11TH MUHAS SCIENTIFIC CONFERENCE

THEME

The role of scientific evidence and innovation in enhancing resilient health systems in addressing global public health challenges.

ABSTRACT BOOK

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MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
11TH MUHAS SCIENTIFIC CONFERENCE

THEME

The role of scientific evidence and innovation in enhancing resilient health systems in addressing global public health challenges.

MUHAS CAMPUS, UPANGA, DAR ES SALAAM
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ABSTRACT BOOK

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Oral Presentations

Maternal, New-born and Child Health

1. TITLE: CLINICAL PROFILE OF CHILDREN WITH AUTISM SPECTRUM DISORDER AND EXPERIENCES OF THEIR PARENTS IN DAR ES SALAAM, TANZANIA.

Contact: jtarsila8@gmail.com
Presenter: Tarsila Joseph Assenga

Background: In 2012, WHO estimated that worldwide, 1 in every 160 children has autism spectrum disorder (ASD), contributing to 7.6 million disability life adjusted years. In 2021, CDC reported that about 1 in 44 children aged 8 years have ASD in the United States. Early detection, diagnosis and intervention have positive impact on outcome of children with ASD. Treating children with ASD often require parents' involvement, and this is usually achieved by imparting parents with knowledge, caregiving skills and helping them cope with stress. This study assessed the clinical characteristics of these children and explored parent's experiences while seeking care and raising these children.

Objective: To assess clinical characteristics of children with ASD, and explore experiences of their parents in Dar es Salaam, Tanzania

Methods: A mixed-method cross-sectional study was conducted at MNH and Aviccena clinics. Socio-demographic and clinical information of children with autism were collected using a structured questionnaire. Descriptive statistics were summarized as the mean and standard deviation for continuous variables and proportions for categorical variables. Qualitative data was collected through in-depth interviews with 10 purposively recruited parents. Interviews were transcribed verbatim then a thematic analysis was done.

Results: A total of 245 children with autism were recruited, majority were boys 162 (66.1%). Mean age of onset of symptoms and getting diagnosis was 2 and 4 years respectively. Speech delay 231 (86.9%), reduced/absence of social interest 98 (40%), and delay in developmental milestones 78 (32.1%) were the most noted symptoms. Behavioural disorder (self-injurious behaviour, aggression, and severe tantrums) was the most occurring comorbidities 62 (60.2%), followed by epilepsy 20 (19.4%) and ADHD 8 (7.8%). Speech delay prompted parents to seek care and children were seen by different clinicians before the diagnosis was made. Social stigma, psychosocial burden, neglected parents' needs and difficulty accessing care were challenges.

Conclusion: This study revealed males were more affected, as seen globally. Symptoms were mostly noted at 2 years; however, parents reported that their concerns were

disregarded by health care providers, and they had to see different clinicians before diagnosis was made, which noted in this study was at around 4 years. Delayed speech 86.9% and reduced/absent social interest 40% were the most presenting symptoms and behavioural disorder (self-injurious behaviour, aggression, and severe tantrums) was the most occurring comorbid.

Recommendation: Autism screening should be done during paediatric routine clinics as recommended by the American Association of Paediatrics. This will help to pick the cases early. Establishment of family-centred services that impart parents with knowledge and parenting skills to help them cope with challenging behaviours of ASD. Further studies should be done to explore parents' experiences in the community as this will give a better representation.

2. TITLE: FACTORS ASSOCIATED WITH SEXUAL DYSFUNCTION AMONG POSTPARTUM WOMEN ATTENDING MNAZI MMOJA HOSPITAL, DAR ES SALAAM.

Contact: egidiusmwemezi8@gmail.com
Presenter: Mwemezi Egidius

Background: Sexual dysfunction in postpartum women receives less attention, despite its negative impact on their overall well-being. Global estimates indicate that 20% to 80% of women experience sexual dysfunction following childbirth. Limited data exists in Tanzania and other African countries. A better understanding of the factors associated with sexual dysfunction is crucial for interventions aimed at improving women's sexual health and overall quality of life.

Objective: To determine the magnitude, types, and factors associated with sexual dysfunction among postpartum women at Mnazi Mmoja Hospital, Dar es Salaam.

Methods: A facility-based analytical cross-sectional study was conducted at Mnazi Mmoja Hospital, among 424 postpartum women. Data collection took place from November 10, 2022, to January 9, 2023. Sociodemographic and obstetric factors were assessed, and postpartum sexual dysfunction was evaluated using the Female Sexual Function Index score. Data analysis employed SPSS version 23, including multivariable analysis to determine independent associations among variables. A p-value of <0.05 was considered statistically significant

Results: A total of 430 postpartum women were interviewed, with 424 included in the analysis. Mean age was 28.94 (±6.032), and over half were within the 2-6 months

postpartum period. Sexual dysfunction was reported by 73.6% of women, primarily with arousal disorder (63%). Significantly associated factors were the early postpartum period (2-6 months) and lack of partner support, with prevalence ratios of 1.27 (95% CI: 1.01-1.59) and 1.21 (95% CI: 1.01-1.45), respectively.

Conclusion: Sexual dysfunction is common among postpartum women, with the most common type being arousal disorder. Women in the early postpartum period and those lacking partner support are at increased risk for experiencing sexual dysfunction. Therefore partner involvement and support are important during the postpartum period to improve the overall well-being of women.

Recommendation: Integration of sexual health assessment and counseling into postpartum care and Partner involvement and support should be emphasized during this period. Further research is needed to investigate effective interventions for postpartum sexual dysfunction and assess its impact on postpartum women's quality of life.

3. TITLE: SOCIO-ECONOMIC AND ENVIRONMENTAL DETERMINANTS OF DIARRHEA DISEASE AMONG UNDER-FIVE CHILDREN IN WEST B DISTRICT ZANZIBAR.

Sub theme: Maternal New-born and Child Adolescent Health.
Contact: ali.salama58@yahoo.com
Presenter: Salama Khamis Ali

Background: Diarrhoea kills about 525000 under-five children annually. Approximately 1.7 billion cases of diarrhoea are reported among under-five children globally. Sub-Saharan Africa consist 10 out of 15 countries within which 75% of diarrhoea- related death occur. Many studies done in Tanzania addressing factors affecting diarrhoea in children talk about WASH related activities; but socio-economic factors also are highly significant in the control of diarrhoea disease.

Objective: To assess socio-economic and environmental determinants of diarrhoea disease among under-five children in West B district Zanzibar.

Methods: Study conducted at West B District Zanzibar. Four wards were identified purposively. The Probability Proportional to Size (PPS) used to identify precise number of households to enrol from each ward.

Interview form and observation checklist used for data collection. Analysis done by Stata version 15.0. Descriptive, logistic regression model and forward selection multivariable logistic regression analysis applied.

Results: 252 children enrolled. Majority (44.05%) were 25- 48 months of age, Female (57.94%), married caretaker was (89.29%), (71.43%) had secondary education. Household with less than five children (83.73%) and poorest quintile (21.83%).

Childhood diarrhoea prevalence was 10.71%. Child's age, mother/caregiver's age, unsafe stool disposal and toilet sharing were potent risk factors.

Education level, marital status, number of children in household, toilet facility type, drinking water source, water treatment all showed association but no statistical significance. Wealth index showed no association.

Conclusion: Younger age of the child and the caregivers, low education level of caregiver, toilet sharing and poor child stool disposal are significantly associated with childhood diarrhoea. So, intervention to control diarrhoea disease has to target these aspect.

Recommendation: To support institutions that provide health education to mothers, investing in all age group but emphasis more to young mothers. To do more campaign on use of improved toilet facility.

Discourage toilet sharing and promote proper child stool management.

4. TITLE: FACTORS ASSOCIATED WITH UPTAKE OF IMMEDIATE POSTPARTUM INTRAUTERINE CONTRACEPTIVE DEVICE AMONG MOTHERS WHO GAVE BIRTH AT REGIONAL REFERRAL HOSPITALS IN DAR ES SALAAM

Sub theme: Maternal New-born and Child Adolescent Health
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Presenter: Fatema Mohamed Versi

Background: Immediate post-partum intrauterine contraceptive device (PPIUCD) is an effective and convenient method that can be inserted within 48 hours of delivery. In 2015 the international federation of gynaecology and obstetrics (FIGO) officially launched the program in Tanzania to institutionalize PPIUCD as part of antenatal care and delivery room services in Tanzania and the uptake rate was 5.8%. According to the Tanzania demographic health survey (TDHS) 2022 IUCD accounts for approximately 1% of all methods of

contraception. Many factors could contribute to the low uptake and acceptance of IUCD among post-natal women.

Objective: The study intended to assess factors associated with the uptake of immediate PPIUCD among mothers who gave birth at referral hospitals in Dar es Salaam.

Methods This cross-sectional study was conducted at three regional referral hospitals in Dar es Salaam namely Amana, Mwananyamala and Temeke. Women from the post-natal wards who delivered through caesarean section or spontaneous vaginal delivery were selected through systematic random sampling and recruited in the study, face to face interviews were done using Swahili structured questionnaire. Data analysis was done using Data Statistical Package for Social Sciences (SPSS) version 23. Continuous variables were presented as median. Categorical variable was presented as proportion. 95% confidence interval was determined, a P-value of <0.05 was considered significant. C

Results: Total of 423 participants were recruited in this study, the proportion of PPIUCD was 8.27%. The multivariable analysis reveals that, age category, employment status of self, employment status of partner, parity, booking GA, mode of delivery, ANC visits, and previous contraceptive use were significantly associated with PPIUCD uptake P <0.05.

Conclusion: The overall proportion of PPIUCD uptake was low. Attention should be given to enhancing educational level of women and effective IUCDs counselling should be given during antenatal care visits to correct misconceptions and educate women on the details of this method.

Recommendation: Based on the research findings, knowledge on this method needs to be increased especially targeting a wider coverage of clients during each antenatal visit and also through media.

5. TITLE: EFFECTIVE BREASTFEEDING TECHNIQUES AND ASSOCIATED FACTORS AMONG LACTATING MOTHERS IN DARES SALAAM - TANZANIA

Sub theme: Maternal New-born and Child Adolescent Health
Contact: yerap18@hotmail.com
Presenter: Raiya Ali Hamad

Background: Breastfeeding techniques include positioning, attachment, and suckling, which result in effective or ineffective breast milk intake. Effective breast milk intake results in good weight gain, proper growth, optimal development, and strengthening of the immune system. Effective breastfeeding techniques are sub-optimal globally, with factors

such as health worker support, socioeconomic status, maternal age, and educational level influencing breastfeeding techniques.

Objective: This study determined the magnitude of effective breastfeeding techniques and associated factors among lactating mothers in Dares Salaam - Tanzania.

Methods: This hospital-based cross-sectional study was conducted at Aga Khan and Mnazi Mmoja Hospital in Dar es Salaam, Tanzania from July 2022 to March 2023. Enrollment was done for 435 lactating mothers in the postnatal wards. Socio-demographic and clinical data were collected using structured questionnaires and observation of breastfeeding technique was done by trained nurses. The variables, positioning, attachment, and suckling were used to assess the outcome variable of breastfeeding techniques. Bivariate and multivariate logistic regression analysis was done to identify independent factors associated with effective breastfeeding techniques.

Results: The overall prevalence of effective breastfeeding techniques was 38.2% (166/435). There was a good attachment in 54.7% mother–infant pairs, infants were held in the correct position by 95.6% of mothers, and effective suckling in 55.2% of infants. Factors such as parity, education level, and support by healthcare workers were independently associated with effective breastfeeding techniques (p=0.000).

Conclusion: Effective breastfeeding techniques were practiced by less than half of the participants in this study. Education on breastfeeding techniques should be provided during the antenatal period to all pregnant women.

Recommendation: Healthcare workers should support postpartum mothers to effectively breastfeed their babies. Further studies should be conducted to explore healthcare system barriers and enablers to effective breastfeeding techniques to improve breastfeeding outcomes.

6. **Title: EVALUATION OF NEONATAL RESUSCITATION PRACTICE AND ASSOCIATED FACTORS AMONG NURSES IN THE DELIVERY SUITES AT MUHIMBILI NATIONAL HOSPITAL.**

Sub theme: Maternal New-born and Child Adolescent Health
Contact: salehe_mrutu@yahoo.com
Presenter: Salehe Mrutu

Background: Birth asphyxia accounts for the major of early neonatal death in Sub-Saharan Africa. Neonatal resuscitation (NR) is the most essential component of early neonatal care

that can prevent the majority of these deaths. It is reported that in sub-Saharan countries including Tanzania, majority of the neonatal death are due to poor neonatal resuscitation offered by healthcare providers

Objective: The study aimed at evaluating the practice of neonatal resuscitation and the associated factors among nurses in the delivery suites.

Methods: This was an analytical cross-sectional study done at Muhimbili National Hospital in Dar-es-Salaam, Tanzania among nurses located in the labour ward and obstetric operating theatre. During the study period from September - December 2021, 138 cases of neonatal resuscitation were observed using a standard checklist adopted from WHO HBB guidelines using a non-intrusive observation technique. Also, a standard questionnaire was used to capture the demographic characteristics of nurses who performed NR and their knowledge of NR. Proportions were used to describe NR practice and a Chi-square test was used to establish the statistical significance with a p-value < 0.05

Results: The study showed that 52% (72/138) of the observed cases were adequately performed to meet the standard guidelines for neonatal resuscitation. In the practice on individual steps, the practice was lacking in the areas of prevention of hypothermia by failure to discard wet towels, failure to open the airway by keeping the baby in a neutral position, poor ventilation techniques, inappropriate breath-to-ventilation ratio during CPR, and lack of documentation. The study showed formal training in neonatal resuscitation, attending in-house training, work experience, and having a high knowledge of neonatal resuscitation were significantly associated with neonatal resuscitation practice all with p-value < 0.05.

Conclusion: The study revealed NR skills are still a challenge among healthcare providers. Those with adequate knowledge of NR, attended formal and in-house training and who have worked in the delivery suites for a long time tend to have better skills in neonatal resuscitation.

Recommendation: We recommend adequate training on neonatal resuscitation both pre-service and in-service, supportive supervision, institutional situational evaluation, and refresher training. As these were shown to be associated with neonatal resuscitation practice.

7. TITLE: LIVED EXPERIENCES OF MOTHERS WITH PRETERM BABIES ADMITTED TO THE NEONATAL INTENSIVE CARE UNIT AT MUHIMBILI NATIONAL HOSPITAL.

Sub theme: Maternal New-born and Child Adolescent Health
Contact: frolianalistides@gmail.com
Presenter: ALISTIDES FROLIAN

Background: The mothers and family members of preterm babies are under a lot of stress after their preterm babies are admitted to the Neonatal Intensive Care Unit. Because of this, healthcare providers must have a better understanding of mothers' experiences when their babies are in the Neonatal Intensive Care Unit so as to address them. There is a lack of information on the experiences of mothers with preterm babies admitted to Neonatal Intensive Care Unit at Tanzania hospitals.

Objective: This study aimed at describing the experiences of mothers with preterm babies admitted to the Neonatal Intensive Care at Unit at Muhimbili National Hospital.

Methods: A qualitative study with a descriptive phenomenological approach was conducted from November to December 2022 involving 15 mothers who had preterm babies admitted to the Neonatal Intensive Care Unit at Unit at Muhimbili National Hospital. Data collection was done by using an In-Depth Interview guide. Mothers were recruited through the names of the preterm babies admitted to Neonatal Intensive Care Unit and then traced back to their respective wards and obtained their written consent of participation. All of the interviews were recorded and transcribed verbatim afterwards. Data were analysed using manual thematic analysis as inspired by Braun and Clarke.

Results: Three themes and nine subthemes on mothers' experiences of having a preterm baby admitted to Neonatal Intensive Care Unit at Muhimbili National Hospital emerged following data analysis. The themes were uncertainty about baby's survival, high cost in difficult environment of care and health workers fulfilling their responsibility to mothers and babies.

Conclusion: The experience of a mother with a preterm baby admitted to NICU was filled with anxiety due to uncertainty about baby's survival and high cost in difficult environment of care. Mothers commended the quality of care given by the health care workers and expressed satisfaction with the cooperation and communication of the healthcare workers.

Recommendation: Healthcare providers should continue assisting mothers in through the difficult and stressful experience of the Neonatal Intensive Care Unit by fostering therapeutic and trustworthy connections, offering emotional support, dispensing factual

and understandable information to mothers, and involving them in the care of their baby. Also, should identify those unable to pay hospital bills and link them to social support unit.

8. TITLE: FACILITATORS AND BARRIERS TO THE IMPLEMENTATION OF PERFORMANCE ACCOUNTABILITY MECHANISMS IN THE DELIVERY OF QUALITY MATERNAL HEALTH

Sub theme: Maternal New-born and Child Adolescent Health
Contact: francisaugust6@gmail.com
Presenter: Francis August

Background: Tanzania is among the countries with a high burden of maternal mortality and morbidity (556 maternal deaths per 100,000 live births). This happens despite the government's efforts to institute accountability mechanisms for enforcing quality improvement in the delivery of maternal new born and child health services.

Objective: To explore barriers and facilitators for enforcing performance accountability mechanisms for enhancing quality improvement in the delivery of maternal new-born and child health services.

Methods: We adopted a case study design to conduct semi-structured interviews with ten participants holding administrative positions in the sections of the district hospital; closely involved in the enforcement of accountability mechanisms in the delivery of maternal and new-born child health services. The interview data were analysed using thematic framework analysis.

Results: Findings are linked to two main performance accountability mechanisms, maternal and perinatal death reviews and monitoring and evaluation. Regarding facilitators of maternal and perinatal death reviews, the study identified the prioritization of the maternal health agenda by the government and the presence of maternal death review committees at the facilities. Regarding barriers to maternal and perinatal death reviews, the study documented issues like negligence among leaders, lack of follow-up and poor record keeping, delays in conducting the reviews, and poor community engagement due to limited health literacy and a culture of silence.

Conclusion: The findings of this study underscore that the implementation of accountability mechanisms is spearheaded by the use of technologies in delivering healthcare services with respect to online ordering of medical supplies, the use of biometrics in controlling attendance, and also implementation of accountability mechanisms for quality improvement in maternal health is hampered by inadequate

human resources health, worker's negative attitude - business as usual mentality, political interference.

Recommendation: A prop and well-functioning health system need to tackle barriers that impede the implementation of accountability mechanisms for quality improvement in maternal health services. In this regard, all responsible parties ought to enhance the facilitators which enhance implementation of accountability mechanism for quality improvement in maternal care like more funding being channelled to improve technologies that are vital in revenue collection.

9. TITLE: GROWTH OUTCOMES AMONG HIV EXPOSED-UNINFECTED INFANTS IN RURAL TANZANIA OVER A DECADE OF FOLLOW-UP.

Sub theme: Maternal New-born and Child Adolescent Health
Contact: g.josephmollel@gmail.com
Presenter: Getrud Joseph Mollel

Background: The success of prevention of mother to child transmission of HIV, has led to the growth of the population of HIV exposed uninfected (HEU) infants. Studies have shown poor outcomes among HEU infants. HIV exposure has been shown to add onto other risk factors for poor growth among children, especially those from resource limited settings. Inequalities exist between and within countries, with worse outcomes among those from rural and impoverished settings.

Objective: To investigate growth outcomes among HIV-exposed-uninfected infants born to mothers living with HIV enrolled in the KIULARCO cohort and the association with maternal nutritional status.

Methods: Kilombero and Ulanga antiretroviral Cohort (KIULARCO) is an 18 years old on-going cohort of people living with HIV in rural Southwestern Tanzania. Infants of KIULARCO mothers were enrolled between September 2011 and October 2022. Weight for height (WHZ) and height for age (HAZ) z scores were calculated using WHO 2006 child growth standards. Moderate and severe wasting were defined as WHZ <-2 and <-3 SD, respectively, and similarly for stunting using HAZ. Mothers' preconception body mass index (BMI) was categorised as underweight (<18.5 kg/m2), normal (18.5-<25 kg/m2) or overweight/obese (≥25 kg/m2). Analyses were descriptive.

Results: Among 784 infants, 17 seroconverted, leaving 767 HEU infants. The median age at enrolment was 43 (IQR 35-64) days. Overall, 449(59%), 412(54%), 356(46%) and 285(37%) infants had visits at 6, 9, 12 and 18 months, respectively. 11 (1%) died, 11 (1%) transferred

out, and 364 (47%) were lost to follow-up. 7-12% of infants were wasted over the course of follow-up. Proportion of moderate and severe stunting increased with age, 12% and 4% at 6 months, 10% and 6% at 9 months, 11% and 9% at 12 months, and 17% and 16% at 18 months respectively. Among 434 mothers who had preconception BMI, 5% were underweight, 56% were normal and 37% were overweight/obese. Stunting was more prevalent among infants of underweight mothers.

Conclusion: In this rural population, the results indicate a high burden of stunting among HEU infants, with a higher risk among those born to underweight mothers. Wasting was also prevalent among HEU infants. Furthermore, the loss to follow-up rate is alarming. This indicates an undeniable risk of seroconversion and poorer growth outcome among infants who are loss to follow up.

Recommendation: Further to the interventions for prevention of mother to child transmission of HIV, strategies to improve retention and growth outcomes among HIV exposed uninfected infants are of paramount necessity.

10. TITLE: JUSTIFICATION OF IMAGING REQUESTS AND OPTIMIZATION OF RADIATION EXPOSURE FROM PAEDIATRIC CHEST RADIOGRAPHY AT MNH.

Sub theme: Maternal New-born and Child Adolescent Health
Contact: victormhezi@gmail.com
Presenter: Dr. Victor Phillemon Mhezi

Background: Since ionizing radiation is a well-known source of hazardous impacts on human health, proper indications of X-ray examinations and optimal radiographic techniques during X-ray imaging process is key to avoid unnecessary ionizing radiation exposure. Understanding the principles of "Justification and Optimization" of radiation protection during chest X-ray examinations (which are the commonest radiographic procedures) is crucial for developing radiation protective measures and guidelines, particularly for the paediatric population, a group at higher risk for lifetime ionizing radiation impact such as developing cancers and hereditary effects.

Objective: The main objective of this study was to investigate the application of "justification and optimization" principles of radiation protection from paediatrics chest radiography at MNH.

Methods: A prospective hospital-based cross-sectional study of 320 children, referred for CXR exams. A data collection tool was used to obtain demographic, clinical, and radiographic technical data. Clinical justification of CXR requests was concluded by

comparing each participant's clinical presentation to the standardized "Paediatrics CXR imaging referral guideline". For the optimization principle, six CXR radiographic technical parameters were looked at and compared to the established standards. Data were summarized by frequencies, percentages, central tendency measures, t-test, ANOVA and chi-square test using SPSS v29.0. Significance at p-value <0.05.

Results: 42.8% female and 57.2% male, mean age of 3.17 years +/- 1.98. Proportion of clinically unjustified CXR requests was 36.6%. 51.3% of unjustified requests were due to a complete lack of clinical information, and in 48.7% clinical information didn't meet the referral guideline for CXR imaging. Most of the unjustified requests were significantly from the OPD compared to the IPD (82.9% vs 17.1%). AP projection, poor collimation and rotation observed in most of CXR exams 79.7%, 59.7% & 53.8% respectively, significantly in younger participants. 11.6% had repeat exams. 36.9% of CXR exams didn't utilise the optimal recommended reference levels for at least one of kV, mA, ms or mAs. Shielding tools were not used at all.

Conclusion: The findings that 36.6% of the CXR examination requests among paediatric patients were clinically unjustified and 67.2% of CXR examinations were conducted with sub-optimal of at least one radiographic imaging technique, highlight the need for improving "justification and optimization" practices during imaging. This is crucial in reducing unnecessary radiation exposure to children and ensuring optimal patient care and preventing radiation burden and cost.

Recommendation:

1. Education initiatives on "Justification and Optimization" principles of radiation protection among healthcare professionals

2. Improved provision of appropriate clinical information by clinicians can contribute to better justification

3. To develop and implement the use of paediatric imaging referral guideline

4. To improve patient positioning and collimation techniques by using modern children's immobilization devices

5. Shielding tools use

11. TITLE: PREVALENCE OF PROBABLE ATTENTION-DEFICIT HYPERACTIVITY DISORDER (ADHD) AND ASSOCIATED FACTORS IN TANZANIA PRIMARY SCHOOL CHILDREN.

Sub theme: Maternal New-born and Child Adolescent Health

Contact: hinaesmail99@gmail.com

Presenter: Hina Esmail

Background: Attention-Deficit Hyperactivity Disorder (ADHD) is known to be the most common neurodevelopmental disorder in children, affecting not only different aspects of their lives, but also that of their families and society. Despite this, very few studies have been done in East Africa to determine the prevalence of probable ADHD or its associated factors.

Objective: This study aimed to determine the prevalence of probable ADHD and its associated factors for early primary school children in Dar-es-Salaam, Tanzania, East Africa.

Methods: A cross-sectional design with multistage cluster sampling was used to sample 120 students from two randomly selected government primary schools in Dar-es-Salaam. The history taking interview and ADHD screening tool from the Kiddie Schedule for Affective Disorders and Schizophrenia Present-and-Lifetime Version (K-SADS-PL) and the Center for Youth Wellness Adverse Childhood Experiences Questionnaire (CYW ACE-Q) were administered. Factors of interest associated with probable ADHD were sociodemographic factors, adverse birth outcomes and adverse childhood experiences. The data was analyzed using Stata Version-14 for univariate, bivariate and multivariate analysis.

Results: The overall prevalence of probable ADHD was found to be 19.2%. Several factors of interests were explored, however only place of study (i.e., Urban area) was found to be significantly and independently associated with probable ADHD at p-value < 0.001. Other factors, including history of exposure to alcohol/smoke during index pregnancy, mothers age at delivery of 30 years and above, full term delivery, normal birthweight and 4 or more adverse childhood experiences, were not significantly and independently associated with probable ADHD. There were no other significant findings.

Conclusion: The above findings highlighting the high prevalence of probable ADHD in our setting, provide valuable insights for the importance of early detection and intervention for ADHD, especially in school settings, on affected individuals and their families.

Recommendation: Further research is required in a larger sample and more than one setting, to provide a more accurate prevalence of probable ADHD its associated factors.

1. **TITLE: PREVALENCE AND RISK FACTORS FOR RENAL INSUFFICIENCY AMONG ADULTS LIVING WITH HIV IN TANZANIA: RESULTS FROM A CROSS-SECTIONAL STUDY**.

Sub theme: Non-Communicable Diseases
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Presenter: Theresia A. Ottaru

Background: With improved survival, adults living with HIV (ALHIV) are increasingly likely to experience age-and HIV-related comorbidities such as renal insufficiency (RI). Other risk factors of RI including high blood pressure (BP), obesity, diabetes, and dyslipidemia are common among ALHIV. The objective of this study was to determine the prevalence of RI and its associated risk factors among ALHIV.

Objective: The objective of this study was to determine the prevalence of RI, associated risk factors and impact of synergy of risk factors among ALHIV.

Methods: We conducted a cross-sectional study among ALHIV ≥18 years on ART at six HIV clinics in Dar-es-Salaam, Tanzania between November 2020 and January 2021. Estimated glomerular filtration rate (eGFR) was calculated using 2021 CKD-EPI equation. We determined the prevalence of RI (defined as eGFR of $<60ml/min/1.73m2$) and applied multivariable (MV) logistic regression models to identify independent risk factors of RI. Covariates significant at $p<0.2$ in the univariate analysis were included in MV models. We further examined the role of age and its interaction with other important risk factors for RI.

Results: 450 ALHIV on ART were included in the analysis [males 26%; median age 43(IQR:18-72) years; on tenofovir-based ART 89%; HIV VL≤50copies/mL 88%], of these 34(7.6%) had RI. There was a higher prevalence of RI among males (12%) vs females (6%), p=0.03; ALHIV ≥50years (27%) vs <50years (4%), p<0.01; and those with elevated [120-129/<80mmHg(6%)] and high [≥130/80mmHg(15%)] vs normal (<120/80mmHg) BP(4%), p<0.01. In MV analyses adjusting for age (≥50/<50 years), male sex, BP level, health insurance status, dyslipidemia, HIV VL, only older age(aOR6.53,95%CI:4.2-10.2,p<0.01), and high but not elevated BP(aOR2.38,95%CI:1.2-50,p=0.02) were independently associated with RI. The interaction term was not significant (p=0.95)

Conclusion: Interventions targeting better BP control and screening for renal insufficiency among older ALHIV are critical to reduce morbidity and mortality related to kidney disease..

Recommendation: Screening for RI is critical among ALHIV, especially among older ALHIV and those with high BP. Further research is needed to determine the synergy between known RI risk factors among ALHIV on ART, over time.

2. TITLE: COMPARISON BETWEEN MOYERS AND TANAKA-JOHNSTON METHODS OF TOOTH SIZE PREDICTION AMONG ORTHODONTIC PATIENTS IN TANZANIA.

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
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Presenter: Eladius L Daniel

Background: Lower incisors are the first teeth to erupt, their sizes are reliable and little changes occur on the lower arch during mixed dentition. These teeth can be used to predict the size of remaining unerupted teeth. Accurate teeth size prediction is a crucial aspect of diagnosis and treatment plans during mixed dentition. Moyer's and Tanaka Johnston's analyses are the most widely used methods of teeth size prediction worldwide. However, studies have shown inconsistency in the application of these methods. So, they are not the gold standard and therefore they cannot be used in other populations without question

Objective: The aim of the study was to compare the accuracy of Moyers and Tanaka-Johnston methods of tooth size prediction among orthodontic patients in Tanzania

Methods: A cross-sectional study design was carried out at MUHAS dental clinic involving models from orthodontic patients. Data collection involved actual teeth size measurements and prediction using methods given by Tanaka-Johnston and Moyer's chart. Data entry and analysis were done using Statistical Package for Social Sciences software, version 20.0. Comparison between the actual measurements and the Predicted measurements from both methods were assessed using students' paired t-tests. Correlation and simple linear regression analysis were done to generate the prediction equation for the study sample. The level of statistical significance was set at $p<0.05$

Results: The study involved 204 models from orthodontic patients with ages ranging from 13 to 30 years. Tanaka Johnston's method significantly overestimated the combined width of upper canines and premolars in the female group ($p=0.000$). However, the same method underestimated the lower jaw measurements in both sexes ($p<0.05$). On the other hand, Moyers's method significantly underestimated upper and lower jaw measurements in both sexes ($p<0.05$). New prediction equations for the present study were generated for each sex and arch separately. For the upper jaw, it was $Y=11.97+ 0.56X$ for males and $Y = 10.97+0.49X$

for females. While for the lower jaw, it was Y= 10.8 +0.51X in males and Y=11.39+0.47X in females.

Conclusion: Both Tanaka-Johnston and Moyers's methods of teeth size prediction were found to be inaccurate in estimating the size of unerupted canines and premolars in the study sample. And new prediction equation formulas were generated for the study sample.

Recommendation: The new prediction equations derived from the current study should be adopted in the protocol of management of space discrepancies in our setting as they are more precise than those derived from other populations.

3. TITLE: PREVALENCE, FACTORS ASSOCIATED WITH HYPERURICEMIA AND THE SHORT-TERM OUTCOMES AMONG PATIENTS WITH HEART FAILURE AT JAKAYA KIKWETE CARDIAC INSTITUTE.

Sub theme: Non-Communicable Diseases
Contact: docteej777@g.mail.com
Presenter: Thandie Kunene

Background: Hyperuricemia is an evolving public health burden among patients with Heart failure (HF) which is associated with disease progression and poor outcome. There is lack of evidence-based studies in regard to this challenge in Tanzania.

Objective: to determine the prevalence and factors associated with hyperuricemia

Methods: This cohort study consecutively recruited patients aged18 years with Heart Failure (HF) at Jakaya Kikwete Cardiac Institute (JKCI) , who were followed up for outcome for 30 days. A structured questionnaire was used to collect socio- demographic, clinical and physical examination data. Multivariate logistic regression analysis and Cox regression were used to identify independent factors associated with hyperuricaemia and mortality respectively. P value of <0.05 was considered statistically significant.

Results: We enrolled 352 patients. Mean (± SD) age of participants was 44 ± 9.6 years. The majority, 179 (50.9%) were aged between 45-60 years, were females 193 (54.8%) and insured 203 (57.7%). The prevalence of hyperuricemia was 49.4%. Being male (aOR 3.1, 95% CI 2.2 – 3.9, p 25 (aOR 2.4, 95% CI 1.4 – 3.3, p=0.03), having diabetes mellitus (aOR 4.1, 95% CI 3.5 – 4.7, p < 0.001), hypertension (aOR 2.4, 95% CI 2 – 3.2, p< 0.001), renal insufficiency (aOR 3.3, 95% CI 2.8 – 3.7, p<0.001), New York Heart Association class IV (aOR 2, 95% CI 1.4 -3.0, p<0.001), elevated cholesterol (aOR 1.4 95% CI 1.0-1.8, p<0.05) and ejection fraction <40% (aOR 2.7, 95% CI 1.8 – 3.6 p= 0.02) were independently associated with

hyperuricemia. Hyperuricaemia was also significantly associated with an increase one-month all- cause mortality.

Conclusion: Hyperuricemia is prevalent in patients with severe HF and was mostly associated with modifiable factors.

Recommendation: Intervention should target lifestyle modification in addressing the modifiable risk factors associated with hyperuricemia in heart failure patients.

4. TITLE: TOOOTH LOSS AND ASSSOCIATED FACTORS AMONG PEOPLE LIVING WITH HIV IN DARESSALAAM, TANZANIA

Sub theme: Non-Communicable Diseases
Contact: wrutachunzibwa@gmail.com
Presenter: DR. RUTACHUNZIBWA WILSON

Background: Tooth loss can occur in an individual because of one or more oral diseases such as dental caries, periodontal diseases, and trauma. PLHIV have increased risk for oral diseases which if not treated can lead to tooth loss. Studies on tooth loss among this population in Tanzania are lacking.

Objective: To assess Tooth loss and associated factors among adult people living with HIIV in Dar es salaam city, Tanzania.

Methods: This was a hospital based cross-sectional study involving 474 individuals aged 18 years and above attending selected HIV clinics in referral public Hospitals in Dar es salaam Region, Tanzania in 2022. Participants were selected based on number of clients attending per day. Participants were interviewed using a structured questionnaire and intraoral examined with a dental examination probe and mouth mirror then findings were entered on clinical examination sheets. Data analysis was done by using SSPS version 23.0 software that aided in generating frequency distribution tables, Chi-square tests and logistic regression analysis. p-value was set at $p<0.05$.

Results: Majority of participants were aged between 40-87 accounted for 71.9%.The distribution of study participants by sex showed predominance of females (68.7%) and with primary education level or less being 67.5%. The prevalence of tooth loss among PLHIV was 72%. Age, dental visit, dental carries and duration of use of HAART were statistically significantly associated with tooth loss among PLHIV. Among this study group CD4+ cell count and viral load did not influence tooth loss. (No association was found between found between HIV indices and tooth loss).

Conclusion: Age, dental visit, dental carries and duration of use of HAART are found be associated with tooth loss among PLHIV .However the prevalence of tooth loss among PLHIV was less compared to the general population

Recommendation: Provision of oral health education is important especially among geriatrics PLHIV. More studies should be done on manifestation of oral diseases among people living with HIV on HAART.

5. TITLE: MALNUTRITION, SEVERITY AND ASSOCIATED FACTORS AMONG CHILDREN WITH CEREBRAL PALSY ATTENDING MUHIMBILI NATIONAL HOSPITAL, DAR ES SALAAM

Sub theme: Non-Communicable Diseases
Contact: lamiyahmuslim@gmail.com
Presenter: Dr Lamiyah Alimohamed, Dr Victoria Ndembo, Dr Edward Kija

Background: Malnutrition has been frequently reported in several studies with cerebral palsy (CP), with multifactorial reasons that include both nutritional (gastrointestinal disorders, oral motor dysfunction, constipation and gastroesophageal reflux) and non-nutritional (severity of disease, speech impairment) causes. It continues to be a serious problem, and prevention is vital to reduce the morbidity and mortality.

Objective: To determine proportion of underweight, severity, and associated factors among children with cerebral palsy attending Muhimbili National Hospital (MNH) from August 2022 to April 2023

Methods: A hospital-based a cross- sectional study was conducted among children with cerebral palsy attending outpatient clinic in Muhimbili National Hospital. Data was obtained from researcher-based interviews, physical examination and anthropometric measurements were done, and analysed using specific CP percentile charts. Data entry was done on SPSS version 20. The measure of central tendency used was mean, contingency tables reported univariate analysis. Chi square and Fisher's exact test was used to measure the association between categorical variables, Variables found to be associated with Underweight were analysed using logistic regression. A p-value of 0.05

Results: A total of 300 children were eligible for the study, 164 (55%) were between ages 0-4yrs, with predominance 196 (65%) of males. Proportion of underweight was (33%). It was found in 36% of the children with spastic CP, compared to 31% dyskinetic (p-0.006). Similarly reported in 48% (p=0.001),41%(p= 0.004), 60% (p=0.001), 53%(p=0.001) children with spastic CP with GMFCS V, MACS V, CFCS V, EDACS V respectively. Epilepsy 66% (p=0.04)

was significantly associated with underweight, with CFCS V. There was a significant association between EDCAS V with vision impairment 67% (p=0.02) and underweight.

Almost half the children who were fully dependent 44% and ate mashed foods 48% were underweight and this was statistically significant.

Conclusion: One third of children with cerebral palsy at MNH are underweight. Almost half of children with CP and severe disability were underweight and had a feeding problem. Independent factors associated with underweight were age, gender and vision impairment.

Recommendation: The nutritional status of children with cerebral palsy should be closely and routinely evaluated in outpatient clinic. Nutritional counselling on feeding practices, duration of feeds, number of feeds and type and consistency of food should be routinely given to the mothers.

6. TITLE: GENDER EFFECT ON PRODUCTION AND ENRICHMENT OF F CELL NUMBERS IN SICKLE CELL DISEASE PATIENTS IN TANZANIA

Sub theme: Non-Communicable Diseases
Contact: flosu28@gmail.com
Presenter: Florence Urio

Background: Elevated levels of foetal haemoglobin (HbF) in sickle cell disease (SCD) lead to milder clinical presentation and better prognosis. HbF inhibits de-oxyhemoglobin S polymerization and erythrocyte sickling and HbF containing erythrocytes (F cells) tend to survive longer in circulation. HbF levels are higher in female patients, for unknown reasons.

Objective: The aim of this study was to explore the physiological determinants of HbF production in SCD

Methods: We measured levels of reticulocytes and mature red blood cells (RBCs) containing HbF in 227 SCD patients aged from 5 to 60 years. We used a double staining approach using HbF and CD71 antibodies by Flow Cytometry.

Results: Females carried more F cells than males (31% vs 22%, $p = 0.0004$). F-cell production (% F-Retic) was marginally higher in females (20% vs 17%, $p = 0.05$). We calculated an 'F cell enrichment ratio': 52% (females) and 34% (males) increased their F cell frequency between reticulocyte and mature RBC pools (enrichment ratio > 1.1), whereas 29% (females) and 37% (males) decreased it (< 0.9). The median enrichment ratio for females was 1.26, $p = 0.0019$, and males 1.01, $p = 0.6720$. The sex difference was significant ($p=0.01$).

F-cell production was correlated with total haemoglobin and inversely with reticulocyte count, enrichment was correlated with reticulocytes and inversely with RBC count.

Conclusion: We confirm that processes affecting F-cell levels in SCD mainly occur during terminal differentiation. Here, we show that most of the sex difference in F-cell levels subsequently arises in circulation. Finding causes for the observed differences between male and female patients will be important for the development and evaluation of HbF based therapies in SCD.

Recommendation: The study recommend for the current HbF based therapies in SCD to take into consideration a significant difference in HbF parameters observed in females and males. This may have a huge impact on how the patient respond to the treatment.

7. TITLE: PREVALENCE AND FACTORS ASSOCIATED WITH DEPRESSION AMONG UNDERGRADUATE STUDENTS AT MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: smkakilwa1@gmail.com
Presenter: STEPHANO H. MKAKILWA

Background: Depression ranks first with 7.5% in global Disability-adjusted life years (DALYs) having biopsychosocial associations. Globally the prevalence of depression is estimated to be 4.4% in the general population and 20% among undergraduate students. Undergraduate students are likely to face peer pressure and academic workload in their studies making them likely to have depression with academic deterioration, protracted impairments in interpersonal functioning and suicidal behaviors.

Objective: The study aimed at determining the prevalence of depression and associated factors among undergraduate students at MUHAS.

Methods: A cross-sectional quantitative study using stratified sampling at the study year and then a proportional systematic sampling technique was used. A sociodemographic questionnaire, MSPSS, PHQ9, GSE and AUDIT were used. Data analyzed using SPSS version 23. Results with continuous data were described using mean and standard deviation. Weight prevalence was done. Bivariate analysis and then multivariate logistic regression was done on variables with p-value<0.2 in bivariate for an association between independent and dependent variables with a statistical significance at p-value<0.05. Ethical clearance was sought at three levels starting with MUHAS research senate

Results: Among study participants, one in three, 80 (28%), had depression where 19 (7%), 33 (12%), 20 (7%), 4 (1%), 4 (1%) were first to fifth-year students respectively with a mean age of 23.09 years and 3.259 standard deviations. A positive family history of mental illness and academic performance dissatisfaction (AOR=15.472, 95% CI =7.432-32.211, p-value<0.05) and (AOR=2.152, 95%CI=1.036-4.467, p-value<0.05) respectively were significantly associated with depression.

Conclusion: According to this study depression is common among study participants. Reporting a family history of mental illness and perceiving academic performance dissatisfaction were significantly associated with depression.

Recommendation: This study informs the need for integrating mental health services in universities by mental health practitioners in cooperation with university administration including screening and intervention for depression.

8. TITLE: MALE BREAST CANCER: CLINICOPATHOLOGICAL CHARACTERISTICS AND OUTCOME OF PATIENTS TREATED AT ORCI AND MNH

Sub theme: Non-Communicable Diseases
Contact: getrudemashashi177@gmail.com
Presenter: Getruda G Mashashi

Background: Male breast cancer (MBC) is rare representing 1% of all malignancies occurring in men and approximately 1% of all BC. A higher incidence of MBC was reported in Sub-Saharan Africa than in western countries, majority having poor prognosis due to late presentation at diagnosis. In Tanzania the incidence is 6.5% despite this, data are lacking concerning the disease characteristics, management, treatment and overall survival.

Objective: To determining the clinicopathological characteristics, treatment modalities, and overall survival of MBC at ORCI and MNH from JAN 2016-DEC 2020

Methods: A retrospective study of patients with MBC treated at ORCI and MNH from January 2016 to December 2020, SPSS version 25 was used for analysis of data. The Kaplan-Meier technique was used to create survival curves. A Cox regression model was used to examine factors that were significant in univariate analysis. P value of less than 5% was considered statistically significant

Results: Median age of diagnosis was 64 years, the with a peak incidence of 6th and 7th decades. Majority had T>/= 2cm, positive lymph nodes, clinical T3 and T4 disease and higher grade with 21% of the patients having De-novo disease at presentation, lung being

the most common site of metastasis with a median duration of symptoms of 24 month. Modified radical mastectomy, chemotherapy, radiotherapy and tamoxifen were the most common management employed. Two years overall survival was 94% with smoking history, triple negative breast cancer and radiotherapy being an independent predictor of overall survival.

Conclusion: Public enlightenment is import at various stages of health delivery system to send patients with suspected breast cancer to the appropriate treatment centre.

Recommendation: Further prospective study is needed for hypofractionation radiotherapy in locally advanced breast cancer.

9. TITLE: TRANSLATION AND CULTURAL ADAPTATION OF DRUG USE STIGMA AND HIV STIGMA MEASURES AMONG PEOPLE WHO USE DRUGS IN TANZANIA

Sub theme: Non-Communicable Diseases
Contact: lindasozy@gmail.com
Presenter: Linda B. Mlunde

Background: People who use drugs (PWUD) experience stigma from multiple sources. They experience stigma due to their drug use and those. HIV seroprevalence for PWUD in Tanzania is estimated to range from 18 to 25%. So many PWUD will also experience HIV stigma. Both types of stigmas have negative health and social outcomes, it is therefore important to measure these stigmas and their impact. However, there are no contextually and linguistically adapted measures available to assess both types of stigma among PWUD in Tanzania. In response, we translated and cultural adapted HIV and drug use stigma measures among Tanzanian PWUD and describe that process in this study.

Objective: To translate and culturally adapt HIV and drug use stigma measures among Tanzanian PWUD

Methods: This was a cross-sectional study. We translated and adapted existing validated stigma measures by following a modified version of Wild's ten steps for translation and adaptation. We also added new items on stigmatizing actions that were not included in the original measures. Following translation and back translation, we conducted 40 cognitive debriefs among 19 PWUD living with and 21 PWUD not living with HIV in Dar es Salaam to assess comprehension of original and new items. For the items that had challenges, we made adaptations and conducted a repeat cognitive debrief among ten new PWUD participants where half of them were living with HIV.

Results: Most of the original items (42/54, 78%), response options and all items with new 12 stigmatizing actions were understood by participants. Challenges included response options for a few items; translation to Swahili; and differences in participants' interpretation of Swahili words. Changes were made and the final versions were understood by PWUD participants.

Conclusion: Drug use and HIV stigma measures can successfully be translated and culturally adapted among Tanzanian PWUD living with and without HIV.

Recommendation: Further research is needed to determine the measures' psychometric properties.

1. **TITLE: ANTIBIOTIC UTILIZATION PATTERNS IN TANZANIA: A RETROSPECTIVE LONGITUDINAL STUDY COMPARING PRE- AND POST-COVID-19 ERAS USING TMDA DATA**

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: sangeda@gmail.com
Presenter: Raphael Zozimus Sangeda

Background: Antimicrobial resistance (AMR) is a growing public health concern globally, and the misuse of antibiotics is a major contributor. In Tanzania, antimicrobial stewardship programs have been started to combat AMR. However, the impact of the COVID-19 pandemic on antibiotics utilization in Tanzania remains unknown.

Objective: This study aimed to investigate changes in antibiotic utilization patterns before and after the COVID-19 pandemic in Tanzania using data from the Tanzania Medicines and Medical Devices Authority (TMDA

Methods: This retrospective longitudinal study analyzed secondary data from TMDA. The study compared antibiotic consumption in defined daily doses (DDD) per 1000 inhabitants per day (DDI) in two distinct eras: 2018-2019 as the pre-COVID-19 era and 2020-2021 as the post-COVID-19 era.

Results: The study analyzed 10,614 records and found an overall increase in antibiotic consumption from 2018 to 2021 in terms of DDI. There was a general trend of increasing antibiotic consumption, with a small decrease in 2019. Specifically, in 2018, the consumption was 29.14 DDI, which decreased to 21.18 DDI in 2019. However, the consumption increased in 2020 and 2021 to 29.71 DDI and 31.54 DDI, respectively. Generally, there was an increase in the total consumption of antibiotics, reaching 111.57 DDI over the four years. The consumption was 61.24 DDI in the post-COVID era and 50.32 DDI in the pre-COVID era.

Conclusion: The results indicate that the COVID-19 pandemic may have contributed to an increase in antibiotic consumption in Tanzania, with significant changes in the utilization of specific antibiotics.

Recommendation: This trend could lead to the emergence of antibiotic-resistant bacteria and highlights the importance of continuous monitoring and interventions to promote rational use of antibiotics to combat AMR.

2. TITLE: SURVIVAL AND PREDICTORS OF MORTALITY AMONG MULTIDRUG RESISTANT TUBERCULOSIS PATIENTS IN TANZANIA FROM 2017 TO 2019.

Contact: drgeorgemrema@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance + One Health
Presenter: Dr.George Mrema

Background: Every year, about 20% of multidrug resistant tuberculosis (MDR-TB) patients worldwide who begin therapy die during the course of their treatment. To combat this, the World Health Organization (WHO) recommends decentralization of services which has shown encouraging success. To abide by WHO recommendations, Tanzania decentralized MDR TB services in 2016 through improvement in diagnostic capacities in all the regions as well as the adoption of new guidelines.

Objective: This study aimed at determining the survival probability and predictors of mortality among MDR-TB patients following decentralization of services in Tanzania from 2017 to 2019

Methods: This was a retrospective cohort study involving all MDR-TB patients enrolled in second-line treatment in all 26 regions in Tanzania from 2017 to 2019. The overall mortality rate among MDR-TB patients was calculated using the incidence rate while the survival probability was computed using the Kaplan-Meier estimator. Additionally, independent factors of MDR TB mortality were determined using multivariable Cox proportional hazards model. Ethical approval obtained.

Results: The study followed 985 patients for 13,397 person-months and found a crude mortality rate of 11.7 per 1000 person-months. Specific mortality rates were 17.21, 7.81, and 6.18 per 1000 person-months at 6, 12, and 24 months, respectively. Malnourished patients (adjusted hazard ratio [aHR] 1.85; 95% confidence interval [CI], 1.34-2.56) and MDR-TB/HIV co-infected patients (aHR 2.95; 95% CI, 2.08-4.18) had a higher risk of mortality during follow-up.

Conclusion: MDR-TB patients have the highest mortality rate during the first six months of treatment. Malnutrition and co-infection with HIV were identified as significant predictors of mortality

Recommendation: To reduce mortality, it is important to closely monitor patients during the first six months of treatment, particularly those who are malnourished or co-infected with HIV, and provide them with appropriate and timely care.

3. TITLE: RESPIRATORY CAUSES OF MEDICAL ADMISSIONS AMONG POST PULMONARY TB PATIENTS AT MUHIMBILI NATIONAL HOSPITAL FROM JUNE 2016 TO DEC 2022.

Contact: zionedu4@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Sion Munisi

Background: Despite microbiological cure, patients previously treated for pulmonary tuberculosis continue to suffer from chronic lung disease that complicates tuberculosis infection. The chronic lung disease is a cause of multiple re-admissions and mortality. There is scarce data on the causes of hospital admissions among post PTB patients in Tanzania, hence the need for this study.

Objective: To determine the causes of hospital admissions and relate them to patients' characteristics among post PTB patients at Muhimbili National Hospital in Dar es Salaam, Tanzania.

Methods: In a retrospective cross-sectional study, archived data of post PTB patients admitted in medical wards between June 2016 to December 2022 was retrieved. Patients' socio-demographics, clinical information and discharge diagnoses were collected from the patients' files. Chest radiologic reports were obtained from the hospital's electronic system, Clear-Canvas. Categorical data are presented as proportions. Logistic regression was used to determine factors independently associated with various causes of admissions. P value of <.05 was chosen for statistical significance. Ethical approval granted by WHOM including waiver of consenting?????

Results: We studied data for 354 participants whose meanage was 47(±16) years. The majorities were male 232(65.5%) and employed 184(52%). The most frequent causes of admission were lung fibrosis (48.9%), bronchiectasis exacerbation (23.4%) and lung tumors (16.1%). Factors associated with lung fibrosis were age >45 years, aOR(95%CI) 1.61(1.02-2.53) and rhonchi aOR(95%CI) 9.76(2.27-41.91) while for bronchiectasis were anemia, aOR(95%CI) 2.36(1.25-4.48) and multiple PTB episodes, aOR(95%CI) 4.36(1.13-16.85). Lung tumors were associated with working in mines aOR(95%CI)=2.43(1.07-5.52) and smoking, aOR(95%CI)=2.55(1.27-5.12).

Conclusion: The present study has revealed that post-TB patients continue to suffer in the post-treatment period. Lung malignancies, fibrosis, and bronchiectasis were the most prevalent causes of admission.

Recommendation: PTB patients need long-term follow-up to diagnose and manage TB sequela. Associated factors for various sequelae can be used to guide the suspicion and diagnosis of these sequelae, follow up, and management.

4. TITLE: DETERMINATION OF SULFONAMIDES AND TETRACYCLINE RESIDUES IN BROILER CHICKEN SOLD IN KINONDONI AND ILALA MUNICIPALITY, DAR ES SALAAM.

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: winnerj316@gmail.com
Presenter: Winstone Ulomi

Background: In Tanzania, the increased demand for animal-derived foods, particularly eggs, meat, and milk, has resulted in the intensification of farming systems with the use of antimicrobials, particularly sulphonamides and tetracyclines. According to the FAO/WHO Codex Alimentarius commission, concentrations of antimicrobial residues in food exceeding the acceptable daily intake (ADI) and maximum residual limit (MRL) pose a health risk to consumers.

Objective: This cross-sectional study determined the concentrations of sulphonamide and tetracycline residues in the liver tissues of commercial broiler chicken sold in Dar es Salaam, Tanzania,

Methods: We conveniently sampled eighty-four liver tissue samples from broiler chicken sold in two out of six large markets in Dar es Salaam. The amounts of tetracycline and sulphonamide residues were determined using an ELISA kit (Shenzhen Lvshiyuan Biotechnology Company, Shenzhen, China).

Results: The results showed that all 100% (n = 84) samples contained tetracycline residues and 21.4% (n = 18) samples contained sulphonamide residues, while 21.4% (n = 18) contained both sulphonamide and tetracycline residues. The concentrations of sulphonamide residues were within the maximum residual limit (MRL). However, 90.5% (n = 76) of the samples had tetracycline levels that exceeded the acceptable daily intake (ADI) range 0-3 µg/kg and 13.1% (n = 11) of the samples had tetracycline levels that exceeded the maximum residue limit of 300 µg/kg.

