Matyazo Urban Informal Settlements, in Rwanda

Author(s): : Dieudonné Uwizeye [i, ii], Cosmas H. Sokoni [i], Caroline Babiru [iii]

Institution(s): [i] University of Dar es Salaam (UDSM) [ii] National University of Rwanda (NUR) [iii] African Population and Health Research Centre, Nairobi (APHRC)

Background: Many cities in less industrialised countries have been a destination of many rural immigrants expecting to get a refuge from poverty and unemployment. Failing to enter and live the life of urban centres, most of urban immigrants invade poor physical site conditions and complicated site layouts which requires considerable investment to make it safer to live in. Therefore, socio-economic status of each household plays a considerable role in the quality of life of its members.

Objectives: A Cross-sectional Study was done in Matyazo informal settlements of Huye town in Rwanda to review the association between socio-economic status and diarrheal variability

Methods: Data were collected using mixed ethnographic techniques including transect walk, household observations and interviews, focus group discussions and health records analysis. Data analysis was done using mixed methods approach with STATA 11 and Nvivo 9.2 software packages

Results: : Results suggested that risk for diarrhoea varies depending on a number of factors including the status of environment around and within the household, access to social basic needs such as quality and size of the house, piped water and the level of education of the head of the household. Besides, the data showed that access to electricity plays a significant role in diarrheal risks variability (probability of having diarrhoea is around 42% when the family stays in the informal settlement with electricity, versus 70.6% when the family has no electricity). It was also observed that space dimension of the disease plays a significant role. The community members expressed their perceptions on the disease surveillance and mitigation strategies for diarrhoea risks in mountainous urban informal settlements similar to Rwanda

Conclusion: The study ends with a number of policy implication conclusions. Given the rapid urban environmental pollution, policies should protect lives of socio-economically disadvantaged dwellers of slums.

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Title: Risk Distribution across Multiple Health Insurance Funds in Rural Tanzania

Author(s): Chomi, Eunice [1 2], Mujinja, Phares [1], Enemark, Ulrika [2], Hansen, Kristian 3 and Kiwara, Angwara [1]

Institution(s): [1] Muhimbili University of Health and Allied Sciences; [2] Aarhus University; [3]London School of Hygiene and Tropical Medicine

Background: Having multiple insurance funds serving different population groups may compromise equity due to differential revenue raising capacity and an unequal distribution of high risk members among the funds. This occurs when the funds exist without mechanisms in place to promote income and risk cross-subsidisation across the funds.

Objectives: This paper analyses whether the risk distribution varies across the CHF and NHIF in two districts in Tanzania. Specifically we aim to 1) identify risk factors associated with increased utilisation of health services and 2) compare the distribution of identified risk factors among the CHF, NHIF and non-member households.

Methods: Data was collected from a survey of 695 households. A multivariate logisitic regression model was used to identify risk factors for increased health care utilisation. Chi-square tests were performed to test whether the distribution of identified risk factors varied across the CHF, NHIF and non-member households.

Results: There was a higher concentration of identified risk factors for health care utilisation among CHF households compared to those of the NHIF. Non-member households have a similar wealth status to CHF households, but a lower concentration of identified risk factors.

Conclusion: Mechanisms for broader risk spreading and cross-subsidisation across the funds are necessary for the promotion of equity. These include risk equalisation to adjust for differential risk distribution and revenue raising capacity of the funds. Equally important is the expansion of CHF coverage, by addressing non-financial barriers to CHF enrolment to encourage wealthy non-members to join, as well as subsidised membership for the poorest.

Title: CLINICAL TREATMENT OUTCOMES FOR ACUTE MALARIA TREATED WITH ARTEMETHER/LUMEFANTRINE DRUGS IN HIV-1 INFECTED PATIENTS ON ANTI-RETROVIRAL DRUGS

Author(s): Maganda, Betty Allen; Minzi, Omary; Premji, Zul; Ngasala, Billy; Sasi, Phillip and Aklillu, Eleni.