Conclusion: The observed presence of antibiotic residues in the poultry tissues poses a health risk to consumers, and may lead to antimicrobial resistance of the micro-organisms, which may spread to humans and animals via the environment. Vigorous surveillance and

observation of the withdrawal periods should be advocated to ensure that the food from animals is safe with regard to the residues of veterinary medicines

Recommendation: There is an urgent need for strict legislation and control measures regarding the sale and use of veterinary drugs in treatment, as well as the prohibition of their use as feed supplements. The use of antimicrobials as growth promotion should be banned. Infection prevention and control measures such as biosecurity and vaccinations should be highly advocated.

5. TITLE: EFFICIENCY OF A MINIATURIZED DOUBLE NET TRAP (DN-MINI) IN RELATION TO A CDC LIGHT TRAP FOR SAMPLING HOST- SEEKING ANOPHELES MOSQUITOES

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: alimwagu@ihi.or.tz
Presenter: Alex J. Limwagu

Background: Surveillance of host and non–host seeking malaria vectors is crucial in observing changes in behavior of malaria vectors and impact of existing vector control interventions. The most reliable and common method for surveillance is human landing catches (HLC), which estimates human biting rates. However, this method involves exposing the human legs to mosquito borne diseases, and hence brings the ethical concern due to risks of being bitten by infectious mosquitoes. Therefore, alternative methods to HLC are highly required.

Objective: This study aimed to evaluate the efficacy of a miniaturized double net trap, an exposure-free tool, in comparison to a CDC light trap

Methods: Adult mosquitoes were collected by using a miniaturized double net trap (DN-Mini trap), CDC light trap and Prokopack aspirator in the 74 randomly selected houses across three villages: Chirombora, Mzelezi and Ebuyu. First, we collected indoor host seeking mosquito using CDC Light trap and DN-Mini trap while a Prokopack aspirator was used for collection of indoor resting mosquitoes. Second, we collected indoor and outdoor host seeking and resting mosquitoes by using DN- Mini trap and prokopack aspirator. Generalized linear mixed models (GLMM) with a negative binomial distribution used to assess effectiveness of one trap over the other on catching mosquitoes

Results: DN-Mini trap had 1.53 times more efficient for collection of Anopheles funestus species (RR= 1.53, 95%CI:1.190-1.98) than the CDC-Light trap. However, for Anopheles

arabiensis, DN-Mini trap was found to be 0.32 times less efficient (RR= 0.32, 95%CI: (0.183-0.567) compared to the CDC-light trap for indoor collection. The number of An. funestus and An. arabiensis species collected by DN-Mini trap were found to be more indoors than outdoor.

Conclusion: The DN-Mini trap was effective in capturing An. funestus mosquitoes, which are now contributing to malaria transmission in South-eastern Tanzania, but it was less effective in capturing the An. arabiensis species.

Recommendation: I recommend utilising DN-Mini trap for surveillance of Malaria vectors especially to the area with a high prevalence of An. funestus a dominant species responsible for malaria transmission, DN-Mini trap can also be deployed for indoor outdoor collection making ti suitable for comprehensive vector monitoring.

6. TITLE: PREVALENCE OF GRAM-NEGATIVE BACTERIA CONTAMINATING HANDS OF VISITORS AT REGIONAL REFERRAL HOSPITALS, DAR ES SALAAM

Contact: ninaeljonas@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Ninael Jonas

Background: Hand contamination by bacteria is a significant source of infection transmission, especially in hospital settings. Prevalence of health care associated infections (HCAIs) in low-income countries is 14.8% than in high income countries. HCAIs include multidrug resistant bacterial infections which are known for causing high morbidity and mortality worldwide. In Tanzania extended beta lactamase producing bacteria are reported 28.7% to be hospital acquired. Although studies have been done on the magnitude of health care workers' and patients' bacterial contamination while in the hospital, there is paucity of data on the magnitude of contamination by visitors.

Objective: To determine the prevalence of gram-negative bacterial hands contamination among visitors to regional referral hospitals in Dar es salaam.

Methods: This was a cross-sectional study conducted at 3 regional referral hospitals: Amana, Temeke and Mwananyamala. Dominant hand swabs from 388 systematically selected visitors were taken for bacterial culture and a short interview done to assess factors associated with bacterial hand contamination. Hand swabs collected were cultured on MCA agar, isolates were identified by VITEK MS and appropriate antibiotics were employed in antibiotic susceptibility testing of the isolated Gram-negative bacteria.

Results: Prevalence of gram-negative bacterial contamination on visitors' hands was 21.13% on entry and 30.15% on exit. The most common bacteria contamination was Klebsiella pneumoniae on both entry and exit (42%, 44%). Resistance to imipinem and ceftriaxone were the most pronounced on majority of entry and exit isolates. Bacterial contamination was associated with not washing hands APR1.50 (1.02-2.19), offering services to the patients APR=1.87 (1.19-2.92) and staying longer than 7 days in the hospital APR=1.5 (1.05-2.12).

Conclusion: There was a significantly high prevalence of bacterial contamination brought in and taken out of hospitals by visitors. It is necessary to put emphasis on visitors' hand hygiene and exposure limitations when they come into the hospital settings in order to prevent further spread of infection.

Recommendation: Hospitals should ensure availability of hand washing facilities with all necessary amenities (water, soap and sanitizer). The hospitals may put measures in place to ensure compliance of visitors to hand hygiene on entrance and exit of hospital wards. Further research may focus on visitors' contribution to the bacterial pool, especially multi drug resistant bacteria, in the hospital and community.

7. TITLE: SELF-REPORTED HEALTH AND ASSOCIATED FACTORS AMONG HIV NEGATIVE FEMALE SEX WORKERS IN TANZANIA – A SALUTOGENESIS PERSPECTIVE

Contact: h.o.lichtwarck@medisin.uio.no
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Hanne Ochieng Lichtwarck

Background: Female sex workers carry a heavy burden of HIV and are disproportionally affected by unfavourable social determinants like poverty and violence. Research among this group often have a "risk-focus", but might end up overlooking factors that contribute to better health.

Objective: Inspired by "Salutogensis": a scholarly orientation that focuses on factors supporting health, we assessed self-reported health and predictors of good self-reported health among a cohort of HIV negative female sex workers.

Methods: Female sex workers were recruited by respondent driven sampling and interviewed using a standardized questionnaire. Self-perceived health was measured using a five-point scale from "excellent" to "poor" and frequencies were weighted in descriptive

analysis. We assessed if socio-demographics (age, marital status, education, income), social (social support, stigma) and sex work factors (self-perceived HIV risk, number of clients, age first sold sex) were predictors of good self-reported health (merging "excellent", "very good" or "good") using bivariate and multivariable modified poisson regression.

Results: Of 470 participants, 81 (16.2%) described their health as excellent/very good, 359 (79.0%) as good, and 30 (6.3%) as fair/poor. Being 35 (PR=1.16, 95%CI: 1.01-1.33) having higher education (PR=1.06, 95%CI: 1.00-1.11), never being married/single (PR=1.08, 95%CI: 1.01-1.16), and having high level of social support (PR=1.08, 95%CI=1.02-1.14) predicted the outcome in bivariate analysis. Social support (aPR=1.08, 95%CI: 1.02-1.14) and marital status (aPR=1.08, 95%CI: 1.01-1.16) were independently associated with good self-reported health in the final model.

Conclusion: Despite being a key population vulnerable to disadvantageous disease-outcomes, the majority of the female sex workers in this cohort reported good health.

Recommendation: Introducing a perspective founded on "salutogenesis": i.e. a stronger focus on factors that promote health among female sex workers, such as building social ties, not merely avoiding disease and individual risk, can be a welcomed addition to health programs and policy.

8. TITLE: FACTORS ASSOCIATED WITH HEP B VACCINE DOSE INCOMPLETION AMONG HEALTHCARE WORKERS IN UNGUJA - 2022

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: sulesherry3@gmail.com
Presenter: Sharifa S. Mohamed

Background: Worldwide, 256M people are infected by hepatitis B (WHO 2015), the Prevalence in Tanzania is 4.2%. Introduction of Hep B vaccine in 1986 was targeted at-risk groups as a means to prevent transmission. However, completion of the required doses is poor, ranging between 11 and 48 percent among HCWs in East Africa. There is still little information on why HCWs are not completing the dosage.

Objective: To determine the magnitude as well as providers and health system factors associated with hep B dose incompletion in Unguja

Methods: We conducted a cross-sectional study in health facilities. We used cluster sampling to pick HFs from each level (strata). By proportionate to size, we randomly recruited 345 Health care workers from respective facilities and collected their Self-

reported information. Poison regression analysis was run and factors that were statistically significant in the multivariate model were reported.

Results: Among 345, 150 HCWs (43.48%) had dose incompletion, being busy (48%) was the most reported reason for it. In multivariate analysis, young adult aged 20-34 (aPR=1.92, 95% CI 1.35-2.73), lab technicians (aPR=0.015,95%`CI;1.12-2.2.86), and primary level of HFs (aPR=1.74, 95% CI; 1.24-2.44) were statistically significant with incomplete vaccination. Other independent factors were, perception that vaccine is unsafe (aPR=1.29, 95% CI; 1.01-1.65) and Hesitance to pay (aPR=1.39, 95% CI; 1.06 -1.89), those vaccinated at college were significantly protected from incompletion (aPR =0.58, 95% CI; 0.36-0.91). Unavailability of vaccines, poor cold chain, and poor vaccination management were also noticed in the Vaccine Unit.

Conclusion: Hep B vaccine dose incompletion in Unguja is below optimum, the completion in those working in Primary level facilities is increasingly insufficient. This challenge seems to be contributed by both individual HCWs and health system.

Recommendation: Apart from individual determination, facilities managers, vaccine coordinators, and government should work in collaboration to established a sustained effort in vaccine dose completion so as to attain full protection to HCWs.

9. TITLE: PREVALENCE OF HELICOBACTER PYLORI AND ASSOCIATED FACTORS AMONG CHILDREN ATTENDING PRESCHOOLS IN DAR ES SALAAM, TANZANIA

Contact: elizabethmkashabani@gmail.com
Presenter: Elizabeth G. Mkashabani

Background: Helicobacter pylori is a gram-negative bacterium that colonizes the gastric mucosa. Humans are the only known reservoirs of H. pylori. Colonization with H. pylori may occur in early childhood, and majority of infected children remain asymptomatic. Early colonization is associated with long term sequela such as chronic gastritis, peptic ulcer disease, gastric cancer and mucosa-associated lymphoid tissue. The prevalence of H. pylori colonization among children is not well studied in Tanzania.

Objective: To determine the prevalence of Helicobacter pylori and associated factors among children attending preschools in Dar es salaam, Tanzania.

Methods: A community-based cross-sectional study was conducted among children attending the selected preschools in Dar es Salaam. Data was collected through a semi-structured questionnaire. Stool samples were collected from each participant and

laboratory test for H. pylori antigen was performed. Data entry and analysis was done using SPSS version 23. The association between independent and dependent variables was determined using chi-square test for categorical variables, while t-test was used for continuous variables. Variables found to be significantly associated with H. pylori colonization were analysed by logistic regression. A p-value less than 0.05 was considered.

Results: A total of 218 preschool children were recruited into the study, 45.9% being males and 54.1% females. The prevalence of H. pylori was 12.4%. H. pylori antigen positive results were 11% and 13.6% among males and females respectively. Low parent/caregiver level of education, children sharing the same bedroom with more than 2 people and use of pit latrine at school were factors independently associated with H. pylori colonization among preschool children.

Conclusion: H. pylori colonization among preschool children is 12.4%. Low parent/caregiver level of education, children sharing the same bedroom with more than 2 people and use of pit latrine at school were associated with H. pylori colonization.

Recommendation: Further research should be carried to determine the magnitude of H. pylori colonization among children in both rural and urban settings in Tanzania, and follow them up to assess development of H. pylori infection and subsequent sequela.

10. TITLE: "THEY ARE NOT ANTI-RETROVIRAL DRUGS (ART); THEY ARE PREVENTIVE DRUGS". A QUALITATIVE EXPLORATION OF BARRIERS FOR ACCESSING PREP.

Contact: margareth.thadei@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Magreth Thadei Mwakilasa

Background: HIV is a serious global concern affecting adolescent girls among other populations due to multiple vulnerabilities. In Tanzania, vulnerable Adolescent Girls and Young Women-(vAGYW) are twice as likely to be infected with HIV compared to their male counterparts. The introduction of Pre-Exposure Prophylaxis-(PrEP) brought hope in changing the HIV cascade, however, to date after the scale-up of PrEP, numerous challenges hinder access to PrEP among key and vulnerable populations-(KVPs).

Objective: To explore barriers that vAGYW face in accessing PrEP following the country-wide scale-up in the selected healthcare facilities.

Methods: We conducted a qualitative study among vAGYW aged 15-24 years accessing PrEP in the selected healthcare facilities in Dar es Salaam, Tanga and Dodoma. A total of 58 In-

depth interviews were carried out between May 2022 to November 2022. Thematic analysis following the six stages of Braun and Clarke was used to analyse data, and Nvivo software was utilized for the organization of data.

Results: vAGYW reported that institutional factors like PrEP provision in traditional HIV/AIDS Care and Treatment Clinics-(CTCs), lack of privacy, inconsistent PrEP availability, long wait times, and inadequate staff hinder PrEP access. Interpersonal factors like peers, family, and coworkers' misconceptions of PrEP for ART and labelling PrEP users as HIV-positive also affected access to PrEP services. Moreover, personal factors that hinder access include fear of HIV testing and test results and disbelief in the efficacy of PrEP in providing HIV protection.

Conclusion: vAGYW access to PrEP was hindered by privacy concerns in the CTCs, stigmatization as HIV-positive by peers, family, and colleagues, and scepticism about its efficacy in preventing HIV infection. Therefore, there is a great need to increase community outreach to raise awareness about PrEP not only among vAGYW but in the community as a whole.

Recommendation: Healthcare facilities should prioritize out-of-facility PrEP delivery, decentralize PrEP from the traditional CTCs building to reduce stigma and promote community advocacy for PrEP.

1. QUASI-TRIAL FOR NEUROPHYSIOLOGICAL REHABILITATION OF SICKLE CELL-RELATED STROKE IN CHILDREN USING INNOVATIVE ICT-BASED MOTO TILES

Sub theme: Epidemiology and Interventions
Contact: khadija.malima@muhas.ac.tz
Presenter: Khadija I. Yahya-Malima

Background: Children with Sickle Cell related stroke, are additionally burdened by neuropsychological deficits even when not accompanied by neurological symptoms (silent cerebral infarcts). The stroke impairs school performance, as attention and working memory are the most common neurocognitive sequelae of SCD. At times, sensory-motor impairments occur hence, mobility and gait defects also manifest. Inadequate access to proper neurorehabilitation services further exacerbates other health-related issues and the quality of their lives.

Objective: To demonstrate the feasibility of neurophysiological rehabilitation of sickle cell-related stroke in children using innovative ICT-based tiles at Muhimbili National Hospital.

Methods: The Quasi intervention trial is designed to include children aged 8-15 years with clinically diagnosed SCD-related stroke or who have clinical symptoms. A six-week neurophysiological rehabilitation using ICT-based Moto tiles will be implemented under real-world conditions at the physiotherapy unit of Muhimbili National Hospital, to provide external validity of the utility of the Moto tiles. Participants were identified from the SCD program database for the continuum of care.

Results: To date, twenty-seven children with SCD-related strokes have been identified. Additional efforts to identify potential clients for rehabilitation from health facilities within the Dar es Salaam region are ongoing to allow statistical validation of the effectiveness of the MOTO tiles for rehabilitation.

Conclusion: This study demonstrates the unique opportunity available for the provision of a continuum of care for patients within the network of health facilities around the named Muhimbili area. The web of institutions in academia, health service provision and international collaboration can generate validated evidence-based inform clinical practice through research outcomes.

Recommendation: The generation of evidence-based research outcomes can be shortened when the validation of research interventions is linked directly to clinical settings from the

baseline and thus the capacity building/benefits become a mutual outcome for the patients, health care facilities and academic institutions all at once.

2. TITLE: SCHISTOSOMA HAEMATOBIUM TRANSMISSION AFTER 12 ROUNDS MASS PRAZIQUANTEL ADMINISTRATION AMONG SCHOOL AGED CHILDREN IN SOUTHERN TANZANIA

Sub theme: Epidemiology and Interventions
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Presenter: Dietrich Malibiche

Background: Urogenital schistosomiasis, neglected tropical diseases caused by a trematode known as Schistosoma haematobium, is endemic in some regions of Tanzania. In Lindi region on the eastern coast, the paediatric prevalence ranges from 16.9% to 58.9%. The high burden of schistosomiasis in the country led to the introduction of annual praziquantel MDA among the SAC in 2005/2006. Data are needed to assess the prevalence and associated factors for S. haematobium infection after 12 rounds of praziquantel distribution in paediatric age in this setting, to further guide prevention interventions.

Objective: The study investigated the prevalence and factors associated with S. haematobium transmission persistence among school age children after 12 rounds of praziquantel in Nachingwea, Southern Tanzania

Methods: A quantitative cross-sectional study was conducted in May /June 2022 among 483 school-aged children in Nachingwea district. Macrohematuria, microhaematuria, and S. haematobium eggs were assessed in urine samples, by macroscopic observation, urine dipstick, and urine filtration, respectively and Infection intensity was quantified for positive S. haematobium samples. Knowledge and attitudes toward schistosomiasis were assessed through an interview-administered questionnaire, and water contact practices were registered through an observation checklist. Data were summarized using descriptive statistics, Chi-square test, and logistic regression analysis.

Results: The prevalence of S. haematobium infection was 10.6%, with 5.9% (3/51) of the infected children having a heavy infection. The factors associated with S. haematobium persistence transmission were a habit of visiting the water bodies (AOR=1.62, 95% CI: 0.40-1.96), swimming in the visited water bodies (AOR=4.58, 95% CI: 1.72-12.19), using water from the river source (AOR=3.79, 95% CI: 1.51-9.51) and attending Tunduru ya Leo Primary School (AOR=6.12, 95% CI: 1.64-22.85).

Conclusion: Findings suggest a persistent transmission of urogenital schistosomiasis among school-aged children in Nachingwea District Council,despite the implementation of 12 rounds of praziquantel massive drug administration. The habit of visiting water bodies, swimming in the water bodies, using river water, and attending Tunduru ya Leo primary school were the factors associated with urogenital schistosomiasis persistent transmission

Recommendation: Neglected Tropical Disease Control Programme should continue praziquantel distribution to SAC, iand plan health education intervention, especially to the younger children of lower-level classes, to improve knowledge regarding the disease causation, modes of transmission, treatment and prevention. Interventions on infrastructures that will make applicable positive attitudes, such as water supply, are strongly recommended.

3. TITLE: TRANSMISSION OF SOIL-TRANSMITTED HELMINTHIASIS AMONG ADULTS: A COMMUNITY-BASED CROSS-SECTIONAL SURVEY IN MULEBA DISTRICT, TANZANIA

Sub theme: Epidemiology and Interventions
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Presenter: Franco Zacharia

Background: In Tanzania school-based Mass Drug Administration (MDA) campaigns have been the main strategy for the prevention and control of Soil Transmitted Helminths (STH) infection. Adults are not part of the program and could remain as the reservoir of infection, favouring continuity in transmission. Water, Sanitation, and Hygiene (WaSH) issues and slow progress in community awareness promotion campaigns contribute to the persistence of STH as public health issue among target populations notwithstanding the achievements of the control interventions

Objective: This study aimed to determine the current prevalence and the risk factors associated with ongoing transmission of STH infection among adults in Muleba District, Tanzania.

Methods: A household-based quantitative cross-sectional study was carried out among 552 adults in Muleba district. Through a quantitative interviewer-administered questionnaire information was registered related to socio-demographic characteristics, level of knowledge on the disease, and WaSH factors. The prevalence of STH and estimation of intensity were assessed by analyzing stool samples through formol-ether concentration and Kato-Katz technique. Descriptive statistics was used to summarise data; bivariate

analysis to determine the association between STH infection and socio-demographic and WaSH factors. A p-value < 0.05 was considered statistically significant.

Results: A total of 552 adults were included in the study; 50.7% (280/552) were female. The, median age was of 30 years (15 years in the interquartile range), ranging from 18 to 73 years. A prevalence of 9.1% (50/552) for STH infection was reported; the prevalence of Hookworm Spp., Ascaris lumbricoides, and Trichuris trichiura was 7.43%, 0.91%, and 0.72%, respectively. Farming and the habit of not wearing shoes were statistically significantly associated with STH infection (AOR=3.2, 95%CI: 1.43-7.46 and aOR of 5.11, 95% CI=1.55-16.87; p= 0.07 respectively).

Conclusion: Our study has documented the ongoing transmission of STH infection among the adult population in the Muleba district, with a prevalence of 9.1%, notwithstanding the interventions in place including MDA. The persistency of defecation in the environment and practices like not wearing shoes, independently from level of knowledge or attitudes towards infection prevention, emphasized the need to build a supportive environment that could favor the translation of knowledge and attitudes in effective preventive practices.

Recommendation: The extension of MDA to adult population, the integrated approaches of educational interventions together with building of infrastructure and extension of WASH coverage will help to meet the 2030 global targets for soil-transmitted helminthiases.

4. TITLE: RAPID HIV CARE RESPONSE FOR IMPROVED ART ADHERENCE DURING MARBURG VIRUS OUTBREAK IN KAGERA.

Sub theme: Epidemiology and Interventions
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Presenter: Aaron Nkini

Background: The rapid response of health care in settings of disease outbreak aims at supporting health care facilities to minimize disruption and ultimately increase the resilience of health services during public health emergencies. The WHO recommends taking all-hazards approach in their health care service delivery to continuity and contingency planning in order to ensure continuity of services during emergencies. In March 2023, the Ministry of Health Tanzania officially declared the first Marburg virus disease (MVD) outbreak in Kagera region. To contain MoH closed the two health facilities at Bukoba DC where care and treatment services for PLHIV were taking place.

Objective: Following that we aimed at establishing a rapid response to care for affected PLHIV using differentiated service delivery (DSD) model including community ART ensuring continuity of service for PLHIV.

Methods: A rapid response team was selected to implement DSD model for needs of PLHIV during the outbreak through use of public awareness, activation of community ART (CART) services and creation of rapid response WhatsApp platform known as "Ntoma/ Maruku task force". During this time, community got proper information about MVD prevention and available PLHIV services in new facilities using posters deployed. Home-based care was established using motorbikes to deliver ART drugs at homes or CART sites. Further, new health facilities were identified as on transit refill site.

Results: Between March and April 2023, a total of 88 and 24 PLHIV who had appointments at Maruku H/C and Ntoma Dispensary refilled by 97% and 92% respectively to the newly established Community ART sites. Using home-based care initiative, a total number of 24 (96%) PLHIV who missed appointments were traced back, along with a total of 7 clients from closed facilities (6 from Maruku HC and 1 from Ntoma dispensary) attended at Bulinda dispensary as on transit site for PLHIV.

Conclusion: Use of a rapid response team and proven differentiated service delivery model can be an effective strategy to ensure provision of client centred approach and continuity of services including treatment adherence among PLHIV. This contributes to improved health outcomes among PLHIV during outbreaks in resource-limited settings.

Recommendation: The rapid response team should be active in responding to health emergencies and ensuring the continuation among health services at health facilities especially to PLHIV and established at Regional/council health management team.

5. TITLE: ZANZIBAR MALARIA CASE BASED (COCONUT) SURVEILLANCE SYSTEM EVALUATION, JULY 2022 – JANUARY 2023.

Sub theme: Epidemiology and Interventions
Contact: fatmamohd22eh@gmail.com
Presenter: Fatma M. Juma

Background: Zanzibar has reached remarkable progress toward malaria elimination by reducing malaria prevalence from 40% in 2003 to <1% in 2022. The successful reduction resulted in the establishment of Malaria Case Notification (Coconut surveillance) from health facilities and Active Case Detections for immediate malaria interventions to prevent

further local transmissions. Since the introduction of Coconut surveillance system, the system has not been evaluated.

Objective: This study evaluated malaria surveillance system key attribute's performance and the way it operates in line with its specified objectives.

Methods: The surveillance system evaluation was evaluated using "CDC updated guideline for evaluating public health surveillance system, 2001". Respondents were purposively selected; we interviewed the surveillance personnel from four purposively selected health facilities based on the number of cases reported and key informants about system's description and operating procedures. Furthermore, the document review was conducted to assess surveillance system usefulness and attributes from July 2022 to January 2023 and analyzed using Microsoft Excel.

Results: All 59 (100%) cases from government and private health facilities were reported, 22% were local and 78% were imported cases. The case definition was easy to understand, all staff were trained and the system was simple. The system was integrated with DHIS2, only one facility had complete reports and data match in all data collection tools while three facilities had 59.2% incomplete reports and 94.9% data mismatch in all data collection tools. About 60.8% cases were not notified within 24 hours and 56.9% cases were not followed up within 48 hours. The system has fully functional server, storage and backup of data is done in a short time.

Conclusion: The system meets its objectives and is useful, simple, representative, flexible and acceptable; however, timeliness and data quality were underperformance

Recommendation: We recommend prioritizing timeliness and data quality for effective malaria elimination.

1. TITLE: COST OF IMPLEMENTING AN INTEGRATED PACKAGE OF ESSENTIAL NONCOMMUNICABLE DISEASE INTERVENTIONS (PEN-PLUS) IN TANZANIA, A STUDY PROTOCOL.

Sub theme: Health Systems (Policy Information and Financing)
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Presenter: Harrieth P Ndumwa

Background: NCDs account for about 74% of all deaths globally, and 77% of these deaths occur in low and middle-income countries (LMICs). Tanzania is no exception with the Disability Adjusted Life Years (DALYs) lost due to NCDs having doubled in the past 30 years. To address the growing burden of NCDs, WHO has been providing support to countries to implement the Package of Essential NCD (PEN) interventions for primary health care in low-resource settings.

Objective: This study aims to estimate the cost of implementing PEN-plus for Rheumatic Heart Disease, Sickle Cell and Type 1 Diabetes in Kondoa district hospital in Tanzania.

Methods: The study will be conducted in Kondoa District hospital in Dodoma. It will involve collection of both capital items (office space, equipment, furniture), recurrent cost items (personnel, medicines, utilities, training, supplies etc) and time data from hospital records, patients and health care providers. Data will be collected through direct observations, measurements, Key Informant Interviews (KIIs) with healthcare providers and patients shadowing. Ethical approval has been obtained from the Norwegian Regional Ethical Committee and the Tanzanian National Health Research Ethics Committee (NatHREC). Data collection will start in July.

Results: This is an ongoing study which will assess the care delivery value chain of selected PEN-Plus interventions expressed by process maps; determine the capacity cost rate of resources (personnel, equipment, and space) used to deliver selected PEN-Plus NCD interventions; Estimate the capital cost and operational costs and identify the main cost drivers for delivering selected PEN-Plus NCD interventions at Kondoa district hospital in Tanzania. A protocol paper has been prepared for submission to a peer reviewed journal.

Conclusion: This study will help in identifying the main cost drivers, important steps for provision of PEN Plus interventions that are being over-looked or need more attention, trends of the prescribed consumables, health providers involved in each step of PEN Plus

service provision and appropriateness in terms of efficiency and effectiveness. This will be useful in monitoring and tracking resource utilisation, patterns and modifications in the provision of PEN Plus interventions over time.

Recommendation: Findings of this study will generate evidence that can be used to inform and scale-up decision of implementing PEN Plus in Tanzania and other settings with similar context.

2. TITLE: EXPLORING THE COST-EFFECTIVENESS OF A WHOLE-GENOME SEQUENCING BASED BIOMARKER FOR TREATMENT SELECTION IN METASTATIC LUNG CANCER PATIENT

Sub theme: Health Systems (Policy Information and Financing)
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Presenter: Zakile A. Mfumbilwa

Background: Whole-genome sequencing based tumor mutation burden (WGS-TMB) has the potential to improve immunotherapy (Pd-(L)1) treatment selection compared to the currently use of programmed death-ligand 1 (PD-L1), for patients with metastatic non-small cell lung cancer ineligible for targeted therapies (non-targetable metNSCLC). However, evidence for its economic value is lacking.

Objective: To perform an early cost-effectiveness analysis of using WGS-TMB as an immunotherapy predictive biomarker for patients with non-targetable metNSCLC, from a Dutch healthcare perspective.

Methods: A decision-model simulating individual metNSCLC patients was used to evaluate diagnostic strategies [A-C] to select first-line immunotherapy only or immunotherapy + chemotherapy combination. Patients were treated with immunotherapy instead of immunotherapy + chemotherapy if they had PD-L1 high (≥50%) [A, a current practice], TMB high (≥10 mutation/mega-base) [B], and PD-L1 high and TMB high [C]. Outcomes were discounted quality-adjusted life-years (QALYs) and healthcare cost measured from first-line treatment initiation to death. Results were reported using net monetary benefits (NMB) given a willingness-to-pay threshold of €80,000/QALY.

Results: QALYs (healthcare cost) were 2.04 (€138,300), 1.93 (€128,400), and 2.08 (€150,300) for A, B, and C, respectively. The most cost-effective strategy was B with the highest NMB (€26,031). Sensitivity and scenario analyses show that, when the cost of immunotherapy and/or chemotherapy were lowered by at least 13% and 23%, respectively, the NMB of A

became highest (≥€34,758). C had the highest NMB (€36,342) when patients with both PD-L1 low and TMB low were treated with chemotherapy only instead of immunotherapy + chemotherapy.

Conclusion: WGS-TMB has the potential to be cost-effective for treatment selection compared with current practice in the Netherlands, though it is sensitive to the cost of immunotherapy and chemotherapy acquisition. Alternatively, WGS-TMB may become cost-effective when used to withhold immunotherapy from patients with both PD-L1 low and TMB low.

Recommendation: The potential of withholding immunotherapy from patients with both PD-L1 low and TMB low merits further investigation.

3. TITLE: INDIVIDUAL CAPACITIES INFLUENCING USES OF ROUTINE HEALTH DATA FOR DECISION MAKING AMONG HEALTH WORKERS AT MUHIMBILI NATIONAL HOSPITAL.

Sub theme: Health Systems (Policy Information and Financing)
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Presenter: Salim Juma Mpimbi

Background: The availability of health workers with capacity to read and understand statistical data and then use them for work-related decision-making, therefore, supporting their institutions or the existing health system at large in developing countries is important. However, in some countries, Tanzania inclusive, this has remained critical. This requires the capacity-building of potential users.

Objective: To assess individual capacities influencing uses of routine health data for decision making among Emergency Medicine health workers at Muhimbili National Hospital (MNH).

Methods: The study design used was a descriptive cross-sectional using a quantitative approach. Stratified random sampling was used to sample Nurses, Medical officers, Residents, and Emergency medicine specialists. A semi-structured questionnaire was used to collect data. The study involved 76 health workers working in the Emergency Medicine Department (EMD) at MNH.

Results: Showed 61.6% use of routine health data for decision making. Working experience, job title, and education level had a statistically significant association with information used for decision making. There was a statistically significant difference in routine data use

between those who had poor and good knowledge to collect, analyze, interpret, and use data. Also, results showed that there was a statistically significant difference in routine data use between those who had poor and good skills to collect, analyze, interpret, and use data. Specialists had good level of knowledge and skills on data use compared to other health workers.

Conclusion: The study demonstrates partial use of routine health data for decision making with an interplay of individual capacities.

Recommendation: A framework for statistical capacity building in Tanzania need to be built, by training a cadre of health workers with core competencies and skills in measuring progress in the health system that could generate a sustainable demand for data use within the health systems of the country.

4. TITLE: IMPLEMENTATION OF EVIDENCE-BASED DENTISTRY IN CLINICAL DECISION MAKING. THE EXPERIENCE OF DENTISTS IN TANZANIA

Sub theme: Health Systems (Policy Information and Financing)
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Presenter: Deodatus Sabas

Background: Utilization of evidence in patient care and decision-making is beneficial in supporting practitioners' decision-making process and positively impacting on patient treatment outcomes. Implementation of evidence-based dentistry (EBD) involves solving complex problems in healthcare settings; thus, dentists need to address the application of EBD gap by inserting evidence into their daily practices. However, limited support and barriers to implementing evidence-based practice hamper the use of evidence in clinical decision-making practice.

Objective: This study aimed to explore dentists' experience towards evidence-based dentistry as well as to identify implementation barriers and facilitators.

Methods: This paper presents qualitative findings which employed a phenomenological study design to explore dentists' experience towards the application of EBD in clinical decision-making. In-depth interviews were conducted to 15 dentists from three selected zonal hospitals in Tanzania. Interview transcripts were imported into computer-assisted data analysis software called Nvivo. Thematic data analysis was performed using: Braun & Clarke's six-phase framework for doing thematic analysis.

Results: Dentists believed that incorporating EBD into their daily practice has the potential to improve the practice environment and patient outcomes. They use standard treatment guidelines and expert and own experience for their clinical activities. Rarely use research findings to provide health services. However, Dentists perceived the following barriers to EBD implementation; inadequate knowledge and skills in using evidence, lack of access to research findings, minimal support, and heavy workload to keep up with new evidence, insufficient resources, and limited professional development training.

Conclusion: The experience of EBD of dentists indicated that research findings were rarely used in clinical decision-making practice. Dentists have strong beliefs about EBD and its benefits however, several barriers were hindering the smooth implementation of the EBD. Therefore, the promotion of adopting research utilization, and training on the identified barriers are mandatory.

Recommendation: In order to enhance oral health outcomes, it is vital to incorporate EBD in the practice of dentists. Therefore, it is desirable that hospital management, develop a comprehensive strategy for building EBD competencies through proper training. Moreover, hospital libraries should also play an active role in developing adequate information literacy skills among dentists.

5. **TITLE: THE ROLE OF PUBLIC HEALTH LABORATORY TOWARDS RESPONDING ON EMERGING DISEASE OUTBREAKS IN TANZANIA: LESSONS FROM COVID-19 PANDEMIC.**

Sub theme: Health Systems (Policy Information and Financing)
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Presenter: Nasibu Iddi Sadick

Background: Public health laboratory is the specific diagnostic organ for monitoring and surveillance of public health and community infections and outbreaks. Public health laboratories have almost disappeared in Tanzania as they have either integrated with or replaced by clinical laboratory, this results in difficulty for conducting their intended public health role and managing surveillance system on different prioritized emergencies.

Objective: To Determine the role of public health laboratory in responding towards the disease outbreaks and reveal the poor implemented public health laboratory system.

Methods: Systematic approach was used to survey literatures published from 2010 to 2022 using three electronic databases (Google Scholar, PubMed, and AJOL) and manual search.

Literature was included when reported one of the following, the role, policy, systems and challenges of public health laboratory on emergency response, both qualitative and quantitative results were extracted and put in a narrative manner.

Results: A total of 22 literatures related to Tanzania public health laboratory from were reviewed. Amongst (59.1%) describe national public health laboratory with cities branches across the country, and (40.9%) challenges and barriers hindering its systematic implementation. COVID-19 lessons reveal 75% limited and structures for effective response and resisting critical effects of outbreaks.

Conclusion: The presence of networking between laboratories is essential in combating emergency conditions, relaying only on clinical laboratories and emergency medicine teams and departments as first line of outbreak defense disrupts patient care and compromising the entire stability of healthcare services.

Recommendation: Government Policy makers must consider establishment of specific structure for emergency outbreak, public health laboratory with One health approach is the best option.

6. TITLE: PROMOTING IMPROVED CARE OF CRITICALLY ILL PATIENTS: LESSONS LEARNED FROM PROMOTION OF ESSENTIAL EMERGENCY AND CRITICAL CARE IN TANZANIA

Sub theme: Health Systems (Policy Information and Financing)
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Presenter: Aneth Kaliza

Background: In an attempt to curtail preventable deaths of critically ill patients, timely identification of these patients and provision of Essential Emergency and Critical Care (EECC) is crucial. EECC is a low-cost approach for prioritizing the first-line, most cost-effective care for critically ill patients. It was co-designed and developed by clinicians, researchers, and policy makers worldwide. Over the past few years, extensive work has been conducted in Tanzania around EECC and has become the first country in the world to engage top-level policymakers and to have a National Strategic Plan for EECC. For optimized scale-up, it is important to document the experience of

Objective: To describe the promotion of EECC in Tanzania and the lessons learned during the process.

Methods Design: Mixed methods study; cross-sectional, qualitative study. Literature review was also conducted.

Setting: Dar es Salaam, Tanzania. Key informants were individuals who participated in the inception of EECC in the country such as researchers, health care workers, policy-makers, representatives from the Ministry of Health, Implementing and Development partners.

Analysis: Thematic analysis.

Results: Essential Emergency and Critical Care (EECC) was introduced in Tanzania in 2018 by engaging stakeholders and dissemination of findings. COVID 19, funding and a push for Emergency care in Tanzania paced the process. It was learned that Research evidence as a key driver of innovation and change, importance of good collaboration and early and continuous policy contact.

Conclusion: To promote EECC, there is no need to re-invent the wheel. Other countries should connect with the Tanzanian research team and access resources and material on EECC and modify according to their setting.

Recommendation: Other countries should connect with the Tanzanian research team and access resources and material on EECC and modify according to their setting.

7. TITLE: FACTORS INFLUENCING OCCUPATIONAL HEALTH AND SAFETY AMONG SANITATION WORKERS: A CASE STUDY OF DAWASA, DAR ES SALAAM

Sub theme: Health Systems (Policy Information and Financing)
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Presenter: Happiness Senzighe

Background: Work-related diseases are one of the rising issues globally, hence making occupational health and safety important. Worldwide, poor occupational health and safety causes 271 million injuries, 160 million occupational diseases, and 2 million work-related deaths each year

Objective: To assess factors influencing the occupational health and safety among sanitation workers in Dar es Salaam Water and Sewerage Authority, Dar es Salaam

Methods: A cross-sectional study was conducted involving a total of 191 sanitation workers in Dar es Salaam Water and Sewerage Authority. A structured interview questionnaire and observation were used to collect data. The collected data was imported into Microsoft Excel

2016 before being exported for analysis by Stata 15. Univariate analysis was used to determine the proportion of commonly reported diseases and bivalent analysis to determine the association between the variables and occupational health diseases and conditions.

Results: Out of 191 study population, 89.23% and 72.32% were reported to have injuries and fatigue, respectively. The contributing factors involved individual factors' practices on the use of Personal Protective Equipment, working hours, and training. The legal and regulatory frameworks found were the Occupational Health and Safety Act, DAWASA health and safety policy, and DAWASA

Human Resource policy and regulations (2018).

Conclusion: There is a high prevalence of occupational health and safety diseases and conditions (injuries and fatigue) in DAWASA Dar es Salaam.

Recommendation: Preventive measures such as the provision of proper quality and effective Personal Protective Equipment and training on the use of Personal Protective Equipment and also controlling working hours among sanitation workers.

8. TITLE: PUBLIC-PRIVATE PARTNERSHIP STAKEHOLDERS' ENGAGEMENT IN HEALTH SERVICES PROVISION IN KILIMANJARO REGION, TANZANIA

Sub theme: Health Systems (Policy Information and Financing)
Contact: kimsomboko@gmail.com
Presenter: Kanti A. Kimario

Background: The functioning of Public-Private Partnerships (PPPs) for any development initiative brings together different stakeholders for achievement of a common goal. PPPs, operating under certain contractual arrangement have been used in the health sector as a means for both maximization of service provision and attainment of investment goals for the benefit of PPP partners. However, if the context, and processes under which PPP stakeholders' engagement takes place is not well known, it becomes difficult to promote PPP collaborations.

Objective: Examine the context and processes for PPP engagement in health services provision; assess factors for PPP progression/stagnation in Kilimanjaro region.

Methods: The study employed a case study research design involving purposive sampling of 40 respondents from the selected health facilities and the health management teams. Qualitative data were collected through documentary review, semi-structured interviews

and focus group discussions. Thematic analysis was applied to obtain sub-themes and themes from the coded segments aided by MAXQDA v.20.3 software.

Results: Findings indicate that factors including stakeholders' involvement, models of PPP arrangement, supportive institutional framework, and existence of political will in support of PPP define the context for PPP stakeholders' engagement. PPP stakeholders' interaction, dialogue, and contractual agreement are important processes for PPP engagement. Factors including political will, transparency and accountability, broader stakeholder engagement, contract completeness, flexibility and governance, regulatory framework, and fiscal space are critical for determining PPP progression or stagnation.

Conclusion: The study concludes, PPP stakeholders' engagement and adherence to service agreement is inevitable for improved health services provision.

Recommendation: The Local Government Authorities (LGAs) should strengthen collaboration with private healthcare providers under PPP contracts to avoid duplication of health services provision in the same area.

1. **TITLE: KNOWLEDGE TRANSLATION, IMPLEMENTATION SCIENCE AND GOOD HEALTH AND WELL-BEING BY 2030: THE MEDIATING EFFECT OF BUSINESS MODEL INNOVATION**

Sub theme: Innovations and Entrepreneurship in Health
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Presenter: Binto, M. B.

Background: Scholars in healthcare agree that knowledge translation and implementation of science synergizes the realization of intended operational results, including attaining good health and well-being by 2030. Whereas knowledge translation focuses on methods for promoting the use of evidence in designing healthcare intervention; implementation science deals with the analysis of the implementation processes, the analysis of the fidelity of implementation and especially the relationships between stakeholders and context. However, the integration of the two perspectives lacks the ability to respond effectively to dynamics occurring in the long run, especially over 5 years

Objective: To explore "the mediating effects of business model innovations on the relationship between knowledge translation, implementation science and good health and well-being by 2030

Methods: Based on the theory of business model innovation, the study used a systematic literature review covering a total of 48 out of 1,160 published articles between 2022 and 2023, The reviewed articles were determined using a deductive screening technique based on a data saturation principle. The themes used for systematic review were such as knowledge translation, implementation science, business model innovations and good health and well-being

Results: Dimensions and scope of knowledge translation, implementation science and business model innovations were established. Four propositions informing the operationalization of the business model innovations process were revealed and a conceptual framework governing the study was developed.

Conclusion: Business model innovations offer mediating effects as knowledge translation and implementation science integrate to influence the attainment of good health and well-being by 2030.

Recommendation: The theory of business model innovations should be used to foster effective adaptability to dynamics caused by emerging changes and development needs

occurring in the long run. Also, a quantitative study should be done to test the theory of business model innovation and the established conceptual model for the study.

2. TITLE: NOHA: A PROMISING BIOMARKER FOR DETERMINING OESTROGEN RECEPTOR STATUS AMONG PATIENTS WITH BREAST CANCER IN RESOURCE-CONSTRAINED SETTINGS

Sub theme: Innovations and Entrepreneurship in Health
Contact: alex.mremi@kcmuco.ac.tz
Presenter: Alex Mremi

Background: Challenges to breast cancer control in low-and middle-income countries exist because of constrained access to care, including pathology services. Immunohistochemistry (IHC)–based estrogen receptor (ER) analysis is limited-nonexistent because of few and inadequately staffed and equipped pathology laboratories. We have identified Nw-hydroxy-L-Arginine (NOHA) as a blood-based biomarker to distinguish ER status in US patients with breast cancer.

Objective: Here, we examine NOHA's clinical utility as an ER IHC alternative in Tanzanian patients.

Methods: Following informed consent, 70 newly diagnosed, known or suspected patients with breast cancer were enrolled at Kilimanjaro Christian Medical Center; basic, deidentified clinical and sociodemographic data were collected. For each, a needle prick amount of blood was collected on a Noviplex plasma card and stored at -80°C. Plasma cards and unstained tumour pathology slides were shipped regularly to US laboratories for NOHA, histologic and IHC analysis. NOHA and IHC assay operators were blinded to each other's result and patient clinical status. Paired NOHA and IHC results were compared.

Results: Slides from 43 participants were available for pathological analysis. Of those with confirmed malignancy (n = 39), 44%, 51%, 5% were ER-positive, ER-negative, and ER inconclusive, respectively. NOHA levels were available among 33 of 43 of those with pathological data and showed distinct threshold levels correlating 100% to tumor ER IHC and disease categorization where a level below 4 nM, from 4 to 8 nM, and above 8 nM signified ER-negative, ER-positive, and no cancer, respectively.

Conclusion: The results are consistent with findings from US patients and suggest NOHA's clinical utility as an accessible IHC replacement in determining ER status among low-and middle-income country patients with breast cancer, promising to extend access to cost-efficient, available hormonal agents and improve outcomes.

Recommendation: NOHA is the first blood-based technology that differentiates ER−versus ER+ breast cancers, offering rapid results through use of inexpensive, easy-to-maintain equipment and reagents, suitable for use by laboratory personnel at LMIC point of care.

Climate Change emerging and re-emerging diseases

1. TITLE: CLINICAL MANIFESTATIONS AND MORTALITY AMONG HOSPITALIZED PATIENTS DIAGNOSED WITH COVID-19 INFECTION IN TANZANIA.

Contact: elishaoosati@gmail.com
Sub theme: Climate Change emerging and re-emerging diseases
Presenter: Elisha Osati

Background: Fever, cough and dyspnea are the most reported symptoms in patients with SARS-CoV2 infection elsewhere in the world. Differential mortality rates from the infection have been reported in the western world compared to countries in Sub-Saharan Africa.

Objective: To describe clinical manifestations and outcome of patients diagnosed with COVID-19 in selected tertiary hospitals in Tanzania.

Methods: A retrospective analysis of archived data from 26th March 2021 to 30th July 2022 was done for adults aged ≥18years who were admitted in participating hospitals. Information collected include socio-demographic, radiological and clinical. Categorical variables were presented as frequencies and proportions and compared using Chi square test. Logistic regression was used to assess the relationship between COVID-19 mortalities and the collected variables.

Results: Out of 1387 patients' 722 (52%) were males with median age of 60 (19-102) years. About 626 (45%) of the patients were covered by health insurance. Significantly more patients were admitted with dyspnea 943 (68%), cough 889 (64%), fever 597 (43%), fatigue 570 (41%), chest pain 364 (26%) and headache 253 (18%). In-hospital mortality was 476 (34%). The odds of death were significantly higher among elderly aged ≥ 60 years [aOR (95% CI) =1.48 (1.32-1.72)], uninsured [aOR (95% CI) = 2.78 (2.09-3.70)], HIV positive [aOR (95% CI) = 3.85 (2.07-7.15)], Headache [aOR (95% CI) = 4.7 (1.11-9.81)], chest pain [aOR (95% CI) = 2.02 (1.28 – 3.20)], High level of D-dimer, [aOR (95% CI) = 2.03 (1.39 – 2.96)] and non-use of Ivermectin [aOR (95% CI) = 1.46 (1.09 – 2.22)].

Conclusions: The most common presenting symptoms were dyspnea, cough and fever. Patients who died significantly had Higher median value of CRP, D-dimer, White Blood cell

count (WBC), Absolute Neutrophil count (ANC), higher Fasting Blood Glucose (FBG), Serum creatinine and Blood Urea Nitrogen (BUN). Predictors of mortality were age above 60 years, being uninsured, positive HIV infection, Headache, chest pain, High level of D-dimer and non-use of Ivermectin.

Recommendations: Follow-up study for long complication of COVID-9 should be considered.

2. TITLE: AN OVERVIEW OF CLIMATE CHANGE'S IMPACT ON INFECTIOUS DISEASES

Contact: mwelange@gmail.com
Sub theme: Climate Change emerging and re-emerging diseases
Presenter: Luco Patson Mwelange

Background: Climate change is the long-term changes in weather conditions and extreme weather occurrence patterns. Climate change is the most significant health threat of the 21st century. The evidence shows that the emergence, re-emergence, and spread of infectious diseases are climate change's most significant health effects. This is due to the accelerating disruption of biodiversity forces humans, vectors, livestock, and pathogens into increasingly closer contact. As the climate continues to change, the risks to health systems and facilities are increasing, reducing the ability of health professionals to safeguard individuals from various climate hazards.

Objective: This study aimed to review climate change's impact on infectious diseases.

Methods This study was a review of the published evidence. The following published documents were used in the review: the bmj a special supplement of eight collections of publications on Climate change and communicable diseases, IPCC, 2022: Climate Change 2022: Impacts, Adaptation and Vulnerability, a comprehensive assessment of the current state of knowledge of the observed impacts and projected health risks of climate change. WHO guidance for climate-resilient and environmentally sustainable health care facilities and Operational framework for building climate-resilient health systems, detailed documents on how to make health systems resilient to climate change.

Results: Climate change exacerbates >50% of human pathogens. The greatest climatic risk is a temperature rise, which exacerbates over 150 diseases. Also, climatic hazards bring people closer to pathogens, which are strengthened by climatic hazards. Climate change is anticipated to increase malaria in Africa, Asia, and South America, subjecting millions more

people to the disease. In North America, Asia, Europe, and sub-Saharan Africa, dengue vector ranges will expand, placing over 2.25 billion people at risk. At a temperature increase of 2.1°C, tens of thousands of additional cases of diarrheal disease, especially in central and eastern Africa. In Asia and Africa, a 1°C increase in temperature can result in a 7% increase.

Conclusion: There is an increasing risk of climate change's impact on infectious diseases, and developing countries with a low capacity to predict, mitigate and adapt will be more affected. There is an urgent need to build climate-resilient health systems that will withstand climatic hazards. In addressing the causes of climate change, the health sector should play a major role because it emits over 4% of the world's greenhouse gases, more than aviation or shipping.

Recommendation:

a. Incorporate environmental information into public health practice integrating climatic data into the surveillance of infectious diseases.
b. Improve adaptation and building resilience to climate change.
c. Capacity building to health workforce on climate change and health system resilience.
d. Capacity building on using climate to predict infectious disease epidemics.
e. Improve energy efficiency in the health sector to reduce greenhouse gases.

3. TITLE: MYTHS AND PERCEPTION ON COVID-19 VACCINATION AMONG ADULT POPULATION: A CASE OF ILALA DISTRICT IN DAR ES SALAAM REGION AND MOSHI DISTRICT.

Sub theme: Climate Change emerging and re-emerging diseases
Contact: lkanyuma@gmail.com
Presenter: Leonida Kanyuma

Background: Currently the Corona virus disease 2019 (COVID-19) vaccine is available across various countries worldwide, whereby in developing countries such as Tanzania the vaccine is provided as a donation from developed countries under international strengthening agreements to ensure all individuals around the world are vaccinated through a phased approach. Irrespective of geographical spread Tanzania in particular, several myths and perceptions pertaining to the

COVID-19 vaccine has emerged ultimately limiting the national administration of vaccine and roll-outs.

Objective: This study aims at exploring the myths and perceptions on COVID -19 vaccinations among adult population in Tanzania.

Methods: An exploratory case design was used and it employed a qualitative approach to gather in-depth and detailed information about the study. Adults' who were not vaccinated were purposely sampled from Karume and Mbuyuni sokoni in Ilala and Moshi and then participated in an interview between September and October, 2022. Data were analysed through Inductive Thematic Analysis (ITA) approach, which yielded five themes.

Results: Thirty adults were interviewed, whereby 63% (N=19) were male, and 37 % (N=11) where female. The mean age of participants was 38.2 years old. Regarding education, the highest percentage of participants 40% (N=12) were primary education, while the lowest was 3.3% (N=1) vocational training education. Fear of being vaccinated was one of the most reported barriers by respondents. The most common sources of fear were potential reactions and side effects of the COVID-19 vaccine which included; the possibility of death, dizziness, shortness of breathes after vaccine. The most troubling side-effects reported included fertility issues and blood clots. Most respondents said that, they would rather delay vaccine

Conclusion: The study provides an understanding of how COVID-19 vaccine hesitation could be tackled; and this calls to design an intervention that supports individuals by ensuring the correct information is provided to allow people to make decisions.

Recommendation: There is a need to design interventions that support individuals by ensuring the correct information is provided to allow people to make decisions. Recognizing and focusing on the barriers revealed by this study can contribute to increasing COVID-19 vaccine acceptance and uptake in Tanzania and possibly elsewhere.

1. TITLE: EPIFRIEDELANOL IS THE KEY COMPOUND TO ANTIBACTERIAL EFFECTS OF EXTRACTS OF SYNADENIUM GLAUCESCENS AGAINST BACTERIA

Sub theme: Nutrition and Traditional/Alternative Medicines
Contact: msengwa_z@yahoo.com
Presenter: Zaituni Msengwa

Background: Medicinal plants have long been used in traditional and alternative medicine for the treatment of diseases. Synadenium glaucescens is a medicinal plant that contains phytochemicals.

Objective: To investigate the antibacterial and toxicity effect on red blood cells of secondary metabolites of Synadenium glaucescens.

Methods: Hexane, dichloromethane, methanol, and water were used as extraction solvents. The extract of the root bark was fractionated with ethyl acetate and methanol. The isolation of compounds from root barks, leaves and stem wood extracts were carried out using column chromatography. Antibacterial activities were characterized based on growth curves, killing curves and MIC determinations. Haemolytic assay was used to measure the release of red blood cells at a wavelength of 540 nm using a spectrophotometer.

Results: Extracts from whole root and root bark showed strong activity against Staphylococcus aureus, Streptococci and Enterococci species, and moderate to weak activity against Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa, Salmonella species, Shigella sonnei and Yersinia enterocolitica. Staphylococcus aureus was the most susceptible. Likewise, extracts, fractions, sub-fractions and epifriedelanol demonstrated bacteriostatic activity against S. aureus. The haemolytic activity of the root extracts, fractions, sub-fractions and epifriedelanol was significantly lower compared to the hydrogen peroxide.

Conclusion: S. glaucescens has the potential for the formulation of antibacterials to reduce antibacterial resistance and epifridelanol could lead to formulation of antibacterial compounds.

Recommendation: Epifriedelanol is the lead compound and can be further investigated in-vivo before consideration by the pharmaceutical industries for the formulation of antibacterial agent

1. TITLE: PRACTICE AND FACTORS ASSOCIATED WITH LOCAL ANESTHETICS USE IN MUHIMBILI NATIONAL HOSPITAL AND MUHIMBILI ORTHOPEDIC INSTITUTE - TANZANIA

Sub theme: Surgery and Trauma
Contact: victoriaadonicam@gmail.com
Presenter: Victoria Adonicam

Background: Local anesthetics are commonly used by surgical specialty teams and are known to be associated with several complications such as Local Anesthetic Systemic Toxicity and High/Total spinal block, which have high mortality rates if not promptly intervened. While International societies like ASRA and NYSORA have recommended standard practices, many low-and-middle-income countries still struggle to adhere to them due to factors like inadequate knowledge of local anesthetics, lack of monitors, drugs and equipment for resuscitation. Anesthesia care providers have been extensively studied while less is known of other surgical team members who also use local anesthetics.

Objective: This study aimed to assess current practices and associated factors regarding use of local anesthetics by surgical specialty teams at Muhimbili National Hospital and Muhimbili Orthopedic Institute.

Methods: An analytical, cross-sectional study was conducted at MNH and MOI, involving 197 surgical specialty team members following a simple random sampling. Non-intrusive direct observation using a checklist derived from ASRA and NYSORA was employed, and standard questionnaires were administered at the end of procedures to assess participants' knowledge of local anaesthetics. Descriptive statistics, Chi-square tests, and Odds ratios were employed to measure associations between variables, with statistical significance set at $p < 0.05$.

Results: The study revealed that only 12% of participants adhered to the standard practice of local anaesthetics. Alarmingly, just 39% practiced continuous monitoring after administering local anaesthetics, and only 14% prepared drugs and equipment for resuscitation, despite having them readily available in their facilities. About 6% of participants practiced handwashing before procedures, despite having running water accessible. Strong associations were observed between practice and factors such as level of knowledge (p=0.001, O.R = 5.3E +15), specialty (p=0.001, O.R = 1.4E +9), work experience (p=0.006, O.R = 4.4) and on-the-job training (p=0.001, O.R = 0.0).

Conclusion: The study revealed a concerning level of suboptimal practice in the administration of local anaesthetics among surgical specialty teams, with a significant gap in adhering to safe practices. Factors influencing the practice of local anaesthetics include HCW level of knowledge, type of specialty, on-the-job training, and institutional availability of monitors, drugs, and resuscitation equipment.

Recommendation: To improve patient safety and reduce the risk of complications associated with suboptimal practices, we recommend development and implementation of standardized protocols for local anaesthetics administration along with continuous medical education and training programs. Healthcare institutions should ensure the availability of necessary resources and emphasize their proper utilization through training and ongoing monitoring.

2. TITLE: FACTORS ASSOCIATED WITH FAVORABLE SHORT-TERM NON-OPERATIVE TREATMENT OUTCOMES AMONG PATIENTS WITH DEGENERATIVE CERVICAL SPINE DISEASE.

Sub theme: Surgery and Trauma
Contact: deogratiousc@yahoo.com
Presenter: Mulokozi C. Mutagwaba.

Background: Cervical degenerative spine disease can be treated operatively or non-operatively, non-operative management involves pharmacotherapy and physical therapy. Favourable Short-term treatment outcomes include pain reduction and sensory-motor recovery, with an eventual return to normal daily activities as a long-term outcome. Several factors have been attributed to early pain relief and sensorimotor recovery, among them including early diagnosis and combined therapy.

Objective: This study was conducted to determine factors associated with favourable short-term treatment outcomes among patients with degenerative cervical spine disease treated non-operatively at MOI.

Methods: This cross-sectional study was conducted from June to December 2022 and included 78 participants 18 years and above with confirmed clinical and radiological diagnoses of chronic degenerative cervical spine disease, all patients received non-operative treatment for 6 weeks. Data on gender, age, occupation, and patient symptoms were gathered using a questionnaire, the research tools Copenhagen neck functional disability scale (CNFDS) and modified Japanese Orthopaedic Association scale (mJOA) were used to assess disease severity and treatment outcome.

Results: The study included 78 patients, mostly females (71.79%) over 60 years old. The common presentation was axial neck pain and radiculopathy, with moderate severity. Combined therapy was the most used treatment, showing greater pain reduction compared to pharmacotherapy alone (p=0.002). Disease severity at presentation significantly affected pain reduction, with moderate cases having higher chances than severe cases (p=0.00) and (p=0.02) after adjusting for other factors. The study had a 5% significance level.

Conclusion: The results of this study suggest that available non-operative treatment modalities at MOI can lead to significant early pain reduction for patients with degenerative cervical spine disease and severity at presentation appears to be a significant factor in determining short-term non-operative treatment outcomes. However, non-operative treatment modalities may yield inadequate early sensorimotor outcomes, and further research is necessary to confirm this finding.

Recommendation: Based on the study findings, an individualized approach to non-operative treatment for degenerative cervical spine disease is recommended, considering disease severity, age, and sex. Early intervention improves outcomes. Implementing multimodal treatment with pharmacotherapy and physical therapy is suggested. Long-term follow-up evaluates sustained effectiveness. Promoting patient education and compliance is crucial.

3. TITLE: ACUTE KIDNEY INJURY, ASSOCIATED FACTORS, AND HOSPITAL OUTCOMES AMONG CHILDREN UNDERGOING CARDIAC SURGERY AT JKCI 2022

Sub theme: Surgery and Trauma
Contact: joy.gimonge@gmail.com
Presenter: Dr.Joyce.S.Gimonge

Background: Cardiac surgery-associated acute kidney injury (CSA-AKI) is one of the serious complications that can potentially impact morbidity, mortality, and long-term adverse effects. Despite the advances in the care and increased survival of children post-cardiac surgery, CSA-AKI is still a big problem with considerable morbidity and mortality in high-risk children. Prevention of CSA-AKI is important for survival and minimization of long-term adverse outcomes of children after cardiac surgery.

Objective: To determine the proportion, risk factors, and in hospital outcomes of Cardiac surgery-associated acute kidney injury (CSA-AKI) among children who underwent cardiac surgery at Jakaya Kikwete Cardiac

Methods: Data collection was done from 210 children using questionnaires, Intensive care unit (ICU) chart review, and hospital records. Diagnosis of AKI was done based on KDIGO criteria. Serum creatinine was measured pre-operative and throughout up to day 7 post-operatively to determine the presence of AKI. Mortality, number of days in intensive care unit were assessed day 7 post-operation. Descriptive data were tabulated and summarized using frequencies, percentages, median and interquartile range. Chi-square and fisher's exact test were used to measure the association between categorical variables. Poisson regression analysis modal was used for the risk factors.

Results: 120 (57.1%) were males and 90 (42.9%) were females. Data collected were analysed using SPSS. Proportion of AKI among children was 13.3%, while 35.7% occurred day 1 post-op and it was higher compared to other days. The factors studied were preoperative, intraoperative, and postoperative risks for AKI. Increased number of days in mechanical ventilator, platelets transfusion, and hypotension were independently associated with CSA-AKI in multivariate Poisson regression analysis. Mortality of patients post cardiac surgery with AKI was 17.9% higher than their counterparts without AKI (1.6%) (p=0.001). The majority (89.5%) of patients with AKI post-operatively had increased days in ICU compare to their counterparts

Conclusion: AKI is common among children undergoing cardiac surgery with increased number of days in ICU and has been significantly associated with increased mortality

Recommendation: There is a need for establishing strategies and intervention to facilitate aggressive management toward hypotension intraoperatively and Further research should be done to explore long-term outcomes of AKI among children undergoing cardiac surgery.

4. TITLE: RISK FACTORS AND PREDICTORS OF OUTCOMES IN PAEDIATRIC TRAUMA PATIENTS PRESENTING AT THE EMERGENCY DEPARTMENT OF MUHIMBILI NATIONAL HOSPITAL

Sub theme: Surgery and Trauma
Contact: rebeccaaprilnixons@gmail.com
Presenter: REBECCA NIXON TUGARA

Background: Trauma is a significant cause of morbidity and mortality, of which more than 90% occurs in LMICs. In the general population, there are 32% more deaths from injuries than from HIV, tuberculosis, and malaria combined. In nations with few resources, trauma is a major burden and the leading cause of morbidity and mortality in paediatric and adolescent populations globally. In an effort to understand the burden, and improve the care process and outcome of paediatric injuries in Tanzania, this study describes the predictors of outcome in paediatric trauma patients presenting to emergency department at a tertiary urban hospital (Muhimbili National Hospital).

Objective: To determine risk factors and predictors of outcomes in paediatric trauma patients at the emergency department of Muhimbili National Hospital

Methods: This is a prospective cohort study done among 225 children from 1 month to 14 years presenting to the emergency department of Muhimbili National Hospital from December 2022 to March 2023. Data was entered into RedCap and analyzed using IBM SPSS version 26 (IBM Corp., Armonk, NY, USA). Categorical variables is presented as frequencies, and numerical variables summarized using mean (+/- SD) or median (+/-QR) depending on how these numerical variables are distributed. Logistic regression analysis was used to test for the between the in-hospital mortality and other variables such as the demographic. A p- value of 0.05 at 95% confidence interval was considered as an

Results: Our study enrolled 225 children, aged 1 months to 14 years, from caregiver of median age was 32 years. The injury severity was 12.2% using the NISS (≥7) and 2.2% using Glasgow coma scale. Using ICD10, 25% were categorised as others and unspecified head injuries, 12.4% as burn and corrosion on multiple body region. Most injuries (63.1%) took place at home, 29.3% were fall from height. The majority (80.4%) of injured children arrived at the EMD within 24 hours after an injury. Also, 20% were self-referrals, and only 36% arrived to the EMD by ambulance. The median time spent at the EMD was 3 hours. In 36% of the children were discharged home within 24 hours, 48.9% and 12% were in the wards and the intensive care u

Conclusion: The study reports the significantly higher in-hospital mortality at a Muhimbili National Hospital among children with injuries than previous studies. The majorities of

injuries took place at home, mostly from fall from height. The predictors for 7 days in-hospital mortality included overall abnormal vital signs and children arriving by ambulance. The study recommends strengthening the referral systems from the referring facilities including referral stabilisation.

Recommendation: Management, stabilisation should be initiate by the referring facilities and enroute to the national hospital. We further recommend the formulation of means to enhance safety at homes.

5. TITLE: TIMING OF SURGERY, IN HOSPITAL POSTOPERATIVE COMPLICATIONS IN GERIATRIC PATIENTS WITH FEMORAL NECK FRACTURE TREATED BY HIP REPLACEMENT

Sub theme: Surgery and Trauma
Contact: evaemma1@gmail.com
Presenter: Eveline Sikahanga

Background: Worldwide hip fractures are projected to increase from 1.7 million in 1990 to 6.3 million in 2050. In Tanzania, conservative estimates suggest an annual incidence of 600,000 osteoporotic (femoral neck) fractures. Clinical guidelines and protocol recommend early surgery, within 48hours after injury.

Objective: To determine the timing to surgery and in hospital post-operative complications among geriatric patients with femoral neck fracture treated by hip joint replacement at MOI.

Methods: A hospital based cross sectional study, conducted at MOI for a period of 6months among patients aged 60 years and above with femoral neck fracture. Data were collected using structured questionnaire. Factors determining timing to surgery and in hospital post-operative complications were assessed. Significant variables have been analyzed with Ordinal and Binary logistic regression analysis. P value of <0.05 was considered statistically significant.

Results: A total of 50 patients were enrolled. The mean age (±SD) was 75 (± 10) years and 52% were males. All patients received their surgical definitive treatment more than 48hours post injury, timing of definitive surgery for patients who were residing in areas out of Dar res Salaam were 20days, theater timing post physician clearance had p value of 0.001. Majority (58%) of the patients developed pressure sores while 50 % developed delirium.

Conclusion: All patients received their definitive treatment 48hours after injury, however all arrived at MOI more than 48hour.

Recommendation: We recommend further studies to be done to know what causes delay on patients' arrival to MOI, and hence implementing the protocols and guidelines of managing the geriatrics patients within the first 48hours as the worldwide guidelines directs.

1. TITLE: PERFORMANCE OF OFFLINE SYSTEMATIC ERROR CORRECTION IN PAEDIATRIC WILM'S TUMOR PATIENTS RECEIVING ADJUVANT CONFORMAL RADIOTHERAPY

Sub theme: Technology
Contact: semruma2000@yahoo.com
Presenter: Rashid M. Mruma

Background: Radiotherapy plays a key role as an adjuvant treatment in pediatric Wilm's tumor, improving survival and quality of life. Pediatric patients pose unique challenges in achieving accurate radiotherapy delivery due to their inability to understand instructions and the high radiosensitivity of their tissues. Thus, it is important to determine the optimum geometric verification strategy that will ensure accurate delivery of the prescribed target as specified in the patient's treatment plan.

Objective: To evaluate the performance of offline geometric correction strategy, ensuring accuracy and reproducibility during radiotherapy delivery in Wilm's tumor patients.

Methods The extended no-action level offline correction strategy was applied in the radiotherapy delivery of 45 Wilm's tumor patients. Gross errors from the first three fractions were used to calculate the systematic errors which were then applied as offline correction factors. Mean errors among different groups were compared using a two-way analysis of variance and Dunnett's pairwise comparisons. All statistical analyses and data visualization were performed using GraphPad Prism version 7.

Results: A total of 45 patients were included in the study. In all three orthogonal directions, the recorded gross errors were significantly lower after the application of the systematic error corrections. Random errors were significantly larger in the longitudinal direction compared to lateral (mean difference=0.28, p=0.036) and vertical directions (mean difference=0.37 cm, p=0.003). Patients' age was a significant predictor of random errors whereby the magnitude of random error decreased with increasing age.

Conclusion This study shows that the offline correction strategy used is effective in ensuring the accuracy of radiotherapy delivery in pediatric Wilm's tumor patients.

Recommendation: Further study has to be done to assess the performance of offline systematic error correction in other like head and neck and chest wall radiotherapy

2. TITLE: ULTRA: AN ELECTRONIC BIRTH REGISTRY FOR THE KILIMANJARO REGION

Sub theme: Technology
Contact: g.nkya@kcri.ac.tz
Presenter: Gustarv Nkya

Background: Maternal and perinatal mortality persists in low-income countries, particularly in Sub-Saharan Africa. To reduce mortality, high-quality data must be collected as close to real-time as possible. Data analysis is difficult with existing paper-based systems, such as Health Management Information System (MTUHA) in Tanzania, as there is hardship in retrieving the data. Studies have proven electronic systems to solve this problem. To address these problems and limitations in the current approach to the recording of obstetrics delivery data, we developed the ULTRA App.

Objective: To set up ULTRA App in Kilimanjaro Region to improve maternal health care and reduce mortality and morbidity.

Methods The ULTRA App is an Android-based platform built using the DHIS2 platform to capture and store individual data of mothers and children in the Kilimanjaro Region. It covers variables from MTUHA books 6, 7, 12, and 13. The app is designed for resource-poor areas with limited internet access and features SMS reminders, notifications, and referral functionalities. It was funded by the Irish Research Council (COALESCE/2021/51).

Results: The ULTRA App has been implemented in five health facilities in the Kilimanjaro Region since October 2022, successfully recording 3137 antenatal visits and 1238 deliveries. Challenges have been reported, such as missing ANC records due to double-entry work. Data is stored securely on a local server.

Conclusion: The ULTRA App has been developed to improve patient outcomes in the Kilimanjaro Region and Tanzania by providing a cost-effective, error-free app with high-quality data.

Recommendation: Local and health ministry officials should encourage digital technology projects and improvements to improve patient outcomes.

3. TITLE: THE EFFICACY OF ACADEMIC LIBRARIES IN SUPPORTING E-LEARNING AT A UNIVERSITY SETTING IN LOW AND MIDDLE-INCOME COUNTRIES: SCOPING REVIEW

Sub theme: Technology

Contact: restychausi2022@gmail.com

Presenter: Restituta Thadeus Mushi

Background: Purpose of this scoping review was to bring together studies of the efficacy of academic libraries in supporting e-learning at a university setting in low and middle-income countries where is becoming a progressively significant approach to both students and faculty members. The protocol was registered in OFS October 2022.

Objective: To find out the efficacy of academic libraries in supporting e-learning at a university setting in low and middle-income countries

Methods: We searched the evidence (in English only) the literature was located from global databases both published and unpublished studies. Databases include: Web of science, SCOPUS, EBSCO, ProQuest, Google scholar and HINARI through summon search and published reports were retrieved from relevant websites and organizations. Studies included those that looked at key factors that support E-learning at universities as well as outcomes in terms of: support E-learning, capacity building, knowledge gathering, creation and dissemination. Main focus was in universities focus on students and faculty members. Studies on e-learning at secondary/primary schools were excluded.

Results: A total of 1642 records were retrieved and 832 potentially relevant articles were selected after title/abstract screening. 34 articles were excluded after full text screening, and therefore six papers were included in this review. All six studies shows that academic libraries in LMICs utilize e-learning and shows how librarians, academic staff and students do benefit. Students utilize different library resources and facilitates to enhance their online classes, not only that but also online submission of sessional work, do attend online examination

Conclusion: The successful utilization of E-learning support students learning, online and digital services. Lack of internet infrastructure and limited funds appear as the main barriers that hinder application of E-learning in academic libraries

Recommendation: The current review showed that there is a need to strengthen implementation of E-learning in LMICs.

1. **TITLE: FACTORS ASSOCIATED WITH TREATMENT OUTCOME OF HELICOBACTER PYLORI AMONG DYSPEPTIC PATIENT USING CLARITHROMYCIN-BASED THERAPY AT MNH**

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: dalilam694@gmail.com
Presenter: Dalila Mwindadi

Background: Helicobacter pylori affects 50 % of the world population. Although treatment has been available for decades, its failure with standard regimen has been noticed. Several factors are attributed to this failure. Few studies have been done in East Africa to associate factors that influence treatment outcome of Helicobacter pylori infection.

Objective: To determine the factors associated with treatment outcome of Helicobacter pylori infection with clarithromycin-based therapy among dyspeptic patients at MNH.

Methods: A cross-sectional study at the Endoscopy unit at MNH conducted between July 2022 to February 2023. Dyspeptic patients with stool antigen positive for Helicobacter pylori were given first line therapy, and eradication tested 6 weeks after completion. Biopsies were taken among those with positive stool antigen for Helicobacter pylori after 6 weeks for culture and AST. SPSS version 23 was used, statistically significant association with p-value <0.05.

Results: Cumulatively 385 patients with stool antigen for Helicobacter pylori were enrolled; mean age (±SD); 41 (±14) years. Majority of the patients were < 60 years 343 (89.1%), females represented 55.3%. 11 (3%) were currently smoking, 149 (38.7%) used alcohol. First line treatment failure as defined positive stool antigen 6 weeks post treatment was 132 (38.3%). Independent predictors of first line treatment failure were smoking (OR: 7.9, 95%CI (0.08 - 0.81), P = 0.03), concomitant herbal medication (OR: 6.7, 95%CI (1.02 – 2.23), P <0.001), PUD (OR: 1.7, 95%CI (0.61 – 3.71), P =0.48), adherence to treatment (OR: 6.2, 95%CI (3.52 – 10.8), P<0.001). 86/130 (66%) were inoculated and AST was done.

Conclusion: One third of patients showed no eradication from clarithromycin- based therapy which is usually the first line. This is below the guideline recommended value. Poor adherence, concurrent use of herbal medication and cigarette smoking were independently associated with poor eradication of Helicobacter pylori eradication. The

resistance to all medication used as first line in the management of Helicobacter pylori are still staggeringly high.

Recommendation: Strengthening adherence counseling before and during treatment is crucial in ensuring treatment success. More effort is needed to ensure individual tailored treatment basing on the susceptibility patterns is practiced

2. TITLE: CLINICAL CHARACTERISTICS AND FACTORS ASSOCIATED WITH MORTALITY AMONG CHILDREN WITH SEPSIS ADMITTED AT PAEDIATRIC ICU AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: oajuna@gmail.com
Presenter: Olivia Theonest

Background: Sepsis is a global burden in pediatric population setting high morbidity and mortality. It is one of the leading causes of Pediatric Intensive Care Unit admissions in both developing and developed countries. Clinical characteristic and factors associated with mortality at ICU in our settings are not well documented, hence posing more challenges in its management.

Objective: To determine the clinical characteristics and factors associated with mortality among children with sepsis admitted at pediatric intensive care unit at Muhimbili National Hospital.

Methods: Cross-sectional study with longitudinal follow up was conducted among 160 children with suspected/proven sepsis admitted to PICU at Muhimbili National Hospital, Tanzania from July 2022 to January 2023.The diagnosis of sepsis was made within 24 hours of admission after screening using SIRS criteria. Clinical and laboratory characteristics were recorded from hospital software (JEEVA) and patient clinical notes. Outcome assessed at day 10 post admission whether survived or deceased. Data entry and analysis was done using SPSS version 23.Chi square or Fisher's exact test used for comparison Poisson regression was used for multivariate analysis for association factors.

Results: total of 160 children with suspected or proven sepsis were included in the study, male to female ratio was 1:1. with median age of 1year (IQR=1-14). Respiratory system was the most common focus of infection (51.9%). Majority of children had sepsis with associated organ dysfunction (76.9%), with respiratory failure being the most common type. Of the study participants, 43.8% had positive culture growth, and the common isolate

was Staphylococcus aureus (76.6%). The proportion of mortality was 38.8% at the 10th - day of follow-up, Septic shock, and the need for inotropes were associated with increase in mortality and culture positive was associated with decrease in mortality.

Conclusion: Sepsis is a major health challenge among children in the pediatric intensive care unit (PICU) in this study 47.8% of children admitted at pediatric ICU had sepsis, half of the participants had respiratory system as focus of infection. Majority had sepsis with associated organ dysfunction with respiratory failure being the most type common, proportion of mortality was 38.8%. Septic shock and the need of inotropes was found to be positively correlated with mortality, where a positive culture result was negatively associated mortality.

Recommendation: Early recognition, prompt management, prevention of septic shock, and optimizing care are crucial in reducing mortality. Prompt identification and targeted treatment of the causative organism may improve outcomes for patients with sepsis in PICU as it guides an informed decision toward patient's management.

3. TITLE: A QUALITATIVE EXPLORATION OF BARRIERS TO ACCESSING PREP AMONG VULNERABLE ADOLESCENT GIRLS AND YOUNG WOMEN

Contact: margareth.thadei@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Magreth Thadei Mwakilasa

Background: HIV is a serious global concern affecting adolescent girls among other populations due to multiple vulnerabilities. In Tanzania, vulnerable Adolescent Girls and Young Women-(vAGYW) are twice as likely to be infected with HIV compared to their male counterparts. The introduction of Pre-Exposure Prophylaxis-(PrEP) brought hope in changing the HIV cascade, however, to date after the scale-up of PrEP, numerous challenges hinder access to PrEP among Key and Vulnerable populations-(KVPs).

Objective: To explore barriers that vAGYW face in accessing PrEP following the country-wide scale-up in the selected healthcare facilities.

Methods: We conducted a qualitative study among vAGYW aged 15-24 years accessing PrEP in the selected healthcare facilities in Dar es Salaam, Tanga and Dodoma. A total of 58 In-depth interviews were carried out between May 2022 to November 2022. Thematic analysis following the six stages of Braun and Clarke was used to analyse data, and Nvivo software was utilized for the organization of data.

Results: vAGYW reported that institutional factors like the provision of PrEP in traditional HIV/AIDS Care and Treatment Clinics (CTCs), lack of privacy, inconsistency in PrEP availability, long wait times for services, and inadequate staff in CTC clinics hinder PrEP access. Moreover, interpersonal factors such as the misconceptions of PrEP as ART by peers, family members, and co-workers as well as the labelling of PrEP users as HIV-positive influence their decision to utilize PrEP services. In addition, personal factors such as fear of HIV testing and test results, disbelief in the efficacy of PrEP in providing HIV protection, and the requirement to take the pills daily prevented vAGYW from accessing PrEP.

Conclusion: vAGYW access to PrEP was hindered by privacy concerns in the CTCs, stigmatization as HIV-positive by peers, family, and colleagues, and scepticism about its efficacy in preventing HIV infection. Therefore, there is a great need to increase community outreach to raise awareness about PrEP not only among vAGYW but in the community as a whole.

Recommendation: Healthcare facilities should prioritize out-of-facility PrEP delivery, decentralize PrEP from the traditional CTCs building to reduce stigma and increase PrEP community advocacy initiatives.

4. TITLE: UPTAKE OF HEPATITIS B VACCINE AND ASSOCIATED FACTORS AMONG HEALTHCARE WORKERS IN DISTRICT HOSPITALS IN PEMBA, ZANZIBAR, TANZANIA.

Contact: sadisuzaeh2016@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Bakar Khamis

Background: Hepatitis B virus vaccine remains as a strategic intervention to combat spread of Hepatitis B infection. However, status of uptake is not well documented among healthcare workers in various levels of Health facility in Zanzibar

Objective: To assess the uptake of Hepatitis B vaccine and associated factors among healthcare workers in district hospitals in Pemba, Zanzibar by using the health belief model.

Methods: A Hospital-based cross-sectional analytic study design was conducted in three district hospitals in Pemba, Zanzibar. An interviewer-administered questionnaire was used to collect data. The descriptive analysis was performed where bivariable and multivariable analyses were conducted via Modified Poisson regression in STATA version 17.

Results: Among 210 healthcare workers, 58 % had ever received the hepatitis B vaccine. The sex and perceived susceptibility were associated with the uptake of the vaccine. Being a female healthcare workers had a 57 % higher prevalence of receiving hepatitis B vaccine compared to males in District Hospital (APR =1.57, 95% CI =1.21-2.024). Healthcare workers with high perceived susceptibility had a higher prevalence of HBV vaccine uptake (APR =1.56, 95% CI = 1.10 -2.32)

Conclusion: The uptake of the Hepatitis B vaccine among healthcare workers in the district hospitals in Pemba, Zanzibar is below WHO target of 90% coverage. The sex and perceived susceptibility play major role in HBV uptake

Recommendation: Therefore, health education should be provided to increase perceived susceptibility among HCWs. Health facility management should prepare special campaign to influence male healthcare workers to uptake HBV vaccine. Further study should be conducted to address factors associated with full vaccination among Health care workers in district hospitals in Pemba Zanzibar

5. TITLE: BARRIERS FOR ADHERENCE TO ANTI-RETROVIRAL UPTAKE AMONG PEOPLE LIVING WITH HIV WITH ELEVATED VIRAL LOAD

Contact: rshemtandulo@mdh.or.tz
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Ramadhani Shemtanduo

Background: In order to halt the HIV epidemic, adherence to anti-retroviral (ARV) treatment including consistently taking ARV at the right time, is essential. Recent reports have shown that 12% of 1,277,012 people living with HIV (PLHIV) in Tanzania have failed to suppress HIV viral load (HVL) copies and this could be partly due to poor adherence on ARV uptake. Understanding reasons contributing to poor adherence to ARV will provide strategies for addressing poor adherence.

Objective: To describe the documented barriers for ARV adherence during continuum HIV care and Treatment.

Methods: We reviewed HIV client's files with HVL copies above 999 copies/ml between October 2021 to October 2022 from 14 health facilities with more than 1000 clients current receiving ARV treatment in Tabora region. The documented reasons for inconsistence adherence to ARV were extracted from client's EAC forms. Descriptive analysis was used to

summarize the reasons by coding and grouping them into four themes: Cognitive, Behavioral, Emotional and Social-economic.

Results: A total of 234 clients had copies above 999copies/ml. of them 174 (73.9%) received sessions on ART adherence. Majority 107 (61.5%) were female with median age of 32 (IQR:16 to 42) years. More than half (54.8%) of documented reasons for low adherence were cognitive, dominated by forgetting, while 32 (19.3%) had social economic barrier brought on by business activities and farming, behavioral accounted for 27 (16.3%) mainly due to alcoholism and 16 (9.6%) emotional challenge which mainly cause by self-stigma.

Conclusion: Forgetfulness is one of the common barriers for adherence to ARV treatment among PLHIV in Tabora region

Recommendation: We recommend a multi-disciplinary approach in addressing the barriers to adherence to ARV including short messages (SMS) reminders.

6. TITLE: FACTORS INFLUENCING HIV VIRAL LOAD SUPPRESSION AMONG ANTIRETROVIRAL THERAPY (ART) USERS ATTENDING METHADONE CLINIC VERSUS CARE AND TREATMENT CONTACT IN DAR ES SALAAM, TANZANIA

Contact: ntoli.abraham@yahoo.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Ntoli Abraham

Background: The prevalence of HIV infection among drug users (PWUD) in Tanzania ranged from 11.0 to 51.1% in studies conducted from 2010 to 2018. These rates exceed 4.5% of HIV infections in the general population. Studies show that only 4% of PWUD have access to ART in Tanzania.

Objective: To determine factors influencing viral load suppression and identifying associated clinical Outcomes among ART users attending methadone clinic versus CTC

Methods: A cross-sectional study design was conducted among 408 ART users aged 18 years and above. A structured questionnaire was used. Categorical variables were summarized using frequencies and percentages. Univariate and multivariate logistic regression were used to analyze the relationship between predictors and outcome variables. Correlation between continuous variables was performed by robust Poisson regression mode.

Results: The median age (IQR) in years was 44(44, 48) for methadone and 48(35, 59) for CTC. Cigarettes' smoking was reported in 72.7% of methadone users. HIV viral suppression was

95.6% and 88.4%, among ART users at methadone clinics and CTC respectively with statistically significant (p<0.05). Positive correlates of viral suppression were obesity(crude prevalence ratio (cPR) = 1.03, p = 0.004) in the methadone group. Negative correlates were stage I and II at the start of ART (cPR = 0.97, p = 0.018) in methadone and participants living less than 5 km away (cPR = 0.92, p = 0.036) in the CTC group.

Conclusion: Attending a methadone clinic was associated with greater viral load suppression than CTC. Factors influencing viral suppression were obesity and stage I and II at the start of ART in the methadone group. Staying less than 5 km from the facility influenced the repression in the CTC group

Recommendations: Both methadone and care and treatment centres have been shown to improve the uptake of ART and therefore viral suppression. The involvement of people living with HIV who inject drugs in methadone programs will increase treatment coverage in our community, thereby coping with HIV disease. In addition, improvements in virus suppression will reduce ongoing HIV transmission both within the PWID community and between PWID and the general

7. TITLE: MAGNITUDE OF CRYPTOCOCCAL ANTIGENEMIA AND EARLY CLINICAL OUTCOMES OF HIV-INFECTED ADULTS RECEIVING FLUCONAZOLE PRE-EMPTIVE THERAPY -INCLUDE THE STUDY SETTING

Contact: ojavety4@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Octar Javety

Background: Cryptococcal meningitis is among the major opportunistic infections that can occur in advanced HIV - infected individuals. There is limited evidence on early clinical outcomes of HIV-infected adults on fluconazole pre-emptive treatment. Therefore, this study aimed to investigate the prevalence of cryptococcal antigenemia and 6-month clinical outcomes of HIV-infected adults with CD4+ cell count < 200 cells/μL treated with fluconazole pre-emptive therapy.

Objective: To investigate the prevalence of cryptococcal antigenemia and 6-month clinical outcomes of HIV-infected adults with CD4+ cell count < 200 cells/μL treated with fluconazole pre-emptive therapy

Methods: A prospective cohort study was conducted in Dar-es-salaam. It involved a total of 165 participants aged ≥18 years with CD4 cell counts < 200 cells/μL from three CTCs.

Fluconazole pre-emptive therapy was initiated for all serum CrAg-positive participants, assessment of signs and symptoms of cryptococcal meningitis was done every month and CD4 cell counts were re-checked after 6 months.

Results: A total of 165 patients were enrolled. The mean age (± SD) of the study population was 42.9 years (±11.4). Males were 52.7%, 52.7% were ART experienced, 9.7% were TB coinfected, 50.3% had WHO Clinical Stage 3, and 56.4% had CD4+ cell counts < 100 cells/μL.

The prevalence of cryptococcal antigenemia was 20/165 (12.1%). ART naïve had a high prevalence (23.1%) compared to ART-experienced participants (2.3%) (p =0.001), and it was significantly associated with cryptococcal antigenemia (p=0.002). During six months of follow-up, there was only one death 1/20 (5%). The rest completed six months with the immune response of CD4+cell counts from the baseline (200 cells/μL after follow-up.

Conclusion: Despite awareness about HIV and the availability of ART, the prevalence of cryptococcal antigenemia is still high. Being ART naïve was an associated factor of cryptococcal antigenemia. It was also found that initiation of ART and fluconazole pre-emptive therapy to serum CrAg-positive participants benefits early response of the CD4+ cell count and prevent the development of cryptococcal meningitis.

Recommendation: Because people are still presenting late to care with advanced AIDS, we still need to increase routine counseling and testing in our settings. Revise the statement; eg. Increased routine counselling and testing may be needed because people present late to care with advanced AIDS.

We recommend large prospective studies which will include checking of CrAg titers at baseline and clearance after follow-up. Also, assessment of adherence to ART and fluconazole during all courses of follow-up may be essential.

8. TITLE: URINARY TRACT INFECTION: PREVALENCE, AETIOLOGY, ANTIBIOTIC SUSCEPTIBILITY PATTERN AND TREATMENT RESPONSE AMONG PATIENTS AT A HEALTH CENTRE IN DAR ES SALAAM, TANZANIA

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: magaiphilo@gmail.com
Presenter: Philomena Emmanuel Magai

Background: Urinary Tract Infection (UTI) is common in Tanzania with a prevalence ranging from 16.7% to 39.7%. Evidence indicates that there is significant bacterial resistance to the commonly prescribed antibiotics for UTI treatment. The study findings will be useful to the Ministry of Health on making policies and guidelines to address drug resistance problem which is currently on the rise.

Objective: To determine the prevalence, bacterial aetiology, antibiotic susceptibility pattern, and clinical outcome of patients treated for UTI at a Health Centre in University of Dar es Salaam (UDSM).

Methods: A prospective cohort study was conducted among outpatients at UDSM Health centre in January 2023. Demographic and clinical information, clean catch mid-stream urine for dipstick and culture were collected. Participants received empirical treatment based on clinician judgement. Culture and antibiotic susceptibility testing were performed at Muhimbili University of Health and Allied Sciences Microbiology lab. Participants were contacted by phone on 7th day to assess symptom progress. Data was analyzed by SPSS 23.0. The Chi square test was used to establish statistical difference of symptom resolution between participant on resistant and susceptible antibiotic. P-values of <0.05 was considered statistically

Results: Cumulatively, 411 participants provided urine samples, 308(75.1%) were females, the mean age was 24 years (SD 9.43). UTI prevalence by urine culture was 59(14.6%). Most isolated organisms were; E. coli 21(35%), coagulase negative Staphylococcus 16 (13%) and S. aureus 8 (7%). Bacterial resistance to Amoxiclav was 18(50%), ciprofloxacin 21 (60%) for E. coli and CONS. Seven days after antibiotic prescription, all participants reported symptom resolution including 18 (82%) participants with resistant isolates

Conclusion: Most bacterial isolates were resistant to amoxclav and ciprofloxacin which are usually the first line. However, majority of the participants had symptoms resolution at day seven while on antibiotics that were indicated to show resistance.

Recommendations: We recommend having a plan to monitor UTI clinical treatment effectiveness among patients regardless of AST results at diagnosis.

9. TITLE: MAGNITUDE OF ADVANCED HIV DISEASE AND TREATMENT OUTCOMES AMONG NEWLY ENROLLED PEOPLE LIVING WITH HIV RECEIVING TREATMENT IN TABORA

Contact: femil@mdh.or.tz
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Faida Emil

Background: The introduction of HIV testing and immediate initiation for ART for eligible clients has led to a decrease in morbidity and mortality across the globe. Despite the advancement of HIV management, still clients present with advance HIV disease (AHD) at first diagnosis. In Tanzania, the proportion who present with AHD ranges between 35%-60%. Little is documented on magnitude of AHD and its outcome in Tabora

Objective: To determine the magnitude and outcome of newly enrolled PLHIV presenting with AHD at health facilities (HFs) in Tabora region

Methods: A retrospective review of client's data newly enrolled at 154 health care facilities (HFs) supported by MDH from January to December 2022 in Tabora region was conducted. Demographic and clinical information including World Health Organization (WHO) staging, CD4 count at enrolment, TB status and Cryptococcal were extracted from CTC2 database (National Database for HIV client). Descriptive analysis was performed using STATA version 13.1, proportional of clients with AHD and their treatment outcome were calculated

Results: A total of 10,825 clients were newly enrolled in HIV care and treatment. 5,600 (60%) were females, with median age of 35 (IQR: 29-45) years. 2,470(22.8%) clients presented with AHD; 2,041 (18.8%) had WHO stage 3 or 4 and 429(4.0%) with CD4 count less than 200 cells/µL. Of those with AHD, 250(10%) had Tuberculosis (TB) while 75 (3.1%) had cryptococcal infection. Total of 109/2,470 (4.4%) of clients with AHD died, of these 21 (19.3%) and 6 (2.4%) had TB and cryptococcal infection respectively, while 442 (17.0%) had treatment interruption/transferred out

Conclusion: Advance HIV disease presentation at diagnosis is common and has negative outcome on clients

Recommendation: Multisector efforts are needed to sensitize community for early identification and treatment

10. TITLE: SELF MEDICATION PRACTICES WITH ANTIMALARIAL DRUGS AND ASSOCIATED FACTORS AMONG UNDER-FIVE CHILDREN AT THE MUHIMBILI NATIONAL HOSPITAL

Contact: anabfaisal@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Anab Faisal Issa

Background: Self-medication is a commonly reported problem in low-middle income countries, Tanzania inclusive. Due to national effort and external support, Malaria cases in Tanzania have been significantly reduced. Under-five children remain susceptible to malaria and other febrile illnesses because of their immature immune system. Self-medication of children with antimalarials is a significant threat towards antimalarial drug resistance especially in low transmission settings where resistant parasite strains can easily emerge. Additionally, children unnecessarily suffer the side effects of such drugs, and delay timely diagnosis and treatment of other causes of febrile illness.

Objective: To determine the prevalence, assess the factors, describe the socio-demographic characteristics, and clinical characteristics of under-five children exposed to self-medication with antimalarial drugs.

Methods: A cross sectional study was conducted at the RCH clinic at Muhimbili National Hospital. The study included all under-fives attending the clinic at the time of data collection; data included socio-demographic characteristics, self-medication practice in the past 6 months, antimalarial drug used, source of obtaining antimalarial, reason for self-medication, and clinical condition for self-medication. Using SPSS, Chi- square test of association was conducted to ascertain association between the various socio-demographic characteristics and self-medication with antimalarial drugs.

Results: At n=185/386, the median age of under-fives exposed to antimalarial self-medication was 37 months. The median age of self-medicating caretakers is 31yrs, 84% (16) are biological mothers, most are married 65% (13), and most educated above secondary school, 60% (12), with source of income being petty business for 55% (11). Many of these children were not insured 13 (65%). Almost half, 49.2% (91) report self-medication; 24% (21) report antimalarial (ALu) use. The symptom commonly resulting into self-medication was; isolated fever, 9 (45%), fever with other symptoms, 9 (54%). 72.4% had complete remission of symptoms. So far there is significant association between age of the child and choice of caretaker to self-medicate them.

Conclusion: The leading reason for caretakers to self-medicate is advice from others, largely reported to be healthcare professionals. Despite being residents of an urban city,

the respondents also prefer pharmacies rather than seeking professional help from health facilities. Even children with chronic illnesses who attend clinics regularly are exposed to self medication.

Recommendation: The prevalence of self medication with antimalarials in unexpectedly high. Proper counselling of mothers should be done so as to avoid delayed diagnosis and treatment of other febrile conditions as well as under treatment of Malaria itself. A qualitative study should be done to have a deeper understanding of the drivers behind self medication with antimalarials among children.

11. TITLE: THE MAGNITUDE AND FACTORS ASSOCIATED WITH THE SECOND DOSE DEFAULTING FOR COVID-19 VACCINATION IN TABORA REGION, TANZANIA.

Contact: sibwe@aaph.or.tz
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Ramadhani Shemtandulo

Background: COVID-19, caused by SARS-CoV-2, has been a major global health threat. People living with HIV (PLHIV) are particularly vulnerable due to their compromised immune systems. WHO recommend Fully vaccination to control the virus including those who have received vaccines that require two shots, should receive a second dose not more than 28 days after first dose. Experience shows, a number PLHIV are defaulted after receive the first dose. However, the magnitude and factors regarding defaulters is very little known.

Objective: To determine the magnitude and factors for 2nd dose of Covid-19 vaccinations defaulters among PLHIV in Tabora region

Methods: This was a retrospective study, involving 62 MDH supported health facilities providing care and treatment services in Tabora region. Demographic and clinical information of PLHV vaccinated from July 2021 to September 2022 were extracted from C-19 module of CTC2 database. Descriptive analysis was performed followed by Univariable and multivariable logistic regression to establish factor for C-19 defaulters.

Results: A total of 63,327 PLHIV were vaccinated, more than half 40,267(63.6%) were female, and the mean age of 43.8(SD=12.7). Around 571(1.23%) did not complete the second dose (Defaulters). Of the assessed determinants of the defaulter to full vaccination, Age group 18 to 25 year (aOR 1.9,95%CI;1.1-3.4), ARV dispensed drugs on the visit prior vaccination (aOR 3.2,95%CI: 2.2-4.7). Duration of less than one year on ART prior to first dose (aOR 0.7, 95%CI:

0.5-0.9) and took first vaccine during their routine clinic schedule (aOR 3.2,95%CI: 1.9-5.2) , were found to be the factors for C-19 defaulters

Conclusion: During vaccinations, Heath care providers are encouraged to incorporate multiple strategies such as call back and community ART outreach services rather than waiting on client's routine clinic schedule.

Recommendation: Despite the availability of COVID-19 vaccines, some PLHIV have been unable to complete their vaccinations although they attended their usual CTC visit and received HIV related services. Therefore, we recommend Health care workers and policy makers to employ multi-disciplinary approaches to scaleup essential services in order to reach an immune threshold of the pandemics.

12. TITLE: BARRIERS FOR ADHERENCE TO ANTI-RETROVIRAL UPTAKE AMONG PEOPLE LIVING WITH HIV WITH ELEVATED VIRAL LOAD IN TANZANIA

Contact: rshemtandulo@mdh.or.tz
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: RAMADHANI SEMTANDULO

Background: Anti-Retroviral Treatment adherence including consistence taking ARV at proper time, play a vital role nearer undetectable viral load among PLHIV in ending the pandemic. As of December 2019, 12% of 1,277,012 people living with HIV (PLHIV) in Tanzania failed to suppress viral load copies which was linked to poor adherence on ARV uptake. Despite the existing established reasons for non- adherence on ART of which most of them are from field interview, little knowledge is available regarding the documented barriers for ART adherence as a result of clients to provider centered adherence education.

Objective: To determine the berries for adherence on Anti-Retroviral uptake among people living with HIV in Tabora region

Methods: This was records'-based review of HIV client's files, clients with HVL copies above 1000 copies/ML from Oct 21 to Oct 22, extracted from 14 health facilities which have more than 1000 clients currently taking ART in Tabora region. The documented reasons for inconsistence ART adherence were extracted from clients' enhance. Descriptive analysis was used to summarize the reasons by coding and grouping them into four themes namely: Cognitive, Behavioral, Emotional and Social-economic.

Results: A total of 234 clients had copies above 1000 from Oct 21 to Oct 22, of them 174 (73.9%) had health education on ART adherence form. More than fifty percentage were , 107 (61.5%) with the median age and interquartile 32 (16 to 42) years.

From the review, more than half (54.8%) of documented reasons for adherence were cognitive which was largely dominated by forgetting, while 32 (19.3%) social economic including being much occupied due to business activities and farming, behavioral account for 27 (16.3%) including alcoholism and 16 (9.6%) were emotional which mainly account for self-stigma.

Conclusion: During health education sessions, Health care providers are highly emphasized to address the issues of stigma, the use of alarm settings as the reminder for ARV uptake; aligned with talking with Clients to arrange for appropriate time for ARV uptake which could not interfere with other life schedules.

Recommendation: This study suggests multi-disciplinary approaches in addressing the barriers to Anti-Retroviral adherence at the earliest stage during continuum HIV care and treatment.

13. TITLE: CONTAMINATION OF HOSPITAL INANIMATE SURFACE WITH MRSA AND ESBL PRODUCING BACTERIA IN OCEAN ROAD CANCER INSTITUTE

Contact: donathvalerian@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Donath Mkenda Valerian

Background: Contamination of hospital inanimate surfaces with resistant bacterial strains predisposes patients to Nosocomial Infections. MRSA and ESBL bacterial strains are the most prevalent hospital surface contaminants globally with the burden skewed to developing countries. MRSA and ESBL account for the majority of nosocomial infections. Hospital inanimate surfaces like bed rails, tables, keyboards, and benches are known to have significant bacterial contamination that acts as a reservoir of infectious agents and potential transmitters of nosocomial infections. Hospitalized patients particularly cancer patients are at increased risk of acquiring HAIs

Objective: To determine the proportion, antibiotic susceptibility pattern, and factors associated with MRSA and ESBL hospital inanimate surface contamination at ocean road cancer institute (ORCI)

Methods: Analytical cross-sectional study was conducted at the Ocean Road Cancer Institute (ORCI). A total of 247 samples was collected from hospital inanimate surfaces by using a sterile swab pre-moistened in sterile normal saline and transported in Trypticase soy broth (TSB). Samples were cultured on Mannitol salt agar (MSA) and MacConkey agar that contains 2mg/ml of ceftazidime. MRSA and ESBL was confirmed phenotypically by testing using a cefoxitin disk 30μg combined disk method respectively. Antimicrobial susceptibility was done using the Kirby Bauer disk diffusion method. Data Analysis was done by using STATA version 15.

Results: A total of 247 swab samples were collected from 6 pre-specified items. Proportion of MRSA and ESBL hospital inanimate surface contamination was 8.5% and 25.5% respectively. Bed rails and sinks were the most contaminated surface. Acinetobacter baumannii and Klebsiella pneumoniae were the most (38%) ESBL bacteria isolated. MRSA isolated from the ORCI hospital surface showed 100% sensitivity to linezolid and more than 80% resistance to clindamycin, gentamicin, and erythromycin. Klebsiella pneumoniae isolates were resistant to meropenem imipenem, piperacillin-tazobactam aztreonam, cefepime, ciprofloxacin, and trimethoprim-sulfamethoxazole by more than 50%. MDR MRSA and ESBL were 81% and 73.5% respectfully.

Conclusion: This study has unveiled the significant proportion of hospital inanimate surface contamination MRSA (8.5%) and ESBL-producing bacteria (25.5%). MDR MRSA and ESBL-producing bacteria were significantly high (81% and 73.5% respectively). It is of prime importance to improve and bolster the IPC procedures at ORCI

Recommendation:

1. The hospital should establish a schedule for routine decontamination of high-touch surfaces like bed rails and hand-washing sinks.

2. The hospital should use 0.5% chlorine for disinfection of high-touch surfaces instead of Dettol

3. The hospital may establish other hand washing stations within the ward apart from that in the toilets.

14. TITLE: INCIDENCE OF VIRAL REBOUND AND ASSOCIATED RISKS FACTORS AMONG ADULTS LIVING WITH HIV; A RETROSPECTIVE COHORT STUDY IN THE KAGERA REGION

Contact: pmwanahapa@mdh.or.tz
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: PATRICK MWANAHAPA

Background: In Tanzania, the viral rebound hasn't received much attention. Since viral suppression (50 Copies/ml) raises the possibility of higher HIV morbidity, mortality, and Increase HIV Transmission within the Community, which would make it harder to meet the 95-95-95 targets of the UNAIDS agenda by 2030.

Objective: To estimate the Incidence rate of and describe the risk factors associated with viral rebound among Adults living with HIV who achieved initial viral suppression.

Methods: Data from the CTC2 database of New Clients on ART from January to December 2019 were used during the analysis. Viral rebound was a dichotomous Variable and logistic regression identified factors linked to Viral rebound.

Results: Among 13,423 inclusive new clients on ART (43.2% were Male and 56.8 were Female), 12.5% were identified to get Viral rebound (> 50 Copies/ml) within the Two years follow-up period. The incidence rate of clients identified with Viral rebound decreased over time from 5.6 per 100 Persons to 0.6 per 100 persons. Some predictors of viral rebound included Males (P=0.009), WHO Stage 11 (P=0.001), and Poor ART Adherence (P=0.002) and which were associated with presenting Viral rebound during the analysis

Conclusion: To avoid Viral rebound (> 50 copies/ml) in the Undetectable equals to Untransmutable (U=U) era, HIV Positive clients should be sustained on ART treatment longer

Recommendation: However, targeting specific high-volume SNUs and male is necessary to avoid Viral rebound.

15. TITLE: DETERMINANTS OF MULTI-DRUG RESISTANCE TUBERCULOSIS TREATMENT OUTCOMES AMONG HIV CO-INFECTED PATIENTS IN TANZANIA FROM 2017-2019

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Sub theme: Communicable Diseases and Antimicrobial Resistance + One Health
Presenter: Twilumba E Lihweuli

Background: Unfavourable treatment outcomes in Multidrug-resistant Tuberculosis patients with Human immunodeficiency co-infected (MDR-TB/HIV) continue to be a global issue of concern. The suggested WHO treatment success rate is 90%, however the current percentage of treatment success is still low (59%) which poses a great threat to TB control.

Objective: This study aimed to identify determinants of treatment outcomes among MDR-TB /HIV co-infection in Tanzania from 2017-2019.

Methods: A retrospective cohort study was conducted, involving all MDR-TB/HIV co-infected patients enrolled for treatment from January 2017- December 2019 from NTLP database. Data access was granted Ministry of health at National TB and Leprosy program. Kaplan Meier estimator was used to determine survival probabilities then log-rank was used to compare these probabilities. Cox regression model was used to assess associations between independent variables and treatment outcomes. Ethical clearance was obtained from Muhimbili University of Health and Allied Sciences.

Results: Of 342 MDR-TB/HIV co-infected patients included in the analysis, proportion of unfavourable and favourable treatment outcome was found to be 28.4% and 71.6% respectively. After follow up of 4359 person-months, median survival time was 30 months. MDR-TB/HIV co-infected patients with malnutrition had poor survival probabilities (log rank test $P<0.001$). On top of that MDR-TB/HIV co-infected patients with other comorbidities had poor survival probabilities (log rank test $P = 0.23$). There was significant association between being malnourished and having unfavourable treatment outcomes among MDR-TB/HIV co-infected patients, aHR=2.57 (95% CI, 1.63-4.04).

Conclusion: Unfavourable treatment outcomes for MDR-TB/HIV co-infected are more likely to be negatively affected by malnutrition.

Recommendation: Tanzania's national TB control programs need to make MDR-TB/HIV co-infected patients' nutritional status a potential target for future intervention.

16. TITLE: ENABLING FACTORS AND BARRIERS TO RETENTION IN HIV CARE AND ADHERENCE TO LIFE-LONG ANTIRETROVIRAL THERAPY.

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: godfreysambayi08@gmail.com
Presenter: Godfrey Sambayi

Background: Optimal adherence and retention to HIV care are key to achieving HIV viral suppression and more broadly support the overall health and well-being of people living with HIV. While many quantitative studies have evaluated factors associated with adherence, retention, and viral suppression in sub-Saharan Africa, relatively few research studies have used qualitative methods to better understand barriers and enablers for patients.

Objective: To explore the facilitators and barriers to retention in HIV care and adherence to lifelong antiretroviral therapy

Methods: We conducted a descriptive qualitative design to explore enablers, barriers, and strategies to improve retention in HIV care and adherence to lifelong antiretroviral therapy (ART) among adults living with HIV in Dar es Salaam, Tanzania. Focus group discussions consisting of 41 people (8-10 per session) were conducted with a semi-structured discussion guide. Thematic analysis was used to identify and interpreting the patterns (themes).

Results: Three major themes with ten sub-themes emerged. Participants indicated that HIV status disclosure, peer-support group/adherence clubs and motivated health care providers facilitated retention and adherence to ART. On the other hand, stigma and discrimination, financial constraint, disease outbreaks such as COVID-19 pandemic, myths and misconceptions about HIV, side-effects of antiretrovirals and occurrence of opportunistic infections were mentioned as barriers. Strengthening community and patient education about HIV and ART through peer support group/adherence clubs, and financial support (e.g., nutritional support and transport refund) for poor PLHIV were the explored strategies.

Conclusion: Addressing the challenges to ART adherence may require more holistic (complex adaptive) approach as many factors ranging from patients and their families, socioeconomic factors, medication to healthcare systems are involved.

Recommendation: We recommended the implementation of evidence-based interventions for increasing retention in HIV care and adherence to ART in the study area.