Institution(s): Muhimbili University, Karolinska Institutet

Background: Malaria and HIV-1 infection cause significant morbidity and mortality in sub-Saharan Africa. Malaria treatment for the HIV-1 infected patients on anti retroviral therapy (ARVs) poses significant challenges such as gaps in the knowledge of ARVs and artemisinin-based combination treatment (ACTs) drug- drug interactions (DDIs) and their consequences. The effect of antiretroviral drugs on the clinical treatment outcome in HIV-1 infected patients with acute malaria treated with lumefantrine/artemether drug combination is still inconclusive

Objectives: The aim of this study was to investigate anti malaria treatment outcome in HIV-1 patients' co –infected with acute malaria on ARVs and not those not yet on ARVs.

Methods: This an open label, non-randomized, three arms, and single center study included in total 227 HIV-1 infected patients ≥ 18 years old co infected with malaria. All patients involved in this study were treated with lumefantrine/artemether drug combination and followed for 28 days to monitor outcome. Treatment outcome of HIV -1 patients on ARVs was compared to those not yet on ARVs. The primary study outcome for both groups was clinical treatment failure, after anti malarial treatment.

Results: still working on data

Conclusion: will be available once we have our results

Title: TLC for pharmaceutical analysis in resource limited countries: setting up an interlaboratory cross validation study''

Author(s): Eliangiringa Kaale,[1,*] Peter Risha,[1] Eike Reich,[2] and Thomas P. Layloff. [3]

Institution(s): [1]. Laboratory for Pharmaceutical Analysis, School of Pharmacy, Muhimbili University of Health and Allied Sciences, P.O. Box 65013, Dar es Salaam, Tanzania, [2]CAMAG-Laboratory, Muttenz, Switzerland; [3]Management Sciences for Health, Arlington, VA.

Background

Planar chromatography due to its robustness, ease of use, and limited the training requirements is a potential alternative laboratory and field method for in assessing the quality of pharmaceutical products especially in resource limited areas . We present the evaluation results of this method

Methods

A Peer Verified Method Validation approach was conducted using High Performance Thin Layer Chromatography (HPTLC) methods developed in our lab. Two laboratories collaborated on this study— the very experienced CAMAG laboratory in Muttenz, Switzerland and the newly formed Laboratory for Pharmaceutical Analysis at the Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania. The LPA developed the study in conjunction with CAMAG, prepared the composite samples used in the study, and furnished all of the reference materials. The laboratories used HPTLC plates from the same supplier and used solvents and development chambers from their usual laboratory stocks. This was followed by a more extensive interlaboratory cross validation involving 10 laboratories including 8 from Africa, 1 from Europe and 1 from America.

Results

The within-laboratory rsd for the four separate composite weighings for each development plate calculated from the polynomial correlation obtained from the five standard levels ranged from 0.98%–5.08% with 73% of the rsd less than 2.00% and 97% of the rsds at 2.60% or less. The overall average rsd was 1.90% and the overall average interlaboratory RSD was 2.74%, with a range of 2.09–3.21%. For the 7 labs interlab study the accuracy during qualifying experiment was 99.88%, RSD 1.33 %n=8 (range from 98.8-102%). The mean potency reported among 7 labs was 98.34%, RSD 3.8%. A test for outlier was performed and showed no outliers with critical value of Z: 2.02 on Grubbs' test at Significance level: 0.05 (two-sided) for seven labs.

Conclusion

The successful interlab cross validation has provided further evidence of the technologies' robustness and also demonstrates that it can be successfully used to enforce regulatory compliance to control commerce. .

Title: Human papillomavirus prevalence and type distribution in 3603 HIV-positive and HIV-negative women in the general population of Tanzania

Author(s): [1]Mwaiselage Julius, [2]Dartell Myassa, [2]Rasch Vibeke, [1]Kahesa Crispin, , [1,3]Ngoma Twalib

Institution(s): 1Ocean Road Cancer Institute, Dar es Salaam, Tanzania; [2]Department of International Health, University of Copenhagen, Copenhagen, Denmark; [3]Department of Clinical Oncology, MUHAS, Dar es Salaam, Tanzania

Background: In Tanzania, cervical cancer is the most common type of cancer in women. Persistent genital HPV infection has been established as the main etiological factor in the development of cervical cancer, and HPV types 16 and 18 infection alone account for up to 70% of all cervical cancers. Relatively little is known about the HPV prevalence and the HPV type distribution in Tanzania.