17. TITLE: ANTIMICROBIAL SUSCEPTIBILITY AND ASSOCIATED RISK FACTORS OF BLOOD CULTURE PROVEN NEONATAL SEPSIS AMONG PRETERM NEONATES ADMITTED AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: chrispinavenance@gmail.com
Presenter: Chrispina Venance

Background: Sepsis is among the leading cause of morbidity and mortality among children. The risk and burden increase more in preterm neonates due to the immature immunity, creating a double burden. However, managing neonatal sepsis has become a challenge due to increase in antimicrobial resistance.

Objective: To determine the proportion of blood culture proven neonatal sepsis, antimicrobial susceptibility and associated risk factors among pre-term neonates admitted at Muhimbili National Hospital i

Methods: It was a hospital based cross sectional study. Admitted preterm neonates with clinical diagnosis of sepsis, based on WHO guideline for sepsis in sick infants, were enrolled. Structured questionnaire was used to document information on the particulars of the pre-term neonates, maternal and neonatal risk factors, blood culture results and antimicrobial sensitivity and resistance. Data entry and analysis was done using SPSS version 23. Frequencies and percentages were used for categorical variables. Association of factors influencing blood culture proven neonatal sepsis was done using Student's T-test, with Chi-square and Fisher's exact used to explain the relations. Ethical approval obtained from?????????

Results: In total 454 pre-term neonates were admitted during Sept 2022-March 2023, 281 had clinical signs and symptoms of sepsis and blood culture samples were taken of which19.2% had blood culture proven sepsis, of which, 85.2% had EONS and 14.8% had LONS. 80% of isolated organisms were gram-negative bacteria predominance of Klebsiella pneumoniae and Acinetobacter spp. Rare species were also isolated such as Aeromonas Hydrophila amd Raoultella planticola. Amikacin, Meropenem and Tazobactam showed highest percentage of sensitivity approximately 80%. Ampicillin, ceftriaxone and amikacin had resistance of 88%, 70% and 5% respectively. ELBW, PROM and referral showed were significant risk factors associated with neonatal sepsis am

Conclusion: Blood culture proven sepsis among preterm neonates was 19.2% with more gram-negative organisms. Rare species exhibited multi drug resistance. Most sensitive

antimicrobials were amikacin, meropenem and tazobactam, and highest resistance noted with first- and second-line drugs.

Recommendation: Further studies to involve CSF analysis, pus and tracheal aspirate for culture, and other supportive investigation such as CBC and CRP

18. TITLE: MALARIA KNOWLEDGE AND FACTORS ASSOCIATED WITH MOSQUITO NET USE AMONG SCHOOL CHILDREN IN MUHEZA DISTRICT

Contact: hsebukoto@gmail.com
Subtheme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Hillary Sebukoto

Background: Provision of mosquito net has been used as a major malaria intervention strategy in Tanzania. Adults and under-five children have been targeted despite reports showing low use among school children. This study assessed malaria knowledge and determined factors influencing mosquito net use among school children in Muheza district in Tanga, Tanzania.

Objective: To assess malaria knowledge and factors associated with mosquito net use among school children in Muheza district

Methods: A cross sectional study was conducted in rural and urban primary schools selected by simple random sampling. Children were selected using systematic sampling method and household visit conducted to 20% of selected children. Interviewer administered questionnaire was used in data collection. Negative binomial regression analysis was used to determine factors associated with mosquito net use using STATA version 15.

Results: The study involved 530 school children where 87.2% reported owning mosquito net. Only 69.8% had used it last night. Nearly 91% had good malaria knowledge. Factors significantly associated with mosquito net use included: residing in urban (aPR = 1.40, 95% CI: 1.19 – 1.62), living with biological parents (aPR = 1.35, 95% CI: 1.14 – 1.58), owning TV/radio (aPR = 1.39, 95% CI: 1.05 – 1.83), knowledge score >50% (aPR = 1.62, 95% CI: 1.16 – 2.30), houses with electricity (aPR = 2.17, 95% CI: 1.12 – 4.20), household size-bed net ratio ≤ 2 (aPR = 2.30, 95% CI: 1.36 – 3.88) and mosquito net age < 3 years (aPR = 1.69, 95% CI: 1.19 – 2.41).

Conclusion: Despite good malaria knowledge, 13% of school children in Muheza district do not own mosquito nets while 20% do not use them. Herbal medicine still used for treatment of malaria related symptoms

Recommendation: Conducting community and school-based malaria health education accompanied with provision of insecticide treated nets to enhance malaria awareness and subsequently increase mosquito net use in the community

19. TITLE: WILLINGNESS TO USE PRE-EXPOSURE PROPHYLAXIS AND REASONS FOR STOPPING AMONG FEMALE SEX WORKERS IN THE PREPVACC HIV VACCINE TRIAL

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: marsellykayombo@gmail.com
Presenter: Marselino Kayombo

Background: HIV infection is still a world concern effective vaccine is the only hope, however PrEP Truvada and Descovy are recommended for HIV prevention, and only Truvada is readily available in Tanzania. PrEP is effective in the prevention of HIV if used effectively and consistently, MUHAS is one of the 4 sites participating in the study, the sites has enrolled 185 female sex workers aged 18-40 years, participants were randomized to receive 4 Vaccination/Placebo at week 0, 4 24 and 48 respectively and to receive Truvada or Descovy as Pre-Exposure Prophylaxis (PrEP) until two weeks after 3rd vaccination, and thereafter can access local PrEP.

Objective: To assess participant's willingness to access local PrEP after completion of study PrEP regimens 2 weeks after 3rd vaccination at 26-30 weeks from enrollment.

Methods: This is international, multicenter, double-blind study, three arm prospective 1:1:1 and 1:1 randomization comparing each of the two experimental combination vaccine regime with placebo control concurrently 1:1 comparing two PrEP regime to the female sex workers, urine for tenofovir and self-reported diary were used to assess adherence

Results: PrEPVacc trial in MUHAS enrolled 185 participants, of whom 184 (99.5%) were willing to use PrEP at enrolment, 7 (3.8%) declined PrEP follow-up visits, 11 (6%) were terminated prior to 3rd vaccination (26-30 weeks) from enrollment, 166 (90.2%) completed study PrEP regimens, among the enrolled participants 85(51%) were willing to switch to locally available PrEP (Truvada). The reasons for not continuing were: PrEP side effects,

unfriendly package of PrEP, large size for Truvada, lack of awareness regarding use of PrEP in the community and preference of injectable to oral PrEP.

Conclusion: Modification of PrEP packaging, community awareness about PrEP could be methods of improving PrEP uptake and retention among FSWs. Further exploration on injectable PrEP is needed.

Recommendation: Modification of PrEP packaging, community awareness about PrEP could be methods of improving PrEP uptake and retention among FSWs. Further exploration on injectable PrEP is needed.

20. TITLE: CONTRACEPTIVE USE AMONG FEMALE SEX WORKERS IN AN HIV VACCINE TRIAL: EXPERIENCES FROM MUHAS- DAR ES SALAAM, TANZANIA.

Contact: kagarukigrace5@gmail.com
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Presenter: Kagaruki Grace

Background: HIV infection is a burden among key populations in low and middle-income countries (LMIC). The LMICs being part of the global science is participating in ongoing HIV vaccine clinical trials. PrEPvacc is the HIV vaccine study that is testing Descovy as Pre-exposure prophylaxis (PrEP) against the standard PrEP medication involving four sites, MUHAS site being one of them. The site recruited high risk female sex worker (FSW).

Objective: Assessment of two different vaccine combinations and PrEP (Descovy or Truvada) medications in preventing HIV infections.

Methods: This is international, multicenter, double-blind study, three arm prospective 1:1:1 and 1:1 randomization comparing each of the two experimental combination vaccine regime with placebo control concurrently 1:1 comparing two PrEP regime to the female sex workers.

Results: Contraceptive use was one of the eligibility criteria for enrollment, and the recommended methods of contraception were either Depot-Medroxyprogesterone Acetate injection or Implant (Levonogestrel/etonogestrel). There were four visits that particitpants received vaccination at week 2, 4, 24 and 48. Trial participants provided informed consent before were recruited in the study. The contraceptive methods are provided at the site or any other health facility to prevent pregnancies until 18 weeks post-last vaccination

Conclusion: Community sensitization, advocacy, counselling sessions and health education are needed to correct misconceptions regarding contraceptive methods and to foster positive attitudes among women in their social circles.

Recommendation: Community sensitization, advocacy, counselling sessions and health education are needed to correct misconceptions regarding contraceptive methods and to foster positive attitudes among women in their social circles.

21. TITLE: HIGH INCIDENCE OF MALARIA IN PATIENTS WITH SICKLE CELL DISEASE

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Presenter: Matilda Mkombachepa
Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health

Background: Infections by Plasmodium falciparum account for most of the malaria morbidity and mortality in Africa. In Tanzania, more than 90% of the population live in malarious areas. Sickle cell disease (SCD) is an inherited chronic hemolytic anemia: it is a cause of childhood mortality especially in Africa. For patients with SCD, malaria can make their anemia worse, and is associated with high risk of malaria-related complications because they have impaired function of the spleen, which plays an important role in clearing malaria parasites.

Objective: We aimed at determining the incidence of malaria in SCD patients at MNH

Methods: In this study, we reviewed records of 115 patients with SCD who were admitted with fever to MNH over a one-year period (March 2020-March 2021). All patients had a P. falciparum Rapid Diagnostic Test (RDT) performed; when this was positive the diagnosis was confirmed by microscopy.

Results: We report that the incidence of malaria to SCD was 7.8%, which is higher than that of 3% observed in a previous study, in which the S/S status was associated with increased mortality from malaria. 7.0% had uncomplicated malaria and were treated with a 3-day course of oral artemisinin lumefantrine (ALU); only one patient (0.9%) was regarded as having severe malaria and was treated with intravenous artesunate. There were no deaths and all patients recovered from malaria.

Conclusion: Our study concludes that anti-malarial chemoprophylaxis and use of Insecticide treated nets in SCD requires higher priority than it does at the moment. Furthermore, prompt diagnosis and treatment of malaria should be mandatory in all SCD who present to a health facility.

Recommendation: We recommend for a mandatory prompt diagnosis and treatment of malaria in all SCD patients that present at health facilities.

22. TITLE: EXPERIENCES OF ENROLLING FEMALE SEX WORKERS IN AN HIV VACCINE TRIAL: A CASE OF PREPVACC STUDY IN DAR ES SALAAM, TANZANIA

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
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Presenter: Mary Ngatoluwa

Background: The search for an effective preventive HIV vaccine is ongoing in different parts of the world. The conduct of HIV vaccine trials requires preparation of suitable cohorts, screening and enrolment to reach targets. PrEPVacc is a multi-center study phase IIb trial taking place in three countries involving populations at high risk of acquiring HIV infection. The Dar es Salaam site recruited and enrolled FSWs

Objective: We describe experiences in enrolment of study participants in PrEPVacc trial

Methods: Recruitment started with seeds identification whereby five seeds represented 5 districts of Dar es Salaam region. The seeds were informed about the study, was given 3 coupons each to bring 3 participants (RDS). The identified seeds were subjected to the screener who confirmed eligibility criteria before enrolment in the study. Study information was given to all screened participants. Consent signing, physical examinations and laboratory tests confirmed enrolment in the study.

Results: Between 2018 and 2022, among 1082 FSWs screened1003 were enrolled in the Registration cohort and followed up to13 visits. Ultimately, the targeted 185 FSWs for the PrEPVacc trial were recruited. Despite successful enrolment, the following challenges were encountered: bringing people who were not FSWs; provision of false names and phone numbers; complain spent too much time at the clinic; frequent relocation due to their mobile nature, poor adherence to contraception.

Conclusion: To address these challenges, the study team undertook unlimited counseling and educational sessions prior to recruitment, during follow up that address participants concerns and eventual trust building among the participants and investigators, participants community misconceptions addressed by field visits. Furthermore, CAB members held discussions with the participants to identify and address their challenges in collaboration with the study team.

Recommendation: Continuous educational and addressing concerns of the participants and their surrounding communities. A screener is essential to ensure recruitment of appropriate participants in the study.

23. TITLE: PREVALENCE AND PREDICTORS OF HIV INFECTION AMONG UNDER FIVE-YEAR CHILDREN BORN TO HIV POSITIVE MOTHERS IN MUHEZA DISTRICT, TANZANIA

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
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Presenter: Veneranda M. Bwana

Background: Human Immunodeficiency Virus (HIV) pandemic has become a serious public health concern worldwide. The prevalence of paediatric HIV infection is largely unknown in many countries in Sub-Saharan Africa (SSA).

Objective: To determine the prevalence and predictors of HIV infection among under-5 years children in Muheza District, Tanzania.

Methods: A facility-based study among mothers/guardians with their under-5 years children exposed to HIV infection was conducted from June 2015 to June 2016. Information on HIV status, socio-demographic and other family characteristics was collected using a structured questionnaire. Data analysis was performed using STATA version 13.0.

Results: A total of 576 HIV-exposed under-5 years children were recruited together with their respective mothers/guardians. The HIV prevalence among under-5 years children was 10.6% (95% CI: 8.1-13.1%). The burden of HIV infection was observed among older children aged 25 to 59 months (AOR= 8.0, 95% CI 2.5-26.0) than in the younger children. There was a four-fold (AOR=3.9, 95% CI 1.7-9.1) risk of HIV infection among children born to mothers of unknown HIV status at conception than among children born to mothers with known HIV status. The odds of HIV infection were higher among children who were delivered from home (AOR=2.6, 95% CI 1.0-6.5), received mixed feeding (AOR=2.4, 95% CI 1.2-4.9), and those living far from a he

Conclusion: The prevalence of HIV among under-5 years children in Muheza is higher among older children. The high prevalence is associated with being born to mothers with unknown HIV status at conception, receiving mixed feeding, home delivery, and living far from the health facility.

Recommendation: Campaigns that provide health educational messages addressing risk factors of HIV need to be emphasized in order to promote the control and prevention of HIV among children.

24. TITLE: DISCLOSURE OF HIV STATUS TO SEXUAL PARTNERS AMONG PEOPLE WITH HIV IN SINGIDA REGIONAL REFERRAL HOSPITAL OF TANZANIA: A CROSS-SECTIONAL

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
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Presenter: Alex Gabagambi Alexander

Background: Human immunodeficiency virus (HIV) status nondisclosure to sexual partners remains a major challenge in Tanzania and other Sub-Saharan countries because it is still self-avoided among heterosexual partners with HIV. HIV disclosure among sexual partners has both advantages and disadvantages. The advantages are such as helping people with HIV to ask for and receive social support, have safer sex, and assistance to access HIV treatment among sexual partners while the disadvantages are increased likelihood of being blamed, discriminated against, depressed, divorced, and verbally abused after voluntary disclosure.

Objective: We assessed voluntary HIV status disclosure to sexual partners, its associated factors, and outcomes among people with HIV (PWH) in the Singida region of Tanzania.

Methods: A hospital-based descriptive, cross-sectional study design, 380 persons with HIV were recruited from the Care and Treatment Clinic (CTC) at Singida Hospital- located in Central Tanzania between June and August 2022. A Swahili questionnaire was used to obtain demographic and HIV disclosure information.

Results: About 78 % (n=297) of the study participants reported they disclosed their HIV status. Adjusted multivariable logistic revealed that HIV status disclosure to sexual partners was significantly associated with living with a sexual partner (AOR = 3.91, 95%, CI = 1.43-10.72), knowledge of HIV disclosure (AOR = 11.71, 95% CI = 2.88-47.63), known serostatus of the sexual partner (AOR =40.20, 95% CI, = 15.31-105.56) and HIV disclosure related stigma (AOR = 0.92, 95% CI = 0.85-0.99). Ninety percent (n=267) of respondents' sexual partners tested for HIV after disclosure.

Conclusion: These findings suggest that there is a significant number of people with HIV who have not disclosed their HIV status to their sexual partners in Singida region, and more

interventions should be adopted or designed to scale up disclosure to sexual partners by addressing the significant factors.

Recommendation: Health education programs should encourage and promote mutual partner HIV testing to increase awareness of the partner`s HIV status. There should be educational forums with full community engagement and other stakeholders in fighting the HIV epidemic, and this will increase advocacy for disclosure, and emphasize the participation of couples instead of the male or female partner alone

25. TITLE: PATIENT-LEVEL FACTORS ASSOCIATED WITH LATE PRESENTATION TO HIV CARE IN KAGERA REGION, TANZANIA; A RETROSPECTIVE STUDY

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: malimi.william@gmail.com
Presenter: Stephen Kazimir

Background: Late presentation to HIV care and treatment is a significant global challenge and is linked to increased healthcare costs and the risk of transmission. However, there is limited information on patient-level factors that perpetuate late presentation at HIV care clinics in Tanzania, creating a gap in our understanding of the issue

Objective: To determine the trend, factors, and consequences associated with HIV late presentation to care in the Kagera region

Methods: This study analyzed the CTC2 database of HIV-positive clients aged 15+ in the Kagera region from Jan 2016 to Dec 2021. A CD4 test results below 350 cells/mm3 or WHO clinical stage 3 or 4 were used to categorize clients as late presenters, and logistic regression identified factors linked to late presentation. Chi-square was used to compare late presentation outcomes, and the Mann-Kendall Trend Test assessed presentation trends over time

Results: Out of 72,952, 13,923 (19.1%) were classified as late presenters to HIV care. The number of clients presenting late to HIV care decreased over time from 3,774 clients in 2016 to 1,191 in 2021 presenting a significant reduction rate of 68.4% (p-value < 0.009). Being male (aOR=1.14, 95% CL: 1.07-1.21), advanced age (aOR=1.31, 95% CL: 1.17-1.46), being divorced (aOR=1.09, 95% CL;0.77-1.55), residing in Missenyi DC (aOR=1.80, CL; 0.95-1.23) and being self-referral (aOR=1.77, 95% CL: 1.56-2.02) were associated presenting late. Early presentation to HIV care was significantly associated with higher HIV viral load suppression rates in the first year (95.7% vs 93.0%, p-value < 0.001), whereas clients who presented late

Conclusion: Our study observed a significant decline in the number of late HIV presenters over time. Male and older individuals were more likely to present late

Recommendation: To further improve HIV outcomes and control the epidemic, it is necessary to target specific populations, including males and older individuals, in early detection efforts

26. TITLE: GENITAL SCHISTOSOMIASIS, SEXUAL AND REPRODUCTIVE HEALTH AMONG MALES OF REPRODUCTIVE AGES IN HIGH SCHISTOSOMIASIS ENDEMIC AREAS.

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: twilumbamakene@gmail.com
Presenter: Twilumba Makene

Background: Male genital schistosomiasis (MGS) is severely neglected and their consequences often go unremarked at international and local levels. The disease is suggested to cause schistosomiasis-induced sexual and reproductive health problems among males. However, in many endemic areas the burden of MGS is not well known.

Objective: The study was conducted to investigate the prevalence of MGS, sexual and reproductive health problems that could be caused by MGS among adult males in Mtama district, southern Tanzania.

Methods: A community-based cross-sectional study was carried out among males aged ≥ 18 years in selected households. Semen samples was collected from each participant to establish the prevalence of MGS. Participants with Schistosoma eggs in semen were examined for Schistosoma eggs in urines. Also, semen quality was assessed. Questionnaire interviews were carried out to collect socio-demographic data and sexual and reproductive health information. Data were entered and analyzed using IBM SPSS version 20. Descriptive statistics were used to provide a summary of each variable. Chi-square or Fisher's exact statistical tests were used.

Results: A total of 223 (response rate of 03.3%) adult males participated in this study. Thirteen (5.8%, 95%CI; 3.1-9.0) participants were found to have Schistosoma haematobium eggs in their semen. The prevalence of Schistosoma haematobium eggs in semen was found to be significantly higher among young adults (≤ 34 years) (9.3%), who never attended to any kind of formal education (17.1%), doing petty business as their source of income (15.4%), who had never been responsible for impregnating a woman (12.9%), who

did not have children (10.7%), who experienced pain during ejaculation (23.5%), and with brownish semen (40%) (p < 0.05).

Conclusion: MGS, like UGS, is prevalent in southern Tanzania. Despite the lack of power to link MGS to reproductive and sexual health issues, the study discovered that MGS prevalence is higher among participants who stated or were observed to have some reproductive and sexual health issues, such as a lack of children, painful ejaculation, and brownish sperm. This highlights the need for more research to investigate the association of MGS and male reproductive and sexual health for the improvement of health services among male.

Recommendation: According to the findings, MGS, like UGS, is prevalent in southern Tanzania and was observed to be higher among males with some reproductive and sexual issues. This highlights the need for more research to investigate the association of MGS and male reproductive and sexual health for improved health services among males.

27. TITLE: NASOPHARYNGEAL CARRIAGE AND ANTIBIOGRAM OF PNEUMOCOCCAL AND OTHER BACTERIAL PATHOGENS FROM CHILDREN WITH SICKLE CELL DISEASE

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: rittdavisrida@yahoo.com
Presenter: Dr. Ritah Mutagonda

Background: Bacterial infections contribute significantly to morbidity and mortality in sickle cell disease (SCD) patients, particularly children under five years of age. In Tanzania, prophylaxis against pneumococcal infection among children with SCD advocates the use of both oral penicillin V (PV) and pneumococcal vaccines (PNV).

Objective: This study aimed to investigate nasopharyngeal carriage and antibiogram of Streptococcal pneumoniae (S. pneumoniae) and Staphylococcus aureus (S. aureus) in children with SCD in Tanzania.

Methods: This cross-sectional study was undertaken at the two Sickle Pan-African Research Consortium (SPARCO) study sites in Dar es Salaam, Tanzania. The study was conducted for six months and enrolled children with SCD between the ages of 6 to 59-months. A semi-structured questionnaire was used to collect patient data. Nasopharyngeal swabs were collected from all participants and cultured for Streptococcal pneumoniae and other

bacterial isolates. Antimicrobial susceptibility tests of the isolates were done using the disc diffusion method.

Results: Out of 204 participants, the overall prevalence of bacterial carriage was 53.4%, with S. aureus (23.5%), coagulase-negative Staphylococci (CoNS) (23%) and S. pneumoniae (7.8%) being commonly isolated. In antibiotic susceptibility testing, S. aureus isolates were most resistant to penicillin (81.8%), whereas 81.3% of S. pneumoniae isolates were resistant to co-trimoxazole. The least antimicrobial resistance was observed for chloramphenicol for both S. aureus and S. pneumoniae isolates (6.3% versus 0%). The proportion of multi-drug resistance (MDR) was 66.7% for S. aureus isolates and 25% for S. pneumoniae isolates.

Conclusion: There are substantially high nasopharyngeal carriage pathogenic bacteria in children with SCD in Dar-es-salaam, Tanzania. The presence of MDR strains among the commonly used antibiotics suggests the need to reconsider optimizing antimicrobial prophylaxis in children with SCD and advocate the use of pneumococcal vaccines.

Recommendation: Since this study enrolled only children with SCD attending sickle cell clinics under SPARCO Tanzania, we recommend that further studies be conducted country-wide to determine the bacterial carriage and antibiotics resistance pattern required for decision making. We also recommend continuous intensification of public health education against irrational antibiotic use. There is also a need to monitor patients with SCD for invasive bacterial disease.

28. TITLE: EFFECTIVENESS AND SAFETY OF DOLUTEGRAVIR BASED ANTIRETROVIRAL REGIMENS AMONG HIV INFECTED CHILDREN AND ADOLESCENTS IN TANZANIA

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: rittdavisrida@yahoo.com
Presenter: Dr. Ritah Mutagonda

Background: Tanzania is one of African countries which have recently adopted World Health Organization (WHO) recommendation for the use of Dolutegravir (DTG) at the adult dose of 50 mg in children and adolescents weighing ≥20kg. The rollout of DTG-based highly active antiretroviral therapy (HAART) regimens has been backed up with studies conducted mostly in high-income countries; therefore, they have inadequately accommodated the context and settings in Africa. To address the variation in pharmacogenetics, nutritional

status, and other socio-demographic characteristics, there is an urgent need for research on the adherence, effectiveness, and safety of DTG-based regimens.

Objective: This study assessed the adherence, effectiveness, and safety of DTG based HAART regimens among HIV infected children and adolescents in Tanzania.

Methods: This was an observational prospective cohort study conducted at the pediatric HIV Clinic in Mbeya, Tanzania. HIV-infected children and adolescents initiated on DTG-based HAART regimens were recruited and followed up for 1 year. Secondary outcomes were the change in CD4+ cell count, safety parameters, and adherence levels. Descriptive statistics was used to summarize all clinical and laboratory results. A binary logistic regression model was used to determine predictors of undetectable viral load at week 24. The results were significant when P-value was <0.05.

Results: A total of 200 patients were enrolled, with the majority (85.5%) being treatment experienced. The mean age of study participants was 13 (+ 1.3) years. High adherence levels (71%) were observed using the pharmacy refill method. At week 24, the overall proportion of patients with undetectable viral load was 70.2%. The predictors of undetectable viral load were age, WHO clinical stage, baseline VL and adherence to pharmacy refills. The commonest adverse drug events (ADEs) reported among 33 patients were dizziness (30.3%), nausea (18.2%), and drowsiness (15.2%).

Conclusion: This study revealed that the use of DTG-based ART in children and adolescents is safe with minor ADEs and changes in laboratory parameters which were well tolerated. In addition, the DTG regimen is effective in this population, even in treatment-experienced children who had high viral load before switching to DTG-based therapy. On the other hand, adherence to DTG regimens was good among children and adolescents.

Recommendation: We recommend similar studies be conducted in other sites, especially those which have high HIV prevalence, and also the inclusion of the adult population should be considered. This will help us to monitor the effectiveness of ART, which is important in the management of HIV patients in our population.

29. TITLE: IS A WIDELY USED HERBAL REMEDY, MAYTENUS SENEGALENSIS, SAFE FOR MALARIA TREATMENT? STUDY FINDS PROMISING RESULTS.

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: kramadhani@ihi.or.tz
Presenter: Kamaka Kassimu

Background: Malaria remains a global public health problem due to its high morbidity and mortality rates, despite the availability of artemisinin-based combination therapies (ACTs). With resistance developing against most antimalarial drugs, the search for new and effective antiplasmodial compounds, including herbal remedies, is crucial. One such remedy is Maytenus senegalensis, a medicinal plant widely used in traditional African medicine for infectious and inflammatory diseases. However, there is a lack of safety data regarding its use in humans.

Objective: To evaluate the safety and tolerability of the antimalarial herbal remedy Maytenus senegalensis in healthy adult Tanzanian participants.

Methods: The study design was an open-label, single-arm, dose-escalation study that enrolled 12 healthy Tanzanian males aged 18 to 45 in four study dose groups (G1: 400mg once, G2: 600mg, G3 & G4: 800mg 8 hourly for four days). Safety and tolerability were monitored on days 0 to 7, 14, 28, and 56 post-first administration.

Results: The results showed that there were no deaths or serious adverse events in any of the study groups, and no adverse events that led to premature discontinuation. Although significant mean changes were observed in laboratory parameters, such as WBC, Neutrophils, Lymphocytes, Eosinophils, Alanine aminotransferase, Creatinine, and Total bilirubin, these changes were not associated with any signs of toxicity or clinical symptoms.

Conclusion: The study concluded that Maytenus senegalensis was safe and tolerable when administered at a dose of 800mg 8 hourly for four days.

Recommendation: The results suggest that Maytenus senegalensis could be further explored as a therapeutic agent for malaria treatment, and this study design could be adapted to evaluate other herbal remedies.

30. TITLE: POST-OPERATIVE ANTIBIOTIC USE AMONG PATIENTS UNDERGOING LAPAROTOMY SURGERY AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: akokole12@gmail.com
Presenter: Larry Akoko

Background: If used appropriately, antibiotics are lifesaving medications for the treatment of bacterial diseases. However, antibiotic overuse has led to a rise in antibiotic-resistant infections, which pose a significant risk to patients globally.

Objective: We aimed to assess post-operative antibiotic use in patients undergoing laparotomy at Muhimbili National Hospital (MNH) in Tanzania.

Methods: We analyzed postoperative antibiotic prescription patterns among adult patients undergoing major abdominal surgery at MNH between August 1st 2022 and February 24th 2023. We used both descriptive statistics and linear regression modelling to identify clinical variables associated with postoperative antibiotic duration. The study received appropriate ethical approvals locally and in the US.

Results: In total, 326 patients were included. The median number of post-operative antibiotic days for clean, clean-contaminated, contaminated, and infected procedures was 7 (IQR: 1-10), 10 (IQR: 7-12), 12 (IQR: 10-15), and 16 (IQR: 10-20). Of the 213 patients with clean or clean contaminated procedures without infectious postoperative complications, 209 (98%) received post-operative antibiotics. In a linear regression model of all patients, wound classification 2.1 (95% CI 0.85-3.3) and presence of an infectious postoperative complication 7.5 (95% CI 6.2-8.9) were associated with increased antibiotic duration controlling for ASA status, emergency procedure, and postoperative ICU admission.

Conclusion: Patients undergoing laparotomies at MNH in Tanzania are prescribed prolonged courses of postoperative antibiotics often with unclear indications. Certain clinical variables are associated with antibiotic duration, suggesting clinicians are making clinically informed but potentially not evidence-based decisions.

Recommendation: Further research is necessary to understand influences on antibiotic prescribing patterns in this setting.

31. TITLE: CAN RESISTANCE TO EITHER ISONIAZID OR RIFAMPICIN PREDICT MULTIDRUG RESISTANCE TUBERCULOSIS (MDR-TB)

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: bmchaki2001@yahoo.com
Presenter: Betty Reginald Mchaki

Background: Previous studies have shown significant differences and lack clarity on whether resistance to either isoniazid or rifampicin can predict multidrug resistance tuberculosis (MDR-TB). Some consider rifampicin resistance to be a surrogate for MDR-TB.

Objective: We conducted this study to determine resistance to either isoniazid or rifampicin can predict MDR-TB.

Methods: This study involved a total of 359 isolates collected at the Central Tuberculosis Reference Laboratory (CTRL), Tanzania, between 2016 and 2019. Drug Susceptibility Testing (DST) was performed on Lowenstein–Jensen (LJ) media containing 0.2 µg/mL and 1.0 µg/mL of isoniazid, 5 µg/mL streptomycin, 40 µg/mL of rifampicin, 2 µg/mL ethambutol and 500 ug/ml para-nitrobenzoic acid (PNB) using the proportion method. Data were analyzed using R (Version 4.2.0) with its integrated development environment (IDE), referred to as JAMOVI version 2.2, together with Excel extensions "Analyse it version 6.0"

Results: Prediction of MDR TB basing on rifampicin results showed sensitivity of 100.0%, specificity of 96.3%, diagnostic accuracy of 96.5%, and positive and negative predictive values of 62.1% and 100.0%, respectively. Isoniazid had sensitivity of 100.0%, specificity of 98.3%, diagnostic accuracy of 98.4%, and positive and negative predictive values of 78.3% and 100.0%, respectively. Prediction of rifampicin resistance based on isoniazid results had sensitivity of 62.1%, specificity of 98.3%, diagnostic accuracy of 94.9%, a positive predictive value of 78.3% and a negative predictive value of 96.2%.

Conclusion: Resistance to either rifampicin or isoniazid sub-optimally predicts MDR-TB. Despite having high sensitivity and specificity, the positive predictive value of rifampicin was only 62.1% and for isoniazid was 78.3%, suggesting that if either is tested in isolation both could result in false positives MDR-TB cases, resulting into patients being unnecessarily subjected to the more toxic and expensive second-line anti-TB drugs, which are less effective compared to first-line anti-TB drugs.

Recommendation: We recommend that resistance to either of them should be followed by further screening with other tests such as LPA or culture methods. In addition, facilities should be encouraged to develop nomograms, which have been successfully used for individualized, simple and precise prediction of incident multidrug-resistant tuberculosis.

32. TITLE: COMPARATIVE PERFORMANCE OF LINE PROBE ASSAY AND GENEXPERT IN THE DETECTION OF RIFAMPICIN MONORESISTANCE IN A TB-ENDEMIC AFRICAN COUNTRY

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: bmchaki2001@yahoo.com
Presenter: Betty Reginald Mchaki

Background: Rapid, accurate and reliable assays are required for timely detection of drug-resistant tuberculosis and early initiation of second-line TB treatment as well as to minimize transmission of resistant strains.

Objective: This study assessed diagnostic performance characteristics of two rapid molecular assays, line probe assay (LPA) and GeneXpert (MTB/RIF), in the detection rifampicin monoresistance using the phenotypi

Methods: This study involved a total of 357 isolates, 74 rifampicin-resistant and 283 rifampicin-susceptible, collected at the Central Tuberculosis Reference Laboratory (CTRL) in Dar es Salaam, Tanzania, between 2016 and 2019. Sensitivity, specificity and positive and negative predictive values were used to assess the performance characteristics of the two assays while kappa coefficient was used to determine agreement of test results. The receiver operating curve (ROC) was used to determine the discriminatory ability of the test in distinguishing resistant and susceptible TB isolates.

Results: Our results showed that GeneXpert had sensitivity, specificity and positive and negative predictive values of 93.2, 82.7, 58.5 and 97.9%, respectively; the corresponding performance for LPA was 86.5, 97.5, 90.1 and 96.5%, respectively. Compared with conventional phenotypic DST results, GeneXpert had a moderate agreement (kappa 0.621, p < 0.001), while LPA had high agreement (0.853, p < 0.001). LPA showed an accuracy of 95.2% compared to GeneXpert's 84.9%. ROC curve depicted the ability of the tests to distinguish rifampicin-sensitive and rifampicin-resistant strains to be 87.9% for GeneXpert and 92.0% for LPA.

Conclusion: Our results indicate the superiority of LPA over GeneXpert regarding detection of rifampicin monoresistance. However, logistic challenges such as longer turnaround time and need for skilled laboratory personnel may limit its use.

Recommendation: We recommend in detection of rifampicin monoresistance, LPA should be considered on those samples which have been detected by GeneXpert as resistant to rifampicin.

33. TITLE: MOLECULAR EPIDEMIOLOGY OF ANTIBIOTIC RESISTANCE GENES AND VIRULENCE FACTORS IN MULTIDRUG-RESISTANT ESCHERICHIA COLI ISOLATED FROM RODENTS

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: vssonola@gmail.com
Presenter: Dr. Valery Sonola.

Background: The interaction of rodents with humans and chicken in the household environment can facilitate transmission of multidrug-resistant (MDR) Escherichia coli (E. coli), causing infections that are difficult to treat.

Objective: We investigated the presence of genes encoded for carbapenem, extended spectrum beta-lactamases (ESBL), tetracycline and quinolones resistance, and virulence among 50 MDR E. coli isolated from human.

Methods: Genomic DNA were extracted by using Zymo Research Fungal and Bacterial Genomic DNA MiniPrepTM kit (Zymo Research, Irvine, USA). The purity, quality and quantity of DNA were determined using a Nanodrop spectrophotometer (NanoDrop, Thermo Scientific, Ramsey, USA) and agarose gel electrophoresis. Multiplex PCR was used to detect the resistance genes and virulence determinants.

Results: Overall, the antimicrobial resistance genes (ARGs) detected were: blaTEM 23/50 (46%), blaCTX-M 13/50 (26%), tetA 23/50 (46%), tetB7/50 (14%), qnrA 12/50 (24%), qnrB 4/50 (8%), blaOXA-48 6/50 (12%), and blaKPC 3/50 (6%), while blaIMP, blaVIM, and blaNDM-1 were not found. The virulence genes (VGs) found were: ompA36/50 (72%), traT 13/50 (26%), east 9/50 (18%), bfp 5/50 (10%), eae 1/50 (2%), and stx-1 2/50 (4%), while hlyA and cnf genes were not detected. Resistance (blaTEM, blaCTX-M, blaSHV, tetA, tetB, and qnrA) and virulence (traT) genes were found in all sample sources while stx-1 and eaewere only found in chicken and rodent isolates, respectively. Tetracycline resistance phenotypes correlated with genotypes t

Conclusion: The PCA ellipses show that isolates from rodents had more ARGs and virulence genes compared to those isolated from chicken, soil, and humans.

Recommendation: This situation urgently calls for One Health based interventions including improving hygiene and control of rodents in households.

34. TITLE: OCCURRENCE OF MULTIDRUG-RESISTANT STAPHYLOCOCCUS AUREUS AMONG HUMANS, RODENTS, CHICKENS, AND HOUSEHOLD SOILS IN KARATU, NORTHERN TANZANIA

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
Contact: vssonola@gmail.com
Presenter: Dr. Valery Sonola.

Background: We studied the occurrence and resistance phenotypes of Staphylococcus aureus isolated from rodents, chickens, humans, and household soils in Karatu district, nrthern Tanzania.

Objective: We conducted this study to investigate the isolation frequency and phenotypic antibiotic resistance pattern of Staphylococcus aureus isolated from rodents, chickens, humans, and household soils.

Methods: Specimens were plated onto mannitol salt agar (Oxoid, Basingstoke, UK) and incubated aerobically at 37 °C for 24 h. Presumptive colonies of S. aureus were subjected to Gram staining, as well as catalase, deoxyribonuclease (DNAse), and coagulase tests for identification. Antibiotic susceptibility testing was performed by using the Kirby-Bauer disc diffusion method on Mueller-Hinton agar (Oxoid, Basingstoke, UK). The antibiotics tested were tetracycline (30 µg), erythromycin (15 µg), gentamicin (10 µg), ciprofloxacin (5 µg), clindamycin (2 µg), and amoxicillin-clavulanate (20 µg/10 µg). The S. aureus strain American Type Culture Collection (ATCC) 25,923 was used a

Results: We found that 483 out of 956 (50.2%) samples were positive for S. aureus. The isolation frequencies varied significantly between samples sources, being 52.1%, 66.5%, 74.3%, and 24.5%, respectively, in chickens, humans, rodents, and soil samples (p < 0.001). S. aureus isolates had high resistance against clindamycin (51.0%), erythromycin (50.9%), and tetracycline (62.5%).

Conclusion: The overall prevalence of multidrug-resistant (MDR) S. aureus isolates was 30.2%, with 8.7% resistant to at least four different classes of antibiotics.

Recommendation: Necessary interventions, such as continuous educative campaigns on effective cleanliness in households, safe disposal of animal wastes, and rodent control strategies, are urgently needed.

35. TITLE: OCCURRENCE OF MULTI-DRUG-RESISTANT ESCHERICHIA COLI IN CHICKENS, HUMANS, RODENTS AND HOUSEHOLD SOIL IN KARATU, NORTHERN TANZANIA.

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health

Contact: vssonola@gmail.com

Presenter: Dr. Valery Sonola

Background: We investigated antibiotic resistance profiles of Escherichia coli among 960 samples obtained from chickens (236), humans (243), rodents (101) and soil (290). E. coli was isolated from 650 (67.7%) samples.

Objective: We investigated the occurrence of Multi-Drug-Resistant Escherichia coli in Chickens, Humans, Rodents and Household Soil in Karatu, Northern Tanzania

Methods: Specimens were plated onto MacConkey agar (Oxoid, Basingstoke, UK) and incubated aerobically at 37 °C for 24 h. Presumptive colonies of E. coli were subjected to a combination of four biochemical tests; indole, methyl red, Voges-Proskauer and citrate utilization (IMViC) for identification. Antibiotic susceptibility testing was performed by using the Kirby-Bauer disc diffusion method on Mueller-Hinton agar (Oxoid, Basingstoke, UK). The antibiotics tested were tetracycline (30 µg), erythromycin (15 µg), gentamicin (10 µg), ciprofloxacin (5 µg), clindamycin (2 µg), and amoxicillin-clavulanate (20 µg/10 µg). The E. coli strain ATCC 29522 was used for reference.

Results: Isolation frequency varied significantly between chickens, humans, rodents and soil samples, being 81.6%, 86.5%, 79.2% and 31.0%, respectively ($p < 0.001$). Resistance rates were particularly higher against imipenem (79.8%), cefotaxime (79.7%) and tetracycline (73.7%) and moderate against amoxicillin-clavulanate (49.4%). Overall, 78.8% of the isolates were multidrug-resistant (MDR) among which, 38.8%, 25.1%, 12.9% and 2.5% exhibited resistance to three, four, five and six different classes of antibiotics, respectively. Multidrug-resistant E. coli were observed in 27.7%, 30.3%, 10.8% and 10.0% of the isolates from chickens, humans, rodents and soil samples, respectively. Our results show high levels of antimicrob

Conclusion: Higher levels of antibiotic resistance and multidrug-resistant E. coli from different hosts in households in Karatu, northern Tanzania.

Recommendation: Comprehensive interventions using a one-health approach are needed and should include improving (i) awareness of the community on judicious use of antimicrobial agents in humans and animals, (ii) house conditions and waste management and (iii) rodent control measures.

36. TITLE: SPECTACLE COVERAGE AND ASSOCIATED FACTORS AMONG PATIENTS WITH PRESBYOPIA AT MUHIMBILI NATIONAL HOSPITAL.

Sub theme: Epidemiology and Interventions
Contact: rodgersmkuwamd@gmail.com
Presenter: Rodgers Mkuwa

Background: Approximately 1.8 billion of people quality of life is affected by presbyopia worldwide, and affected age group are those aged 40 years and above. Affected people lose the ability to read, write and perform near vision-related work/task which nearly impact health related quality of life.

Objective: To determine spectacle coverage and asses associated factors among patients with presbyopia attending selected outpatient clinics at Muhimbili National Hospital.

Methods: A Cross-sectional analytical study was conducted among patients aged 40 and above attending outpatient clinics of surgery, medical gastroenterology, and otorhinolaryngology (ENT) clinics who were selected by two-stage sampling technique at Muhimbili National Hospital in Dar es-salaam Tanzania. Interviewer-administered questionnaire was used to collect data on spectacle coverage and associated factors. Data entry and data analysis was done by using SPSS version 23. Chi square test was used to show the evidence of association between spectacle coverage and associated factors in which P value of <0.05 was considered statistically significant. Logistic regression a

Results: A total of 149 participants were involved in the study, majority were females 86 (57.7%). Participants in the age group of 50-59 years old were predominant at 42.3%, Majority of participants were married (81.9%), had attained secondary education were (50.4%) and were from urban area 72.4%. About a third (33.6%) were petty traders.

The proportion of patients with presbyopia among study participants was 83.9%; although the coverage for presbyopia was only 41%. Lack of money was the commonest barrier of spectacle coverage which was reported by 59.8%. Eighty-one study participants (54.3%) were aware of presbyopia and there was relationship between awareness and spectacle coverage (P 0.001), Majority (81.2%) showed

Conclusion: This study found a high proportion of participants with presbyopia and a relatively low spectacle coverage among participants attending outpatient clinics at Muhimbili National Hospital. Financial constraints were cited as a leading reason for not having spectacles. Living in a rural area, low level of education, being a peasant, lack of awareness about presbyopia and negative attitude towards spectacles use were associated with increased chances of not using spectacle for presbyopia.

Recommendation: Eye health care providers and stakeholders to conduct public health campaigns, educational programs and outreach services to rural areas aimed at increasing awareness of presbyopia, create positive attitude towards spectacles use and to improve access to eye care services as well as to address affordability of eye care services.

37. TITLE: EVALUATION OF THE UNIVERSAL SALT IODIZATION (USI) SURVEILLANCE SYSTEM IN TANZANIA, 2022

Sub theme: Epidemiology and Interventions
Contact: davymahwera.dm@gmail.com
Presenter: David A Mahwera

Background: The evaluation of surveillance systems has been recommended by the World Health Organization (WHO) to identify the performance and areas for improvement. Universal salt iodization (USI) as one of the surveillance systems in Tanzania needs periodic evaluation for its optimal function. This is the first evaluation of the USI surveillance system since its establishment in 2010. The USI surveillance system is key for monitoring the performance towards the attainment of universal salt iodization (90%).

Objective: This study aimed at evaluating the universal salt iodization (USI) surveillance system in Tanzania from January to December 2021 to find out if the system meets its intended objectives

Methods: This evaluation was guided by the Center for Disease Control Guidelines for Evaluating Public Health Surveillance Systems, (MMWR) to evaluate USI 2021 data. The study was conducted in Kigoma region in March 2022. Purposive sampling was used to select the region, district, and ward for the study. The study involved reviewing documents used in the USI system and interviewing the key informants in the USI program. Data analysis was done by Microsoft Excel and presented in tables and graphs

Results: A total of 1715 salt samples were collected in the year 2021 with 279 (16%) of non-iodized salt identified. The majority of the system attributes (6/9) had a good performance with a score of three, 2/9 had a moderate performance with a score of two and one attribute with poor performance with a score of one. Data quality, completeness and sensitivity had 100%, acceptability 91.6%, simplicity 83% were able to collect data on a single sample in 75% and the usefulness of the system had poor performance.

Conclusion: Although the system attributes were found to be working overall well, for proper surveillance of the USI system, the core attributes need to be strengthened. Key

variables that measure the system performance must be included from the primary data source and well-integrated within the President's Office, Regional Administration, and Local Government (Po-RALG) to Ministry of Health (MoH) and Tanzania Food and Nutrition Center (TFNC) to be able to attain 90% global coverage

Recommendation: universal salt monitoring and supervision should be conducted at lower level at least twice a year, TFNC, MoH, and PO-LARG should create a single and comprehensive reporting form. This will improve uniformity in the data reported (ensure data correctness) lastly • PO-LARG should set targets for each council to attain on quantity based to be able to monitor and measure performance

38. TITLE: SHOCK INDEX, PHYSICIAN GESTALT AND LACTATE LEVEL IN PREDICTING ADVERSE EVENTS AMONG CRITICALLY ILL PATIENTS AT EMERGENCY DEPARTMENT.

Sub theme: Epidemiology and Interventions
Contact: hgodwin1993@gmail.com
Presenter: HUMPHREY G MEDARAKINI

Background: Critically ill patients are likely to succumb to adverse events if interventions are not timely. Point of care lactate level is widely used in predicting adverse events. In LMICs where point of care lactate cannot be obtained every time, physician gestalt and shock index can be used, however this has not been well studied in LMICs.

Objective: To compare the performance of shock index, physician's gestalt and lactate level in predicting adverse events among critically ill adult patient presenting to the emergency department at Muhimbili.

Methods: This was a 3 months prospective cohort study of all critically ill adult patients presenting to the Muhimbili emergency department. Physician clinical gestalt probability on occurrence of adverse events was obtained, shock index calculated from initial vital signs and lactate level recorded for all patients. Primary outcome was a composite outcome (intubated on mechanical ventilator support, hypotension on vasoactive drugs, cardiac arrest at ED, mortality in the ED). Continuous variables presented as mean (SD), Median (IQR) and categorical variables as proportions. Sensitivity, Specificity, PPV, NPV,+LR,-LR with ROC and AUROC were presented.

Results: Physician clinical gestalt was able to correctly predict the occurrence of an adverse events in 88.1% of patients, and correctly identify those not likely to have an adverse event

76.2% of the time, with an AUC=0.877, (95% CI 0.833 to 0.922). Shock index had the ability to detect the occurrence of adverse events with a sensitivity of 59.3% and identify those not likely to have adverse events in 83.1% of cases (AUC= 0.734, 95% CI 0.658 to 0.810). An elevated lactate level >2 predicted the occurrence of adverse events with a sensitivity of 89.8% and identified those not likely to have an adverse event with a specificity of 58.2% (AUC=0.819, 95% CI 0.76 to 0.88).

Conclusion: Of the three-index test; the cut off used will affect their sensitivity and specificity in predicting adverse events and depending on the need the cut off value can be adjusted. However, physician gestalt had the highest, AUC=0.877, (95% CI 0.83-0.92) hence it was superior to shock index and lactate in predicting the occurrence of adverse events in critically ill patients. The cut off of gestalt probability can be adjusted to meet the demand depending on the needs such that; ICU admissions or not.

Recommendation: In LMIC where emergency care is growing, it is important to have a system of care that will enhance prevention of adverse events among critically ill patients. Clinicians taking care of these patients at ED can rely on their clinical judgement to determine which patients are likely to succumb adverse events as well as those who will need continuum of care in ICU/HDU. Clinical Judgement do not require additional time or testing.

39. TITLE: FACILITATORS AND BARRIERS TO UPTAKE OF CERVICAL CANCER SCREENING AMONG WOMEN WITH HUMAN IMMUNODEFICIENCY AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Epidemiology and Interventions
Contact: soniakabika@gmail.com
Presenter: Sonia Joseph Kabika

Background: Cervical cancer is the most commonly diagnosed and leading cause of cancer death in women in Sub-Saharan Africa, and East Africa is the leading cause of morbidity and mortality. Globally an estimated 5% of all cervical cancer cases are attributable to Human immunodeficiency virus (HIV). Human papillomavirus (HPV) vaccination and cervical cancer screening for women living with HIV are substantially crucial to reduce the burden of HIV attributed to cervical cancer in the future

Objective: To explore facilitators and barriers to uptake of cervical cancer screening among HIV-infected women

Methods: An explorative qualitative study was conducted from November 2022 to January 2023 at Muhimbili national hospital (MNH), involving 32 participants. Purposive sampling was used to recruit participants. Data collection was done by using open-ended questions for both in-depth interviews and focus group discussions (FGD). The interview guide contained information on social demographic characteristics, knowledge of the cervical disease, perceptions, facilitators, and barriers towards cervical cancer screening uptake. Data were transcribed and analyzed manually by using a thematic approach.

Results: The coded texts generated 6 themes with a number of subthemes in each theme. The results showed that facilitators towards screening includes individual factors that are good knowledge on cervical cancer, good health-seeking behavior, and positive perception on cervical cancer. Also, spouse influence decision and health system factors including inspiration from health care providers and free service delivery. Barriers that were developed include limited knowledge of cervical cancer, fear of being diagnosed, negligence, cultural beliefs, peer negative influence, engagement of male healthcare provider, and demotivation from healthcare provider.

Conclusion: Findings from this study suggest that women are misinformed about cervical cancer, its association with HIV, and the importance of early screening. Individual and community knowledge about the cause and the importance of what is significant is still inadequate. Raising public knowledge about the disease's causes, risks, symptoms, prevention measures, and current treatment choices is paramount to eliminate myths and misconceptions, as well as the stigma and fears that surround it.

Recommendation: Raise awareness through mass media to promote early screening of cervical cancer, also advocacy as with HIV and breast cancer to ensure the public understands about it.

40. TITLE: OPPORTUNISTIC AND OTHER INTESTINAL PARASITIC INFECTIONS AMONG PEOPLE LIVING WITH HIV/AIDS ON ANTIRETROVIRAL THERAPY IN TANZANIA

Sub theme: Epidemiology and Interventions
Contact: vmushi31@gmail.com
Presenter: Vivian Mushi

Background: Opportunistic and other intestinal parasitic infections are serious public health problems in people living with HIV/AIDS (PLWHA). PLWHA is the group that suffers the most from opportunistic and other intestinal parasitic infections due to low CD4+ count. Despite the evidence of HIV co-existence with opportunistic and other intestinal parasitic infections among people living with HIV/AIDS (PLWHA), there is limited information on their burden and associated risk factors in Tanzania.

Objective: The study investigated the current magnitude and predisposing risk factors of opportunistic and other intestinal parasitic infections among PLWHA on ART attending CTCs in the Nyamagana District.

Methods: A quantitative cross-sectional study was conducted involving 374 PLWHA on ART in the Nyamagana district. A single stool sample was collected from each participant for opportunistic and other intestinal parasites examination and infection intensity estimations. A structured questionnaire complemented with an observation checklist gathered clinical and laboratory characteristics and risk factors. Data were summarized using descriptive statistics, chi-square test, and logistic regression.

Results: The overall prevalence of opportunistic and other intestinal parasitic infections was 8% and 17.9%, respectively. The predominant opportunistic parasite was Cryptosporidium parvum (70%), while for other intestinal parasites, it was Hookworm (17.9%). All 21 PLWHA infected with intestinal helminths had light infection intensity. The significant factors for transmission of opportunistic and other intestinal parasitic infections were the habit of eating undercooked vegetables (AOR: 3.15, 95% CI: 1.07-9.29), visiting rivers and wells (AOR: 8.74, 95% CI: 1.65–41.24) and habit of eating with unwashed hands (AOR: 1.39, 95% CI: 0.93–1.88).

Conclusion: This study adds evidence of ongoing transmission of opportunistic and other intestinal parasitic infections among PLWHA on ART in Northern Tanzania. The factors that were statistically significantly associated with the transmission of opportunistic parasitic infections were the habit of eating unwashed fruits, eating undercooked vegetables, visiting rivers and wells, and having untrimmed nails, while the habit of not washing hands before eating was statistically significantly associated with transmission of other IPIs.

Recommendation: There is a need for the Ministry of Health (MoH) to develop health education programmes that will aim for unhygienic behavior change. Also, the MoH should consider routine stool tests for PLWHA for early detection and treatment of opportunistic intestinal parasites that can't be treated alone with antihelminthic drugs such as Cryptosporidium. The Ministry of Water should ensure adequate water supply and sanitation improvement.

41. TITLE: TRENDS IN CASE DETECTION RATE FOR LEPROSY AND FACTORS ASSOCIATED WITH DISABILITY AMONG REGISTERED PATIENTS IN ZANZIBAR, FROM 2018-2021

Sub theme: Epidemiology and Interventions
Contact: elhebib31@gmail.com
Presenter: ALI HABIB SAID

Background: Leprosy is still the disease of the public health concern. Globally, 2 to 3 million people are thought to be affected by leprosy's disease-related disabilities. Regarding the leprosy status in Zanzibar, limited information is available. Determining changes in leprosy case detection rates and risk factors for disability among registered patients in Zanzibar will be essential.