Objectives: The aim of the Prevention of Cervical Cancer in Tanzania (PROTECT) study is to assess the prevalence of oncogenic human papillomavirus (HPV) and to determine the type distribution among women in the general population according to human immunodeficiency virus (HIV) status, in preparation for a potential HPV immunization program

Methods: We included 3603 women from the general population in urban and rural areas of Tanzania. All women underwent a gynecological examination where a Pap smear was obtained and cervical cells were collected to assess the presence of high-risk (HR) HPV DNA by hybrid capture 2 test. Genotyping was performed by the LiPaExtra method. These women were also tested for HIV.

Results: The prevalence of HR HPV types was 20.1%, ranging from 14.8% in women with normal cytology to 94.2% in women with high grade squamous intraepithelial lesion (HSIL) or worse (100% in 5 cancers). In women with normal cytology or low-grade lesions, the most common type was HPV52 (3.2%), followed by HPV16 (2.1%). In contrast, HPV16 was the dominating type in HSIL or worse (32.8%). No cancers contained HPV52. The HR HPV prevalence was higher in HIV-positive women (46.7%) than in HIV-negative women (17.2%). No specific HR HPV types were significantly more common in HIV-positive women.

Conclusion: The HPV type distribution is similar in HIV-positive and HIV-negative women. These results suggest that the HPV vaccines that are currently available could protect women from HPV infection independently of their HIV status.

Title: Treatment of Burkitt lymphoma in equatorial Africa using a simple three-drug combination followed by a salvage regimen for patients with persistent or recurrent disease

Author(s): [1]Ngoma Twalib, [2]Adde Melissa, [3]Durosinmi Muheez, [2]Ian Magrath

Institution(s): [1]Department of Clinical Oncology, Muhimbili University of Health and Allied Science, Dar es Salaam [2]International Network for Cancer Treatment and Research, Brussels, Belgium [3]Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria

Background: there has been poor outcome of treatment for patients with Burkitts Lymphoma. Estimated survival of patients with Burkitt lymphoma in countries in Africa is probably no more than 10–20%.

Objectives: To introduce the International Network for Cancer Treatment and Research (INCTR) protocol INCTR 03-06 for treatment of BL and assess its effectiveness in improving survival

Methods: Use of a uniform treatment protocol consisting of cyclophosphamide, methotrexate, vincristine, and intrathecal therapy, and the introduction of non-cross resistant second-line (salvage) therapy, consisting of ifosfamide, mesna, etoposide and cytarabine, when patients failed to achieve a complete response to first-line therapy or relapsed early

Results: Overall survival rates of 67% and 62% were observed at 1 and 2 years (relapse is rare after 1 year of remission). Of interest was the small impact of cerebrospinal fluid (CSF) and bone marrow involvement on outcome. However, the presence or absence of abdominal involvement clearly defined two prognostic groups. An additional finding was the association between CSF pleocytosis and orbital tumours, suggesting that spread of tumour cells to the central nervous system may sometimes occur via direct involvement of cranial nerves in the orbit.

Conclusion: Survival rates may be increased in patients with abdominal involvement by combining first- and second-line therapy, but verification will require a further clinical study.

Title: Risk factors for VIA positivity and determinants of screening attendances in Dar es Salaam, Tanzania

Author(s): [1]Kahesa Crispin, [2]Kjaer Sussane, [1,3]Ngoma T, [1]Mwaiselage Julius, [2]Dartell Myassa, [2]Rasch Vibeke

Institution(s): [1]Ocean Road Cancer Institute, Dar es Salaam, Tanzania; [2]Department of International Health, University of Copenhagen, Copenhagen, Denmark; [3]Department of Clinical Oncology, MUHAS, Dar es Salaam, Tanzania

Background: Tanzania is among the countries in the world where the cervical cancer incidence is estimated to be highest. Acknowledging an increase in the burden of cervical cancer, VIA was implemented as a regional cervical cancer screening strategy in Tanzania in 2002.

Objectives: Describing the risk factors for VIA positivity and determinants of screening attendances in Tanzania,

Methods: 14 107 women aged 25-59 enrolled in a cervical cancer screening program in Dar es Salaam in the period 2002 - 2008. The women underwent VIA examination and took part in a structured questionnaire interview. Socioeconomic characteristics, sexual behavior, HIV status and high-risk (HR) HPV infection were determined in a subpopulation of 890 who participated and 845 who did not participate in the screening.

Results: Being widowed/separated OR=1.41 (95% CI: 1.17-1.66), of high parity OR=3.19 (95% CI: 1.84-5.48) of low education OR= 4.30 (95% CI: 3.50-5.31) and married at a young age OR=2.17 (95% CI: 1.37-3.07) were associated with being VIA positive. Women who participated in the screening were more likely to be HIV positive OR=1.59 (95% CI. 1.14-2.25) in comparison with women who had never attended screening, while no difference was found in the prevalence of HR-HPV infection among women who had attended screening and women who had not attended screening.

Conclusion: Women who are widowed/separated, of high parity, of low education and married at a young age are more likely to be VIA positive and thus at risk of developing cervical cancer. The study further documents that a referral linkage between the HIV care and treatment program and the cervical cancer screening program is in place in the setting studied, where HIV positive were more likely to participate in the cervical cancer screening program than HIV negative women.

Title: PERCEIVED BARRIERS TO ACCESS AVAILABLE HEALTH SERVICES AMONG MEN WHO HAVE SEX WITH MEN IN DAR ES SALAAM 2012

Author(s): Daniel Magesa

Institution(s): : Pastoral Activities and Services for people with AIDS Dar es Salaam Archdiocese

Background: Men who have sex with men (MSM) continue to be highly affected with the HIV infection worldwide. Studies have shown that organization of health care system and how the MSM perceive it, play a major role in granting or denying them access to health care services. Little is known in Tanzania with regards to barriers of MSM accessing health services in Tanzania.

Objectives: The study was geared towards determining the proportion of MSM who accessed health care and disclose their sexual orientations to health care workers (HCW). It also intended to find out the anticipated barriers from HCW's if they were to disclose their sexual orientations to them and look into the types of social networks used when facing various challenges.

Methods: The study employed both quantitative and qualitative methods. Participants were enrolled in the study Respondent Driven Sampling .Quantitative data was entered and analyzed using the Statistical Package for the Social Sciences v.20. Qualitative data was collected using in-depth interviews read and interpreted to identify themes and create categories. These were manually analyzed and interpreted according to the study objectives.

Results: Majority of MSM (87.7%) in this study accessed health care services when sick, only 3.4% did nothing because they had no money to pay for the services. Only a third of them had ever disclosed their sexual orientations to HCW's, due to perceived lack of confidentiality, fear of stigma and discrimination, shame and mistreatment at the health facilities and fear of HCW's reaction after disclosure of their sexual orientations.

Conclusion: MSM need to be empowered to overcome their perceived fears on HCW's and health facilities. Efforts should be put in breaking the cycle of wrong information and perceptions MSM have on health care worker's knowledge on dealing with same sex practices' health related problems.

Title: The Cost Estimates of Providing in-patient and out-patient Services for Under-five Children with Malaria in Tanzania

Author(s): Amani Thomas Mori [1,2*], Frida Ngalesoni[1,3], Ole Frithjof Norheim[1], Bjarne Robberstad [1]

Institution(s): [1]Department of Global Public Health and Primary Healthcare, University of Bergen, Norway [2] Muhimbili University of Health and Allied Sciences, Tanzania [3] Ministry of Health and Social Welfare, Tanzania

Background: Tanzania is the third country with highest burden of malaria in the WHO African Region and the disease is the leading cause of deaths in children under the age of five years. Malaria is also the leading cause of admissions and out-patient visits for under-fives in the country.

Objectives: This study presents cost estimates of providing in-patient and out-patient services for under-five children with malaria in urban and rural district hospitals in Tanzania

Methods: The study was conducted from a provider perspective. Data for the most recent financial year was collected between August and November 2012 at Mwananyamala Hospiatal, Dar es Salaam and Tosamaganga Hospital in Iringa Rural District. An ingredient approach was employed, where capital and recurrent items were first identified, counted and valued. Useful life span of capital items were solicited from the WHO-CHOICE Project and were discounted at 10%, as per Bank of Tanzania recommendations. Costing analysis was performed using Microsoft Excel.

Results: The unit costs of providing out-patient and in-patient services for under five children with malaria were 7.63 US $ and 88.75 US $ in urban hospital and 72.33 US $ and 338.18 US $ in the ural hospital, respectively. Large fixed costs and small number of malaria cases recorded in the rural hospital explains the large differences in unit costs between the settings.