Objective: This study aimed to determine the trends in case detection rate for leprosy and risk factors for disability among registered patients in Zanzibar, from 2018 to 2021.

Methods: The study included all leprosy patients underwent treatment in Zanzibar's 11 districts between 2018 and 2021. An analytical cross-sectional design was used. Prevalence and NCDR was calculated. Bivariate and multivariate logistic regression analyses were used to identify risk factors associated with leprosy disability. Adjusted odds ratios (AOR) and their respective 95% confidence intervals were reported.

Results: The leprosy disease was found to be more common in male than female patients. The average prevalence was 7.43/100,000 population while the average NCDR was 7.13/100,000 from 2018 to 2021. Furthermore, the percentage of cases with G1D or G2D disabilities increased from 4.3% in 2018 to 6.3% in 2021, while G0D contributed to a substantial number of new cases at diagnosis and at the end of treatment. Male sex (AOR=2.23, CI: 1.39-3.57, P=0.001), advanced age (AOR=10.17, CI: 3.12-33.13, P=0.000) and multi-bacillary (AOR=12.6, CI: 5.29-29.99, P=0.000) were more likely to develop disability.

Conclusion: This study showed that, leprosy prevalence increased between 2018 and 2021 in Zanzibar despite a declining trend in new cases being detected there. Disability was correlated with risk factors of male sex, advanced age, and multi-bacillary patients.

Recommendation: Our research reveals that prioritizing health education programs, contact tracing, and adequate multidrug therapy are required to prevent leprosy-related disability and transmissions.

42. TITLE: MAGNITUDE AND TRENDS OF TUBERCULOSIS IN DODOMA REGION, TANZANIA - A TWO-YEAR CROSS-SECTIONAL STUDY, 2020-2021.

Sub theme: Epidemiology and Interventions
Contact: elhebib31@gmail.com
Presenter: ALI HABIB SAID

Background: Majority of tuberculosis (TB) infections and fatalities occur in Sub-Saharan Africa, where it affects 9 million people and kills 1.3 million people each year. Treatment availability, poor socioeconomic level, access to and use of healthcare facilities, delays in seeking treatment and diagnosis, and a lack of disease awareness all influence how frequently tuberculosis cases are reported.

Objective: To assess the trends and magnitude of tuberculosis among tuberculosis patients in Dodoma Region, Tanzania from 2020 to 2021.

Methods: We conducted a descriptive analysis from 2020-2021 in Dodoma Region. The Electronic Tuberculosis and Leprosy System (ETL) was used to extract and evaluate the NTLP database's tuberculosis surveillance data for the years 2020 to 2021. Trend and magnitude analysis for tuberculosis was performed using Microsoft Excel worksheet and STATA software.

Results: 9,904 TB patients in total, of which 25.4% had extra pulmonary TB (EPTB), 14.0% had smear-negative TB, and 23.4% had smear-positive TB, were included in the analysis. In 2020, there were 192 cases of all forms of TB per 100,000 people, but by 2021, that number had notably reduced to 177. Similar to this, the incidence rate for all forms of TB dropped from 190 per 100,000 people in 2020 to 174 in 2021. Over the investigated time periods, the magnitude of TB has generally reduced. The PTB percentage is high. To contain PTB patients, we advise expanding the bacteriological diagnostic.

Conclusion: The prevalence and incidence of TB infections are declining in the Dodoma Region. The treatment success rate in the current study is lower than the NTLP target. There is a significant prevalence of pulmonary TB.

Recommendation: Further study is needed to identify the causes for the poor treatment success rate and to assure all patients diagnosed with tuberculosis are bacteriologically confirmed in order to evaluate the efficiency of DOTS programs.

43. TITLE: REGIONAL MORTALITY RATE TRENDS, AND PREDICTORS OF MORTALITY AMONG PEOPLE WHO RECEIVED ANTIRETROVIRAL SERVICES IN TANZANIA FROM 2017-2021

Sub theme: Epidemiology and Interventions
Contact: philipolambo@live.com
Presenter: Philipo Lambo Shineneko

Background: Disproportionalities in the magnitude of mortality among people receiving HIV care and treatment services across national and sub-national levels remain challenging despite the universal expansion of HIV care services. Moreover, factors associated with death during and after the initiation of treatments evolve over time.

Objective: To determine the variation in mortality rate trends at sub-national level, and factors associated with death among people received HIV care and treatment services in Tanzania from 2017 to 2021.

Methods: This was a retrospective cohort study. We analyzed routinely collected data from the national HIV database (CTC-3 Macro). Descriptive statistics were used to summarize demographic and clinical characteristics. We estimated mortality rates in person-years, Kaplan Meir was used in estimating the survival probabilities, and an extended Cox-regression proportional hazard model was used to determine the predictors of mortality.

Results: A total of 857,081 clients-initiated ART services from 2017 to 2021 were analysed. All the participants contributed a total of 1,404,583 follow-up time person-year. About 41,513(4.9%) deaths were reported during the follow-up period. The crude mortality rate was 29.6 (95% CI, 29.3-29.8) per 1000 person-years. The highest peaks of mortality rate were observed in the central and northern zones. Shorter time to mortality observed among males (average hazard ratio, AHR =1.58, 95% CI = 1.45–1.73), age >50 years (AHR= 2.25, 95% CI = 1.94–2.60), (WHO) clinical stage IV (AHR=2.16, 95% CI = 1.78–2.63), underweight

(AHR=1.9, 95% CI = 0.72–2.09), Tuberculosis suspect (AHR = 1.9, 95% CI 1.40–2.50), and VL>1000 copies

Conclusion: Our study demonstrated differences in mortality rate distributions across geographical zones in Tanzania and its trends for the past 5 years. The survival probabilities decrease at different rates in the first three years of treatment, then remain nearly constant afterward. Predictors of early mortality continue to be being male sex, enrolled at an age of 50 years and above, being underweight, having HIV -infection classified as WHO clinical stage IV, being a TB suspect, and having HIV viral load ≥ 1000 copies/ml in the first test.

Recommendation: Understanding the variation in mortality rate trends at sub-national levels is essential in formulating individualized targeted health interventional approaches over time. Also, the Periodic assessment of the risk factors of death among clients during and after initiation of antiretroviral therapy services through follow-up visits remains vital to the continuum of care in this subpopulation.

44. TITLE: PSYCHOMETRIC VALIDATION OF SWAHILI-TRANSLATED QUALITY OF LIFE IN REFLUX AND DYSPEPSIA (QOLRAD) QUESTIONNAIRE IN PATIENTS WITH GERD

Sub theme: Epidemiology and Interventions
Contact: sellemank@yahoo.com
Presenter: Suleimani Kizibo

Background: Health related quality of life (HRQoL) in patients with reflux disease is significantly impaired due to reduced vitality, sleep disturbance, anxiety and reduced productivity. Patient-outcome assessment tools such as Quality of Life in Reflux and Dyspepsia (QOLRAD) questionnaire is a valid and reliable tool in assessing HRQoL of patients with GERD and Dyspepsia. Cultural adaptation of Swahili - translated QOLRAD questionnaire ensures that the translated version of the questionnaire is equivalent to the original version of a questionnaire meanwhile preventing a translated version of the questionnaire from constructions, semantic and grammatical errors

Objective: We aimed to assess the psychometric and linguistic validity of Swahili-translated QOLRAD questionnaire in addressing Health related quality of life in patient with GERD and Dyspepsia.

Methods: A cross-sectional study was conducted at Muhimbili National Hospital (MNH) in Tanzania among 170 Swahili speaking study participants, with complains of clinical GERD

with positive endoscopy. Participants completed a self-reported Swahili-translated QOLRAD questionnaire and Swahili- translated SF -36 questionnaire. Poor HRQoL was defined as SF-36 score less than 50.

Results: The Overall cronbach's Alpha coefficient of the Swahili -QOLRAD questionnaire was 0.937 with Item correlation within the domains of QOLRAD ranged from 0.728 Eating/drinking disorder and 0.860 Sleeping disorder. The test- retest reliability of Swahili QOLRAD ranged from 0.766 and 1.00. The QOLRAD domains had positive correlation with all SF-36 domains.Majority (91%) of study participants had significantly impaired HRQoL

Conclusion: Swahili-translated QOLRAD questionnaire has good reliability and validity. HRQoL in patient with GERD and Dyspepsia is significantly impaired. Swahili translated QOLRAD questionnaire is a valid and reliable tool in addressing HRQoL in patients with GERD and Dyspepsia.

Recommendation: Swahili –translated QOLRAD questionnaire can be used to assess the HRQoL and response to treatment in patients with GERD and Dyspepsia

45. TITLE: INTRODUCTION OF HEAT STABLE CARBETOCIN FOR PPH PREVENTION; EXPERIENCE FROM 39 HEALTH FACILITIES IN 10 COUNTIES IN KENYA

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: Michael.Muthamia@jhpiego.org
Presenter: Michael Muthamia

Background: Globally, Post-Partum Hemorrhage (PPH) is the leading cause of maternal mortality. In a systematic review, overall, 48.9% of 1890 uterotonic samples (19 studies) failed quality tests; failures rates were 75% for Ergometrine and nearly 40% each for oxytocin and misoprostol. To understand the acceptability, feasibility, and experiences in the introduction of HSC (heat stable carbetocin), Smiles for Mothers (SFM) Project conducted an implementation study. HSC was introduced as part of an integrated PPH prevention and management package.

Objective: To determine the healthcare providers' (HCPs) and client's knowledge, experience and perception on the introduction and utilization of Heat Stable Carbetocin in 39 facilities in Kenya

Methods: This was a mixed-method study. Quantitative data collections adopted a pre-post (Baseline July 2021, End line November 2022) approach. The study was implemented in 39 health facilities from 10 counties. A total of 171 healthcare providers at baseline and at end

line were surveyed. 19 policy makers were interviewed. 8833 single doses of HSC were utilized in the study sites. A total of 191 postpartum women who received HSC were interviewed.

Results: At baseline only 0.6% (n=171) mentioned having administered HSC for prevention of PPH compared to 98.8% (n=171) at end line. At end line 93.6% of HCPs agreed that HSC was easy to administer, easy to distinguish from other uterotonics from their packaging (91.8%), has sustained effective contractions (87.1%), has minimal side effects (81.3%) and is effective in preventing PPH (91.2%). In the multivariate analysis, number of ANC visits and whether educated on danger signs for excessive bleeding by the healthcare provider were significantly associated with the knowledge on uterotonics. Out of 8833 doses of HSC administered mostly by midwives, no adverse event was reported. HCPs reported reduction in PPH cases.

Conclusion: It is feasible, acceptable and safe to introduce single dose HSC in public facilities for PPH prevention. Introduction of HSC has the potential reduce PPH incidence and its effects. Inclusion of HSC in key national policy documents, training package and HMIS is a critical in scale up and sustainability.

Recommendation: We recommend the inclusion HSC as a WHO recommended uterotonic in the national guidelines, national training package,   and in HCPs' job aids. We further recommend awareness creation on uterotonics among pregnant women during antenatal clinic visits.

46. TITLE: CLINICAL PROFILE, OUTCOME AND ITS ASSOCIATED FACTORS AMONG NEONATES ADMITTED TO NEONATAL ICU AT MUHIMBILI NATIONAL HOSPITAL, DAR ES SALAAM.

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: tanneyta@gmail.com
Presenter: JANETH TARIMO

Background: Neonatal period is a highly vulnerable and vital time to ensure that every child survives and thrives to reach their full potential. Despite improvements over the past decade, neonatal mortality rate in developing countries is the highest in the world. Therefore, to further expand life-saving services, improvements in access to quality facility-based neonatal care are required.

Understanding the clinical profile and factors associated with outcome among critically ill neonates admitted to a recently upgraded public Neonatal intensive care unit (NICU) at Muhimbili National Hospital (MNH) will help in focused planning, resource allocation and reflection quality of care.

Objective: To determine the clinical profile, factors associated with outcome among critically ill neonates admitted to NICU at MNH

Methods: Hospital-based prospective cohort study was conducted among 335 neonates admitted to NICU, MNH from April to October 2022. Data was collected using a structured questionnaire with data on demographic profile, maternal infection, antenatal corticosteroids use in anticipated preterm delivery, gestational hypertension, mode of delivery, place of delivery, birth weight, gestational age, Apgar score, admission diagnosis, need for mechanical ventilation, and NICU stay.

The primary outcome was mortality or survival at time of exit from NICU. Data entry and analysis was done using STATA version 14.2. Descriptive data were summarized using frequencies, percentages.

Results: Among 2622 neonates admitted to the newborn unit, 13.8% were admitted to the NICU, of whom 205 (61.2%) and 268 (80%) were out born and preterm, respectively. More than half 178 (53.2%) were hypothermic on admission, 6% had both medical and surgical disease conditions, and nearly half 155 (46.3%) were mechanically ventilated. About 179 (53%) had multiple diagnoses, however, the leading admission diagnoses were respiratory distress syndrome (RDS) 172 (51.3%) and Sepsis 110 (32.8%).

The median NICU follow-up time was 6 days (IQR 2-11 Days). Mortality was 68 per 1000 neonate-day equivalent to 170 (50.7%), with 60% of overall mortality being early neonatal death (within 7 days).

Conclusion: One out of every 10 new-borns admitted at MNH required neonatal ICU care. The majority were preterm and out-born. Half of these neonates died during the study period. Factors associated with mortality were; extremely low birth weight, admission hypothermia, sepsis, and the need for mechanical ventilation.

Recommendation: There is a need for establishing strategies and interventions to facilitate aggressive preterm and critically ill newborn management to reduce mortality. Such strategies should reinforce simple interventions such as essential newborn care in all delivery facilities and newborn units, as well as during transport to prevent hypothermia and sepsis. Studies with a larger sample size to explore risk of fatality among ventilated neonates are warranted

47. TITLE: MENSTRUAL HYGIENE MANAGEMENT PRACTICES AMONG RURAL SECONDARY SCHOOL STUDENTS IN HANDENI DISTRICT

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: ibrahim.olekinwaa@yahoo.com
Presenter: Ibrahim Olekinwaa

Background: Menstruation is a natural monthly occurring process linked to the reproductive cycle of adolescent girls and women. The lack of proper sanitation facilities, proper and affordable sanitary materials, support from peer adolescent girls and women at home, at school and at workplaces, affects their health, their potential to access education, employment; and their overall safety and quality of life. The study utilized a qualitative approach that included semi structured in-depth interviews with key informants who were secondary school head teachers and focus group discussions with secondary school girls and community women from wards where selected secondary schools were located.

Objective: To explore factors associated with menstrual hygiene management (MHM)practices in rural secondary schools of Handeni district and the girls' experience on menstrual hygiene management.

Methods: This study was conducted in six rural public secondary schools and communities from respective wards where the selected secondary schools were located in Handeni district. A total of six secondary schools were purposively sampled in consultation with staff from the District Education Office to include secondary schools in rural areas of Handeni district in this study. Six secondary school head teachers underwent in-depth interviews and 12 focus group discussions were conducted before reaching maximum saturation of information in the field (10). A total of 71 school girls aged 14-20 years were selected from form three and four to participate in the focus group discussion (FGD).

Results: Girls' experience on MHMo Knowledge on puberty, menarche and menstruation

Most of the involved participants seems to have an awareness and basic understanding concerning puberty, menarche and menstrual cycle. Most of the participants have defined puberty as the transformation phase from childhood to adulthood and they explained menarche to be the first blood discharge that a girl experience after reaching a certain age, which they described as the first step from childhood to adulthood. "…. Puberty is the state of a girl or woman from childhood to adulthood; it includes egg maturation and the start of menstruation" (FGD#5_Girl)

Conclusion: Most of girls reported to have knowledge on puberty, menstruation and understanding on how to manage it. It is reported that girls from families with good financial background were using commercial sanitary material while others from families with financial hardship used rag cloths as their sanitary pad's alternative.

Recommendation: To make school WASH facilities more MHM-friendly, improvements must be made to their design and upkeep, including the addition of suitable disposal systems and changing areas inside latrines. In order to foster a supportive environment for girls, teachers should teach all students including boys to be understanding.

48. TITLE: SONOGRAPHIC PATTERNS AND PROPORTIONS OF PLACENTA ABNORMALITIES IN PREGNANT WOMEN ATTENDING MUHIMBILI NATIONAL HOSPITAL

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: samsonnyanda@gmail.com
Presenter: SAMSON NYANDA

Background: Placental pathologies are often overlooked and receive attention only when complications arise. In most settings, Placental reporting is often limited to the location and presence of calcification. A complete fetal ultrasound should include a full assessment of the placenta for any possible abnormalities. Placental diseases range from abnormal morphology, size, location, extent, and degree of placentation to abruption and the presence of rare placental neoplasms of benign or malignant nature. Familiarity with the placenta's normal and abnormal imaging appearance is necessary for the radiologist and physician. Abnormalities of placenta may lead to poor maternal and fetal outcomes

Objective: To demonstrate the sonographic patterns and proportions of placental abnormalities and their associated factors in pregnant women attending Muhimbili National Hospital

Methods: A hospital-based quantitative cross-sectional prospective study was done at Muhimbili National Hospital, where real-time placenta ultrasound findings were taken and documented from all pregnant women who met the inclusion criteria. A standard ultrasound machine with similar optimal settings was used on each visit until the sample size was reached. Analysis??

Results: Placental pathologies excluding those related to location and abruption were overlooked in 200 (91.7%) of the study population. These include placentomegally, parenchyma pathologies and placenta accrete.

Pathologies related to placenta parenchyma and morphology had a strong association with chronic maternal illness and chronic medication use both with p <0.001

Placentomegally was significantly associated with chronic maternal illness p <0.001, and was also associated with fetal complications.

Unexplained fetal loss and early neonatal death was significantly strong associated with placenta parenchyma pathologies p -value 0.001.

Sonographic features of placenta accrete were also found to be helpful in the antenatal diagnosis of the Placenta Accreta Spectrum.

Conclusion: Antenatal diagnosis of placental abnormalities is vital for the early detection of the increased risk for possible fetal complications.

Recommendation: All obstetric practitioners should methodically evaluate, report and follow placental findings in all antenatal ultrasound scans so as to detect high risk pregnancies timeously.

49. TITLE: CLINICAL CHARACTERISTICS AND FACTORS ASSOCIATED WITH MORTALITY AMONG CHILDREN WITH SEPSIS ADMITTED AT PAEDIATRIC ICU AT MUHIMBILI NATIONAL HOSPITAL.

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: oajuna@gmail.com
Presenter: Dr. Olivia Theonest

Background: Sepsis is a global burden in the paediatric population resulting in high morbidity and mortality. It is one of the leading causes of Paediatric Intensive Care Unit (PICU) admissions in both developing and developed countries. Clinical characteristics and factors associated with mortality from sepsis at our PICU are not well documented, hence posing more challenges in its management.

Objective: To determine the clinical characteristics and factors associated with mortality among children with sepsis admitted at paediatric intensive care unit at Muhimbili National Hospital.

Methods: A cross-sectional study with longitudinal follow up was conducted among 160 children with suspected/proven sepsis admitted to PICU at Muhimbili National Hospital, Tanzania from July 2022 to January 2023.The diagnosis of sepsis was made within 24 hours of admission after screening using SIRS criteria and thorough clinical examination. Clinical and laboratory characteristics were recorded from the hospital software (and patient clinical notes. Assessment of the outcome was done at day 10 post admission whether survived or deceased. Data entry and analysis was done using SPSS version 23. Descriptive analysis was done using frequencies and proportions for categorical data.

Results: A total of 160/334 (47.8%) children were admitted in the PICU with sepsis and were thus included in the study. The male to female ratio of 1:1 and a median age of 1 year (IQR=1-14). The respiratory system was the most common focus of infection (51.9%). Most children had sepsis with associated organ dysfunction (76.9%), with respiratory failure being the most common type. Of the study participants, 43.8% had positive blood culture growth, and the common isolate was Staphylococcus aureus(76.6%).

The proportion of mortality was 38.8% at the 10th -day of follow-up, septic shock contributed to 35.5% of total deaths. Septic shock, and the need for inotropes were associated with an increased risk in mortality (PR 1.82, 95% CI 1.25-2.67, p =0.008).

Conclusion: Sepsis is a major health challenge in close to 50% of the children admitted to the pediatric intensive care unit (PICU) Half of the participants had respiratory system as focus of infection. The majority had sepsis with associated organ dysfunction with a predominance of respiratory failure. More than a one third of the children died from sepsis, which positively correlated with the presence of septic shock and the need of inotropes.

Recommendation: Early recognition, prompt management and/or prevention of septic shock, is crucial in reducing mortality from sepsis in children admitted to PICU. Prompt identification and targeted treatment of the causative organism may improve outcomes for patients with sepsis in PICU as it guides an informed decision toward patient's management.

50. TITLE: QUALITY OF LIFE AND ITS PREDICTORS AMONG CHILDREN AND ADOLESCENTS WITH CANCER RECEIVING TREATMENT AT MUHIMBILI NATIONAL HOSPITAL, TANZANIA

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: mbeduleh@gmail.com
Presenter: Dr. Happyphania Mathew

Background: Cancer in children and adolescents is one of the debilitating diseases that have a low cure rate in developing countries. The advent of new chemotherapeutic agents and treatment modalities, has led to better outcomes and increased survival among childhood cancer patients in the world today. Nevertheless, children with cancer struggle with a poor quality of life (QoL) in low-income settings, an area that has not been well addressed in most African countries. Knowing the predictors of QoL will guide the identification and support to improve the QoL in this key population.

Objective: To assess the quality of life and its predictors among children and adolescents with cancer receiving treatment at Muhimbili National Hospital

Methods: A cross-sectional, analytical study was conducted among children and adolescents with cancer receiving treatment at MNH paediatric oncology unit from March to May 2023. A total of 105 patients were included. Any child or adolescent with cancer receiving treatment at the oncology unit as either inpatient or outpatient and met the inclusion criteria after signing assent and consent forms were recruited into the study. A standardized questionnaire was used to collect demographic and clinical data. PedsQLÔ Generic Core Scale 4.0 and Disease-specific PedsQLÔ cancer module 3.0 were used to determine age-specific QoL.

Results: A total of 105 children and adolescents with cancer receiving treatment at MNH aged 8 to 18 years were recruited into the study, with mean age of 11.50 years. Most of them (53.33%) were male. with a predominance (53.33%) of haematological malignancies. The mean age at diagnosis was 10.40 years. The total generic mean score of the child report was 71.93, considered good, with school function perceived to be lower than other domains. On the cancer specific QoL, the reported mean scores were 54.84±18.15 considered poor, with pain and hurt and procedure anxiety being more problematic. The predictors of QoL were age of the child and the family monthly income.

Conclusion: Children and adolescents on cancer treatment at MNH had a perceived better generic QoL but a relatively low cancer specific QoL. In the generic QoL score the, the school domain had the lower scores whilst lower score was observed in all 8 domains of cancer

specific domains of QoL. Age of the child and family monthly income predicted the overall QoL of children and adolescents with cancer.

Recommendation: Assessment of QoL should be included in the standard of care of children with cancer as it will help to identify those who need psychosocial support and behavior intervention in order to improve their quality of life.

51. TITLE: PATTERNS OF PREMENOPAUSAL GYNECOLOGICAL CONDITIONS AND ASSOCIATED FACTORS AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: mercianagilbert10@gmail.com
Presenter: MERCIANA GILBERT MLIGA

Background: Gynecological diseases burden women, necessitating accurate early diagnosis and timely management. While ultrasound is commonly used, MRI's superior soft tissue contrast makes it ideal for early staging and diagnosis, especially for malignancies. However, limited access to pelvic MRI delays proper management. In Tanzania, there is lack of published data on MRI patterns of gynecological conditions. Further research on pattern of gynecological diseases on MRI is needed.

Objective: To determine the pattern of premenopausal gynecological conditions and associated factors among women referred for pelvic MRI at Muhimbili National Hospital.

Methods: Consecutive sampling was used to enroll 100 non-pregnant premenopausal women in a prospective descriptive cross-sectional study conducted at Muhimbili National Hospital Radiology department from July to December 2022. Demographic and clinical information was collected using a structured questionnaire. Data analysis was performed using SPSS version 20, and descriptive statistics, univariate and multivariate logistic regression were employed. Significance level was determined at p-value < 0.05.

Results: Majority of respondents (80%) were above 30 years old. The prevalence of gynecological conditions among the subjects was 75.5%. The most common gynecological condition among participants was fibroids. Lower abdominal pain was the most common clinical presentation accounting for 45% of cases.

Multivariate analysis was conducted to examine the association between socio-demographic factors and MRI findings. Women aged >30 had a tenfold higher likelihood of fibroid diagnosis compared to younger women (P=0.001, OR 10.372). Nulliparous women had a fivefold higher likelihood of fibroid diagnosis than their multiparous counterparts

(P=0.001, OR 5.183). Parous women had a 0.2 times lower likelihood of gynecological tumor diagnosis compared to nulliparous.

Conclusion: Premenopausal women commonly experience a significant occurrence of gynecological conditions. These conditions exhibit distinct MRI patterns.

Recommendation: To prioritize the use of MRI for diagnosing gynecological conditions due to its ability to detect them early and enable timely intervention

52. TITLE: CRITERIA BASED AUDIT ON THE MANAGEMENT OF PREECLAMPSIA WITH SEVERE FEATURES AT MERU DISTRICT HOSPITAL, ARUSHA.

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: gracecharles434@gmail.com
Presenter: GRACE CHARLES

Background: Preeclampsia and eclampsia, which together account for an estimated 13 to 16% of maternal mortality in Tanzania, are the second major causes of maternal death. Auditing management of pre-eclampsia with severe features at Meru District Hospital will help raise standards of care, improving maternal and perinatal outcomes.

Objective: To assess adherence to the standard management of preeclampsia with severe features at Meru District Hospital.

Methods: A retrospective, descriptive study auditing the management of preeclampsia with severe features was conducted at Meru District Hospital from 3rd September to 14th October 2022 after agreeing on the criteria during a meeting with the staff working in the maternity ward. The management of preeclampsia with severe features was established by using Tanzania's standard treatment guideline of which year??…. A checklist of best practices was used to collect data from 68 case notes and then entered into SPSS version 23 for analysis. The adherence to standards practice based on the diagnosis, investigations and treatment was computed as proportions.

Results: The proportion of preeclampsia with severe features accounted for 3.8% (68/1773). Among these, 100% had a urine dipstick for protein check, full blood picture and liver enzymes were also checked in 47% and creatinine in 45% of the cases. Magnesium sulphate was administered to each of pregnant women, though only 10 (14.7%) had their respiration rates and 2 (2.94%) had their deep tendon reflexes monitored. Antenatal corticosteroids were given to 16 women (100%) who were between 32 and 34 weeks of gestation, however, only 2 (50%) of the women under 32 weeks received steroids. Only 2 (2.9%) women were

tested for deep tendon reflexes and 39 (57.4%) were monitored for fetal heart rate. Antihypertensives were started in 18 (26.5%) women within 20 minutes of diagnosis.

Conclusion: The overall management of patients with preeclampsia with severe features according to standards at the district hospital level was suboptimal. However, the administration of magnesium sulphate and urine dipstick check was notably optimal. A helpful tool for raising the standards of care is criteria-based auditing. It promotes self-analysis and creativity while assisting in identifying priority areas and redistributing resources accordingly.

Recommendation: Monitoring women with preeclampsia with clear documentation is needed to get better outcomes. Proper documentation from the time of admission, doctors' consultation, investigations and treatment given should be done to increase standards of operation. Also, on the job training of staff on how to take a good history to reach a correct diagnosis, to take required investigations and management is required to reduce the complications of preeclampsia.

53. TITLE: AN EVALUATION OF NEWBORN AND STILLBIRTH'S INDICATORS IN ROUTINE DHIS2 SYSTEM TO INFORM DATA IMPROVEMENT IN TANZANIA

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: jshabani@ihi.or.tz
Presenter: Josephine Shabani

Background: Globally, an estimated 2.3 million newborn deaths and 1.9 million stillbirths occur every year (UN-IGME 2022). In Tanzania, an estimated 46,000 newborn deaths (NMR: 20 per 1000) and 43,000 stillbirths (Stillbirth rate (SBR): 18.3 per 1000) (UN-IGME 2022) occurred. Tanzanian Government has prioritized improving maternal and newborn care and committed to the Sustainable Development Goals (SDG), notably SDG3.2 so as to have fewer than 12 neonatal deaths per 1000 live births by 2030. However, the quality of newborn data, including neonatal mortality in routine health information systems has not been systematically assessed.

Objective: Descriptive evaluation of availability and quality of reported Every Newborn Action Plan (ENAP) indicator in DHIS2. Compare the variability in NM reported in DHIS2 across various levels of care

Methods: WHO data quality assessment dimensions was used for quality assessment of neonatal indicators from the Tanzania District Health Management Software (DHIS2) data

for 2015-2021 (N=9,151 facilities) according to availability, internal, and external consistency dimensions. Comparative analysis of neonatal deaths data reported by level of care in Tanzania was also done for 2015-2021.

Results: An improvement in reporting of postnatal care (2 days) from 58% to 86%, breastfeeding has been high>86%. NMR, bag mask ventilation and treatment of neonatal infections is underreported over 7 years. District hospitals reported the highest proportions of facility deaths among the facility deaths reported for the years 2015-2021. Facility births risen from 62-81% since 2015 in Tanzania (Demographic and health surveys). DHIS2 estimates shows that SBR is higher than NMR while UN-IGME NMR estimates are higher than SBR estimates.

Conclusion: Core newborn indicator data are available in Tanzania DHIS2; however, some indicator data are highly unreliable. Some newborns who died at home might not have been captured by facility DHIS2.

Recommendation: Routine Health Information System (RHIS) in Tanzania should put emphasis on documentation of core neonatal indicator data for ENAP and SDG targets tracking

54. TITLE: OUTCOMES AND ASSOCIATED FACTORS OF RETINOPATHY OF PREMATURITY TREATMENT AT MUHIMBILI NATIONAL HOSPITAL, DAR ES SALAAM.

Sub theme: Maternal New-born and Child Adolescent Health
Contact: warda.albarwany@gmail.com
Presenter: WARDA KHALEF

Background: Retinopathy of prematurity (ROP) is a potentially blinding disease caused by abnormal growth of retinal blood vessels in premature babies leading to scarring, retinal detachment, and vision loss. There are several treatment modalities for ROP, all of which aim to prevent further growth of abnormal blood vessels. Outcomes and the factors that may influence ROP treatment outcomes remain inconclusive.

Objective: To assess outcomes and associated factors of ROP treatment at Muhimbili National Hospital.

Methods: A hospital-based analytical cross-sectional study that consecutively recruited 40 babies who had ROP and had received treatment from 2019 to 2022 was conducted. Participants were assessed for structural findings, visual status, and refractive errors. Data were analyzed using SPSS version 24.

Results: Seventy-nine eyes of 40 patients were analyzed. Majority (71.3%) had stage 3 ROP. ROP regression was seen in all eyes. Normal vision was observed in 64.6% of eyes. The most common refractive error observed was low hyperopia in 31.3% of eyes, moderate and high myopia was 23.8% and 12.5% of eyes, respectively. Birth weight, GA, PMA, and disease severity showed no association with structural outcome, visual and refractive status.

Conclusion: All eyes showed ROP regression. Normal vision was observed in majority of eyes. Low hyperopia was a common refractive error followed by moderate and high myopia. GA, PMA, birth weight, and disease stage showed no association with treatment outcomes.

Recommendation: Efforts to screen, detect and treat babies with ROP at MNH must continue in order to maintain a good outcome. To encourage scaling up of ROP screening and treatment throughout the country.

55. TITLE: INVESTMENT CASE FOR SMALL AND SICK NEWBORN CARE IN LOW- AND MIDDLE-INCOME COUNTRIES: SYSTEMATIC ANALYSES IN TANZANIA.

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: dshamba@ihi.or.tz
Presenter: Donat Shamba

Background: Worldwide 2.4 million neonates die during their first 28 days. Scale-up of Small and Sick Newborn Care would provide high impact and is necessary to meet SDG and Every Newborn Action Plan target. Countries have committed to reaching 80% of districts with a WHO level 2+ newborn care unit.

Objective: There is demand for a systematic, data-based investment case to inform budgeting and resource mobilization.

Methods: Firstly, national policy frameworks and guidelines were reviewed. Secondly, the potential impact of scaling up SSNC was estimated using the Lives Saved Tool for 2025 and 2030. Thirdly, costs were estimated for set-up and running using an Activity Based costing approach and the NEST360 Device Planning and Costing tool costs. Two costing scenarios were simulated: scenario 1 included costs of all new according to government standards, and Scenario 2 assumed half new or halfway to government standards. Fourthly, we estimated return-on-investment. Fifthly, potential financing opportunities were identified and targeted.

Results: By 2025 Tanzania aims to have functional neonatal level 2+ care units in 146 district hospitals (*80% of districts) and all 25 regional hospitals. At 85% coverage using LiST, we estimated cumulative lives saved by 2025 at 36,600 and 79,900 by 2030. The neonatal Mortality Rate (NMR) was forecasted to fall from 20 to 13 per 1000 live births, superseding the government target of 15 by 2025. However, the projected NMR by 2030 at 13 may miss the SDG target of 3.2 of <12. Set-up cost was estimated at US $220 million (scenario1) and US $130 million (scenario2), driven by infrastructure.

Conclusion: There is a substantial investment case in Tanzania, especially noting the return-on-investment potential gain of U$ 32 per $1 invested in small and sick newborn care.

Recommendation: Running cost was estimated at US $52.48 and US $25, driven by addressing the human resources gap.

56. TITLE: POST CAESAREAN SECTION DELIVERY PAIN MAGNITUDE, PATIENT MANAGEMENT AND SATISFACTION IN THE KIBITI DISTRICT.

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: samwelimadaha@gmail.com
Presenter: Samweli G. Madaha

Background: Postoperative pain complaint is common among inpatients who undergo Caesarean Section Delivery (CSD) where its proportion ranges from 47-100%. WHO defines that severity as moderate to severe pain and recommends the use of a multi-moda analgesia approach that involves opioids, narcotics, Non steroid anti-inflammatory drugs (NSAIDs), acetaminophen and other groups. However, WHO reports inadequacy of the above medications in LMICs despite the raising Caesarean section rate. Kibiti district is one of those areas with a high fertility rate and raised proportion of CSD from seven to 10% in 2019 and 2021 respectively. However, the use of a multi-moda approach for pain management has not been evaluated in Kibiti district.

Objective: To assess proportion of patients with post CSD pain, types of medications used for its management, and patient satisfaction in Kibiti district, Tanzania

Methods: This hospital-based prospective cross sectional study was conducted at Mchukwi Mission Hospital and Kibiti Health Centre. Data were collected in 422 patients from 1st October, 2022 to 31st April, 2023 by using customized checklist for patient characteristics; Allina Health Pain Assessment Scale for pain score at 8, 12, 24 hours; and customized,

validated Surgical Satisfaction Questionnaire (SSQ) for satisfaction at 24 hours. Data analysis was done by using Statistical Package for Social Sciences (SPSS) version 25. Chi-square test was used for categorical variables. Linear mixed effect model was used in repeated measures showing association between medications and pain level.

Results: Medications used for patients were Diclofenac, Tramadol and Pethidine as a single drug in 365 (86.5%) patients. Pethidine was used in only one facility among the two in spite of its lowest mean pain score. Proportion of patient with mild to very severe pain was decreasing from 100-57 % in 24 hours. The highest proportional of patient with inadequate pain control (from moderate to very severe) was 70% at eight hours then decreased by three folds in next 12 and 24 hours. However, 88% of patients were very satisfied.

Conclusion: Postoperative pain management was still inadequate. Majority of patients were given one group of analgesics where pethidine was used in only one facility among the two.

Recommendation: For better response the use of other groups like opioids and acetaminophen as multi-modal analgesia approach should be practiced as recommended. To do qualitative studies to assess the reason for high satisfaction in spite of the high postoperative pain level.

57. TITLE: ADOLESCENT WELLNESS VISITS IN TANZANIA: TEACHERS' AND CLINICIANS' PERSPECTIVES

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: agape_minja@yahoo.com
Presenter: Anna Minja

Background: No routine preventative health service delivery platform exists for Tanzanian adolescents. HIV and sexual and reproductive health (SRH) services often do not meet all adolescent needs. A cluster RCT assesses a preventive health service for young adolescents—Adolescent Wellness Visits (AWV), coordinated via primary schools and health facilities. AWVs include screening for nutrition, vision, mental health, and dental pain and optional sexual and reproductive health services (SRH-HIV testing, contraception).

Objective: The broad aim is to determine over a two-year period, if experience of a positive, prevention-focused clinical encounter influences adolescents' future health service utilization.

Methods: Twenty government primary schools were randomized to intervention and control groups. Standard 7 students at 10 intervention schools (n=509) participated in AWVs in Kinondoni and Bagamoyo. Providers were trained on national adolescent-friendly HIV and SRH guidelines, and how to conduct nutrition, vision, dental, and mental health screenings and referrals. Teachers escorted student groups to individual clinic-based AWVs. Post-intervention, 23 FGD were held with head teachers, teachers, and health providers (HP) to explore their perceptions on adolescent health needs met and suitability of AWVs. Rapid qualitative analysis was used to identify themes.

Results: HPs felt AWVs met adolescent health needs although community-based norms were barriers to the provision of SRH services. Working with schools was perceived by HPs as useful for follow-up on referrals. Teachers reported that AWVs were appropriate, complemented the school curriculum and existing health programs. Teachers recommended more social welfare staff involvement to support completion of referrals. Most teachers and HPs report need for more training on adolescent's mental health, and AWVs were suitable and potentially sustainable.

Conclusion: Professionals report AWVs are feasible in our setting but with few logistical challenges.

Recommendation: The government in collaboration with stakeholders to provide adequate training on mental health for both teachers and HPs.

58. TITLE: AUDIT OF CAESAREAN SECTION INDICATIONS AT GEITA REGIONAL REFERRAL HOSPITAL, A LIMITED RESOURCE SETTING

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: fyamri@gmail.com
Presenter: FATMA YAHYA

Background: Caesarean section (CS) is a lifesaving procedure for both mothers and their babies when indicated, but it can also be the cause of severe maternal morbidity and mortality when not indicated, the rate of Caesarean section varies worldwide due to varying socioeconomic conditions and availability of public and private health sectors. The rate of CS at Geita RRH keeps on escalating, indicating the overuse of this life-saving procedures, necessitating the need for auditing the indications of CS performed to assess the adherence of diagnosis and management provided to patients.

Objective: To determine the current clinical adherence towards standard criteria of diagnosis and management of CPD, fetal distress and obstructed labor at Geita RRH

Methods: A descriptive retrospective clinical audit was conducted at Geita RRH by reviewing CS conducted from January to December 2021.Criteria of standard diagnosis and management of the CS indication were adopted from the study done at Muhimbili National Hospital and ACOG. Data of current practice assessment was entered in SPSS version 23 and subsequently analyzed for proportions of adherence of CS diagnosis and management through composite scoring.

Results: a total 923 cesarean section conducted at Geita RRH from January to December 2021, among those 260 case note were audited due to completeness of documentation, among the audited indication fetal distress was the leading indication accounting for 38.5%, obstructed labor 37.3% and CPD 24.2%. The proportion of adherence to standard diagnosis was 84.5% in obstructed labor, 74.2% in CPD and 70% in fetal distress, while the proportion of adherence to standard management in all audited indication was affected by low coverage of surgical checklist which was 13%, 11.1% and 8.2% in fetal distress, CPD and obstructed labor respectively.

Conclusion: Three-quarter of all CS audited adhered to standard diagnostic criteria and less than quarter of management adherence was affected by the use of surgical checklist.

Recommendation: We recommend further studies on assessment of surgical checklist and its impact on patients' outcome. Also, qualitative study to assess the knowledge on CS indications and factors contributing to CS at Geita RRH.

59. TITLE: MANAGEMENT TIMING AND MATERNAL OUTCOMES ON PRIMARY POSTPARTUM HAEMORRHAGE AT MAWENZI REGIONAL REFERRAL HOSPITAL.

Sub theme: Maternal, Newborn, Child and Adolescent Health
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Presenter: Victor Jeremiah

Background: Primary postpartum haemorrhage remains one among the leading cause of maternal morbidity and mortality following delivery. Regardless of the interventions done in the country, there has been an increase in the trend of primary PPH cases in the Kilimanjaro region. Several literatures have shown that, adverse delivery complications occurred at night compared to the daytime. Studying the time of occurrence and maternal

outcomes on primary PPH is very important to improve the quality of care, prevention, early diagnosis and management of primary PPH cases and related outcomes.

Objective: This study aimed at determining management timing and maternal outcomes on primary PPH at Mawenzi RRH from January 2019 to December 2021.

Methods: A hospital-based cross-sectional study was conducted. The data were collected and analyzed using Statistical Package for Social Science (SPSS) Version 23. The proportions of primary PPH which occurred during the day and nighttime were determined. Maternal outcomes following primary PPH and their differences as per the time of the day were assessed. The Chi-square test assessed the differences in proportions and maternal outcomes, following primary PPH between day and nighttime. A P-value of less than 0.05 was used as the cut-off for determining a statistically significant value. Variations in maternal outcomes depending on months of the year were described.

Results: The total number of deliveries during the study period was 8592. A total of 174 files were analyzed. There were 60.9% of total primary PPH cases during the night and 39.1% of total cases during the daytime. Proportions of primary PPH during the night and daytime were 2.1% and 2% respectively with a P-value >0.05. P-values for the differences in maternal outcomes as per the time of the day and night were >0.05. There were random variations of maternal outcomes following primary PPH, depending on the months of the years under study.

Conclusion: There were no statistically significant differences in the proportions of primary PPH between the day and nighttime. There were no statistically significant differences in maternal outcomes between daytime and nighttime, following primary PPH. There were random variations of maternal outcomes following primary PPH, depending on the months of the years under study.

Recommendation:

1. Further/large-scale study is needed to assess the knowledge and skills among healthcare providers on the prevention, identification and management of primary PPH

2. Healthcare providers should strengthen prevention, early diagnosis and timely management on Primary Postpartum Haemorrhage during the night time, as most severe outcomes of Clinical significance occur at night. Also, greater than three quarter of the deliveries occur at night time.

60. TITLE: PREVALENCE OF INTRAVAGINAL PRACTICES AND ASSOCIATED FACTORS AMONG WOMEN ATTENDING GYNAECOLOGY CLINIC AT MBAGALA RANGI TATU HOSPITAL

Sub theme: Maternal, Newborn, Child and Adolescent Health

Contact: mbwanapili@gmail.com

Presenter: Dr. Pili Mbwana

Background: Intra-vaginal practice (IVP) is the behavior that has been reported to be practiced by various women worldwide for a number of reasons, ranging from social-cultural to economic ones. The practice is influenced by varying motives, employing a wide range of products and substances. The substances used, disrupt vaginal integrity and put women at risk of various gynecological conditions. In Tanzania, there is limited studies about IVP popularity and its associating factors.

Objective: The aim of this study was to determine the prevalence of intra-vaginal practice and associated factors among women attending gynaecology clinics at Mbagala Rangi Tatu Hospital.

Methods: A cross-sectional study was conducted among women attending at Mbagala Rangi Tatu Hospital. Data were collected by using a structured interviewer-administered questionnaire. The participants were obtained by convenience sampling. Data were analyzed using SPSS, version 23. Descriptive statistics, like frequencies and percentages, were used to present categorical independent variables. Association was tested using Chi-square, Bivariable, and multivariable logistic regression to see the association between IVP and independent variables, with a P-value < 0.05 considered statistically significant.

Results: A total of 395 women were recruited for the study. The mean age of women studied was 33.69(±8.78) and 318(80.5%) were residing in urban areas. Over half of the women 250(63.3%) were married and the majority of the participants 352(89.1%) had one sexual partner. The prevalence of IVP was found to be 92.7%. There was no association found between social demographic factors and IVP.

Conclusion: The prevalence of IVP is very high in our community. Water only is the most substance used in cleansing for hygiene purposes and traditional herbs are mostly used in insertion for treatment purposes. Relatives are the predominant source of information for the larger part of the women

Recommendation: There is a need for a program to reduce the number of women exposed to this practice. To increase woman's awareness and to encourage them to seek health issues advice from health care providers rather than anybody around such as relatives.

There is a need for another study with a different methodology such as a community-based study with a bigger sample size so as to determine well the association.

61. TITLE: AWARENESS, COMPLIANCE AND ASSOCIATED FACTORS OF MALARIA PREVENTION INTERVENTIONS AMONG PREGNANT WOMEN IN KIGOMA, TANZANIA

Sub theme: Maternal, Newborn, Child and Adolescent Health
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Presenter: Msilikale W. Manyiri

Background: Pregnant women face significant risks to their health and the health of their unborn babies due to malaria in pregnancy. Unfortunately, the utilization of preventive interventions is inadequate in malaria-endemic countries like Tanzania. It is very vital to comprehend the level of awareness, compliance, and factors linked to malaria prevention among pregnant women in Tanzania. This understanding is essential for developing targeted interventions and planning effective programs within antenatal clinics

Objective: To determine the level of awareness, compliance and associated factors of malaria prevention among pregnant women in Kigoma Municipality, Tanzania

Methods: The study used a cross-sectional design, where consecutive women attending the RCH clinic in selected facilities in Kigoma Municipal council, who met the inclusion criteria were interviewed. Descriptive statistics were used to analyze social and demographic variables, while bivariate and multivariate Modified Poisson regression were used to determine the association between socio-demographic, obstetric and gynaecological factors and timely uptake of both IPT and ITN.

Results: The study found high awareness rates for insecticide-treated nets (ITNs) and intermittent preventive treatment (IPT) among pregnant women in Kigoma Municipality, Tanzania. The main sources of information were antenatal clinics and electronic media. Of the participants, 85.77% received IPT, with most taking two or more doses. Factors such as education level, gravidity and late ANC booking were associated with timely uptake of IPT doses. Timely receipt of the second and third IPT doses was low. Approximately 59.87% of women received ITNs, and timely receipt was influenced by early antenatal booking. However, only a small percentage achieved optimal protection time from these interventions.

Conclusion: Although there is high awareness of both ITN and SP(IPT), similarly coverage of SP(IPT) & ITNs, timely uptake and therefore optimal protection time depended on timing of antenatal booking, gestation age and level of education of women.

Recommendation: Despite high awareness and compliance rates to malaria preventive interventions, this study highlights the importance of strengthening health systems and addressing barriers to timely uptake for adequate protection in Tanzania.

62. TITLE: PERCEIVED BENEFITS AND FACILITATORS OF HOME DELIVERY STAKEHOLDERS' VIEWS FROM A QUALITATIVE STUDY IN MONDULI DISTRICT

Sub theme: Maternal Newborn, Child and Adolescent Health
Contact: lucumaynolamali@gmail.com
Presenter: Nolamali Ndoipo Lucumay

Background: Home delivery is one of the major contributors to maternal and neonatal life-threatening complications during birth and postpartum since it is conducted by unskilled personnel, under unhygienic conditions. In Monduli home delivery marked as existing problem despite of tremendous efforts made by the government to reduce home delivery. This study is aimed to explore facilitators motivating home delivery and possible perceived benefits.

Objective: To explore perceived benefits and facilitators of home delivery among home delivery stakeholders in the Monduli district.

Methods: A qualitative study was conducted October 2022 in Monduli district,where purposely sampling was used to recruit stakeholders (women of reproductive age who delivered within two years at home before data collection, their husbands, traditional leaders, and traditional birth attendants (TBAs). Women who delivered at home were recruited from the RCH register and trucked through community health workers under the aid village executive officer. A total of eight in-depth interviews (IDIs) were conducted using interview guide until saturation point was archived and three focus group discussion(FGDs) were conducted using a separate interview guide.

Results: The study identified four main themes related to home delivery: poor support and empowerment of women, inadequate performance in the health system, upholding cultural beliefs, and better care at a low cost. These themes were further explored through various sub-themes. Participants expressed their perspectives on these themes, emphasising the lack of support and empowerment for women, the shortcomings of the

health system, the influence of cultural beliefs, and the importance of accessible and affordable care.

Conclusion: The findings of the research emphasize the need for comprehensive interventions and collaborative efforts to address the challenges surrounding home deliveries in the Monduli district. By empowering women, improving the supportive system, enhancing the health infrastructure, addressing cultural beliefs, the safety and well-being of women and newborns during deliveries can be significantly improved.

Recommendation: Engage in dialogue with health system, community leadership, and civil society organization to challenge traditional beliefs and promote facility-based childbirth; Empower women to enhance self-worth and decision-making autonomy; Increase recruitment of female midwives in marginalized areas ; Research reasons behind lack of support from Maasai men and promote men involvement.

63. TITLE: ADOLESCENT WELLNESS VISITS IN TANZANIA: DESCRIPTIVE DATA ON THE HEALTH STATUS OF STANDARD 7 STUDENTS

Sub theme: Maternal Newborn, Child and Adolescent Health
Contact: racheljared@rocketmail.com
Presenter: Rachel Mtei

Background: Adolescents are less likely than adults to access HIV testing and counseling (HTC) in Tanzania, in the absence of comprehensive preventive adolescent healthcare. A cluster randomised control trial aims to determine the impact of a new healthcare service (Adolescent Wellness Visits (AWV), coordinated via primary schools and health facilities— on future HIV testing and health service use. The AWVs include screenings for nutrition, vision, mental health, dental, and optional sexual and reproductive health (SRH) services (HIV testing, contraception).

Objective: Three follow-up visits aim to evaluate, over two years, impacts of the AWV on multiple adolescent's health service use outcomes.

Methods: Twenty government primary schools were randomized to intervention and control groups. Standard 7 classrooms at 10 intervention schools were eligible to participate in AWVs at nearby health facilities in Dar es Salaam and Bagamoyo. Providers were trained on national adolescent-friendly health guidelines and referral processes by district health managers. Students were escorted in groups by teachers to attend individual

AWVs. Data included surveys and medical record reviews for AWV participants. We report baseline findings using descriptive statistics.

Results: Of 1,285 eligible students, 85% enrolled in the study (n=1,095). Among all participants, 4% experienced physical or emotional violence (past year); 1% experienced moderate/severe depression (past two weeks); and 8% indicated moderate-severe household hunger (past month). In the intervention arm (n=509), 13% had dental pain, and 8% were referred for vision follow-up. In both arms, 6% had ever received an HIV test prior to the study, and 33% received an HIV test.

Conclusion: AWVs were designed to create a model that complements existing health and education systems. Baseline data indicate that AWVs are feasible for schools and clinics to implement, and health problems that required follow-up were identified.

Recommendation: The government needs to consider the implementation of AWVs in current health and education systems.

64. TITLE: POSTPARTUM DEPRESSION AND ITS ASSOCIATED FACTORS AMONG MOTHERS OF PRETERM BABIES MNH IN DAR-ES-SALAAM, TANZANIA.

Sub theme: Maternal, Newborn, Child and Adolescent Health
Contact: twalibngajoa@gmail.com
Presenter: Twalib Rashid

Background: Postpartum depression (PPD) is a serious mental disorder affecting a range of 10% to 15% of women in developed countries and higher in non-developed countries especially in mothers who are giving preterm birth. Unobserved PPD may be accompanied with adverse long-term effects on the mother, child and family in general. It can add to emotional, behavioral, cognitive and interpersonal problems to the child in the later life. This is due to the fact that, most facilities do not screen and manage postpartum depression earlier until complications arise.

Objective: To determine the proportion of PPD and associated factors among women with preterm births at Muhimbili National Hospital (MNH) in Dar es Salam, Tanzania.

Methods: The study was conducted at Muhimbili National Hospital (MNH), in Dar es Salaam Tanzania from July to October 2022. This was an analytical cross-sectional study design. It involved collection of data on postpartum depression (PPD) and associated factors using questionnaire from women with preterm babies during the study period. Descriptive statistics such as frequency and means were used to summarize and describe obtained

data by using Statistical Package for Social Sciences (SPSS) version 23. Chi-square test (for categorical variables), t-test (for continuous variable) were computed at bivariate level. Variables that yield significance association at p-value 0.2

Results: Data was collected from 409 post-delivery mothers. Their mean age, parity and gravidity was 27.89 ± 6.64, 2 ± 1 and 3 ± 1 respectively. Among 409 mothers studied, 99 (24.2%) had suffered postpartum depression. Being employed [AOR =2.2, CI: 1.3- 4.5], delivering babies with sepsis (AOR=2.7, CI: 2.2-12.2), jaundice (AOR=26.2, CI: 12.2-36.2), Hypoglycemia (AOR=12, CI: 6.7-27.6) and Hypothermia (AOR=10.5, CI: 5.1-36.1) had significance higher odds of postpartum depression (PPD).

Conclusion: The proportion of postpartum depression (PPD) was 24.2%. Being employed, delivering babies with sepsis, jaundice, Hypoglycemia and Hypothermia were factors related with postpartum depression (PPD).

Recommendation: All pregnant and postpartum women should be evaluated in order to identify risks for postpartum depression (PPD). Women at increased risks for postpartum depression (PPD) should be referred to psychosocial and psychiatrist for counseling. To do early identification and proper management to all women with postpartum depression (PPD) and to make follow-up in order to reduce complications to mothers, babies, families and society.