Conclusion: The costs of providing in-patient and out-patient services to under-five children with malaria in Tanzania are immense, considering scarcity of healthcare resources in developing countries. Health authorities must continue to invest in cost-effective preventive strategies such as the use of Insecticide Treated Bed nets to minimize the treatment costs.

Title: The Role of Evidence in Decision-Making Processes for Essential Medicines in Developing Countries: A Case Study in Tanzania

Author(s): Amani Thomas Mori, [1,2*], Eliangiring Amos Kaale, [2] Frida Ngalesoni, [1,3] Ole Frithjof Norheim, [1] Bjarne Robberstad [1]

Institution(s): Department of Global Public Health and Primary Care,, University of Bergen, Norway [2] Muhimbili University of Health and Allied Sciences, Tanzania [3] Ministry of Health and Social Welfare, Tanzania

Background: The low availability of essential medicines in developing countries is a major concern globally. Stakeholders are optimistic that increases in governments spending on pharmaceuticals will solve this problem. However, there is a paucity of research from developing countries showing the role of scientific evidence in formulary decisions to ensure efficient use of limited healthcare resources.

Objectives: This study examines the role of evidence in decision-making processes for essential medicines in Tanzania.

Methods: We conducted in-depth interviews with eighteen key informants who revised the Standard Treatment Guideline and National Essential Medicine List and document reviews. We used a thematic content approach to analyse the data.

Results: Efficacy, safety, availability, affordability and cost criteria were considered in decision-making, although this was largely based on experience rather than evidence. In addition, international guidelines and medicine promotion were also considered to be influential in medicine selection. Cost-effectiveness evidence was not used in decision-making processes.

Conclusion: Recent decisions for selection of essential medicines in Tanzania were largely based on experience rather than evidence. This practice increases the risk of choosing ineffective and costly interventions which may not be worth implementing. Policy makers need further training about how to search for relevant scientific evidences and how to systematically appraise, interpret and apply such evidence in decision-making processes.

Title: Public-private partnership in health sector: role of Service Agreement in enhancing access to reproductive and child health services in Tanzania.

Author(s): Gasto Frumence[1], Mughwira Mwangu[1], Dereck Chitama[1], Oberlin Kisanga[2]

Institution(s): [1]Department of Development Studies, School of public health and social sciences, Muhimbili University of Health and Allied Sciences, Box 65454, Dar Es Salaam, Tanzania. [2] GIZ, Tanzania

Background: Tanzania's government developed the national Public-private partnership (PPP) policy in 2009 and enacted a PPP Act no. 18 of 2010 in order to strengthen the collaboration between the public and private sector. In the health sector, the government adopted public-private partnership to meet the demand for health care and increase access to health services. Since 2008, the local government authorities have signed the Service Agreement (SA) under the PPP arrangement with faith-based and private health facilities to deliver some of the reproductive and child health (RCH) services and receive government's reimbursement for the services delivered.

Objectives: The objective of this study was to assess the role of Service Agreement in enhancing access to reproductive and child health services.

Methods: This was an evaluation study that applied qualitative methods of data collection as well as review of service delivery records. The study employed in depth interviews with key informants from national, regional, council and health facility levels, supplemented by group discussions with key stakeholders involved in the implementation of SA. Thematic analytical approach was used to analyze data.

Results: Results indicate that before signing SA, faith-based health facilities were charging fee for RCH services, which did not attract significant numbers of clients mainly due to inability of many poor families including those living in the rural areas to pay the user fees. RCH clients and patients had to walk long distances looking for public health facilities to get free RCH services. Study findings indicate that after signing SA, access to services in terms of affordability, availability and acceptability for both inpatient and outpatients particularly pregnant mothers and under 5 children has increased significantly.

Conclusion: SA has increased access to RCH services for under 5 children and pregnant mothers to majority of people including families living in hard to reach areas.

Title: DENTAL APPEARANCE AND QUALITY OF LIFE AMONG MUHIMBILI UNIVERSITY STUDENTS

Author(s): Simon, T. Kida, ¹. and Mandari, G.

Institution(s): MUHAS

Background: Dental esthetics has not been seen to be important in most developing countries and research in this regard is meager. Due to rapid increase in global network the effect of a pleasant appearance is now recognized to be very important, hence may lead to changes in person's esthetics needs and may affect dental treatment priority.