65. TITLE: IMPACT OF COVID-19 TRENDS ON FAMILY PLANNING SERVICE UTILIZATION, ADHERENCE AND PATTERN OF METHOD USE AT FAMILY PLANNING CLINICS IN DSM

Sub theme: Maternal, Newborn, Child and Adolescent Health
Contact: matildaalfred14@gmail.com
Presenter: MATILDA ALFRED MKONYI

Background: Family planning (FP) plays a crucial role in promoting the health and welfare of families by empowering individuals to determine the desired number of children and plan the spacing and timing of their births. However, the COVID-19 pandemic, has posed significant challenges to the utilization of FP services. Lockdowns, transportation difficulties, misallocation of funds, and the imperative for social distancing have impeded access to FP services. Nevertheless, in Tanzania the impact of COVID-19 on FP services is not yet known.

Objective: The study assessed the impact of COVID-19 on FP services utilization, method choices, adherence, and quality of services in FP clinics in Dar es Salaam.

Methods: A cross-sectional study was conducted to assess the impact of COVID-19 on FP service utilization, method choice, adherence to FP methods, and quality of FP services. The study took place at five FP clinics in Dar es Salaam, and data were collected from the FP registry book and structured questionnaire. The data were analyzed using SPSS version 23, and trends in FP service utilization were assessed using the chi-square test. A significance level of $p < 0.05$ was considered significant.

Results: During COVID-19 there was a 7% monthly increase in women utilizing FP services. However, after COVID-19, a decreasing trend was observed. Women's FP choices differed during COVID-19 compared to before or after. Among new clients during COVID-19, there was statistically significant increase in preference for the Implant method, from 38% to 41.6%. Adherence during COVID-19 was higher compared to before or after. However, the study found that FP services were poorer during COVID-19 than before or after in terms of FP counselling, availability of FP methods and accessibility of FP clinics.

Conclusion: The COVID-19 pandemic had an impact on FP services, resulting in increased utilization and adherence during the pandemic. However, it also had a negative effect on the quality of FP services.

Recommendation: This study recommends improving FP services during pandemics like COVID-19 by ensuring adequate contraceptive supplies. Additionally, studying the potential of telemedicine to enhance access to FP services during crises is recommended. Further research is needed to assess barriers to FP counselling provision, which remains a challenge in both pre and post -COVID-19 periods.

65. TITLE: PESTICIDE EXPOSURE EXPERIENCE DURING PREGNANCY, KNOWLEDGE, ATTITUDES, AND PRACTICES AMONG HORTICULTURAL WOMEN IN TANZANIA

Sub theme: Maternal, Newborn, Child and Adolescent Health
Contact: obabrab@gmail.com
Presenter: Baldwina Olirk

Background: Adverse pregnancy outcome is multifactorial in etiology, and remain a major cause of perinatal morbidity and mortality. Prenatal pesticide exposure is linked to numerous adverse fetal outcomes. Yet, there is limited information on the impact of pesticide exposure to fetal outcome in Tanzania. Also, the available pesticides exposure

data is insufficient for interventions at the moment. This may be due to inconsistent approaches assessing workers exposure to pesticides.

Objective: Explore experience of pesticide exposure during pregnancy, examine Knowledge, Attitudes, Practices of pesticide exposure, among horticultural women in Tanzania.

Methods: A cross sectional study with both qualitative and quantitative research approach was carried out among 171 women working in Horticulture using an interviewer structured questionnaire. Qualitative part included four FGDs and four In-depth Interviews (IDIs). We collected information on types of pesticides used; frequency, knowledge, practices and perceptions on pesticides exposure with regard to pregnancy. Descriptive statistics was computed to summarize the data. Qualitative data was analyzed by thematic approach.

Results: A total of 171 women were involved in this study with the mean age of 38.7± 12.0. The main crop cultivated is onions. In 171, 12.3% spray pesticides with no PPEs. Majority (73.7%) returned to the farm soon after spraying while 33.2% mixed pesticide concentrate. Majority were not aware whether pesticides hazards and toxicity are communicated in labels, first aid following pesticide exposure and effect to the foetus. From qualitative findings, pregnant women continue to work until close to birth.

Conclusion: Women in Agriculture continue to be exposed to significant dozes of pesticide and that the effect may affect the growing foetus as they continue working in the farms throughout the pregnancy.

Recommendation: The ministry of Agriculture should also pay attention and invest on the health effects of pesticides rather than the protection of the crops alone.

66. TITLE: MORTALITY RATE, CAUSES AND ASSOCIATED FACTORS AMONG CHILDREN AGED 5 TO 18 YEARS AMONG TERTIALLY HOSPITALS IN DAR ES SALAAM

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: mjocey4@gmail.com
Presenter: JOSEPH MWALONGO

Background: More than 10 million children die each year, most from preventable causes and majority of these deaths occur in low- and middle-income countries. Mortality rates, aetiology and risk factors for children under-five of years of age have been well documented across the globe. Significant advances have been made in reducing mortality for under-five

however there is paucity of data for children between the age of 5-18 years, hence lack of effective strategies to prevent mortality in this age group.

Objective: The main objectives were to determine the mortality rate, causes and associated factors among children 5 to 18 years of age among tertially hospitals in Dar es salaam

Methods: This was the prospective cross- sectional study of all patient aged between 5 and 18 years, admitted and dying from any causes in the mentioned age group during the data collection period. Data were collected from the patient physical and electronic files using structured questionnaires to obtain social demographic and clinical parameters as well as immediate and underlying cause of death. Data was analyzed using statistical package for social sciences (SPSS). Data were collected from June 2022 to May 2023.

Results: A total of 2214 children were admitted in the hospitals and recruited in the study with male to female ratio of 3:2. About two third 1495 (67.5) of the admissions were children aged 5- 10 years. The leading cause of admission were trauma accounting for about one third 583 (26.2%) followed by malignancy 496 (22.4%). Admission due to trauma were mostly due to motor traffic accident 178 (38.9%).

The mortality rate for the study population is 55% per 1000 individual per year. More than half of children 64 (52.9%) who died were males. About half of them 68 (56.2%) were aged between 5 and 10 years. Most children 47 (38.3%) died due to malignant conditions with acute leukemia by 29 (19%).

Conclusion: The significant number of children were hospitalized due to trauma attributed to motor traffic accidents and the leading cause of mortality to this age group was malignancy with acute leukemia being the highest.

Recommendation: It is high time now we need to provided road safety education in their school program as well as involve other stakeholders including national security forces and road safety. It is also important to introduce early malignancy screening tools for early detection and management.

67. TITLE: EXPERIENCES, PERCEPTIONS AND EXPECTATIONS ON USING DIGITAL HEALTH TOOLS FOR COLLECTING MATERNAL AND CHILD HEALTH IN KILIMANJARO REGION.

Sub theme: Maternal Newborn and Child Adolescent Health
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Presenter: Francis M. Pima

Background: The WHO recommends using digital health interventions for strengthening health systems globally. The purpose of digital health is to monitor, prevent, screen, diagnose and treat health-related issues in healthcare and public health.

Maternal and child health data collection in Tanzania is mostly relying on MTUHA book records. While the MTUHA Health Management Information System is very consistent, it is difficult to extract data from paper records.

Objective: To explore experiences, perceptions, and future expectations of using digital health tools for collecting maternal and child health data among healthcare workers at facilities in Kilimanjaro region.

Methods: Prior to setting up and implementing a digital birth registry (The ULTRA App) we conducted interviews with nurse midwives and reproductive and child health coordinators to explore their experiences, perceptions, and expectations of using both MTUHA and a digital birth App for collecting maternal and child health data. Qualitative interviews were completed with nurse midwives and reproductive and child health coordinators responsible for collecting and managing data through MTUHA books. Data was analyzed thematically; coding and theme generation were completed using NVivo software. Our study was approved from local institution and National ethical review boards

Results: Preliminary results portray many participants had experiences in using some digital health methods such as SMS systems, digital Apps, and the district health information system (DHIS2). They are enthusiastic about using digital methods in preference to paper based as the latter are considered time consuming, create data security challenges and produce lower data quality. They expect the digital app to simplify their work and improve data quality and security.

Conclusion: Participants recommended a comprehensive training on digital health methods to all health workers dealing with data collection.

Recommendation: Implementation research is warranted for investigating bottlenecks and strategies for scale up of proven digital data collection interventions.

68. TITLE: KNOWLEDGE, ATTITUDE AND PRACTICE OF PALM-COEIN CLASSIFICATION AMONG GYNAECOLOGISTS AND RESIDENTS IN ASSESSING AND DIAGNOSING ABNORMAL

Sub theme: Maternal Newborn and Child Adolescent Health

Contact: rogateolomi@gmail.com

Presenter: Rogathe Ernest Olomi

Background: Abnormal uterine bleeding (AUB) refers to irregularities in the menstrual cycle involving frequency, regularity, duration, and volume of flow outside of pregnancy. The PALM-COEIN acronym, provided by the International Federation of Gynaecology and Obstetrics (FIGO), classifies the underlying causes of AUB. However level of knowledge and application of PALM-COEIN classification system varies widely across countries, hindering the universal assessment of AUB care. Particularly in resource-limited settings like Tanzania, it has been reported that applying this classification clinically is challenging.

Objective: This study aimed to assess the knowledge, attitude and practice of gynaecologists and residents in University Teaching Hospitals and other Medical Colleges in Dar es Salaam regarding the PALM COEIN s

Methods: A descriptive cross-sectional study was conducted at four study sites. Data were collected from gynecologists', senior residents, and patients admitted to gynaecological wards with AUB. A total of 87 qualified specialists and post graduate students were assessed for knowledge and attitude. Additionally, 213 patients were involved in assessing doctor's practice of the PALM COEIN system. Variables on knowledge, attitude and practice were collected, coded, entered, cleaned and analyzed using Statistical Package for Social Sciences (SPSS) version 27.0.

Results: The study found that 73.6% of the participants were knowledgeable about the terminologies in the PALM COEIN acronym . Doctors exhibited different attitude towards the use of PALM COEIN classification system with nearly half (54%) considering it applicable in resources-limited setting like Tanzania, although 21.8% found it confusing. More than half (60.9%) believed that there is lack of clear terminologies in classifying different causes of AUB. The study also revealed low adherence to standard guideline for evaluating patients with AUB.

Conclusion: This study shows that practicing doctors have knowledge of the PALM COEIN terminologies but have varying attitudes towards its utilization in their daily practice. Moreover, adherence to the standard guideline for AUB evaluation is still low.

Recommendation: Further knowledge on the usefulness of PALM COEIN is to be provided to the practicing doctors. Moreover, in-depth assessment of the opinion and attitudes of using the PALM COIEN classification system is required.

69. TITLE: PREVALENCE, SEVERITY, RISK FACTORS AND EARLY OUTCOME OF NEONATES WITH HYPOXIC ISCHEMIC ENCEPHALOPATHY ADMITTED AT NEONATAL UNIT MUHIMBILI

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: farhiyaseif@yahoo.com
Presenter: Farhia Seif Ally

Background: Hypoxic Ischemic Encephalopathy (HIE) is a significant complication that affects full-term infants, with a prevalence rate of 1.5 to 2.5 per 1000 live births in high-income countries. This condition is a type of brain damage that results from a hypoxic-ischemic event, which can occur during the prenatal, intrapartum, or postnatal phase. This event restricts the proper flow of blood to the infant's brain, leading to potential damage and subsequent complications.

HIE can have severe and long-term consequences for affected infants. Up to 60% of infants with HIE either die or develop serious neurodevelopmental disorders by the age of two.

Objective: To determine the Prevalence, severity, risk factors and the early outcomes of HIE in neonates admitted at neonatal unit.

Methods: This study was a prospective longitudinal study conducted from November 2022 to March 2023. The study population consisted of late preterm and term newborns with HIE who were admitted to the neonatal ward at MNH. Data was collected using a standardized questionnaire, which included both maternal and neonatal data. an ABG test was conducted on the day of admission for newborns with an Apgar score less than 7 . The enrolled newborns were then monitored daily for seven days, with a particular focus on their HIE Thompson scores. The immediate outcome for each neonate, whether alive or died, was determined on the seventh day.

Results: The results of this study indicated a prevalence of HIE at MNH of 37.8%. Of the 218 neonates admitted during the study period, 58.2% (n=127) presented with mild HIE, 29.4% (n=64) with moderate HIE, and 12.4% (n=27) with severe HIE. The mortality rate among neonates with HIE was 5.1%. Particularly. The study identified several neonatal characteristics that were significantly associated with an increased likelihood of HIE.

Neonates with a birth weight less than 2500 grams, Male sex, Neonates requiring resuscitation at birth demonstrated a significantly higher likelihood of HIE.

Conclusion: HIE is prevalent among neonates, affecting 37.8% in our study. Our findings underscore the association between the severity of HIE and mortality rate, with a notably higher mortality rate of 72.2% observed among neonates with severe HIE compared to those with milder forms. Importantly, independent predictors for HIE were identified, including low birth weight, male sex, and the need for neonatal resuscitation.

Recommendation: To Conduct a longitudinal study to better understand the long-term outcomes of neonates with HIE. Also, to Analyze cord arterial gases immediately after birth to more accurately measure the degree of intrapartum hypoxia. Incorporate advanced diagnostic tools such as EEG and MRI alongside clinical assessment for a more comprehensive evaluation of neonates with HIE.

70. TITLE: THE ASSOCIATION OF BMI AND GESTATIONAL WEIGHT GAIN ON FETAL BIRTH WEIGHT AMONG PREGNANT WOMEN ADMITTED FOR DELIVERY AT ILALA.

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: judychris85@gmail.com
Presenter: Judica Christopher

Background: Fetal birth weight (FBW) is an important indicator and prognostic factor for newborn health. It reflects the nutritional status of the mother and fetus and provides insights into growth and development during pregnancy. A normal birth weight is desired outcome of any pregnancy. This study determines the association of body mass index (BMI) and gestational weight gain (GWG) on fetal birth weight among pregnant women admitted for delivery an Ilala City Council in Dar-Es-Salaam.

Objective: The aim of this study was to determine the association of body mass index (BMI) and gestational weight gain (GWG) on fetal birth weight among pregnant women admitted for delivery in Ilala City Council

Methods: A cross-sectional study was conducted in Ilala city council in Dar es salaam involving three Government health centers. The study enrolled 364 pregnant women admitted for delivery who met the inclusion criteria. Through proportional probability sampling 201 study participants were enrolled from Chanika, 104 from Mnazi Mmoja and 59 from Buguruni health Centers. Consecutive sampling was used to enroll study participants. The weight and height of study participants during admission for delivery were measured

by using calibrated digital weighing scale. The initial weight in the first trimester was recorded from Antenatal card. Data was analyzed by SPSS Software.

Results: In total 364 women were interviewed, among these 146 (40%) of had inadequate gestational weight gain. The study also found a significant relationship between initial BMI and the weight of their baby at birth. For every one unit increase in BMI, the baby's weight at birth increases by 0.0168kgs (95%, CI 0.008-0.026, P < 0.01). Additionally, the amount of weight a person gains during their pregnancy (GWG) was also related to the baby's weight at birth. For every one unit increase in GWG, the baby's weight at birth increases by 0.0124kgs (95%, CI 0.002-0.023, P < 0.05).

Conclusion: The findings of this study highlight the importance of maintaining healthy BMI among women of reproductive age. Additionally, this emphasizes the need for monitoring GWG during pregnancy among pregnant women to align with the recommendation of the Institute of Medicine.

Recommendation:

1. Public health education should focus on the significance of maintaining a healthy weight among women of reproductive age and weight gain during pregnancy, following the Institute of Medicine recommendations.

2. Healthcare professionals should closely monitor weight during pregnancy

3. Further studies should be conducted to determine the causes of inadequate weight gain during pregnancy.

71. TITLE: MATERNAL AND EARLY-LIFE EXPOSURE TO ANTIBIOTICS AND THE RISK OF AUTISM AND ATTENTION-DEFICIT HYPERACTIVITY DISORDER IN CHILDHOOD

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: lembrisnjotto@gmail.com
Presenter: Lembris Njotto

Background: Antibiotics are commonly prescribed to pregnant women, infants, and toddlers. Antibiotic use during pregnancy may alter the maternal microbiota, which can influence the microbial colonisation of the gastrointestinal system of the foetus. It has been claimed that antibiotic use during pregnancy may have an effect on the gut-brain axis and, as a result, neurodevelopment. Neurodevelopmental disorder (NDD) is a category of

illnesses characterized by functional impairments that manifest early in development. The most frequent NDDs are autism and attention-deficit/hyperactivity disorder (ADHD).

Objective: To investigate the association between maternal and early-life antibiotic use and autism and ADHD in childhood.

Methods: This is a Swedish nation-wide population-based cohort study which included all first live singleton births (N = 483,459) between January 2006 and December 2016. The association of dispensed antibiotics with autism and ADHD in children aged almost 11 years was estimated by applying multivariable logistic regression and generalized estimating equations models to account for parity.

Results: Of all mothers, 25.9% (n = 125,106) were dispensed to at least one antibiotic during the exposure period (from 3 months pre-conception to delivery), and 41.6% (n = 201,040) of the children received at least 1 antibiotic in early life (aged ≤ 2 years). Penicillin was the most prescribed antibiotic class (17.9% of mothers, 38.2% of children). Maternal antibiotic use was associated with an increased risk of autism [odds ratio (OR) = 1.16, 95% confidence interval (CI) 1.09–1.23] and ADHD (OR =1.29, 95% CI 1.21–1.36) in childhood. Early-life exposure to antibiotics showed an even stronger association [autism (OR = 1.46, 95% CI 1.38–1.55); ADHD (OR = 1.90, 95% CI 1.80–2.00)].

Conclusion: Maternal and early-life antibiotic use was associated with an increased risk of autism and ADHD in childhood. However, differences were noted by exposure period and antibiotic classes.

Recommendation: Our recommendation is to consult a healthcare professional for personalized advice on using antibiotics during pregnancy and early childhood. Additionally, it is important to use antibiotics only when necessary and adhere to the prescribed dosage and duration to minimize potential risks.

72. TITLE: PERSPECTIVES OF PREGNANT AND POSTNATAL WOMEN ON CHALLENGES EXPERIENCED IN GETTING TETANUS TOXOID VACCINE IN HAI DISTRICT KILIMANJARO

Sub theme: Maternal Newborn and Child Adolescent Health

Contact: a.hemed@kcri.ac.tz

Presenter: Asia Hemed

Background: Antenatal care for pregnant and postnatal mothers is the main gate for maternal vaccination interventions, however different factors such as access to healthcare, recommendation of vaccine by a healthcare worker, women knowledge on vaccine and acceptance are some of the factors that impact vaccination uptake. In developing countries including Tanzania pregnant and postnatal women especially in rural communities have been experiencing barriers to maternal vaccination such as lack of awareness, misconceptions, cultural beliefs, lack of time, money to access distant and low quality care.

Objective: Exploring Challenges experienced by pregnant and post-natal mothers in getting tetanus vaccination in rural villages of Hai district in Kilimanjaro region

Methods: A descriptive qualitative study conducted from October 2020 to May 2021 in 10 remote villages of Hai district in Kilimanjaro region, using focus group discussion (FGD) and in-depth interviews (IDIs) involving 15 pregnant and postnatal mothers purposively selected based on their availability and convenience.

Results: themes were extracted were namely; Unreliable Multiple sources of vaccine information, Healthcare workers attitude, household chores overload, role of traditional medicine in pregnant mothers, and adherence of appointment dates for vaccination after delivery

Conclusion: The role of healthcare providers is a critical component for the appropriate transfer of vaccine information to the mothers and their spouses during clinic visits, to eliminate vaccine misconceptions hence improving overall tetanus vaccine uptake. Quality of information from reliable sources could be an important factor to upgrade the awareness of pregnant mothers on maternal vaccination.

Recommendation: The government should facilitate HCWs into working hand in hand with Community Health Workers to provide health education including tetanus maternal vaccine education in rural community and ANC clinics

73. TITLE: OVARIAN SCHISTOSOMIASIS: A CASE REPORT OF NEGLECTED TROPICAL INFERTILITY

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: silvestri.valeria82@gmail.com
Presenter: Edrick Elias

Background: Female Genital Schistosomiasis, the pathophysiology manifestations of Schistosoma spp. trematode in the gynaecological apparatus, is the most neglected sexual and reproductive health condition in sub-Saharan Africa with an estimated of 20-120 million cases. The entrapment of Schistosome eggs after oviposition in ectopic tissues has been documented in different organs and in 0.5% of cases fallopian tubes and ovaries were involved.

Objective: Aim of this work was to explore the co-occurence of ovarian Schistosome oviposition and infertility in a case managed in Consolatha Hospital.

Methods: We report a case of 38 years old women assessed for a 10 years history of infertility. On ultrasound investigation, multiple cystic formations were observed in the ovary. Oophorectomy was planned to exclude malignancy, and granulomatous formations surrounding several Schistosoma spp. eggs were found in proximity of the corpus luteus and haemorragicum on histological investigation of the surgical specimen.

Results: Ectopic Schistosome oviposition have been described in the ovary and fallopian tubes as in our case and could be a potential cause of reproductive organ damage and complications such as infertility, ectopic pregnancy, miscarriage, premature birth, low birth weight, and even maternal death. Neoangiogenesis around entrapped eggs may mimic hemorrhagic corpus luteum, challenging the diagnostic process.

Conclusion: Ectopic Schistosoma spp oviposition can occur in the ovary in patients with a history of infertility. Clinical awareness in endemic settings is essential for a prompt and correct diagnosis. The case adds emphasis to the importance of investigating for female genital schistosomiasis in cases of infertility from endemic settings or a history of Schistosome exposure.

Recommendation: More studies are needed to inquire about ovarian Female Genital Schistosomiasis and its impact on women fertility in endemic areas to guide specific interventions that could target this vulnerable population of childbearing age. This would contribute to the NTD WHO 2030 aim of eliminating schistosomiasis as a matter of public health.

74. TITLE: TRENDS AND DRIVERS OF UNMET NEED FOR FAMILY PLANNING IN CURRENTLY MARRIED TANZANIAN WOMEN BETWEEN 1999 AND 2016.

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: abdony.rwabilimbo@gmail.com
Presenter: Abdon Gregort Rwabilimbo

Background: The current study investigated the trends and factors associated with the unmet need for family planning (FP) for limiting and spacing births among married Tanzanian women between 1999 and 2016.

Objective: The study investigated the trends and factors associated with the unmet need for FP (for limiting and spacing births) among currently married women in Tanzania from 1999 to 2016

Methods: The study used Tanzania Demographic and Health Survey (TDHS) data for the years 1999 (N = 2653), 2004–2005 (N = 2950), 2010 (N = 6412), and 2015–2016 (N = 8210). Trends in the unmet need for FP were estimated over the study period. Multivariable multinomial logistic regression models were used to investigate the association between community-level, predisposing, enabling, and need factors with the unmet need for FP in Tanzania.

Results: The results showed no significant change in percentage of married women with an unmet need for birth spacing between 1999 and 2016. The proportion of married women with an unmet need for limiting births decreased from 9.5% (95% confidence interval (CI): 7.9%, 10.6%) in 1999 to 6.6% (95% CI: 5.9%, 7.3%) in 2016. Residing in a rural area, parity between 1–4 and 5+, visiting a health facility for any health services within twelve months, and planning to have more children (after two years and/or undecided) were factors positively associated with the unmet need for FP-spacing. Women with parity of 5+ were more likely to experience an unmet need for FP-limiting. Women's age between 25–34 and 35–49 years, women's emp

Conclusion: The study findings are expected to have a positive impact on policy and practice regarding reducing the unmet need for FP (limiting and spacing births). Policy makers are expected to formulate policies that will address the issues related to the unmet need for FP but also target all the attributes of unmet needs for FP. Doing so will change the practice of health professionals, thereby helping to reach many women with unmet needs for FP.

Recommendation: Therefore, reducing unmet needs for FP is attainable if government policies and interventions can target women residing in rural areas and other modifiable

risk factors, such as parity, health facility visits, planning to have more children, employment, watching television, and women's autonomy.

75. TITLE: DENTAL FLUOROSIS, TREATMENT NEED AND ITS IMPACT ON ORAL HEALTH RELATED QUALITY OF LIFE AMONG ADULT PATIENTS ATTENDING DENTAL CLINICS IN

Sub theme: Non-Communicable Diseases
Contact: mimuk9@hotmail.com
Presenter: AMIMU KILOMONI

Background: Dental fluorosis is the hypo mineralization of enamel caused by consumption of excessive amount of fluoride within critical phase where the development of tooth is taking place. Fluoride in excess of 1.5mg/l in drinking water is the major cause of endemic dental fluorosis. Dental fluorosis causes disfigurement and unappealing teeth appearance as a result compromises individuals aesthetic which results into social and psychological effects, whereby individuals demonstrate significant dissatisfaction over their appearance thus affecting their ability to interact and form relationships leading to loneliness depression and other undesirable social behaviours hence a

Objective: To determine dental fluorosis occurrence, severity, objective – subjective treatment need and its impact on oral health related quality of life among adult patients attending dental clinics in Arusha,

Methods: This was hospital based analytical cross-sectional study, involved 18 years and above adult patients attended dental clinics in Arusha. 427 participants were involved in this study selected among dental clinics in Arusha. Data were collected using interviewed questioner and clinical form. OIDP questions (modified for this purpose) were used to assess the impact of dental fluorosis on quality of life. Clinical examination for dental fluorosis were carried out by calibrated examiner (kappa=0.85) using TF- index and clinical form, furthermore TFI scores were categorized to determine treatment need groups. Obtained data was fed into a computer, cleaned, and analysed.

Results: A total of 427 patients aged 18 to 77 years were involved. Majority (73.5%) of the participants were young adults with (57.6%) being female. The occurrence of dental fluorosis was high (81.3%) with majority (69.8%) had moderate to severe form of dental fluorosis. 0ral impact on daily performance among participants was 88.8%, the performance most affected were smiling 62.3%, eating 62% having fun with other people 57.8%, on the other hand brown discoloration 78.2% of the teeth were the most frequently

perceived actual cause of the oral impact. The most perceived dental treatment was removal of brown teeth discoloration (71.4%). Majority of the participants perceived at least one oral impact and dental fluorosis.

Conclusion: The prevalence of dental fluorosis among patients attending dental clinic in Arusha is high. Moderate to severe forms of dental fluorosis were the commonest. Dental fluorosis has great social and psychological impact on quality of life, Majority of the participants perceived at least one oral impact and dental fluorosis was the main actual cause of the perceived impacts. Majority of the participants perceived removal of brown tooth discoloration as their most perceived dental treatment need and required minimal invasive treatment.

Recommendation: Treatment of water before supplied to the communities (Defluoridation). Oral health education to the communities to increase awareness of the community, Train dental clinician, Provide affordable means of treatment of dental fluorosis.

76. TITLE: COMPARISON OF ALIGNMENT EFFICIENCY, ARCH EXPANSION AND PAIN EXPERIENCE OF TWO ORTHODONTIC ARCHWIRES, A RANDOMIZED CLINICAL TRIAL

Sub theme: Non-Communicable Diseases
Contact: pmsungu@gmail.com
Presenter: Protas Msungu

Background: Nickel Titanium Archwires are routinely used in initial phase of orthodontic treatment. The transformation of Metallurgy industry over the years has brought outstanding improvement on Nickel Titanium (NiTi) alloy resulting into NiTi archwires with improved properties. The performance of the Super Elastic NiTi (SE NiTi) and Copper NiTi (Cu-NiTi) archwires which are currently being used in orthodontic treatment has not been clinically compared in Tanzanian population.

Objective: Compare irregularity index reduction, transverse arch expansion and pain experience in users of 0.014-in SE NiTi and 0.014-in Cu-NiTi archwires among orthodontic patients attending MUHAS dental clinic

Methods: A total of 82 patients were randomly allocated to 1 of 2 different archwires types (group 1, SE-NiTi; group 2, CU-NiTi). Eligibility criteria included irregularity index >2 mm on mandibular anterior site. Patient received Stainless steel Bracket 0.022 * 0.028 MBT

prescription. Arch width dimension were recorded from the dental cast. Pain experience was assessed using a Modified McGill pain questionnaire and Visual analogue scale. Data were analyzed on SPSS Version 25.

Results: The mean anterior irregularity index reduction were 3.79 (2.93) mm and 3.28 (2.86) mm in SE-NiTi and CU-NiTi respectively. The irregularity index significantly decreased over time in both groups. The difference between the two groups was not statistically significant (p = 0.435). There were significant changes in Interpremolar and intermolar dimensions in both groups. The difference between the two groups on arch expansion was not significant. No significant difference were found in the pain score ,Onset, Site, duration and analgesic consumption between the two groups.

Conclusion: There were no significant differences between the two groups in alignment efficiency, arch width changes and pain experience.

Recommendation: It is advised to conduct further trials, particularly in light of the numerous new arch wires and orthodontic technologies that are currently on the market but whose clinical efficacy for our population cannot be determined.

77. TITLE: BIOCHEMICAL RESPONSE AND OVERALL SURVIVAL RATE AMONG CASTRATE RESISTANT PROSTATE CANCER PATIENTS TREATED WITH DOCETAXEL

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: selidward@gmail.com
Presenter: LEILA EDWARD MWAKIPUNDA

Background: Castrate Resistant prostate Cancer (CRPC) is a very common disease in Tanzania and is associated with a poor prognosis and diminished quality of life because of poor access to novel drugs. Patients with CRPC have an estimated median survival of 9–36 months. Most patients with CRPC are treated by docetaxel; however, there is no data to assess the biochemical response and overall survival after this treatment in Tanzania

Objective: To determine biochemical response and 2 years overall survival rate (OS) among patients with CRPC treated with Docetaxel

Methods: The study was a retrospective cohort, patient's information was obtained from medical records of patients with CRPC who were treated with docetaxel at Ocean Road Cancer Institute and Muhimbili National Hospital from January 2018 to December 2019. Data was analyzed using SPSS V23, cox regression model was used to identify independent

predictors and kaplan meir method and log rank test was used to find association between biochemical response and 2 years OS

Results: Among 100 patients 56% attained biochemical response. The mean duration was 24.8 months. Median survival was 9 months. Mean performance status was ECOG 3. 97% presented with stage 4 disease. There was association between number of docetaxel cycles and biochemical response (HR = 1.2, p=0.03). After adjustment, hemoglobin level, Number of docetaxel cycles and PSA response showed to have significant impact on OS (p=0.01, 0.01, 0.037 respectively)

Conclusion: To our understanding this is the first study in sub-Saharan Africa which has determined the time to Castrate resistant after ADT initiation, sighting majority of patients presenting with an advanced disease at time of CRPC. Number of Docetaxel cycles was an independent predictor influencing both biochemical response and overall survival.

Recommendation: Further studies are needed to address the proper management of CRPC among Africans since majority of patients present at an advanced state and poor performance status leading to intolerability of Docetaxel

78. TITLE: CLINICOPATHOLOGICAL CHARACTERISTICS, TREATMENT MODALITIES AND 2 YEAR OVERALL SURVIVAL IN ADULT SOFT TISSUE SARCOMA AT OCEAN ROAD CANCER

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: aishahashim60@gmail.com
Presenter: Aisha Hashim Ramadhan

Background: Soft tissue sarcomas (STS) constitute a heterogeneous group of rare malignancies (1%) that vary extensively by anatomic location, histology and biologic behavior. Its rarity and various presentations make it peculiar and a most challenging diagnosis in oncology. The purpose of this study was to establish a baseline of clinicopathological features of soft tissue sarcomas that can impact treatment approaches and patient outcomes.

Objective: To determine the clinical pathological features, treatment modalities and a 2year overall survival among adults with Soft tissue sarcoma at Ocean Road Cancer Institute (ORCI) in Tanzania.

Methods: A retrospective cohort study was conducted at the ORCI in Dar es salaam, Tanzania. Patients with histologically confirmed soft tissue sarcoma from January 2017

through December 2020 were included in the study population. The endpoint was 2 year Overall survival (OS).

Results: A total of 88 cases were analyzed. There was a slight male predominance (n=48, 54.6%) and the mean age (SD) of the patients was 41.7 (17.6) years. Greater than 65% presented with an advance stage (68%, TNM stage 3, p= 0.045). The commonest site of presentation was the lower extremity (n=32, 36.4%) followed by the upper extremity (n=16, 18.2%) with liposarcoma being the common histology (n= 21, 23.9%). The 2 year OS was 59% and the true predictors of OS were the ECOG status(ECOG2 HR 2.3, 95% CI (1.15-4.58), p= 0.017 ECOG3 HR 3.4, 95% CI (1.13-7.23), p=0.029) , tumor size >5cm (HR 2.7, 95% CI(1.31-4.94), p=0.047   and tumor stage (locally advanced HR 4.5 , 95% CI (1.2-21.23), p=0.045, metastatic HR 5.4, 95% CI

Conclusion: Soft tissue sarcoma presents with a widest range of histologies in different parts of the body. Patients presents when the tumors are more than 5cm resulting to a worst survival.

Recommendation: Every health worker should have a high index of suspicion to STS. There is a continuing, critical need for advances in therapeutic options for this difficult-to treat disease.

79. TITLE: ISOLATION, QUANTIFICATION AND CRYOPRESERVATION OF MONONUCLEAR CELLS FROM CORD AND PERIPHERAL BLOOD SAMPLES OF HEALTHY DONORS – METHODS

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: aishafikiriniG@gmail.com
Presenter: Aisha Fikirini

Background: Various laboratory techniques are employed for preparing and selectively isolating stem cells, particularly CD34+ cells. Successful preparation of stem cells using these techniques is integral to downstream processes such as editing and engraftment for potential transplantation or gene therapy, particularly for treatment of sickle cell disease.

Objective: First phase of this study aims to validate existing methods to obtain high quality mononuclear cells (MNC's) from CB and PB of healthy donors in Tanzania. Specifically, we aim to optimize volume of bl

Methods: Blood samples were collected from Muhimbili National Hospital (MNH) and Aga Khan Hospital (AKH). Isolation of MNC's from whole blood was performed using Ficoll technique. Counting of cells was done using hemocytometer. Cells were preserved in a

freezing media containing 10% DMSO and frozen to -80°C at a controlled rate of 1°C/min. A Fraction of whole blood was tested for contamination using BacTec culture system.

Results: A Total of nine PB and three CB samples have been collected. The average volume of CB was 78 mL. No microbial contamination was detected in all collected samples. The average number of MNCs was 2,254,213/mL of PB and 2,647,058/mL of CB. Average viability of MNC's from randomly selected PB and CB samples before freezing was 93.04% and 91.30%, respectively. Viability declines in post thawing of MNCs from PB and CB was 59.30% and 64.23%, respectively. On average, it takes 15 minutes from MNH and 30 minutes from AKH for samples to reach the lab after clinical collection.

Conclusion: Our results show readiness to transit to the next steps including CD34 selection and quantification.

Recommendation: We recommend the technical validation of methods to obtain HSCs to be done in Tanzania so as to generate biological specimens for further research on advanced gene therapy.

80. TITLE: FACTORS ASSOCIATED WITH TREATMENT DELAY AMONG ADULT PATIENTS WITH OCULAR ADNEXA MALIGNANCIES AT TERTIARY EYE UNITS IN DAR ES SALAAM

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: kajiirene@gmail.com
Presenter: IRENE KAJI

Background: The ocular adnexa is a rare site for malignancies in the human body. Conjunctival squamous cell carcinoma is the commonest ocular adnexa malignancy with an annual incidence of 2.8 per 100,000 persons worldwide. Clinical experience shows that many patients have late presentation with local invasion, loss of vision, reduced quality of life, distant metastasis and death pausing a challenge in management. There is paucity of data on treatment delay and its associated factors about these malignancies in our setting.

Objective: To determine factors associated with treatment delay among adult patients with ocular adnexa malignancies at eye units in Dar es Salaam

Methods: A hospital based cross-sectional analytical study consecutively enrolled 40 adult patients with ocular adnexa malignancies was conducted at MNH and CCBRT. Data was analysed using SPSS version 25.

Results: The mean age of participants was 48±13 years and the overall mean delay was 24 ± 19 months, where 92.5% and 72.5% of patients experienced primary and secondary delay respectively. Not being bothered by the symptoms, having no insurance and misdiagnosis were associated with treatment delay.

Conclusion: The proportion of patients with treatment delay was high. Not being bothered by symptoms was a significant patient related factor and having no insurance was an important health system related factor.

Recommendation: Efforts to create awareness on symptoms of ocular adnexa malignancies are required to ensure affected patients present early. Universal health insurance provision to overcome financial constraints when seeking medical help.

81. TITLE: CLINICAL CHARACTERISTICS AND SHORT-TERM OUTCOMES OF PATIENTS WITH CHRONIC KIDNEY DISEASE ON HAEMODIALYSIS AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: jus4manishe@gmail.com
Presenter: Justus Luta Ishengoma

Background: Chronic kidney disease (CKD) is a global health concern mainly caused by hypertension and diabetes. CKD prevalence in Africa is estimated at 10.4%. Haemodialysis is crucial for treating CKD however there is lack of information on characteristics and short-term outcomes of CKD patients on haemodialysis in Tanzania.

Objective: We described the clinical characteristics and short-term outcomes of CKD patients on haemodialysis at Muhimbili National Hospital (MNH).

Methods: This cohort study recruited patients with CKD on haemodialysis at MNH and followed up for outcomes at three months. A standardized questionnaire was used to collect clinical characteristics, and short-term outcome that included blood pressure (BP) control, haemoglobin levels (HB), dialysis adequacy, blood glucose (RBG) control and death. Blood samples for urea, glucose, and haemoglobin were taken at enrolment and 90 days. Associations between clinical characteristics and mortality were analyzed using univariate analysis, variables with p-value < 0.2 were introduced into the multivariate modal and analyzed using Cox Regression model.

Results: A total of 241 study participants were enrolled, at three months mortality was 27 (11.2%), HB 11.1 mmol/L 18 (7.5%), mean 7.6+ 2.9 mmol/l. Participants with one or more

comorbidity, dialysis < thrice/week and use of dialysis catheter was associated with an increased risk for mortality at 90 days aHR= 3.65, 95% CI (1.623-8.24), aHR=2.7,95%CI (1.15-6.112),and (aHR 4.83,95%CI 1.12-20.83) respectively.

Conclusion: At three months follow up there was a high mortality, and patients had uncontrolled blood pressure and low haemoglobin levels. Comorbidity, dialysis less than thrice per week and use of venous catheters were associated with mortality.

Recommendation: Mortality could be reduced by use of a fistula/graft, three dialysis sessions/week, control of diabetes, hypertension and anaemia

82. TITLE: BREAST CANCER RELATED LYMPHEDEMA AND ITS ASSOCIATED FACTORS

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: angelakaria05@gmail.com
Presenter: Angela Karia

Background: In Tanzania BC is the 2nd leading cancer and most of the cases are diagnosed at advanced stage. Survival has been noted to improve which raises important questions about how to improve the Quality Of Life for patients after treatment.

Breast Cancer-related arm lymphedema (BCRL) is one of the most distressing and debilitating complication.

Objective: To determine prevalence of BCRL and its associated factors among patients attended at ORCI.

Methods: All breast cancer patients attended ORCI from Oct 2022 to March 2023 who have completed treatment with 2 years. BCRL was graded as circumference change relative to contralateral arm by using LENT SOMA. Multivariate analysis was conducted using logistic regression to variables

Results: BCRL was found in 70 cases (58.8%) of the study population. Among 70 patients with BCRL, 61.4% was mild, 10.0% was Moderate while 28.6% had severe stage. The probability that participants with BMI of ≥25 to get BCRL was 1.75 times (P value: 0.002) higher than those who had BMI < 25. Patients who had MRM surgery done were 1.23 times likely to develop BCRL than those who had Breast conserving surgery (p value: 0.04). Patients with Level I-II LN dissected were 2.14 times likely to develop BCRL (P value: 0.016).

The probability of participants who more than 5 LN dissected to develop BCRL was 3.1 (P value: 0.019) higher

Conclusion: Prevalence of BCRL is significant in our patients and most of them present with mild stage. BCRL is mainly a/w overweight, MRM, Level I-II LN dissection and higher no. of LN harvested during surgery

Recommendation: Early detection is key for optimal management because mild stage is reversible. Survivors should be regularly screened by symptom assessment, clinical exam, and imaging. Sentinel Lymphnode Biopsy which is the preferred axillary LN staging should be performed

83. TITLE: IN-HOSPITAL MORTALITY AND FACTORS ASSOCIATED AMONG PATIENTS WITH LIVER CIRRHOSIS ADMITTED AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: arwa.amir21@gmail.com
Presenter: Arwa Janoowalla

Background: Liver cirrhosis is a significant public health matter in Tanzania. Most of these patients present with advanced and irreversible disease. The world-wide in-hospital mortality amongst patients with liver cirrhosis ranges from 8.7% to as high as 41%. Mortality risk increases rapidly when these patients experience signs and symptoms of decompensation which include ascites, hepatic encephalopathy, upper gastrointestinal bleeding, and spontaneous bacterial peritonitis among others.

Objective: To determine the in-hospital mortality and factors associated among patients with Liver Cirrhosis admitted at Muhimbili National Hospital.

Methods: This is a cross-sectional study which was carried out at Muhimbili National Hospital involving 179 consenting patients with a diagnosis of Liver Cirrhosis admitted at the Internal Medicine department. Patient information was collected using a structured questionnaire. Diagnostic biochemical and hematological tests were performed for all patients. Analysis was done using Modified Poisson regression to determine association between in-hospital mortality and baseline variables. Statistical significance was considered when the p-value was less than 0.05. Data analysis was done using SPSS version 23.

Results: A total of 179 patients with liver cirrhosis were included. Males accounted for the majority (67.6%). The mean (±SD) age of the study population was 47.4 (±15) years. The

most common complication was ascites (88.8%) followed by jaundice (46.4%) and esophageal varices (36.3%). In-hospital mortality occurred in 35 patients (19.6%). Factors independently associated with mortality were Hepatic encephalopathy aRR (95% CI) =1.693(1.11-2.58), elevated WBC aRR(95%CI) =1.805(1.06-3.06), Hyponatremia aRR (95% CI)=1.860(1.09-3.15) and Child Pugh C aRR(95%CI)=8.183(2.80-23.88).

Conclusion: The identification of Hepatic Encephalopathy, hyponatremia, elevated WBC, and CTP C as factors associated with mortality provides valuable insight into the risk factors for poor outcomes in patients with liver cirrhosis.

Recommendation: Healthcare providers should prioritize monitoring and addressing these factors in the management of liver cirrhosis patients. Future research could focus on developing targeted interventions to improve outcomes in this patient population, ultimately leading to better quality of life for patients with liver cirrhosis

84. TITLE: CLINICAL OUTCOME AND ASSOCIATED FACTORS FOLLOWING INTRA-VITREAL BEVACIZUMAB INJECTION AMONG PATIENTS WITH DIABETIC MACULAR EDEMA AT MUHIMBILI

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
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Presenter: ZULEIKHA M. HAJI

Background: Diabetic macular edema (DME) is the commonest cause of vision impairment in people with diabetic retinopathy with a global prevalence of 7.5%. This is characterized by macula thickening and swelling due to fluid accumulation. Anti-vascular-endothelial-growth-factors agents like bevacizumab have been used worldwide for treating DME with variable outcomes in our setting despite it being used for several years. Knowing the treatment outcome and associated factors will help address treatment options that may benefit clinical management and patient counseling.

Objective: To determine the clinical outcome and associated factors following intravitreal bevacizumab injection among patients with diabetic macular edema at Muhimbili National Hospital (MNH).

Methods: A longitudinal study was done at the retina clinic of MNH. Consecutively recruited, newly diagnosed patients with DME. Baseline visual acuity and central macular thickness were assessed at baseline and after three bevacizumab injections. Analysis was done using SPSS version 25.

Results: A total of 60 patients and 63 eyes with DME were followed and analyzed. Most (58.3%) were males with a median age of 60.50 ±0.929 years. The mean BCVA improved from 0.876±0.592log-MAR to 0.660±0.589log-MAR at baseline and after 3 injections respectively. The mean CMT decreased from 453.02 ±71.944 µm to 357.23 ±65.192 µm at baseline and after 3 injections respectively. Reduction in CMT was significantly associated with a shorter duration of diabetes and good glycemic control.

Conclusion: Intravitreal bevacizumab injections significantly improved visual acuity and reduced CMT in DME. A shorter duration of diabetes and good glycemic control were associated with a reduction in CMT.

Recommendation: To continue using bevacizumab injections as well to emphasize on proper glycemic control in order to improve visual acuity and reduce CMT in patients with DME.

85. TITLE: COMPARISON OF QUALITY OF LIFE AMONG PATIENTS WITH AND WITHOUT DIABETIC RETINOPATHY AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: marwamaggie94@gmail.com
Presenter: MAGRETH MARWA

Background: Diabetes mellitus (DM) is a chronic metabolic illness of public health importance. About 463 million individuals worldwide have DM. Diabetic retinopathy (DR) is a potentially blinding microvascular consequence of DM causing visual impairment and blindness. Visual impairment and blindness caused by DR affects the individual socially, emotionally and economically, hence disturbs the overall life of individual patients, family and community at large. There is scarcity of data on the quality of life (QoL) among patients with DR.

Objective: To assess quality of life and associated factors in patients with and without diabetic retinopathy at Muhimbili National Hospital.

Methods: A cross-sectional comparison study systematically recruited among adult patients attending retina and diabetic clinics at MNH. A total of 160 patients were recruited, 86 with DR and 74 were those with DM without DR. The NEI-VFQ 25 tool was used for assessment. Data analysis was done by SPSS version 23.

Results: Mean age of 55.2 (+8.9) years. Hypertension and cataract were the common systemic and ocular comorbidities respectively. The overall Qol was lower in patients with

DR (45.8±11.3) compared to those without DR (71.8±10.2). Poor vision, duration of DM, BUN, LDL levels and being overweight/obese were associated with poor QoL.

Conclusion: The QoL was poor in patients with DR compared to those without DR. Noninsured medical expenses, higher DM duration, high BUN level, abnormal LDL, severe visual impairment, and grade of DR were associated with a poor QoL.

Recommendation: Efforts to improve access to healthcare including eye services. A comprehensive multi-modal approach where patient-centered therapy and lifelong follow-up is done.

86. TITLE: RETINOBLASTOMA IN TANZANIA: SURVIVAL RATE AND ASSOCIATED FACTORS

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: sukiheven@gmail.com
Presenter: Heavenlight Masuki

Background: Retinoblastoma (RB) is the most frequent intraocular childhood cancer arising from the immature retina cells. In developed countries, RB is a highly curable childhood cancer with very high survival rate. However, in Africa it is the most common and important life-threatening ocular cancer associated with higher mortality rate. At Muhimbili National Hospital, a significant number of children with RB are seen each year but the survival rate is not known.

Objective: This study aimed to determine the survival rate and associated factors among patients with retinoblastoma diagnosed at Muhimbili National Hospital

Methods: A retrospective cohort study involving 166 children diagnosed with retinoblastoma between 2016 and 2018 was conducted. Data on demographic characteristics, clinical presentation and the survival time was retrieved from the retinoblastoma data base. Data entry and analysis was performed using Epidata software version 4.1 and Stata version 11.0 respectively. Kaplan-Meier survival analysis was used to assess the survival rates of different groups, and the log rank test was used to determine the statistical significance. Unadjusted and adjusted hazard regressions were calculated using univariable and multivariable Cox regression. Statistical significance was defined

Results: One hundred and sixty-six (166) children with unilateral (69.3%) and bilateral (30.7%) disease were studied. The overall mean age at diagnosis was 25.56 ± 15.56 months. The most common reported complaints were leukocoria 90.4% and eye protrusion 46.4%.

The mean duration of symptoms was 7.9±5.3 months while the mean total delay time was 9.4±5.6 months. Half (51.8%) of the study participants had advanced disease at presentation. The Kaplan-Meier survival rate estimate was 69.0%, 59.6% and 52.3% at 1,2 and 3-years respectively. Age at diagnosis of >24 months (p=0.001), failure to complete treatment (p=<0.001) and extra-ocular disease invasion (p=0.008) were found to be associated with a lower survival rate

Conclusion: The overall survival rate of patients with retinoblastoma at MNH was low. Age at diagnosis of greater than 24 months, failure to complete treatment and extraocular disease invasion were associated with lower survival rate.

Recommendation: Efforts to improve survival rate by early diagnosis, timely referral and timely initiation of appropriate treatment are necessary.

87. TITLE: VISION RELATED QUALITY OF LIFE AMONG PATIENTS WITH GLAUCOMA AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: n.urassa15@gmail.com
Presenter: Nancy Urassa

Background: Glaucoma is a chronic optic neuropathy causing damage to the optic nerve head and irreversible vision loss. Being a chronic and blinding condition can negatively impact a patient's sense of wellbeing on everyday activities, leading to psychosocial and economic issues affecting quality of life. Despite being a common condition in our locality, less is known about its effects on the patient's quality of life (QoL).

Objective: To assess the QoL among patients attending glaucoma clinic at Muhimbili Nationa Hospital (MNH)

Methods: A comparison cross-sectional analytical study was conducted at glaucoma and anterior segment clinics of MNH. Patients with confirmed diagnosis of glaucoma and without glaucoma were recruited using consecutive sampling method. GQL-15 questionnaire was used to assess quality of life and SPSS version 23 was used to analyze the data.

Results: Four hundred participants were recruited and analyzed (200 patients and 200 comparison group). Mean age was 59.8(±9.3) years. The mean GQL-15 score in patients with glaucoma was substantially higher (indicating poorer QoL) than the comparison group [patients 58.83 (95% CI, 56.94-60.54) and comparison 17.28 (95% CI, 16.72-17.86), p <

0.0001]. Patients with severe visual impairment and advanced glaucoma, age above 61 years, lack of formal education and lack of medical insurance had significantly poor quality of life.

Conclusion: Quality of life among patients with glaucoma attending MNH is poor. Low level of education, lack of medical insurance and disease severity were significantly associated with poor QoL.

Recommendation: Vision rehabilitation and psychosocial support services be provided for patient with glaucoma. Eye health checkup be encouraged for early detection of glaucoma in order to reduce advanced disease.

88. TITLE: BURDEN OF HUMAN PAPILLOMA VIRUS INFECTION AMONG ORAL AND OROPHARYNGEAL SQUAMOUS CELL CARCINOMA PATIENTS AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
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Presenter: Sira S. Owibingire

Background: There has been a global upsurge of oropharyngeal cancer (OPC) cases associated with increased human papilloma virus (HPV) infection. Data from sub-Saharan African countries on the same are lacking and HPV among OPC is not investigated routinely. The recommended practice is to determine HPV status to oral and oropharyngeal squamous cell carcinoma (OPSCC) before treatment since the positive cases are treated with de-escalated regime because they respond better to treatment.

Objective: This study aimed at determining the HPV status to OPSCC through p16 immunohistochemistry (IHC) and in situ hybridization (ISH) and comparing the IHC results of p53 and Ki67 biomarkers.

Methods: The study was done at Muhimbili National Hospital (MNH) and MUHAS Dental Clinic from August 2020 and Dec 2022. The biopsies were taken from the cases clinically suspected to have OPSCC. Following confirmation of OPSCC histologically, the blocks of 218 patients were obtained and screened for possibility of obtaining quality tissue materials for tumour microarray (TMAs) for IHC and ISH whereby blocks for 176 patients qualified. Tissues were transferred to Haukland University Hospital (Norway) where TMAs were prepared, and then IHC and ISH were done. In addition, IHC for p53 and Ki67 were performed to search for association of occurrence of the three biomarkers.

Results: Out of 176 cases of OPSCC the p16 overexpression was found in 14 cases (7.95%) which had over 70% of cells in the specimen stained. In-situ hybridization was done in all cases and only 2 (1.13%) were positive. The majority of p16 positive cases showed only weak stains on ISH. The majority of the 14 cases which showed p16 overexpression were located on the tongue followed by retromolar trigone and buccal. Most of the cases which were p53 positive had no p16 overexpression and were randomly distributed on the subsites.

Conclusion: Findings concur with research done elsewhere in sub-Saharan Africa showing that HPV infection among OPSCC is low, but more so in oral cancer cases. Given the current situation of genital HPV infections, there is a need for constant surveillance of the oropharyngeal area.

Recommendation: There is still a necessity to routinely determine HPV status using p16 IHC and RNA ISH among OPSCC cases in Tanzania before initiation of treatment for the sake of estimating prognosis and for constant surveillance of HPV burden.

89. TITLE: ORAL HEALTH-RELATED QUALITY OF LIFE AND ITS ASSOCIATED FACTORS AMONG OLDER ADULT DIABETIC PATIENTS ATTENDING SELECTED DIABETIC CENTERS

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: melealusinde@gmail.com
Presenter: Dr Melea Lusinde

Background: Diabetes is a chronic metabolic disease, characterised by hyperglycaemia which results from defects within the insulin-producing cells or peripheral resistance in insulin function or both. Diabetes carries major health concerns as it is connected to vascular, eye, nerves, kidney, cardiac as well as oral complications. In the oral cavity, diabetes may present with varied manifestations such as xerostomia, candidiasis, burning mouth syndrome, severe dental caries, accumulation of plaque and calculus, gingivitis, and periodontitis. Ultimately, poor oral health status which in turns negatively impacts individuals' daily performances.