Objectives: To determine satisfaction with dental appearance and its association with oral health related quality of life among students at Muhimbili University of Health and Allied Sciences

Methods: Cross-sectional study was conducted in December 2010, using a self administered questionnaire, with information on socio-demographic and satisfaction with dental appearance. Oral health related quality of life was assessed using Oral Impact on Daily Performance (OIDP) inventory.

Results: In thisstudy, 492 participants were involved. Age ranged from 18 – 57 years old, mean age was 22.9, sd = 3.9. Dissatisfaction with dental appearance was present in 21.5% of the subjects. Female showed higher prevalence 28.5% of dissatisfaction with their dental appearance compared to males (P=0.01). The main factor contributed to dissatisfaction was teeth discoloration. Prevalence of OIDP was 60.6%. The most affected performance was eating (46.1%) and the least being speaking (11.4%). Those who reported impacts on performances were more likely to be females (OR - 1.5, CI: 1 – 2), and those who were not satisfied with their dental appearance (OR: 3.1, CI: 1.9 - 5.2).

Conclusion: A high percentage of the university students perceived to have good dental appearance and were satisfied with their dental appearance. However the impacts of oral conditions to their dental appearance were substantial.

Title MORBIDITY AFTER ANTERIOR ILIAC CREST HARVEST FOR RECONSTRUCTION OF THE MANDIBLE AFTER ABLATIVE SURGERY FOR TREATMENT OF AGGRESSIVE ODONTOGENIC TUMOURS

Author(s): Author. Simon E.

Institution(s): School of Dentistry, Muhimbili University of Health and Allied Sciences

Background: Patients with aggressive odontogenic tumours of the mandible report late for treatment with massive tumours that necessitate resection of portion of the bone to avoid recurrences. This leaves the patient with a compromised life both functionally and psychologically. To minimize the impact autogenous bone is often used for primary reconstruction of the mandible to restore function and aesthetics. Anterior iliac crest of the pelvic bone considered as one of the available donor sites.

Objective

To determine the post operative morbidity after anterior iliac crest harvest for the primary reconstruction of mandibular defects following resection for the treatment of aggressive odontogenic tumours.

Material and methods

Over a ten years period (January 2001 to December 2011) 33 selected patients (11 males and 22 females) who were diagnosed with ameloblastoma (an aggressive odontogenic tumour) at the Oral and maxillofacial firm, MNH, were surgically treated by resection of the tumour and primary reconstruction of the mandible.

After clinical, radiological and histological diagnosis of ameloblstoma the patients were counseled and asked to sign a written consent. All necessary parameters were assessed for fitness for surgery under general anaesthesia. Two operations; resection of the tumour with a safe margin of 1.5 to 2 cm of the mandible and harvesting bone from the anterior iliac were performed simultaneously by two teams of maxillofacial surgeons. The resultant gap after resection of the tumour would determine the size of bone to be harvested. Where the tumour was big and in patients with small pelvis the harvest was done bilaterally. The patient was positioned in supine position and after exposure of the iliac crest an electric saw was used to make a horizontal cut on the iliac crest for a length of about 6 cm starting from the anterior superior iliac spine. Two vertical cuts were made on each end, the length of which depended on the amount of bone needed for the reconstruction. At the bottom another horizontal cut was made

using a curved chisel to join the two vertical ones. Chisel and curates were then used to harvest the cortico-cancellous block of bone. After haemostasis was achieved soft tissues were apposed and wound closed by interrupted suturing. The patient was assessed physically and by interview 48 hrs after the operation, after three days, after one week after 2 weeks and after one month. After discharge the patients were assessed again six months post operatively.

Results

Twenty patients (60.6%) complained of moderate pain 48 hrs post operative, 7 patients (21.2%) expressed feeling severe pain while 6 (18.1%) experienced mild pain only. Regarding function 24 hours after the operation all 32 patients had difficult on walking upright, which gradually improved in the majority after two weeks and six months later none had complaint regarding gait. The scar was assessed after six months and in two (%) patients keloids were observed. The rest of the patients were satisfied with the scars. Other complaints related to the harvest during the first six months were minor and none of the patients presented any complaints after six months.