Objective: To assess Oral health-related quality of life and its associated factors among older adult diabetic patients attending selected diabetic centers in Dar es Salaam, Tanzania.

Methods: Analytical cross-sectional study was conducted among 430 diabetic patients. The impact of oral health on daily life was assessed by the oral impacts on daily performances (OIDP) index. Statistical analysis of the data was done using the IBM SPSS Statistics for Windows, Version 23.0. Cross-tabulations were generated and Chi-square tests computed to determine the relationships between dependent and independent variables. Odds ratios and confidence intervals (CI) were calculated to measure the strength of associations between variables. A p-value of $p<0.05$ was set as a level of significance.

Results: The prevalence of oral impact on daily performance was 51.6% with chewing and eating domain being the most affected performances (44.4%) and the prevalent cause of impacts were toothache. After adjusting for the model, in social demographic characteristics; the impact was more prevalent (OR = 1.69, 95% CI = 1.11 – 2.59) among females. In clinical criteria, those with tooth mobility had high odds of reporting OIDP (OR = 3.87, 95% CI = 2.04 – 7.36), subjects with poor oral hygiene were associated with more oral impacts (OR = 2.13, 95% CI = 1.18 – 3.85) and respondents with at-least one DMFT significantly associated with the prevalence of OIDP (OR = 8.36, 95% CI = 3.07 – 22.75).

Conclusion: Female, reported tooth mobility, poor oral hygiene and having at least one DMFT were associated with higher oral impact of daily performance, and the results were in the expected direction.

Recommendation:

1. Prevalence of dental caries was higher, with more missing teeth. This alerts the oral health clinicians to change the treatment modalities in strategising more on restoratives-based treatment modalities as preventive measures, but as well to provide dentures in this group

2. Higher OIDP, calls on respective ministry to amend policies to includes the oral health educations, this will improve their oral health hence better life performance.

90. TITLE: PREVALENCE OF ADVERSE CHILDHOOD EXPERIENCES AMONG PATIENTS ATTENDING THE PSYCHIATRIC CLINIC AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: alikombughi@yahoo.com
Presenter: ALIKO MBUGHI

Background: Adverse childhood experiences (ACEs) are the major risk factor for substance use, suicide, and mental disorders. In Tanzania, no study systematically explores the prevalence of ACEs among people with mental illness. The study on the prevalence of ACEs in people with mental illness help to raise awareness to the clinicians, patients, policy makers and community so that preventable measures can be used to reduce ACEs.

Objective: This study determined the prevalence of ACEs and associated factors among patients who attend the psychiatry clinic at Muhimbili National Hospital (MNH).

Methods: The study used a hospital-based cross-sectional quantitative analytical design. A systemic random sampling technique was used to select adult patients who attended the psychiatry clinic at MNH from August to September 2022. Adverse childhood experiences international questionnaire, demographic health surveys, and parenting style questionnaires were used for data collection. Data were analyzed by using a statistical package for social sciences (SPSS 23.0). Logistic regression analyses were performed to test the association between dependent and independent variables.

Results: About 342 patients participated in this study with a mean age of 34.33 + 11.19 years. More than half (53.8%) of the participants were males. Eighty percent (80.1%) of the participants reported a history of exposure to ACEs. Male participants had an increased odds of reporting ACEs nearly three-fold. Those who are born from young mothers aged <20 years during the participant date of birth have increased odds of reporting ACEs three-fold compared with the older.

Conclusion: There is a high prevalence of ACEs among patients who attend psychiatry clinics. Male genders and those who are born from young mothers are associated with ACEs.

Recommendation: Clinicians should raise awareness among the patients, their caregivers, and the community about ACEs so that preventive measures can be used to reduce ACEs.

91. TITLE: INDICATIONS AND RHYTHMS PATTERN AMONG PATIENTS UNDERGOING 24-HOUR HOLTER ELECTROCARDIOGRAPHY AT JAKAYA KIKWETE CARDIAC INSTITUTE.

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: Halimasamuel70@gmail.com
Presenter: HALIMA MARWA

Background: In SSA Cardiovascular diseases, including arrhythmia, continue to be a major public health concern. This may be due to a significant disparity in cardiovascular care standards between developed and low- and middle-income countries. Arrhythmia may be the most neglected area of cardiology in African countries.

Objective: To determine indications and describe the rhythm pattern among patients undergoing 24-Hour Holter ECG at JKCI.

Methods: A hospital-based cross-sectional study was conducted at JKCI between September to December 2022. A consecutive sampling method was used to enroll at least 305 adult patients undergoing 24-hour ambulatory Holter ECG, exploration of indications for Holter ECG utilized the AHA/ACC guidelines for ambulatory electrocardiography. SPSS software v 23.0 was employed in statistical analyses with statistically significant association from a p<0.05.

Results: The study included 305 participants with a mean age of 55.0 (±18). Gender distribution was nearly equal, with males accounting for 48% and females 52%. Hypertension was the most common comorbidity (64.3%), while 21% had no comorbidity. Recurrent palpitation (44.5%) and chest pain (17%) were the commonest indications for Holter ECG. Among participants, 43.3% had normal sinus rhythm, and 56.7% exhibited arrhythmia. The most common arrhythmias were PVCs (19.7%) followed by sinus tachycardia (7.5%). Heart blocks (2.6%) and VT (3.3%). Independent associations with arrhythmias were found for renal insufficiency (aOR 2.07, p=0.04), hyperthyroidism (aOR 9.3, p=0.001), and structural heart disease (aOR 2.9, p=0.001).

Conclusion: Prevalence of arrhythmia on 24-Hour Holter ECG is high (57.4%) and therefore Holter ECG remains an essential tool in evaluation of patients with suspected arrhythmia

Recommendation: Manage cardiovascular risk factors: As hypertension was found to be the most common co-morbid condition in the study participants, it is important to manage cardiovascular risk factors such as hypertension and diabetes, to prevent the development of arrhythmias and other cardiovascular complications.

92. TITLE: ADHERENCE TO ORAL ANTICOAGULANTS AND ASSOCIATED FACTORS AMONG PATIENTS WITH MECHANICAL HEART VALVES ATTENDING JKCI

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: happy_kassim@yahoo.com
Presenter: Happy Kassim

Background: Valvular heart diseases (VHD) account for about 10-20% of all cardiac surgeries in the US. In Tanzania, VHD accounts for about 18% of all heart diseases. Placement of mechanical heart valves (MHVs) is the mainstay treatment in patients with severe valve dysfunction, warranting lifelong use of anticoagulant therapy to prevent thromboembolic events. Poor adherence to anticoagulants has been linked to sub-optimal International normalized ratio and is reported among young patients with travel time to clinic > 1 hour, less frequent check-up visits and unavailability of warfarin.

Objective: We aimed to find the magnitude of and factors associated with adherence to oral anticoagulants among patients with MHV attending JKCI.

Methods: Patients who underwent MHV placement in 2021 were traced in this cross-sectional study which was between August and December 2022. Questionnaires were used to collect socio-demographic characteristics, factors affecting adherence and thromboembolic complications. A self-reported 8-item Morisky medication adherence scale was used to assess adherence. Patients scoring less than 6 were considered non-adherent. Chi-squire test and logistic regression were used for analysis. P<0.05 was used for statistical significance.

Results: A total of 149 patients were enrolled. Mean age (±SD) was 41.4 (±15) years. Majority 115 (77.2%) were aged 26-64 years, female 87 (58.4%), attained secondary education or higher 112 (75.2%), self-employed 69 (46.3%), had clinic visits 3 hours 93 (62.4%),13(8.7%) experienced medication side effects. A total of 105 (70.5%) had good medication adherence. Higher education level (aOR 4.4, CI1.65-12.07, p<0.005) was independently associated with good adherence.

Conclusion: The proportion of patients adhering to oral anticoagulant is reasonable. Higher education level was associated with good adherence.

Recommendation: Emphasis and patient education on importance of adherence should be conveyed in ways that patients at all education levels can understand.

93. TITLE: INDICATIONS AND OUTCOMES OF CORONARY ANGIOGRAPHY IN PATIENTS ADMITTED AT JAKAYA KIKWETE CARDIAC INSTITUTE – DAR ES SALAAM, TANZANIA

Sub theme: Non-Communicable Diseases, Epidemiology and Interventions
Contact: jamescmabula@gmail.com
Presenter: James Mabula

Background: Coronary artery disease (CAD) is on the increase, with 126 million people affected globally in 2019. In Tanzania mortality increased from 9% in 2012 to 13% in 2016. Coronary angiography (CAG) is crucial for CAD diagnosis. Jakaya Kikwete Cardiac Institute (JKCI) is the national referral facility for cardiac conditions. Determining the indications and outcomes of CAG is important for rationalizing its use

Objective: To determine the indications and outcomes of CAG at JKCI

Methods: A hospital based cross sectional study was conducted from November 2022 to February 2023. A structured questionnaire was used in data collection from consecutive patients planned for CAG. Data was analyzed with the Statistical Package for Social Science (SPSS) version 23. Regression analysis was used to determine the association between variables

Results: The study enrolled 300 participants. Mean (±SD) age was 62.9 (±10.3) years. Males were 173 (57.7%). Smokers were 59 (19.7%), hypertensives were 161(53.7%). Radial access was deployed in 142 (47.3%). Commonest indication for CAG was Stable angina in 243 (81%). A total of 142 (47.3%) patients had CAD, whereby 17 (12.1%), 77 (54.6%), 27 (19.1%) and 20 (14.2%) had minimal vessel disease, single vessel disease, double vessels disease and triple vessels disease respectively. 54 (18%) patients had complications, commonest (25.9%) being radial bleeding.

Age (aPR 1.95, p=0.02), femoral radial access (aPR 3.35, p<0.001), as well as simultaneous performance of CAG and intervention (aPR 1.63, p=0.039) associated with complications

Conclusion: At JKCI, the proportion of patients having CAD was similar to other studies. The rate of complications associated with CAG was relatively low

Recommendation: Patients at risk for complications should be recognized early for appropriate interventions

94. TITLE: ASSOCIATION BETWEEN FETAL HEMOGLOBIN PARAMETERS AND DISEASE SEVERITY IN SICKLE CELL DISEASE PATIENTS IN TANZANIA

Sub theme: Non-Communicable Diseases
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Presenter: Hadiya Mahadhi Haji

Background: Fetal haemoglobin (HbF) is restricted in the F cells. Sickle cell patients with high HbF levels generally have mild disease than those with lower levels. However, some patients with high levels of HbF still have severe disease. This diversity is possible due to the amount of HbF per F-cell (HbF/ Fcell). This hypothesizes that the overall concentration of HbF and F cells are not powerful indicators of disease severity; instead, the amount of HbF/F cells is essential.

Objective: To determine the association between fetal hemoglobin parameters and disease severity in SCD patients in Tanzania.

Methods: In a retrospective cohort study, data from the Sickle Pan-African Research Consortium Tanzania registry were analyzed. Ninety two individuals with SCD aged ≥ 6 years, were investigated at Muhimbili University of Health and Allied Sciences. HbF/ cell was calculated from the formula: MCH(pg) x HbF(%) / F cell (%). STATA version 15 was used for analysis.

Continuous variables were summarized using the median, Mann Whitney test was used to find the association between independent and intermediate variables. The association between the dependent and intermediate variables was summarized by binomial logistic regression and chi-square test.

Results: Among 92 study participants, 84.8% had low Hb F level (<8.9%), 83.7% had low F cell level (<38.8) and 89.1% had low Hb F/ F cell (<10 pg). The median levels of Hb F, F cells and Hb F/F cells were 4.45, 21.60 and 5.63 respectively. HbF/F cell was significantly higher in males than females, with a median of 6.44 and 5.34 respectively (P=0.004). No significant difference in HbF and F cell levels versus age and sex.

HbF and F-cell levels, had no significant association with disease severity P=0.356, and P=0.449 respectively, although HbF/F-cell had marginal association versus terminal events p=0.099 respectively.

Conclusion: Only HbF/F-cell levels showed marginal association with the occurrence of terminal events, this might reflect what is already known that it is a better predictor of the severity of disease in SCD patients.

Recommendation:

1. Larger sample size study to increase statistical power and enhance the ability to detect significant associations.

2. Using a prospective study design, data will be collected over a specific period, examining continuous trends and assessing connections between variables.

95. TITLE: PREVALENCE AND FACTORS ASSOCIATED WITH HYPERGLYCEMIA AND HYPERTENSION AMONG CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA DURING INDUCTION

Sub theme: Non-Communicable Diseases
Contact: rosemary.anthony2011@gmail.com
Presenter: Rosemary A. Minde

Background: Globally, around 1-4.75 per 100,000 children suffer from Acute Lymphoblastic Leukemia (ALL) with peak incidence between ages 2-6 years. Treatment of children with ALL involves the use of a multidrug regime divided into phases (induction, consolidation, and maintenance). Induction therapy as the initial phase of treatment has a primary goal of achieving complete remission. Children with ALL are at high risk for developing hyperglycemia (16%) and hypertension (13%-67%) following induction chemotherapy. However, the burden of these complications in developing countries has not been studied, bringing up the need for this study.

Objective: To determine the prevalence and factors associated with hyperglycemia and hypertension among children with ALL during induction chemotherapy at Muhimbili national hospital in Dar es Salaam, Tanzania.

Methods: A thirteen months analytical cross-sectional study was conducted among all children below eighteen years. Their information was extracted using self-administered Swahili-translated questionnaires. Blood sugar was assessed on the second week and blood pressure on the second and fourth weeks. Data analysis was performed using SPSS version 23. Categorical data were summarized by using frequency and proportions, whereas numerical data were summarized by using median and interquartile ranges. Logistic regression was used to determine the association: Odds ratio (OR) with respective 95% confidence intervals (CI) and p-values <0.05 was considered significant.

Results: The study included 124 participants; of which 94(75.8%) were males and 89 (71.8%) were aged below ten years with a median age of 6.6 (4.5-10.0) years. The overall prevalence

of hypertension was 23.4% and that of hyperglycemia was 14.5%. Factors associated with hyperglycemia included; Male sex (Adjusted Odds Ratio (aOR) =3.55; 95% CI (1.17-10.78), P=0.025) and age above ten years ((aOR) =3.73; 95% CI (1.24-11.25), P=0.016). Factors that were associated with hypertension included; CNS leukemic infiltration ((aOR) =11.48; 95% CI (1.51- 87.16), P=0.018).

Conclusion: The prevalence of hypertension and hyperglycemia during induction therapy is alarming. Factors that influenced hypertension and hyperglycemia were CNS leukemic infiltration, male sex, and age ≥10 years respectively.

Recommendation: Regular screening of blood pressure and blood sugar is recommended for children with ALL, specifically those with; CNS leukemic infiltration, age≥10 years, and male sex throughout treatment but significantly on the second and fourth week of induction therapy for early detection and timely management.

96. TITLE: PREVALENCE OF DEPRESSION AND ASSOCIATED FACTORS IN PEOPLE WITH CHRONIC KIDNEY DISESASE ATTENDING OUT-PATIENT CLINIC AT MUHIMBILI NATIONAL HOSPITAL.

Sub theme: Non-Communicable Diseases
Contact: nahr09@gmail.com
Presenter: Nahir Rajab

Background: Chronic kidney disease is a condition whereby kidney tissue is damaged and functioning is reduced. Depression in persons with CKD, is associated with poor clinical outcomes, including hospitalization, early initiation of dialysis, or death. Diagnosing and managing depression early might have benefits in slowing the progression of CKD.

Objective: The main aim of this study was to determine the prevalence of depression and associated factors among persons with CKD attending out-patient clinics at MNH.

Methods: Data from patients aged 18 years and older attending the nephrology Clinic at MNH were collected using a cross-sectional study design, the study used face to face semi-structured interviews, Multidimensional Scale for Perceived Social Support Scale, Hope Scale, and the Patient Health Questionnaire assessed symptoms of depression to collect data from patients. Data were entered and analyzed using the Statistical Package for the Social Science version 23. Logistic regression analyses were performed to test the association between dependent and independent variables.

Results: A total of 224 participants diagnosed with CKD participated in the study, 108 male and 116 female. The mean age was 49.62 years (SD=14.21). The prevalence of depressive symptoms using a cutoff point of ≥9 was 22.3%. Being female increased the likelihood of probable depression by three times compared to being male (AOR =0.3, 95% CI, (0.1-0.8), p-value 0.025). Depressive symptoms were also associated with poor and moderate social support, where participants that reported of having poor social support were about two times at risk as compared to those who have good social support

Conclusion: Findings from the study showed that the presence of depressive symptoms was common among patients diagnosed with CKD, being female and having low to moderate support were found to be independently associated with depressive symptoms

Recommendation: The study recommends screening for depressive symptoms and the need for integration of mental health services in general health care.

97. TITLE: PREVALENCE, PREDICTORS OF LIPOHYPERTROPHY AND ITS EFFECT ON GLYCEMIC CONTROL AMONG CHILDREN WITH DIABETES MELLITUS TYPE 1

Sub theme: Non-Communicable Diseases
Contact: mwakipadorice@gmail.com
Presenter: Dorice Mwakipa

Background: Lipohypertrophy is a prevalent condition in children and adolescents with type 1 diabetes, affecting almost half of the patients. Usually present as soft dermal nodules like lipomas or fibro collagenous scar tissue within the skin. Commonly stated risk factors for lipohypertrophy development include extended insulin use, failure to rotate injection site, high frequency of insulin injections per day, and insulin needle reuse.

Objective: To determine the prevalence, predictors of lipohypertrophy and its effect on glycemic control among children and adolescents with diabetes mellitus type 1 in Dar es Salaam.

Methods: A 7-months hospital-based cross-sectional study was done on children and adolescents with diabetes mellitus type 1 who attended diabetic clinic and had used insulin injections for at least 6 months. A questionnaire with demographic data and clinical information of participants was used to collect data. Physical examination on insulin injection sites was done, then a sample for HbA1c was taken. Data were analyzed using SPSS version 26, logistic regression analysis for categorical variables was done, at 95% CI. A p-value of <0.05 was considered statistically significant.

Results: A total of 248 participants were recruited, their age ranged from 1-19 years with a mean and SD of 12.81±5.33. Factors that were statistically significant on multivariate logistic regression included diabetes mellitus of > 9 years had approximately 5 times higher odds of developing lipohypertrophy (OR=4.66; 95% CI 2.81-5.67; P=0.00), Needle reuse for 2-3 days (4-9times) had 2 times higher odds of developing lipohypertrophy compared to single day use (OR=2.3:95% CI 1.12-1.83; P=0.019), also micro-fine needle use had 2 times higher odds of developing lipohypertrophy compared to pen (OR=2.9; 95% CI 1.50-5.67; P=0.002).

Conclusion: Our study reports the prevalence of insulin-induced lipohypertrophy of 36.7%, also shows the longer duration of insulin use, high frequency of needle reuse and micro fine needle use predispose the client to lipohypertrophy.

Recommendation: Patients on insulin injection should be screened for presence of lipohypertrophy on their insulin injection sites regularly, once the injection site is identified to have lipohypertrophy it should be spared without being injected for some months to years for recovery.

Patients should be advised to use one insulin syringe for single injection, and would rather use of pen needle versus micro-fine needle for insulin injection.

98. TITLE: COMPARATIVE STUDY OF FEASIBILITY, ACCEPTABILITY AND EFFICACY OF NBS VS EID FOR SCD

Sub theme: Non-Communicable Diseases
Contact: arbituro@yahoo.co.uk
Presenter: ALFRED BITURO

Background: Sickle cell disease (SCD) is an inherited blood disorder which characterized by the formation of abnormal hemoglobin S within red blood cells (RBCs), rendering them prone to sickle in areas of low oxygen tension. Tanzania has an estimated annual birth of 11,000 individuals with SCD, ranking 5th worldwide.

Despite the fact that newborn screening for SCD is recommended, no African country has made it to be a national health program.

Objective: The main aim of this study is to establish evidence on the best timing for screening for SCD (NBS at birth vs. screening during immunization-EID) for adoption in policy.

Methods: A cross-sectional mixed method study conducted at Temeke and Amana hospitals in Dar-es salaam. Quantitative study included 424 mothers and 37 healthcare providers (Among those 424,3 mothers had twins to make 427 neonates in the study) whereas Qualitative study included 8 mothers and 12 healthcare providers. Participants aged >18yrs and babies aged was <14weeks.A sample of blood (DBS) was collected and tested using Isoelectric Focusing (IEF) in diagnosis of SCD. A questionnaire administered to study participants to assess the acceptability and efficacy of NBS and EID, and IDI used to ascertain the feasibility and acceptability of NBS and EID.20 IDI were conducted

Results: Acceptance rate of mothers was 97.64% with NBS efficacy of 74% (done at Temeke hospital, among 342 neonates born from 24 January 2023 to 10 February 2023 ,screened neonates were 250).28(75.7) of healthcare providers agreed that availability of test to be challenge and 9(24.3) denied whereas 24(64.9) agreed lack of time to be a challenge and 13(35.1) denied. 87.26% of mothers opted for screening immediately after delivery(NBS) whereas 12.74% of them opted for screening during immunization(EID).70.27% of healthcare workers opted for NBS and 29.73% opted for EID.

Three major themes emerged on acceptability as well as feasibility of NBS Vs EID which perceived as NBS more feasible and acceptable compared to EID.

Conclusion: This is the first study that has highlighten preferences of clients and healthcare providers on the best time for SCD screening in which most of them opted for NBS rather than EID however the study faced some challenges to collect data in RCH setting which gives room for further studies. Generally NBS was found to be acceptable and feasible to be implemented however there were some challenges to be addressed before introducing Screening services in the immunization setting.

Recommendation: Government is advised to put much emphasis on NBS, improve its infrastructure such as to set places for sample collection, to solve challenge of availability of screening tools by involving also private companies, more training of staff and if possible, to recruit them and to scale up the screening services to other peripheral hospitals.

99. TITLE: PREVALENCE AND DETERMINANTS OF PROGRESSIVE KIDNEY DISEASE AMONG PATIENTS WITH SICKLE CELL DISEASE ATTENDING MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases
Contact: nyanjigamkangara@gmail.com
Presenter: Dr Nyanjiga Mkangara

Background: Sickle cell disease (SCD) is widespread over much of Sub-Saharan Africa, affecting up to 3% of all births in some areas, but it is still a low-priority disease in most African countries. Kidney disease is common in SCD and accounts for 16-18%of mortality among patients with SCD. Nonetheless, in Tanzania, little is known about the coexistence of SCD and renal disease, and little is known about the factors that influence kidney disease progression in SCD patients.

Objective: To determine the prevalence and determinants of progressive kidney disease among patients with SCD attending Muhimbili National Hospital, Dar es Salaam, Tanzania.

Methods: This is a cross-sectional study among 369 SCD patients registered in SPARCO-Tanzania and attending the hematology clinic at the Muhimbili National Hospital within a period of five months. Participants will be consecutively enrolled into the study using a convenient sampling method. After receiving ethical clearance from the MUHAS Research Ethics Committee and written informed consent from study participants, data were collected. Participants' demographic data and clinical parameters such as blood pressure and random blood glucose were collected using a standardized tool. Blood and urine samples were also collected for the measurement of serum and urine creatinine.

Results: Patients who were enrolled were 363 of which female were 52.1% and male were 47.9 respectively. Majority of patients fell between the age of 5-18 years old and of these enrolled patients 59.8% were on both folic acid and hydroxyurea treatment. Only 1.1% found to be hypertensive while 0.5% were diabetic. The overall prevalence of kidney disease among these patients was found to be 49% and it was found to be more prevalent again in patients at the age between 5-18 years reasons being that majority of the patients fell in that age category. It was also found that hypertensive patients had an increased chance of developing kidney disease by 4.2-fold.

Conclusion: Half of the patients with SCD attending MNH have a kidney disease.

Recommendation: Microalbumin, hypertension together with diabetes should be screened routinely at clinic as the can help in preventing the development and even predicting the occurrence of kidney disease among sickle cell disease patients at clinics.

100. TITLE: FACTORS AFFECTING ADEQUATE PAIN CONTROL IN PATIENTS WITH SICKLE CELL DISEASE AT MWANANYAMALA AND MUHIMBILI HOSPITALS IN DAR ES SALAAM

Sub theme: Non-Communicable Diseases
Contact: epijoseph1@gmail.com
Presenter: Happiness Joseph

Background: Sickle cell disease (SCD) is the most common hemoglobin disorder in the world. Africa has the highest burden of (SCD), accounting for up to 75% of the 300,000 SCD births worldwide each year. Despite treatment advancement, most patients with SCD are still admitted for various reasons, pain being the leading cause of admission among adult patients with SCD. About 90% of hospital admissions of patients with sickle cell disease are for the treatment of acute pain.

Objective: This study aimed to determine factors associated with inadequate pain control among patients with SCD presenting with a painful event at Mwananyamala and Muhimbili hospitals in Dar es salaam Tanzania.

Methods: This was a cross-sectional study, conducted at (MNH) and (MRRH) in Dar es Salaam Tanzania. A total of 390 Patients with SCD who presented with painful events aged eight years and above were enrolled in duration of six months. A structured questionnaire was used to collect data on participants' socio-demographic characteristics including age, gender, residence, and education level, clinical parameters including medication history, comorbidity, type of analgesia used during pain episode, dehydration status, hemoglobin level, and WHO pain scale were assessed. WHO pain index score tool was used to assess the level of adequate pain control.

Results: A total of 390 patients with SCD, age 8 years and above were analyzed with a mean age of 15 ± 6 years. Total of 31% of patients who were enrolled had inadequate pain control while 61% attained adequate control of their pain. The factors that were significantly associated with inadequate pain control were Receiving initial pain management in other health centers OR= 2.5, 95%CI (1.5- 4.5), P=0.001 while receiving initial treatment at MNH/MRRH seemed to be a protective factor OR=0.29, 95% CI (0.14 -0.61), P=0.001. Patient who come from outside Dar-es salaam had high chance of receiving inadequate pain control OR=1.74, 95%CI;(1.1-2.9), P=0.03. Another factor included presenting to the hospital with Moderate pain OR=2.2,

Conclusion: A third of patient received sub-optimal pain control. The significantly associated factors being residing outside Dar-es salaam, receiving initial pain management from other health care facility, presenting to hospital with moderate pain and having fever.

Recommendation: These findings highlight the need for improved pain management strategies for SCD patients, especially for those who seek care at different healthcare centers. And a need to assess applicability of SCD guidelines in other hospitals

101. TITLE: "ASSESSING THE RELATIONSHIP BETWEEN THE PAIN EXPERIENCE AND OHRQOL CHANGES IN THE INITIAL STAGE OF ORTHODONTIC TREATMENT, TANZANIA"

Sub theme: Non-Communicable Diseases
Contact: monamatiko@gmail.com
Presenter: MONA MUKALUNYOISA MATIKO

Background: Recently, the awareness of malocclusion has grown and access to treatment has become widespread, henceforth fixed orthodontic appliance therapy has become increasingly popular in many societies. However, orthodontic treatment is reported to be a source of pain especially in the initial phase of treatment. Such pain may affect the Oral Health Related Quality of Life (OHRQoL) amongst its recipients. This study has addressed the association between orthodontic treatment related pain and OHRQoL. The results of which will be useful for future interventions, in an attempt to improve the patients' treatment compliance and outcome.

Objective: To determine the relationship between the pain experience and OHRQoL changes in the initial stage of treatment among orthodontic patients attending MUHAS dental clinic in Dar es salaam, Tanzania.

Methods: A hospital based cross sectional analytical study design was done at the MUHAS dental clinic. The study involved 178 orthodontic seeking patients. There was a clinical examination and a series of questionnaires given at different time stamps. OHRQoL was measured by the OHIP-14 questionnaires at the beginning of treatment (T0) and a month after (T8). The pain experience was measured by the MMPQ-SF with VAS and PPI questionnaires for the duration of the first week after treatment initiation (T1-T7). The analysis was done using computer SPSS version 20.0 software.

Results: A total of 178 subjects participated. Most were females (56.2%). The age range was 12-39 years, with 73% being 12-19 years. The mean OHIP-14 score at T0 was 11.93 SD=0.642. The age group of 20-39 scored significantly higher. Overall, there was an insignificant increase in the OHIP-14 scores at T8. There were improvements in psychosocial domains. 95.5% of the participants experienced pain. 89.9% of the participants described their pain sensation as "tight" and 11.2% also noted that it was "frustrating". Over T1-T7, the pain

prevalence peaked at T2 and severity at T3. Overall, is no significant association with the sociodemographic factors nor the prevalence of pain with OHRQoL changes. P<0.05.

Conclusion: Orthodontic treatment in the initial phase of treatment is associated with physical pain for the majority of patients. However, this pain does not significantly affect their oral health related quality of life. The OHRQoL changes are also not significantly affected by gender nor age. In addition, there is an overall improvement in the psychological and social aspects of patients who undergo orthodontic treatment.

Recommendation: Orthodontic treatment should be more widespread locally. Society should be educated that orthodontic treatment can yield positive results and an improvement in oral health related quality of life even in post-adolescent age groups. Patients should be counselled about the orthodontic treatment related pain and encouraged as the pain is only temporary.

102. TITLE: PREVALENCE AND FACTORS FOR HYDROXYUREA USE AMONG SICKLE CELL DISEASE PATIENTS ATTENDING CLINICS IN TANZANIA

Sub theme: Non-Communicable Diseases
Contact: candicekate@gmail.com
Presenter: CATHERINE S MHANDO

Background: Since its introduction and approval from FDA, Hydroxyurea (HU) has brought forth beneficial outcome in SCD patients. Studies have shown that use of HU in SCD patients has tremendously improved morbidity, mortality and the overall quality of life of these patients. Patients with SCD nowadays due to improved interventions can survive well into their adulthood, despite these advancement in interventions HU is still underutilized especially in low resource countries such as Tanzania being among countries with high disease burden.

Objective: This study aimed at exploring the prevalence of patients with SCD using HU, and factors for HU use among SCD patients attending different clinic sites in Tanzania.

Methods: A retrospective multicenter study was conducted at a Sickle cell center SPARCO in collaboration with Muhimbili University of Health and Allied Sciences, to analyze the prevalence of HU use and assess the possible factors leading to HU use among registered SCD patients attending clinics at different sites in Tanzania from January 2017 through December 2022, electronically retrieving their medical records in the database. Haemoglobin severity before and after HU treatment within one year were evaluated.

Results: Among 6275 SCD patients in the database from 2017 to 2022 the median age was 11 years of which 77% were those below 18years of age. This study found that only 32% of patients are utilizing Hydroxyurea, of which majority of these patients 47.7% are attending clinics at National hospital (Muhimbili and Mloganzila) and 84.6% have Health insurance coverage. There was a significant alteration in the severity of anaemia by at least 3 months of HU utilization.

Conclusion: This study showed that SCD patients use hydroxyurea at a relatively low frequency. Those attending National Hospital clinics (Muhimbili and Mloganzila) and having health insurance were typical for patients who did receive hydroxyurea. Moreover, hydroxyurea therapy significantly improved the degree of anemia in SCD patients. These results highlight the significance of expanding hydroxyurea therapy access and use in the treatment of sickle cell disease.

Recommendation: Need for policy change to incorporate medical officers in prescribing of HU, to make HU available in the lowest health care facilities that patient primarily visit before being referred to a tertiary / national hospital.

103. TITLE: EVALUATION OF CHEMOTHERAPY RELATED ADVERSE EVENTS AND ITS EFFECT ON COMPLETION OF THERAPY AMONG COLON CANCER PATIENTS.

Sub theme: Non-Communicable Diseases
Contact: glorymakupa@gmail.com
Presenter: GLORY MAKUPA

Background: Colorectal cancer (CRC) is the fifth most commonly diagnosed cancer in Tanzania, accounting for 2,354 new cases annually. Surgery is the mainstay of treatment for localized colon cancer and adjuvant chemotherapy is given in stage II (high risk) and stage III patients to reduce the risk of recurrence. Although these chemotherapy regimens are often effective, the wide variety of side effects may necessitate chemotherapy modifications that reduce their effectiveness.

Objective: To determine the frequency of chemotherapy related adverse events (AEs) and its association with completion of therapy among non-metastatic colon cancer patients attending ORCI and MNH.

Methods: A prospective, observational cohort study was conducted from 2022-2023 at ORCI and MNH in Dar-es-salaam, Tanzania. After consenting, participants were interviewed at baseline for socio-demographic and clinical-pathological characteristics. The PRO-CTCAE®

instrument (Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events) was used to classify symptoms at midpoint and endpoint of the study weeks. Descriptive statistics was used to summarize baseline characteristics, and adverse events. Chi-square test was used to find association between the patient characteristic parameters, AE's and completion of chemotherapy.

Results: Ninety three percent of the patients in the cohort reported fatigue, 91% had peripheral neuropathy, 86% neutropenia, 77% hand and foot syndrome, 58% vomiting, and 57% diarrhea. The most frequent grade 3 or 4 adverse event was neutropenia, diarrhea and vomiting. A statistically significant relationship was observed between low BMI and the incidence of Peripheral neuropathy (p=0.013). Sixty percent of patients had delayed completion and 7% did not complete treatment. A statistically significant relationship was noted between neutropenia and delayed therapy completion (p=0.009)

Conclusion: In this study it was observed that colon cancer patient receiving adjuvant chemotherapy encountered multiple side effects. Neutropenia, diarrhea, and vomiting presenting as severe forms of AE's. Majority of socio-demographic and clinical-pathological characteristics did not show a significant association with the occurrence of adverse events. Majority of patients in the cohort had delayed chemotherapy completion. The commonest reasons for delayed completion was related to hematological toxicity (neutropenia).

Recommendation: Pro-active dose adjustment with close monitoring could be an alternative approach for preventing delays in patients with neutropenia.

-Further research should address the effect of dose modification (dose delays and reduction) on treatment efficacy in our population.

104. TITLE: PREVELANCE OF SKELETAL RELATED EVENTS AND ASSOCIATED FACTORS IN PROSTATE CANCER

Sub theme: Non-Communicable Diseases
Contact: mrumainnocent@gmail.com
Presenter: Innocent M Sifueli

Background: About 90% of patients with advanced prostate cancer have bone metastases. Patients with bone metastases have a higher chance of enduring skeletal complications, including bone pain that requires radiotherapy, pathologic fracture, spinal cord compression, surgery to the bone, and hypercalcemia of malignancy, which are referred to

as skeletal-related events" (SREs). In addition to causing patient morbidity and reducing the quality of life, there are complex and increased demands on the healthcare resources required for treatment. Understanding the associated factors for SRE will enable approaches to be taken so as to reduce the burden of SRE.

Objective: To determine the prevalence of skeletal-related events and associated factors among patients with prostate carcinoma with bone metastases treated at Ocean Road Cancer Institute from 2018-2022

Methods: A retrospective cohort study was conducted at the ORCI in Dar es Salaam, Tanzania. A patient with a diagnosis of prostate cancer with bone metastasis who developed SRE was recruited. A sample of 169 patients was obtained. SPSS v. 25 was used for statistical analysis. The prevalence of skeletal-related events was obtained by dividing the number of SRE by the total number of prostate cancer patients with metastasis in the study period. 95% CI was used to calculate a range within which the true value of the prevalence was likely to lie. The Chi-square test was used to compare proportions. A P value of less than 0.05 was considered statistically significant.

Results: The prevalence of skeletal-related events in prostate cancer patients was 53.25%. The most prevalent event was bone pain (78.89%), followed by cord compression (15.56%), and only 5.56% had pathological fractures. PSA levels (86.6%), Risk stratification, and staging were found to be statistically significant with SRE, with p values of 0.0002,0.006 and 0.001, respectively.83.78% of participants who had high-risk stratification and 96.67% who had stage IV disease experienced SRE. Hormonal response was statistically significantly associated with SRE, with a p-value of 0.001. High-risk and Stage IV were found to be the only predictors for SRE.

Conclusion: The prevalence of skeletal-related events in prostate cancer patients with bone metastasis at Ocean Road Cancer Institute was 53.25%. Bone pain is the most presenting symptom in patients with SRE. The stage of the disease and risk stratification are independent predictors of SRE. Also, there is a significant difference in mean PSA and hormonal sensitivity among patients with and without SRE. However, PSA and hormonal sensitivity are not independent predictors of SRE.ADT and bisphosphonates have no influence on SRE

Recommendation: Health education and awareness among the public and health workers about the importance of early detection and treatment should be of paramount as it seems many patients attend health facility at a late stage. There is a need for strengthening the scope of the screening program for prostate. On the Gleason reporting are we reporting

correctly. Prospective studies on the influence of ADT and bisphosphonates on these complications in our setting

105. TITLE: LATENT TUBERCULOSIS IN CHILDREN AND YOUTH WITH TYPE 1 DIABETES MELLITUS IN DAR ES SALAAM, TANZANIA

Sub theme: Non-Communicable Diseases
Contact: ednasiima07@gmail.com
Presenter: Edna Siima Majaliwa

Background: Both tuberculosis (TB) and diabetes mellitus (DM) are increasing worldwide, with the asymptomatic presentation when they co-exist, leading to interference in glycemia control, anti-tuberculous therapy failure, relapse, and death. Different studies (Mixed adult and youth) have shown how frequent TB is in patients with DM, and most of the time, they are asymptomatic.   There is no data that report the prevalence of latent tuberculosis in children and youth with diabetes in Tanzania.

Objective: To determine the prevalence of latent tuberculosis in youth and children with type 1 Diabetes in Dar es Salaam –Tanzania.

Methods: The study employed a cross-section study design to establish screening of latent TB T1DM participants. A structured questionnaire was used to collect the required study information, including socio-demographic factors admissions, insulin and any other medication. Then children and youth were screened for symptoms of Tuberculosis as per NTLP guideline Then Physical examination was done including Anthropometric measurements, pubertal assessment and eyes checked using fundo-pictures as well screening for nephropathy. All those who did not have symptoms underwent a QuantiFERON testing (QuantiFERON)

Data were analysed using SPSS version 25 (IBM SPSS, Armonk, NY,

Results: Of the 281 participants, the mean age was 19 (±6) years, 51.2% were female, and (80.8%) had either a primary or secondary level of education at baseline. Overall, the prevalence of latent TB was 14.9%, more slightly in females (52.4%) than in males but was insignificant. The proportion of latent TB was significantly higher in uncontrolled HbA1c levels (76.2%) than those with controlled HbA1c (23.8%) [p=0.046]. Duration of diabetes and age at diagnosis did not affect the occurrence of latent Tuberculosis [p > 0.05]. Meanwhile, in the regression model, participants with latent TB were more likely to have uncontrolled HbA1c. [p=0.045

Conclusion: Despite the methodological limitations, this survey highlights the high prevalence of latent TB among children and youth with diabetes shouting for better control.

Recommendation: These results clearly show the need to screen for Tuberculosis in children and youth with diabetes and start them on Isoniazid prophylaxis as per protocol, especially in this TB endemic areas like Tanzania.

106. TITLE: SATISFACTION WITH VASCULAR ACCESS AND ASSOCIATED FACTORS AMONG PATIENTS ON HEMODIALYSIS AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases
Contact: zachalbina@gmail.com
Presenter: Albina Zachariah

Background: Chronic kidney disease (CKD) is a growing public health issue globally, fueled by rising rates of hypertension, diabetes and an aging population. Patients who require hemodialysis need a vascular access that is reliable and efficient for successful treatment. The level of access satisfaction in hemodialysis patients can notably impact and modify the patient's quality of life.

Objective: To measure satisfaction with vascular access and its determinants among patients on hemodialysis at Muhimbili National Hospital.

Methods: A cross-sectional study was employed to collect data on hemodialysis patients' sociodemographic, clinical characteristics and satisfaction with vascular access. Satisfaction was assessed by using the SF-Vascular Access Questionnaire (SF-VAQ) which is composed of three domains (physical functioning, social functioning and dialysis related complications). The SF-VAQ has a score range of 12 to 84, whereby a mean sum score of less than 38 indicated satisfaction and the lower the score, the greater the satisfaction. Logistic regression was performed to explore the association between studied factors and satisfaction. Statistical significance level was set at $p<0.05$.

Results: A total of 203 patients were recruited (132 (65%) male and mean(SD) age 50±14 years). AV Fistula was used by 75(36.9%), permanent catheters by 81(39.9%), and temporary catheters by 47(23.3%). The overall mean (SD) VAQ score 32.8(+ 9.8) indicating that patients were satisfied with their vascular access. The physical functioning domain recorded lowest mean VAQ scores (8.7+4.5) followed by social functioning domain (11.7+5.0). Binary logistic regression analysis showed that male sex (aOR 2.63(1.29-5.39),

p=0.008) and having AV Fistula (aOR 3.06(1.02-9.17), p=0.042) were independent factors for satisfaction.

Conclusion: Hemodialysis patients are satisfied with their vascular access. Male sex and having an AV Fistula were independent factors for satisfaction. Our study offers more proof that AVF can be used on the right patients. In addition to having lower morbidity and mortality than catheters, this access type also results in higher patient satisfaction.

Recommendation: The results from this study highlight the need of advocating for AV Fistula creation in eligible candidates as it has been found to be significantly associated with patients' satisfaction. Also, we recommend pre-dialysis counselling with emphasis on vascular access. This will equip patients with more information and pros and cons of different vascular access.

107. TITLE: PREVELANCE OF SKELETAL RELATED EVENTS AND ASSOCIATED FACTORS IN PROSTATE CANCER DUPLICATE OF 151

Sub theme: Non-Communicable Diseases
Contact: mrumainnocent@gmail.com
Presenter: Innocent M Sifueli

Background: About 90% of patients with advanced prostate cancer have bone metastases. Patients with bone metastases have a higher chance of enduring skeletal complications, including bone pain that requires radiotherapy, pathologic fracture, spinal cord compression, surgery to the bone, and hypercalcemia of malignancy, which are referred to as skeletal-related events" (SREs).In addition to causing patient morbidity and reducing the quality of life, there are complex and increased demands on the healthcare resources required for treatment. Understanding the associated factors for SRE will enable approaches to be taken so as to reduce the burden of SRE.

Objective: To determine the prevalence of skeletal-related events and associated factors among patients with Ca prostate with bone metastases treated at Ocean Road Cancer Institute from 2018-2022

Methods: A retrospective cohort study was conducted at the ORCI in Dar es Salaam, Tanzania. A patient with a diagnosis of prostate cancer with bone metastasis who developed SRE was recruited. A sample of 169 patients was obtained.SPSS v. 25 was used for statistical analysis. The prevalence of skeletal-related events was obtained by dividing the number of SRE by the total number of prostate cancer patients with metastasis in the

study period. 95% CI was used to calculate a range within which the true value of the prevalence was likely to lie. The Chi-square test was used to compare proportions. A P value of less than 0.05 was considered statistically significant.

Results: The prevalence of skeletal-related events in prostate cancer patients was 53.25%. The most prevalent event was bone pain (78.89%), followed by cord compression (15.56%), and only 5.56% had pathological fractures.PSA levels(86.6%), Risk stratification, and staging were found to be statistically significant with SRE, with p values of 0.0002,0.006 and 0.001, respectively.83.78% of participants who had high-risk stratification and 96.67% who had stage IV disease experienced SRE. Hormonal response was statistically significantly associated with SRE, with a p-value of 0.001. High-risk and Stage IV were found to be the only predictors for SRE.

Conclusion: The prevalence of skeletal-related events in prostate cancer patients with bone metastasis at Ocean Road Cancer Institute was 53.25%. Bone pain is the most presenting symptom in patients with SRE.The stage of the disease and risk stratification are independent predictors of SRE.Also, there is a significant difference in mean PSA and hormonal sensitivity among patients with and without SRE.However, PSA and hormonal sensitivity are not independent predictors of SRE.ADT and bisphosphonates have no influence on SRE

Recommendation: Health education and awareness among the public and health workers about the importance of early detection and treatment should be of paramount as it seems many patients attend health facility at a late stage. There is a need for strengthening the scope of the screening program for prostate. On the Gleason reporting are we reporting correctly. Prospective studies on the influence of ADT and bisphosphonates on these complications in our setting

108. TITLE: NO WOMAN LEFT BEHIND: ACHIEVING CERVICAL CANCER ELIMINATION AMONG WOMEN LIVING WITH HIV

Sub theme: Non-Communicable Diseases
Contact: alex.mremi@kcmuco.ac.tz
Presenter: Alex Mremi

Background: Cervical cancer (CC) is the fourth most common malignancy in women of reproductive age globally. The burden of this disease is highest in LMICs, especially among women living with HIV (WLHIV). In 2018, WHO launched a global strategy to accelerate CC elimination through rapid scale-up of prophylactic vaccination, cervical screening, and

treatment of pre-cancers and cancers. However, achieving elimination of CC among WLHIV requires consideration of biological and social issues affecting this population.

Objective: This initiative is a key in raising a call for action to address the stark global disparities in CC burden.

Methods: This Position Paper shows specific challenges and uncertainties on the way to CC elimination for WLHIV and highlights the scarcity of evidence for the effect of interventions in this population.

Results: We argue that reaching equity of outcomes for WLHIV will require substantial advances in approaches to HPV vaccination and improved understanding of the long-term effectiveness of HPV vaccines in settings with high HIV burden CC, just as HIV, is affected by social and structural factors such as poverty, stigma, and gender discrimination that place the elimination strategy at risk. Global efforts must, therefore, be galvanised to ensure WLHIV have optimised interventions, given their substantial risk of this preventable malignancy.

Conclusion: HPV immunisation programmes must be expanded, and the use of evidence-based HPV vaccine schedules that specifically address populations with a high burden of HIV is urgently required. An evidence-based clinical algorithm of care requires urgent attention for WLHIV who are positive for oncogenic HPV.

Recommendation: Service integration models with antiretroviral treatment services might expand access to CC interventions for WLHIV. Addressing gender bias will be key to achieving the right to equitable inclusion of WLHIV in the CC elimination strategy.

109. TITLE: ADAPTING AND USABILITY TESTING OF THE KANSAS CITY CARDIOMYOPATHY QUESTIONNAIRE (KCCQ) IN A HEART FAILURE CLINIC IN TANZANIA

Sub theme: Non-Communicable Diseases
Contact: pchillo2000@yahoo.co.uk
Presenter: Pilly Chillo

Background: The integration of patient–reported outcome measures (PROMS) into health care delivery systems is being increasingly recognized as an important component of quality, person-centered care, especially for chronic illnesses like congestive heart failure (CHF). However, while PROMS are increasingly being used to follow up CHF patients in high-income countries, their use in sub-Saharan Africa is still limited.

Objective: To adapt the Kansas City Cardiomyopathy Questionnaire (KCCQ-23), a CHF-specific PROM and test its use in an outpatient CHF clinic at a cardiac refferal hospital in Tanzania

Methods: Adaptation of the KCCQ-23 included translation into Swahili by linguistic experts, in-depth cognitive debriefing in native Swahili–speaking CHF patients, and input from Tanzanian Cardiologists, PROMS experts, and the tool developer. Using a cross-sectional design, we tested the usability and observed the results of the translated KCCQ-23 in a convenience sample of 60 CHF patients attending an outpatient clinic at the Jakaya Kikwete Cardiac Institute (JKCI).

Results: The survey was successfully completed by 59 (98.3%) of 60 enrolled participants. The mean (SD) age of participants was 54.9 (14.8) years, 30.5% were women and 72.2% had class 3 or 4 New York Heart Association (NYHA) symptoms. The overall KCCQ-23 score was low, with a mean (SD) score of 21.7 (20.4) indicating generally very poor to poor patient-reported outcomes in this population. The mean (SD) scores for the specific KCCQ-23 domains were 15.25 (24.2) for social limitation, 23.8 (27.4) for physical limitation, 27.1 (24.1) for quality of life and 40.7 (17.0) for self-efficacy. No socio-demographic or clinical characteristics were associated with their overall KCCQ-23 scores.

Conclusion: We successfully translated a validated tool, the Swahili KCCQ, for use in improving the care of patients with CHF in Tanzania and a broader population of Swahili–speaking patients.

Recommendation: Work to expand the use of the tool in the clinic is planned.

110. TITLE: A COMPARISON OF CLINICAL PROFILE AND SURVIVAL AMONG PATIENTS WITH OCULAR SURFACE SQUAMOUS CELL CARCINOMA BY HIV STATUS IN TANZANIA.

Sub theme: Non-Communicable Diseases
Contact: godfreymalangwa@gmail.com
Presenter: Godfrey Malangwa

Background: Ocular surface SCC is the major and most common ocular malignancy of the eye. The risk factors are human papillomavirus types 16 and 18 and immunodeficiency such as immunodeficiency secondary to HIV infection and organ transplant. There is high incidence of ocular surface squamous carcinoma in Sub Saharan countries due to high

burden of HIV and there is high exposure to sunlight. However, the clinical profile and overall survival by HIV status is not clearly known.

Objective: This study aimed to compare the overall survival among patient with ocular surface carcinoma by HIV status and to assess the predictors of overall survival.

Methods: This study was a retrospective cohort study that was conducted from 2016 to 2019 at Ocean Road Cancer Institute (ORCI) and Muhimbili National Hospital (MNH). The sample size was calculated using sample size calculator. The sample size was 99 patients. However, this study included all patients in the study period who met minimum inclusion criteria during the study period. Kaplan Meier curves was used to describe two years overall survival. The log-rank test and Coz proportional hazard regression analysis was performed to assess the predictors of overall survival. Ethical clearance was obtained from Muhimbili Institutional Review Board (IRB).

Results: The prevalence of HIV among patient with ocular surface SCC is high (70.7%). Majority of patients were peasants and had locally advanced ocular surface SCC. There were few (4.3%) participants who had documented CD4 count. There is no difference in social demographic characteristic and clinical profile among patients with ocular surface SCC by HIV. Dose of radiotherapy and nodal status were independent predictor of survival. Baseline characteristics like sex, HIV status, ART use, occupation, radiological findings, histopathology, and surgical findings did not significantly influence survival.

Conclusion: There is high proportion of HIV among patients with ocular surface SCC. Majority of patients were peasants, stage IV disease. There is no difference in social demographic, clinical profile and overall survival among patients with ocular surface SCC by HIV status. Nodal involvement and dose of radiotherapy were independent predictors of overall survival. There are few patients who have documented CD4 count

Recommendation: Proper documentation of CD4 count and integration of HIV in cancer management especially for HIV associated malignancy. Further studies are needed to investigate the influence of other factors such as HPV infection and intensity of radiation in contributing ocular surface ocular surface SCC. Early detection and screening should be advocated. People should use the preventive gears such as wearing sunglasses and cap when exposed to the sun.

111. TITLE: THE COMPARISON OF CLINICOPATHOLOGICAL FEATURES AND PROGNOSIS BETWEEN TRIPLE-NEGATIVE AND NON-TRIPLE NEGATIVE BREAST CANCER AT ORCI

Sub theme: Non-Communicable Diseases

Contact: veulade@gmail.com

Presenter: Rugengamanzi Eulade

Background: In Tanzania, breast cancer ranks as the second most common cancer, accounting for 9.9% of newly diagnosed cases per year and contributing to a mortality rate of 7% per year. BC is a heterogenous disease with different subtypes. Triple-negative BC doesn't benefit from targeted therapy and leads to poor outcome. The purpose of this study was to identify potential differences in these subtypes that may impact treatment approaches and patient outcomes.

Objective: To determine the prevalence of Triple Negative Breast Cancer (TNBC), and to compare the clinicopathological features and prognosis between patients with TNBC and non-TNBC at Ocean Road Cancer institute.

Methods: A retrospective cohort study was conducted at the ORCI in Dar-es-Salaam, Tanzania. Patients with histologically verified breast cancer with Immunohistochemistry from January 2018 through December 2019 were included in the study population. The endpoints were five-year Overall Survival (OS) and five-year Disease-Free Survival (DFS). We employed stratified sampling followed by random sampling for a final sample size of 124 TNBC and 124 non-TNBC patients.

Results: TNBC constituted 23.3% of all breast cancer diagnoses. TNBC was more prevalent among younger premenopausal women compared to non-TNBC (mean age 45 vs 55, p=0.001). Patients with TNBC more often had advanced stage (77% vs 68% AJCC stage III and IV, p=0.001), The 5-year OS and DFS were 32.2% and 30.8% for TNBC and 46.7% and 40.5% for non-TNBC, respectively (P<.001). Symptom duration (HR=1.1, 95% CI [1.06, 1.13], p=0.001). for every month delay of symptom is associated with 10% increase risk of mortality. Surgery (HR=0.31, 95% CI [0.08,0.56], p=0.001) and Radiotherapy (HR=0.18, 95% CI [0.09,0.32], p=0.001). Surgery reduce 69% of mortality while radiotherapy decrease 82% of mortality.

Conclusion: TNBC exhibited a more aggressive clinicopathologic features at diagnosis, earlier, associated with history of breast cancer in family and more frequent recurrence, and worse overall survival compared with non-TNBC. Efforts towards earlier diagnosis and optimised neoadjuvant and adjuvant therapies will be critical to improving TNBC outcomes in Tanzania. Use of immunotherapy will improve the outcome of triple negative.

Recommendation: Emphasise on Neoadjuvant Chemotherapy in treatment of Triple Negative breast cancer (TNBC)

Awareness and Early detection

Achieve Negative Margins in surgery

Genetic studies for breast cancer predisposition in family.

The molecular biology features of TNBC, and the gene expression profiles of TNBC in Lower middle-income countries.