Conclusion

Anterior iliac crest harvest when properly done seemed to be a safe operation with minor complaints which were temporary. There were no permanent or long term complaints in this group of patients. The resulting

Title: Challenges facing the conduct of HIV Vaccine Trials in Tanzania

Authors: Fred Mhalu, Muhammad Bakari, Eligius Lyamuya, Mohamed Janabi, Eric Aris, Deus Buma, Candida Moshiro, Patricia Munseri, Said Aboud, Agricola Joachim, Kisali Pallangyo and the HIV Vaccine Trials Group at MUHAS and MNH, Dar es Salaam

Institution(s): Muhimbili University of Health and Allied Sciences and Muhimbili National Hospital

Background: HIV Prevention Vaccine Trials in humans have been going on in the world since 1987 and in Tanzania since 2006. Todate more than 200 different trials have been completed in the world, 6 of those were in Tanzania. Three of the global HIV vaccine trials were efficacy (phase III) trials, conducted in USA, and Thailand. None of those candidate vaccines have satisfied the requirements for licensure for use. On the other hand, biomedical and social behavioural HIV interventions have resulted into the continuing decline in new HIV infections and to a fall in HIV associated illnesses and deaths.

Aim: To review the challenges facing HIV vaccine trials with special reference to Tanzania

Methods: A critical review of the challenges encountered during the conduct of the HIV Vaccine Immunogenicity Trial 03 (HIVIS 03) in Dar es Salaam between 2007 and 2011 was made.

Results: The following were the main challenges encountered during the conduct of the trial: delays in the review of trial protocols by ethical and regulatory authorities; difficulty in retention of study personnel for carrying out the trial; limited infrastructure; negative rumour mongering leading to irrational fear among potential volunteers and communities, of HIV transmission through candidate vaccines; and competition for scanty global and national financial and human resources to support the conduct of the trial. Since an effective vaccine is a powerful and highly cost effective public health tool and because we now have evidence from the recent phase III HIV vaccine trial conducted in Thailand that an HIV vaccine is possible, there is a need for Tanzania to adopt the African AIDS Vaccine Partnership (AAVP) advocacy and strategy for advancing research for an AIDS vaccine as an important tool in the combination prevention package.

Conclusion: Tanzania should continue to play her role in the ongoing global efforts for the development and testing of HIV vaccines and should address the continuing challenges which are not insurmountable.

TITLE: A Fast and Reliable High Performance Liquid Chromatography Method for Simultaneous Determination of Selected Anti-retroviral and Lumefantrine in Human Plasma

Authors: Maganda, Betty [1], Minzi, Omary [1], Holler, Agness [2] and Olivier Heudi[2] Institutions(S)[1]Unit of Pharmacology and Therapeutics, School of Pharmacy, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania [2] Novartis Pharma AG, DMPK/Bioanalytics, CH-4056 Basel Switzerland

Background: There is increasing likelihood of drug-drug interactions (DDIs) in patients due to polypharmacy.In order to identify possible DDIs, pharmacokinetics studies (PK) are conducted. PK studies help to identify factors that cause changes in the dose-concentration relationship and the extent of these changes. Determination of concentrations of drug in human plasma requires a sensitive, selective and cost effective analytical method.

Aim: the aim of this study was to develop a simple and cost effective method for simultaneous analysis of nevirapine (NVP), efavirenz (EFV) and lumefantrine (LUM) in human plasma

Methods

Sample preparation consisted of plasma protein precipitation with 0.5% acetic acid acetonitrile solution. An internal standard halofantrine was used. Chromatographic separation was carried out on an Acclaim Polar Advantage C16, column (150 x 4.6 mm x 3 µm) using a gradient of mobile phase made of 0.01% TFA in 0.1 M ammonium acetate and 0.1% TFA in acetonitrile . Detections were performed at 275 nm (NVP), 255 nm (EFV), and 300 nm (LUM), and the separation was achieved within 17 min at a flow rate of 1.0 ml min−1.

Results: The calibration curve for LUM, EFV and NVP all exhibited good linearity ($r2> 0.998$). The intra and inter-day precision and accuracy were all within the acceptable ranges. Blank plasma from six different individual donors and 12 potential concomitant drugs, were all tested and no significant interfering peaks were observed. The mean extraction recovery was 100% for all the analytes. The tested analytes were all stable under the tested conditions.

Conclusion: The developed method is fast and cost effective and can be implemented in Tanzania to determine human plasma levels of NVP or EFV in combination with LUM or both.