112. TITLE: COMPARISON OF CONCURRENT CHEMORADIOTHERAPY AND RADIOTHERAPY ALONE IN THE MANAGEMENT OF MUSCLE-INVASIVE BLADDER CANCER

Sub theme: Non-Communicable Diseases
Contact: banzimob1980@gmail.com
Presenter: Dr. Mathias Oscar Banzi

Background: Radical cystectomy (RC) is the standard management of muscle invasive bladder cancer (MIBC), although is associated with severe post operative morbidity. Bladder preservation therapy (BPT) is the best alternative to RC due to favorable complication profile. BPT comprises of one or more of the following therapies: maximum trans-urethral resection of bladder tumor (TURBT), radiotherapy and/or chemotherapy.

Objective: Comparing overall survival (OS) among MIBC treated with concurrent chemoradiotherapy (CCRT) and radiotherapy alone in a setting where maximum TURBT is note routinely done.

Methods: From January 2017 to December 2021,107 non metastatic MIBC patients treated by radiotherapy with or without chemotherapy were included in a retrospective hospital-based cohort study. Patient's characteristics were compared using chi-squared and student t-tests. Survival curves were drawn by using the Kaplan-Meier method and compared by log-rank test in the univariate analysis and the Cox regression model in the multivariate analysis.

Results: In patients with MIBC without prior maximum TURBT, the median OS was 11 months in both arms, CCRT or radiotherapy alone (P-value=0.76). The median OS of patients who were treated with TURBT followed by either CCRT or Radiotherapy alone was

35 months, while CCRT or radiotherapy alone without prior TURBT   was 11 months (P-value=0.027). The median OS of patients who were treated with Radiotherapy alone, CCRT, TURBT followed by Radiotherapy, and TURBT followed by CCRT were 10, 19, 21, and 24 months respectively (P-value=0.04). After adjustment for other confounders, baseline hemoglobin level and maximum TURBT before Radiotherapy or CCRT were independent predictors of survival.

Conclusion: CCRT has superior survival to radiotherapy alone in the presence of maximum TURBT. TURBT is a crucial component in BPT among MIBC patients. Correction of hemoglobin level before and during radiotherapy could potentially correlate to better survival.

Recommendation: Clinicians should highly consider maximum TURBT before the initiation of Radiotherapy with /without chemotherapy to improve survival.

113. TITLE: COMPARISON OF SURVIVAL AND CLINICAL PROFILE OF LARYNGEAL CANCER PATIENTS TREATED WITH 3DCRT AND THOSE TREATED BY 2DRT AT ORCI

Sub theme: Non-Communicable Diseases
Contact: jonathanjesse92@gmail.com
Presenter: Jesse Jonathan

Background: Laryngeal cancer is among the most common cancers of the head and neck region. In 2020 worldwide it accounted for around 184,615 new cases and around 99,840 new deaths. In Tanzania, laryngeal cancer accounted for 259 new cases and 175 deaths. The condition is more predominant in men mostly with tobacco smoking and alcohol use history, there is no information on patients treated using 3DCRT, this study determined if investment in acquiring the modern radiotherapy machine (LINAC) has resulted in the improvement of the treatment outcome of patients with laryngeal cancer in Tanzania.

Objective: To determine the difference in survival and clinical profile of laryngeal cancer patients treated using 2DRT in 2008-2012 and those treated using 3DCRT in 2018-2019 at OCEAN ROAD CANCER INSTITUTE

Methods: Retrospective comparative cohort study carried at ORCI, including all laryngeal cancer patients, sample size calculated using PS power and sample size calculator program (n=95) consecutive sampling done to obtain 97 patients treated using 3DCRT and data set of 82 patients obtained from the investigator, analysis done using SPSS version 28

measures of central tendency used to summarize quantitative data, proportions for categorical data, Kaplan Meir and long rank test for survival curves, P value less than 0.05 was considered significant. Ethical clearance was obtained from Muhimbili University of health and allied sciences (MUHAS) and ORCI.

Results: This study recruited 179 patients, with a mean age of 59.2±11.6 , 91.1% were male and 8.9% were female, there was increased smoking rate and alcohol intake in the 3DCRT cohort, hoarseness of voice was the commonest presentation (92.3%), a decreased use of concurrent chemoradiotherapy observed in the 3DCRT cohort .The 3DCRT cohort exhibited an improved three-year overall survival (OS) rate of 58% compared to the 2DRT cohort (35%), with median survival times of 37 months and 34 months, respectively. The improved OS was associated with an increase in radiotherapy dose, decreased duration of radiotherapy, use of radio sensitizers, and stage of the disease. Advanced stage was found to be associated with poor OS.

Conclusion: Induction chemotherapy does not improve OS so proper patient selection should be done.

prospective study to assess toxicity due to increase in radiotherapy dos. Despite the improved overall survival (OS) rate of laryngeal cancer treated by 3DCRT, it remains relatively low compared to developed countries which is approximately 89%. Early diagnosis, an increase in radiotherapy dose, the use of radio sensitizers, and shorter duration of radiotherapy can further enhance the OS of laryngeal cancer patients in Tanzania.

Recommendation: Patient should be treated using 3DCRT because it results in increase in radiotherapy dose which has significant association with good OS and for advanced disease stage intensity modulated radiotherapy is recommended. Emphasis should be put on the use of concurrent chemo radiotherapy

114. TITLE: HIGH-RISK HUMAN PAPILLOMAVIRUS GENOTYPING IN CERVICAL CANCERS OF WOMEN WITH AND WITHOUT HIV IN TANZANIA

Sub theme: Non-Communicable Diseases
Contact: gadcollins@gmail.com
Presenter: Gad Murenzi

Background: Carcinoma of the uterine cervix (Ca-Cx) is the most common cancer in Tanzania. High-risk HPV (hrHPV) infection is a necessary but not sufficient cause of all Ca-Cx but the hrHPV types in Ca-Cx in Tanzania by HIV status and histologic subtype are unknown. Knowing which hrHPV types cause Ca-Cx would inform policy on appropriate HPV vaccines.

Objective: To determine the proportion of hrHPV types in Ca-Cx diagnosed at Muhimbili National Hospital (MNH).

Methods: One hundred and forty-nine (149) formalin-fixed paraffin-embedded tissue blocks of Ca-Cx diagnosed in 2020 at MNH with available blocks and HIV records were retrieved and sections taken for HPV genotyping using Ampfire (Atila Biosystems), an HPV genotyping assay for HPV16/18/31/33/35/39/45/51/52/56/59/58/66/68. hrHPV positivity proportions by HIV status and histologic subtype were computed.

Results: The mean age was 53.6 (±13.3) years, 28.2% were women living with HIV and 51.9% (55/106) had a parity of more than five. Squamous cell carcinoma (SCC) was the most common histologic subtype with 89.9% followed by adenocarcinoma-ADC (6.0%). 78.5% of the cancers were hrHPV+ and HPV16 was the most common type with 37.6% followed by HPV18 (18.1%). HPV positivity was higher among older women with 58.3%, 83.5% and 80.4% among 30-40-, 41-60- and 61–96-year-old women, respectively (p=0.029). There was no difference in hrHPV+ by HIV status. HPV16 was more commonly associated with SCC (41.0%) compared to none (0%) of the ADC (p=0.022). Although not statistically significant, 33.3% of the ADC were HPV18+ compared to 16.4% o

Conclusion: We found a high proportion of hrHPV among Ca-Cx but with lower proportions of HPV16 and 18 compared to global rates.

Recommendation: It is important to consider including more hrHPV types (other than HPV16/18) in the prophylactic HPV vaccine(s) currently available in Tanzania in order to optimize protection against cervical cancer.

115. TITLE: BLOOD TRANSFUSION STRATEGIES AND CLINICAL OUTCOMES AMONG PATIENTS ADMITTED WITH UPPER GASTROINTESTINAL BLEEDING AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases
Contact: kananinkuli@yahoo.com
Presenter: NKULIKIYE KANANI

Background: Upper gastrointestinal bleeding (UGIB) causes significant morbidity and mortality globally. Compared to liberal blood transfusion (BT) (BT maintaining hemoglobin (HB) between 9 and 11 g/dl), restrictive BT (maintaining HB between 7 and 9 g/dl) has been shown to improve six-week mortality, re-bleeding, and re-admission in patients with UGIB. There is a paucity of local data on patients with UGIB receiving a recommended BT and their corresponding clinical outcomes.

Objective: We aimed to determine the types of blood transfusion strategies used and their effect on clinical outcomes at six weeks among patients with UGIB at Muhimbili National Hospital.

Methods: A single-arm cohort study involving patients aged ≥18 years with UGIB. Data collected included demographics, clinical characteristics, and hemoglobin levels before and after BT. At six weeks post-UGIB information on re-bleeding, re-hospitalization, and mortality was documented. Kaplan-Meier and Cox Regression were used in the analysis. A p-value was set at <0.05.

Results: A total of 181 patients with UGIB were enrolled. The mean ± SD age of study participants was 46 ± 16 years. The majority 128 (71%) were male. BT strategies used were restrictive 101(56%), inadequate 69 (38%) (discharged with severe anemia HB< 7g/dl), and liberal 11 (6%). Re-bleeding (30.4% vs. 12% P=0.005) and re-admission (27.5% vs. 13% P=0.01) were higher in patients with inadequate BT compared to restrictive BT respectively. All-cause mortality was comparable (14.5 % vs. 12% P=0.65). The restrictive BT strategy was protective against re-bleeding aHR (95%CI) 0.38 (0.18- 0.80) P=0.01. Age ≤ 60 years was independently associated with re-bleeding aHR (95%CI) =3.03 (1.3 – 6.8) P= 0.007.

Conclusion: Only 56% of patients with UGIB received a recommended BT strategy. 38% received inadequate BT and this was associated with a higher risk of re-bleeding and re-admission.

Recommendation: Restrictive BT should be emphasized in patients with UGIB.

116. TITLE: ENVIRONMENTAL AND OCCUPATIONAL EXPOSURE DESCRIPTIVE CHARACTERISTICS OF ESOPHAGEAL CANCER PATIENTS ATTENDING OCEAN ROAD CANCER INSTITUTE

Sub theme: Non-Communicable Diseases

Contact: mwelange@gmail.com

Presenter: Luco Patson Mwelange

Background: Cancer is a public health problem in Africa; in 2030, Africa will account for ¾ of cancer cases, and Tanzania will have 50,000 cancer cases yearly. Esophageal cancer is the 7th most common cancer globally. Africa has high esophageal cases and mortality. East Africa has unique features and cases occurring at a young age. Cancer is influenced by numerous factors: genetic, lifestyle, environmental, and occupational factors. Although genetics and lifestyle are well-known risks, occupational and environmental exposures are recently emerging cancer risk factors.

Objective: This study aimed to assess environmental and occupational exposure characteristics of esophageal cancer patients attending Ocean Road Cancer Institute.

Methods: This descriptive cross-sectional study was conducted at Ocean Road Cancer Institute (ORCI). This study used a structured questionnaire to interview esophageal cancer patients. The following patient information was collected: Age, sex, occupation history, region and district of residence, place of birth rural/urban, year of diagnosis, smoking and alcohol use, energy used for cooking, and family cancer history. SPSS version 23 was used for data analysis. Descriptive analysis and the Chi-square test were used for data analysis.

Results: This study included 100 cancer patients, 59 (59%) male. The mean age was 59(13.57) and 51(12.34) for male and female respectively. Over 82% and 10% of the patients had primary and no informal education, respectively. Almost 72% of the patients came from Eastern and Northern zones, and 81% were born in rural areas. Over 56% of male and 29% of female patients used alcohol, while 63% and 5% of males and females were smoking. The findings show that >51% were engaging in agriculture, 11% used Public Health pesticides at home, and 21% had a family history of cancer. Also, 95% of the patients use firewood and charcoal for cooking.

Conclusion: This study's findings should serve as a wake-up call to the scientific community, prompting them to conduct a comprehensive survey on environmental and occupational carcinogen exposure. The information we discovered regarding the high proportion of patients involved in agriculture and the majority coming from rural areas calls for additional research into the carcinogenic role of pesticides. The results may aid in

developing cancer prevention measures, particularly for those who work in environments with proven carcinogens.

Recommendation: We recommend a population-based study to investigate further, get a clear picture of population exposure to environmental and occupational carcinogens, and identify the role of geographical location and high prevalence of cancer. This will help to know which risk factors are common in different geographical regions and whether those regions with a high proportion of cancer patients are real or because they have good health-seeking behaviour.

117. TITLE: THE INFLUENCE OF HIV STATUS IN CLINICAL PROFILE AND SURVIVAL AMONG PATIENTS WITH DLBCL IN TANZANIA FROM JAN2018-DEC 2019

Sub theme: Non-Communicable Diseases
Contact: nuruantarmabruk@yahoo.com
Presenter: Dr Nur antar

Background: Diffuse large B cell lymphoma (DLBCL) is the most common type of non-Hodgkin lymphoma worldwide (NHL), representing about 30-40% of all cases in different geographic regions. NHL remains the most common HIV-defining cancer and the first or second cause of cancer-related death among people living with HIV. HIV is associated with aggressive forms of NHL. The knowledge of the influence of HIV status in clinical profile and survival among patients with Diffuse Large B Cell Lymphoma will help to determine the association between HIV and treatment outcome of patients. This knowledge will also lead to customized care among our patients with DLBCL.

Objective: To determine the Effect of HIV status on clinical profile and survival among patients with DLBCL in Tanzania

Methods: All Individuals with DLBCL managed at Ocean Road Cancer Institute and MNH from Jan 2018 to December 2019 were the subject of this retrospective cohort research. A consecutive sampling technique was used to recruit 60 patients with HIV-DLBCL and 60 patients with non-HIV-DLBCL. To compare clinical profile, chi square test was used. To compare Overall Survival, Kaplan Meier curve was used. To determine predictors of survival, Cox regression was used.

Results: The clinical characteristics did not differ significantly between patients with HIV-DLBCL and those without. -The Overall survival of patients with HIV was much lower than those with HIV negative DLBCL though the difference was not statistically significant. -

Weight loss, night sweats, fever, LDH levels and Ann Arbor stage were associated with poorer overall survival in univariate analysis.

Conclusion: HIV does not impair outcome of patients with DLBCL despite the clinicopathologic characteristics. International Prognostic Index, hemoglobin levels and the no of chemotherapy cycles are independent prognostic markers of Overall Survival

Recommendation: HIV testing for all DLBCL patients. CD4 count testing and viral load testing to patients with HIV-DLBCL Molecular characterization of patients with DLBCL as some subtypes are associated with poor response to R-CHOPnHemoglobin level to be incorporated as a prognostic marker and salvage regimes initiated in the affected cases Proper CT scan/PET scan evaluation of patients before Treatment and post Treatment for Response Assessment.

118. TITLE: DEVELOPMENT OF THE SICKLE PAN-AFRICAN RESEARCH CONSORTIUM REGISTRY IN TANZANIA: OPPORTUNITY TO HARNESS DATA SCIENCE FOR SICKLE CELL

Sub theme: Non-Communicable Diseases
Contact: dkandonga@blood.ac.tz
Presenter: Daniel Kandonga

Background: Sickle cell disease (SCD) is a severe hereditary form of anemia that contributes between 50% and 80% of under-five mortality in Africa. Eleven thousand babies are born with SCD annually in Tanzania, ranking 4th after Nigeria, the Democratic Republic of Congo and India. The absence of well described SCD cohorts is a major barrier to health research in SCD in Africa

Objective: This paper describes the Sickle Pan African Consortium (SPARCO) database in Tanzania, from the development, design of the study instruments, data collection, analysis of data and management of data quality.

Methods: The SPARCO registry used existing Muhimbili Sickle Cell Cohort (MSC) study case report forms (CRF) and later harmonized data elements from the SickleInAfrica consortium to develop Research Electronic Data Capture (REDCap) instruments. Patients were enrolled through various strategies, including mass screening following media sensitization and health education events during World Sickle Cell Day each June and the SCD awareness month in September. Additional patients were identified through active surveillance of previously participating patients in the MSC

Results: Three thousand eight hundred patients were enrolled between October 2017 and May 2021. Of these, 1,946 (51.21%) were males and 1,864 (48.79%) were females. The hemoglobin phenotype distribution was 3,762 (99%) HbSS, 3(0.08%) HbSC and 35 (0.92%) HbSb +thalassemia. Hemoglobin levels, admission history, blood transfusion and painful events were recorded from December 2017 to May 2021.

Conclusion: The Tanzania SPARCO registry will improve healthcare for SCD in Africa through the facilitation of collaborative data-driven research for SCD

Recommendation: Tanzania has demonstrated success in establishing the SPARCO registry, with the potential to expand to other regions in Tanzania for the aim of ensuring all sickle cell patients are being enrolled into care to improve healthcare of patients as well as research.

119. TITLE: PREVALENCE AND ASSOCIATED FACTORS OF HYPERURICEMIA AMONG CHRONIC KIDNEY DISEASE PATIENTS AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Non-Communicable Diseases
Contact: vaneshwaribamania@yahoo.com
Presenter: Vaneshwari Bamania

Background: Chronic Kidney Disease (CKD) is a global health problem and a significant burden on the patient as well as the health care system. Previous studies from outside Tanzania have shown that the co-existence of hyperuricemia and CKD leads to rapid progression to End-Stage Renal Disease (ESRD), especially among non-dialysed CKD patients. However, there is little information on the magnitude and associated factors of hyperuricemia among CKD patients in our setting.

Objective: To determine the prevalence and associated factors of hyperuricemia among CKD patients attending Muhimbili National Hospital (MNH).

Methods: A cross-sectional study was conducted from August 2022 to January 2023 at the MNH in- and out-patients' nephrology units. Data on socio-demography, clinical characteristics, anthropometric measurements, and laboratory findings were collected. Serum uric acid was considered elevated when it was ≥0.42 and ≥0.35 mmol/l for males and females respectively. SPSS version 23 was used for data analysis. Modified Poisson Regression with univariate and multivariate analysis was used to determine the association between hyperuricemia and the independent variables with statistically significant association from p-value <0.05.

Results: In total 380 patients were enrolled. Their mean(±SD) age was 58.0 (±14.4) years, 56.3% were male, 93.2% were hypertensive, and 36.8% were diabetic. The prevalence of hyperuricemia was 76.8% in the total population. In multivariate analysis age >45 years(aPR=1.11), male gender(aPR=1.08), being diabetic(aPR=1.11), HIV (aPR=1.17), smoking(aPR=1.12), central obesity(aPR=1.1), uncontrolled hypertension at enrollment(aPR=1.12), increased serum BUN (aPR=1.25) and phosphate(aPR=1.08) were independently associated with hyperuricemia, all p<0.05

Conclusion: Hyperuricemia is highly prevalent among CKD patients in our setting, and is associated with older age, male gender, being diabetic, HIV, smoking, central obesity, uncontrolled hypertension, increased serum BUN and phosphate. Multiple modifiable and non-modifiable risk factors have been identified in this study.

Recommendation: Management of CKD should include controlling for the modifiable associated factors for hyperuricemia.

120. TITLE: PREVALENCE AND FACTORS ASSOCIATED WITH INTRADIALYTIC BLOOD PRESSURE DERANGEMENTS AMONG PATIENTS ON MAINTENANCE HEMODIALYSIS THERAPY

Sub theme: Non-Communicable Diseases
Contact: jainmponzi@gmail.com
Presenter: Jane Mponzi

Background: Hemodialysis is a form of renal replacement therapy prescribed for patients with chronic kidney disease. Blood pressure derangements are common complications during hemodialysis and large BP variability increases morbidity and mortality among hemodialysis patients.

Objective: We aimed to determine the prevalence and factors associated with intradialytic blood pressure derangements among patients on maintenance hemodialysis therapy at MNH.

Methods: A hospital based cross-sectional study was conducted among patients on maintenance hemodialysis at MNH over a period of 6 weeks. Demographics and clinical information were collected using patient interview and structured questionnaire. Multivariate modified Poisson regression analysis was used to identify independent factors associated with intradialytic blood pressure derangements. P value of <0.05 was considered statistically significant.

Results: A total of 155 patients were enrolled. The mean age(±SD) was 50(±13) years and a sex ratio (M/F) of 1.7. More patients (88.4%) had hypertension. Intradialytic hypertension was commoner than intradialytic hypotension (35.5% versus 21.3%). The independent factors associated with intradialytic hypertension were hypertension (aPR 7.4, 95%CI 1.12 - 49.46, P=0.038), the use of calcium channel blockers (aPR 2.4, 95%CI 1.14 – 5.06, P=0.02) and BMI of less than 25(aPR 2, 95%CI 1.22 – 3.28, P=0.006). BMI of at least 25 was associated with intradialytic hypotension (aPR 2, 95%CI 1.06 – 3.76, P=0.033).

Conclusion: In this study intradialytic hypertension appeared more frequent than intradialytic hypotension. Hypertension, BMI less than 25 and the use of calcium channel blockers were significantly associated with intradialytic hypertension. BMI of ≥25 was associated with intradialytic hypotension

Recommendation: Close monitoring of patients with these factors during hemodialysis is crucial to minimize complications.

121. TITLE: BREAST CANCER: SCALING UP SCREENING AND EARLY DETECTION IN KILIMANJARO REGION, NORTHERN TANZANIA

Sub theme: Non-Communicable Diseases
Contact: alex.mremi@kcmuco.ac.tz
Presenter: Alex Mremi

Background: Breast cancer (BC) is the most common female cancer worldwide with significant global disparities in screening, stage at diagnosis, treatment outcomes and survival. Despite a lower BC incidence in Sub-Saharan Africa (SSA), 75% of women are diagnosed in stage III and IV disease. Later stages are associated with worse outcomes. Reasons for this advanced stage at diagnosis and high mortality can be characterized by patient, provider, and health system factors. In Tanzania, there is limited access to BC screening and diagnostic services which are available only at referral hospitals.

Objective: We aimed to describe the findings of the BC control program that is empowering women at risk of developing BC with health education, screening and early detection in Northern Tanzania.

Methods: Preliminary data from an ongoing BC control program were extracted and descriptively analysed for this study. The program targets potentially asymptomatic women aged ≥30 years old in Kilimanjaro, Tanzania. The women are invited for clinical breast examination (CBE) and if suspicious lesions are found, FNA/trucut needle biopsy are

performed. Participants found with pathological lesions are linked to care including surgico-oncology treatment.

Results: Of 1892 women included in this study, the mean age was 52 years. A total of 143 (7.6%) participants had abnormal findings on CBE, of these 18 (12.6%) were confirmed to be BC on histopathology. The remaining were benign conditions of which fibroadenoma was the commonest 47 (32.9%). The vast majority of participants with BC 13 (72.2%) had clinical stage I or II; and infiltrating ductal carcinoma, NST was the commonest 15 (83.3%) histopathology type. Hormonal receptor status determination established 9 (50%) and 5 (28%) of BC tumours to overexpress ER and HER-2 respectively.

Conclusion: Organized screening, early detection and control programs should be expanded to improve outcomes of BC patients in Tanzania.

Recommendation: Funding: The program was funded by the International Cancer Institute (ICI) as part of the Tanzania Blueprint for Innovative Access to Healthcare through Takeda.

122. TITLE: DIAGNOSTIC VALIDATION OF A PORTABLE WHOLE SLIDE IMAGING SCANNER FOR LYMPHOMA DIAGNOSIS IN RESOURCE-CONSTRAINED SETTING

Sub theme: Non-Communicable Diseases
Contact: alex.mremi@kcmuco.ac.tz
Presenter: Alex Mremi

Background: Telepathology utilizing high-throughput static whole slide image scanners is proposed to address the challenge of limited pathology services in resource-restricted settings. However, the prohibitive equipment costs and sophisticated technologies coupled with large amounts of space to set up the devices make it impractical for use in resource-limited settings.

Objective: We aimed to validate a portable whole slide imaging (WSI) device against glass slide microscopy (GSM) using lymph node biopsies from suspected lymphoma cases from Sub-Saharan Africa.

Methods: Study pathologists evaluated 105 surgical lymph node specimens initially confirmed by gold-standard pathology. The tissues were processed according to standard protocols for H&E and IHC staining, then digitalized the H& E and IHC slides at each center. The digital images were anonymized and uploaded to a HIPAA-compliant server by the histotechnicians. Three study pathologists independently accessed and reviewed the images after a 6-week washout. The agreement between diagnoses established on GSM

and WSI across the pathologists was described and measured using Cohens' kappa coefficient (κ).

Results: On GSM, 65.5% (n=84) of specimens were lymphoma; 25% were classified as benign, while 9.5% were metastatic. Morphological quality assessment on GSM and WSI established that 79.8% and 53.6% of cases were of high quality, respectively. When diagnoses by GSM were compared to WSI, the overall concordance for various diagnostic categories was 93%, 100%, and 86% for lymphoma, metastases, and benign conditions respectively. The sensitivity and specificity of WSI for the detection of lymphoma were 95.2% and 85.7%, respectively, with an overall inter-observer agreement (κ) of 0.86; 95% CI (0.70–0.95).

Conclusion: We demonstrate that mobile whole slide imaging (WSI) is non-inferior to conventional glass slide microscopy (GSM) for the primary diagnosis of malignant infiltration of lymph node specimens. Our results further provide proof of concept that mobile WSI can be adapted to resource-restricted settings for primary surgical pathology and would significantly improve patient outcomes.

Recommendation: Our results imply that this simple technology can improve access to diagnostic services and patient outcomes in resource-limited settings. However, challenges remain with the technical robustness of the device and the software and hardware support for sharing and storing images. These will need to be addressed prior to the field application of this technology.

123. TITLE: CERVICAL CANCER IN NORTHERN TANZANIA—WHAT DO WOMEN LIVING WITH HIV KNOW?

Sub theme: Non-Communicable Diseases
Contact: alex.mremi@kcmuco.ac.tz
Presenter: Alex Mremi

Background: Cervical cancer (CC) is more prevalent in women living with human immunodeficiency virus (HIV) infection compared to the general population. The magnitude is high among all countries burdened with HIV— Tanzania is no exception. Despite the unprecedented risk, women living with HIV (WLHIV) may not be aware of the risk and might have unfounded beliefs thereof.

Objective: This study aimed to determine the knowledge, awareness, and beliefs on CC screening among WLHIV attending a clinic at the Kilimanjaro Christian Medical Centre (KCMC) in Northern Tanzania.

Methods: Hospital-based cross-sectional study was conducted among 327 WLHIV attending care and treatment clinic (CTC) at KCMC. A pre-tested questionnaire was used to collect quantitative data. Both descriptive and regression methods were used to determine CC knowledge, awareness, and beliefs as well as factors associated with knowledge of CC among WLHIV using SPSS version 23.

Results: Participants' mean age was 46 ± 10.4 years. Although just half (54.7%) of WLHIV had insufficient knowledge of CC, the majority of the participants (83.5%) were able to recognize at least three risk factors, but with limited understanding of symptoms and prevention. The majority held positive beliefs on CC and screening practices. Factors associated with good knowledge of CC included being married (AOR: 3.66, 95% CI: 1.84–7.28), having used ART for at least 2 years (AOR: 4.08, 95% CI: 1.36–12.21), and having previously screened for CC (AOR: 1.62, 95% CI: 1.01–2.59)

Conclusion: WLHIV attending CTC had insufficient knowledge about CC screening. To further improve screening and treatment for CC, at both facility and community levels, targeted awareness and education campaigns are warranted

Recommendation: Posters on CTC clinic walls and fliers to WLHIV could increase CC knowledge. Using the ongoing prevention effort to educate this specific group by empowering HCPs to link CC and CTC services throughout care.

124. TITLE: KNOWLEDGE OF AUTISM AND ASSOCIATED FACTORS AMONG DOCTORS IN DAR ES SALAAM REGION: A CROSS SECTIONAL STUDY IN DAR ES SALAAM TANZANIA

Sub theme: Non-Communicable Diseases
Contact: ghanieyahya5@gmail.com
Presenter: Ghanie Yahya

Background: According to the World Health Organization (WHO), 1 out of every 160 children in the world has autism spectrum disorder (ASD). Data on Autism's prevalence in Africa is limited. Early diagnosis, which is critical for behavioral intervention to enhance good outcomes in children with Autism, is still lacking. Doctors' deficiency of understanding of autism contributes to late diagnosis and early intervention thus increase in comorbidities

in children with Autism. With the rise in the prevalence of autism, doctors' knowledge for early diagnosis must be ascertained.

Objective: To determine the knowledge of autism and associated factors among doctors in Dar es Salaam, Tanzania.

Methods: This hospital-based cross-sectional study was conducted among doctors working in the paediatric unit of major public and private hospitals in Dar es Salaam from March 2023 to April 2023. Socio-demographic and other factors were collected using a standardised structured questionnaire, while the "knowledge about childhood autism among doctors" (KCAHW) questionnaire was used to assess doctors' knowledge of childhood autism. Data were analysed using SPSS v20.

Results: The median score of participants on KCAHW questionnaire was 17 out of a total score of 30 questions. The study showed that the prevalence of doctors with adequate knowledge of autism was 53.0% (187). Furthermore, it was shown that participants above 30 were independently associated with adequate knowledge of autism, with a p-value less than 0.05. Knowledge gap was highest on KCAHW Domain 2 which assessed impairments in communication and language with only 84 (23.8%) scoring above the median. Domain 4 which assessed the types of disorders in childhood autism, had the highest number (171, 48.4%) of participants with scores above the median.

Conclusion: This study showed that the proportion of doctors with adequate knowledge of autism in Tanzania is 53.0%, suggesting that about 47.0% of doctors can misdiagnose or delay diagnosis of autism due to a lack of knowledge. Therefore, more effort is needed to improve doctors "knowledge of autism through continuous medical education

Recommendation:

More effort is needed to improve doctor's knowledge on autism for early diagnosis of autism especially in developing countries like Tanzania. Increase in ASD training among doctors by using specialist/experts for quality care and management children with ASD.. Future studies should aim at providing baseline data to guide policies and planning on healthcare delivery system to children with childhood autism.

125. TITLE: THE ADHERENCE TO SECONDARY PROPHYLAXIS AND ASSOCIATED FACTORS AMONG PATIENTS WITH RHEUMATIC HEART DISEASE AT JKCI

Sub theme: Non-Communicable Diseases
Contact: fredrickchinyama52@gmail.com
Presenter: Fredrick Chinyama

Background: In areas of social economic deprivation rheumatic heart disease (RHD) is significant cause of morbidity and mortality. Secondary prophylaxis is the most important entity for preventing complications related to Rheumatic fever and RHD. Little is known on factors affecting adherence to secondary prophylaxis for RHD in Tanzania.

Objective: We aimed to determine the level of self-reported adherence to secondary prophylaxis and its associated factors at JKCI

Methods: A hospital-based cross-sectional study was conducted among patients aged 5 years or older with RHD attending JKCI between October 2022 to January 2023. Demographic and clinical information was collected using patient interview and structured questionnaire. Multivariate modified poison regression analysis was used to identify independent factors associated with poor adherence to secondary prophylaxis. P value of <0.05 was considered statistically significant.

Results: A total of 180 patients were enrolled. The mean age (±SD) was 31.0(±9.9) years. Majority were female 125 (69.4%), outpatients 132 (73.3%), attained secondary level of education or higher 96 (53.3%) and insured 120 (66.7%). A total of 80 (44.4%) patients were on secondary prophylaxis for RHD, out of which 59 (73.8%) had poor adherence. Being older than 18 years (aPR 2.1, 95% CI 1.18-3.57), longer duration on prophylaxis (aPR 1.7, 95% CI 1.11-2.57), lack of awareness on importance of prophylaxis (aPR1 .4, 95% CI 1.13-1.84), and consequence of missing it (aPR 1.6, 95% CI 1.11-2.37), painful nature of injection (aPR 1.5, 95% CI 1.1-2.1) was independently associated with poor adherence to secondary prophylaxis

Conclusion: The uptake of secondary prophylaxis was low, Adherence to secondary prophylaxis was also poor. Most of the factors affecting secondary prophylaxis adherence were patient-related.

Recommendation: Providing health education to patients on importance of secondary prophylaxis is of paramount importance.

126. TITLE: COPING STRATEGIES AMONG LONG-TERM SURVIVORS OF CERVICAL CANCER AT OCEAN ROAD CANCER INSTITUTE IN DAR ES SALAAM, TANZANIA.

Sub theme: Non-Communicable Diseases
Contact: emanuelimsengi1@gmail.com
Presenter: Emanueli Amosi Msengi

Background: Cervical cancer is the fourth most common cancer affecting women worldwide. A diagnosis of cervical cancer is a stressful event affecting all aspects of a patient's life including psychological, physical, and socio-economic aspects. To reduce the impact, adaptive coping strategies are needed. Therefore, it is important to explore coping strategies used by cervical cancer patients.

Objective: To explore coping strategies among long-term survivors of cervical cancers at Ocean Road Cancer Institute, Dar es Salaam.

Methods: A descriptive cross-sectional study design with an explorative qualitative approach was employed to explore coping strategies used by cervical cancer patients. Cervical cancer patients were selected using a purposeful sampling technique guided by the saturation principle. In-depth interviews with twelve cervical cancer patients was carried out, and the interviews were audio-recorded and transcribed verbatim. The data was then analyzed using a conventional content analysis approach.

Results: Five themes emerged with eleven categories. The first theme was religious coping with one category; practicing or exercising faith in God. The second theme was emotion focused with seven categories; acceptance, positive reappraisal, normalizing the situation, use of avoidance, use of distraction, self-soothing, and escapism. The third theme was meaning-making with one category; cognitive reframing. The fourth theme was social support with one category; seeking external support. The fifth theme was problem-focused with one category; professional support.

Conclusion: Different coping strategies are used by cervical cancer patients to cope with their illness. They are accepting the situation, considering cancer as a normal disease, doing daily activities as usual, and getting rid of their thoughts about illness. In addition, some participants had maladaptive coping strategies including drinking alcohol and not paying attention to the disease. Coping with cervical cancer is essential for improving the quality of life of cervical cancer patients.

Recommendation: Great effort should be made to encourage cervical cancer patients to apply coping strategies that have been found helpful. Also, medical personnel need to have a better understanding of the coping mechanisms of each patient inorder to identify those

who had maladaptive coping strategies and take corrective measures. Furthermore, informal support groups should be created to help these patients to cope with their illness.

127. TITLE: CARDIOVASCULAR DISEASE RISK FACTORS AND BARRIERS TOWARDS HEALTHY LIFE STYLE AMONG HEALTH CARE PROVIDERS AT MUHIMBILI - DAR ES SALAAM

Sub theme: Non-Communicable Diseases
Contact: drsalum@icloud.com
Presenter: Salum Hamed

Background: Health care providers are reflected to be wardens of health of society by advising people on healthy lifestyles. However, studies have shown majority to be overweight with poor compliance on the appropriate dietary habits and physical inactivity. Majority reported long working hours, high work load and absence of fitness facilities to be the barriers to a healthy lifestyle.

Objective: To determine cardiovascular disease risk factors and barriers towards healthy life style among health care providers at Muhimbili - Dar es salaam, Tanzania.

Methods: A total of 429 doctors and nurses were recruited in a cross sectional study involving MNH, JKCI and MOI between August and November 2022. Data was collected on demographics, clinical and life style factors on the risk of cardiovascular disease, and the factors perceived as barriers towards healthy life style. SPSS version 23 was utilized for data analysis; results were expressed as means with SD for numerical variables and proportions for categorical variables. Comparison of categorical variables was done by chi square test and a p value < 0.05 as statistically significant.

Results: The mean age ± SD of participants was 37.0 ± 5.6 years. The majority were nurses 263 (61.3%), female 255 (59.4%) and married/cohabiting 349 (81.4%).Hypertension and diabetes mellitus were reported in 42 (9.8%) and 46 (10.7%) respectively. Majority, were overweight 290 (67.6%), had central obesity 269 (62.7%), were physically inactive 353 (82.3%), had high levels of stress 253 (59.0%) and consumed one portion of fruits per day 321 (74.8%). Majority, reported that the high work load 409 (95.3%), long working hours 396 (92.3%) and no healthy food options at canteen 295(68.6%) as the barriers to healthy living.

Conclusion: Cardiovascular disease risk factors and barriers to healthy living were prevalent among health care providers. Compliance to recommended levels of physical activity, intake of fruits and vegetables was low among health care providers which were

attributed to lack of availability of canteens and healthy food, lack of fitness facilities at work place and lack of time.

Recommendation: Addressing modifiable risk factors like overweight, obesity, cigarette smoking, physical inactivity and inappropriate dietary habits is highly recommended amongst health care providers. We recommend that the health facilities to develop an environment that would encourage physical activities like fitness centres, creating easily accessible food canteens and availability of healthy food options.

128. TITLE: SINONASAL CANCER: RISK FACTORS, STAGE AT DIAGNOSIS, HISTOLOGICAL SUBTYPES AND TREATMENT MODALITIES AT MNH AND ORCI.

Sub theme: Non-Communicable Diseases
Contact: bmusimu128@gmail.com
Presenter: DR. MUSIMU BARAKA M.

Background: Sinonasa cancer accounts for 3-5% of the head and neck cancers. Squamous cell carcinoma (SCC) is the most common histological subtypes accounting for 50-80%. Males are more affected than females in a ratio of 2:1. Occupational exposures to carcinogens -wood dusts, leather dusts, textile industry, chemicals, agriculture activities, construction works and non- occupational factors -cigarette smoking and HPV infection all have been implicated with occurrence of these malignancies. Most patients present late with advanced stages of the disease and surgery with adjuvant chemotherapy and or radiotherapy entails most of the treatment modalities offered.

Objective: Determining the prevalence of risk factors associated with sinonasal cancer, histological subtypes, stage at diagnosis and treatment modalities.

Methods: This was a cross sectional descriptive, hospital-based study with a total of 134 subjects being from Sep 2022 to March 2023 at MNH and ORCI. Patients with confirmed cases of sinonasal malignancies by histology were recruited, signed informed consent and assent for under 18 years of age. A structured questionnaire was used to collect data. Analysis was done by SPSS software version 24 and a p-value <.05 considered statistically significant.

Results: 134 study subjects, mean age(SD) of 51.7(15.6) years and M:F (1.1:1). 68% had single exposure and 8.2% had multiple exposures to occupational risk factors. Majorities (64.9%) were involved in agricultural activities and 22.4% used urea-based fertilizers, 29.9% used pesticides and 30.6% used herbicides. Wood dusts, leather dusts, textiles, chemicals

and hair dressers accounted for 15% in total by frequencies. 17.9% smoked cigarette, family history of head and neck cancer (17.9%) and 8.2% had history of ever practiced oral sex. Squamous cell carcinoma accounted 50%, majorities (44% ,33.6%) were at stage III/IV respectively. Majorities (47.8%) were treated by surgery + adjuvant chemotherapy and or radiotherapy.

Conclusion: Majority of patients with sinonasal malignancies in our setting are involved in agriculture and use of urea based fertilizers, herbicides and pesticides which have been implicated with the occurrences of these malignancies. This is different from developed countries were majorities have exposure to leather dusts, wood dusts, textiles industry, construction works and other chemicals. Also most of patients present at a very advanced disease stages (III and IV) which has implication on prognosis.

Recommendation: Further studies to be done to find out the associations between agricultural activities, use of urea based fertilizers, herbicides and pesticides with the occurrences of sinonasal cancer (Cohort case control) in our setting (Tanzania). Further studies to be done on prognosis of these patients and their predictive factors in our setting (Tanzania).

129. TITLE: TRADITIONAL RISK FACTORS FOR CARDIOVASCULAR DISEASES AND THEIR CORRELATES AMONG TREATMENT NA VE HIV- INFECTED ADULTS INITIATING ANTIRETOVIRAL THERAPY

Sub theme: Non-Communicable Diseases
Contact: tosimwakys@gmail.com
Presenter: Tosi M. Mwakyandile

Background: Cardiovascular diseases (CVDs) have become an important cause of morbidity and death among people living with HIV and/or AIDS (PLHIV) in the developed world during the era of the widespread use of antiretroviral therapy (ART). Little is known about the burden of, and traditional risk factors for CVDs among PLHIV in developing countries including Tanzania despite the widespread use of ART.

Objective: To determine the traditional risk factors for CVDs and their correlates among ART naïve PLHIV initiating ART

Methods: A cross-sectional analysis of baseline data of 430 clinical trial participants intending to study the effect of low-dose aspirin on HIV disease progression among HIV-infected individuals initiating ART was done. Traditional risk factors for CVDs studied were

age, alcohol consumption, cigarette smoking, individual and family history of CVDs, diabetes mellitus (DM), hypertension, obesity/overweight, and dyslipidaemia. A generalized linear model (robust Poisson regression) was used to determine the predictors for risk factors for CVDs.

Results: The median (IQR) age was 37 (28, 45) years. Females were the majority (64.9%). The most prevalent risk factors for CVDs were dyslipidaemia (88.3%), alcohol consumption (49.3%), overweight/obesity (29.1%), and hypertension (24.8%). The correlates of dyslipidaemia were WHO HIV clinical stage 3 and of overweight/obesity were alcohol consumption and WHO HIV clinical stages 2 and 3. Being overweight/obese predicted the occurrence of hypertension.

Conclusion: Traditional risk factors for CVDs in the treatment naïve PLHIV initiating ART are similar to the ones in the general population, with dyslipidaemia being more prevalent than in the general population.

Recommendation: Identifying and managing these risk factors during ART initiation may lower future CVDs among PLHIV.

130. TITLE: TRENDS OF FREQUENCY, MORTALITY AND RISK FACTORS AMONG PATIENTS ADMITTED WITH STROKE FROM 2017 TO 2019 TO MEDICAL WARD AT KCMC.

Sub theme: Non-Communicable Diseases
Contact: bekamoshi0306@gmail.com
Presenter: BARAKA MOSHI

Background: The burden of stroke has increased in recent years worldwide, particularly in LMIC's, being second leading cause of death and disability in adults worldwide. Due to lack of resources directed to control of risk factors, associated morbidity and mortality stroke is steadily increasing. In Tanzania Stroke incidence is well known, but still effort and intervention are needed to monitor and reduce the stroke admission.

Objective: To determine the number of stroke admissions, and associated co-morbidities, to a referral hospital in Northern Tanzania.

Methods: We conducted a retrospective audit of medical record data from 2017 to 2019 for patients aged 18 and above admitted in medical ward. Data collected included demographic characteristics, previous history of stroke, and outcome of the admission.

Primary outcome was the proportion of Stroke patients and the secondary outcome was outcome of admission.

Results: Among 8003 patients admitted during this time frame, 975 (12.2%) were stroke patients. Trends showed an increase in patients admitted with stroke over the 3 years with 222, 292 and 458 for 2017, 2018, 2019 respectively. Of the stroke patients, 568 (58%) had hypertension while 167 (17%) had Diabetes mellitus. The proportion of stroke patients aged 18-45 years, increased from 2017 (n=28, 3.4%) to 2019 (n=40, 4.3%). The in-hospital mortality related to stroke was 230 (23.5%) and females had higher odds of death as compared to male patients (OR:1.5; CI: 1.30,1.80).

Conclusion: The burden of stroke on individuals and health services is increasing over time, which reflects a lack of awareness and effective preventive measures.

Recommendation: Prioritizing interventions directed towards the reduction of non-communicable diseases and associated complications such as stroke is urgently needed.

131. TITLE: COSTS OF ACCESSING SICKLE CELL DISEASE SERVICES AMONG PATIENTS ATTENDING SICKLE CELL CLINIC AT MUHIMBILI NATIONAL HOSPITAL, DSM

Sub theme: Non-Communicable Diseases
Contact: joshuanoah98@gmail.com
Presenter: Joshua Noah

Background: Sickle cell disease (SCD) is a chronic hereditary illness that affects a large number of people worldwide. With 11,000 children with SCD per year, Tanzania is the fifth country in the world with the largest estimated burden. SCD results in catastrophic health care costs, loss of productivity, and a barrier to economic growth because of poverty. The direct medical expenditures of SCD from the perspective of the physician are well reported in the literature although the expenses of treating individuals with sickle cell disease in Tanzania are still unknown.

Objective: The main objective was to determine the annual cost of accessing sickle cell disease services for individual patients visiting sickle cell clinic at MNH.

Methods: This was a descriptive cross-sectional Cost of Illness study using quantitative approach among 207 patients who visited Muhimbili National Hospital from June 2021-May 2022. A systematic sampling method was used to select study participants. Data was collected using well-structured questions which was an interview based. Data processing

and cleaning was done with Microsoft Excel 2013 version. Data analysis was done with SPSS version 20. Indirect costs were estimated using human capital Method. The annual costs were determined by summing up the direct and indirect costs. A one way and two-way sensitivity analysis was done to reduce uncertainty.

Results: There were about 207 participants in the study, and 87.34% of them responded. The mean age of the patients was 10.26 years, with 189 (91.3) of them being under the age of 18. 53.6% of the participants, or 111, were men. At MNH, the estimated annual cost per patient to get SCD services was Tsh 847,186.01 ($367, 62428).The majority was made up of the average direct cost per patient (76.4%) of Tsh 647,573.23 (US $ 281.00516). The actual average annual cost of SCD treatment was decreased by 64.44% by having a health insurance card. The cost drivers were medications, laboratory, investigations, and consultation fees.

Conclusion: The average annual cost for seeking SCD care at MNH is high. Possession of health insurance schemes reduces the actual average annual cost of SCD treatment.

Recommendation: Future studies should focus on other cost drivers and regression analysis (analytical) so as to see how cost varies across different variables.

132. TITLE: AGE OF DIAGNOSIS AND TIMING OF INTERVENTION IN CHILDREN WITH TRUNCUS ARTERIOSUS: A CLINICAL AUDIT

Sub theme: Non-Communicable Diseases
Contact: meghabunadkat@gmail.com
Presenter: Megha B Unadkat

Background: Truncus Arteriosus is a rare defect and is described as a single arterial trunk that gives rise to coronary, systemic and pulmonary arteries. Guidelines by the European Association for Cardio-Thoracic Surgery (EACTS) and the Association for European Paediatric and Congenital Cardiology (AEPC) recommend repair within neonatal period. In late presentation, repair is complicated or contraindicated due to elevated pulmonary vascular resistance. Late diagnosis is associated with significant morbidity and mortality.

Objective: This audit aimed at reviewing the age of diagnosis and timing of repair among children with Truncus Arteriosus at JKCI.

Methods: We performed a retrospective audit from January 2018 to April 2023 among children diagnosed with Truncus Arteriosus at JKCI. Data was collected retrospectively from all available medical records using a data collection tool. This audit included all

children diagnosed with Truncus Arteriosus at JKCI between the age of 0 to 18 years. Analysis was done using SPSS, categorical variables were summarized using frequencies and proportions and continuous variables using medians and ranges.

Results: There were a total of 109 Truncus Arteriosus patients with an almost equal distribution between male and females. Only 11 patients (10.1%) of the cases were diagnosed less than one month of age and most patients were diagnosed between the age of 2-6 months (53 patients, 48.6%) with a median age of diagnosis of 6 months. In terms of age of repair, there were no repairs performed within the recommended time of one month however more than half of the patients were repaired between 1 to 6 months (20 patients, 55.7%), with median age of repair as 3 months. Survival of repaired patients in this audit was 75%.

Conclusion: This audit demonstrated that timely diagnosis of Truncus Arteriosus is still a challenge in our setting and this hinders early intervention as recommended by EACTS guidelines due to delayed diagnosis. Major barriers to early diagnosis were recognized as lack of foetal and neonatal screening, lack of early referral systems and misdiagnosis. Major barriers to early intervention were identified as late diagnosis, late referral, lack of finances/insurance coverage, loss to follow-up and lack of ICU preparedness.

Recommendation: Interventions to facilitate early diagnosis are use of fetal and neonatal screening for critical defects and early and easy referral systems. In order to facilitate early intervention and improve surgical outcomes, there is a need for continuous advocacy for investment in healthcare delivery through policy changes, universal health coverage, reduction in delay in referral and an increase in need for more cardiac surgeons and centres.

133. TITLE: INCIDENTAL DIAGNOSIS OF LARGE AORTOPULMONARY WINDOW POST PATENT DUCTUS ARTERIOSUS LIGATION: A CASE REPORT

Sub theme: Non-Communicable Diseases
Contact: meghabunadkat@gmail.com
Presenter: Megha B Unadkat

Background: Aortopulmonary window (APW) is a rare congenital heart disease resulting from the deficiency of a septum between the ascending aorta and the main pulmonary artery resulting in an abnormal communication between the two major arteries. Patients with aortopulmonary window usually present with early signs and symptoms of congestive heart failure and pulmonary hypertension (PH).

Objective: We present a unique case of a three-year-old boy who was diagnosed to have a different congenital heart defect (APW) after undergoing Patent Ductus Arteriosus (PDA) ligation.

Methods: A three-year-old boy of African descent presented to our clinic with features of heart failure and was diagnosed to have a large PDA by transthoracic echocardiography (ECHO). He subsequently underwent PDA surgical ligation but one month later, he still had persistent symptoms of heart failure. A repeat ECHO revealed a large undetected APW, which was confirmed by a cardiac computed tomography (CT) scan and the patient subsequently underwent successful repair.

Results: In our case, the diagnosis of APW was initially missed by ECHO. It is difficult to differentiate APW from other left-to-right shunts like a PDA therefore it can be easy to miss APW in the presence of other conditions. APW can also lead to irreversible PH early in infancy therefore, un-repaired or late repair of APW can lead to poor outcomes and mortality. Our case was unique that PH was still reversible even at the age of three years.

Conclusion: A high index of suspicion is required for patients who present with early signs of congestive heart failure and pulmonary hypertension. A thorough and systematic ECHO is recommended to avoid missing this rare lesion. Other noninvasive imaging modalities such as cardiac CT scan or magnetic resonance imaging with angiography may be required to confirm the diagnosis.

Recommendation: A high index of suspicion for residual lesions or other defects is required for patients still symptomatic for heart failure post-surgical repairs. Even delayed diagnosis of APW might still be operable beyond infancy therefore thorough assessment of operability must be done in all patients, regardless of their age at presentation.

134. TITLE: THE LIVED EXPERIENCES AND CARING NEEDS OF WOMEN DIAGNOSED WITH CERVICAL CANCER: A QUALITATIVE STUDY IN DAR ES SALAAM, TANZANIA

Sub theme: Non-Communicable Diseases
Contact: emmanuelchona20@gmail.com
Presenter: Emmanuel Z. Chona

Background: Cervical cancer continues to be a major global public health concern affecting the lives of many women and increasing the costs of treatment. In 2020, cervical cancer was the seventh most commonly diagnosed cancer among all cancers worldwide and Tanzania was ranked fourth among the countries with the highest incidence rates (59.1 new cases

per 100,000 women) of cervical cancer. The lived experience and caring needs of patients and their families provide insights into the psychosocial aspects of healthcare among the affected population.

Objective: This study aimed to explore the lived experiences and caring needs of cervical cancer patients at Ocean Road Cancer Institute (ORCI) in Dar es Salaam, Tanzania.

Methods: A qualitative descriptive study was carried out among cervical cancer patients at ORCI in Dar es Salaam from December 2022 to February 2023, Tanzania. Using a purposeful sampling technique, 12 cervical cancer patients were interviewed with the principles of saturation guiding sample size determination. A semi-structured face-to-face interview guide was employed to collect the information. A conventional content analysis approach was used to analyze data after translation with the aid of NVivo 12.0 computer software.

Results: Five themes emerged after data analysis: knowledge and attitude about cervical cancer, sufferings from a disease process, socio-economic disruptions, psychological problems, and sexual and reproductive concerns.

Conclusion: The findings of this study provide vital insights into the life experiences and caring needs of cervical cancer patients and call for an urgent response from healthcare stakeholders to develop and implement comprehensive and culturally consonant approaches in providing care to the affected population with more emphasis on psychosocial aspects of life.

Recommendation: At the health facility level, well-structured and sustained counseling sessions should be conducted to enhance cervical cancer patients' coping capability. Also, more qualitative research is required to ascertain the lived experiences of terminal cervical cancer patients and those of long-term cervical cancer survivors.

135. TITLE: EXPERIENCES OF FAMILY CAREGIVERS IN CARING FOR PATIENTS WITH HEART FAILURE ADMITTED AT JKCI, DAR ES SALAAM.

Sub theme: Non-Communicable Diseases
Contact: tuzolundgreen@gmail.com
Presenter: Tunzo Mcharo

Background: Heart failure (HF) continues to be a global health problem with its ramifications more pronounced in underdeveloped countries. Family members play a pivotal part in patient management which may influence the patient's overall quality of life. Prolonged delay in attendance to health care facilities among patients indicates ineffective

support from family caregivers. In the Tanzanian context, there is limited information about the experiences of family caregivers in caring for patients with HF.

Objective: To explore the experiences of family caregivers in caring for patient with HF at JKCI, Dar es Salaam Tanzania.

Methods: A qualitative descriptive study design was conducted at Jakaya Kikwete Cardiac Institute in Dar es Salaam, Tanzania. A purposive sampling technique was used to select the potential participants. A sample size of 10 family caregivers of patients with HF was included in the study. Thematic analysis was used to derive the main theme and sub-themes.

Results: Three major themes were identified: demands for supportive care, new caring role and lifestyle, and professional support in caring for patients with HF. Caregivers needed social and financial support in the caring process. Learning to provide the required care at the right time while failing to participate in social events and caregiving in an unfavorable environment were reported as challenges. However, compliance with instruction and effective interaction among the nurses and caregivers were considered to be positive professional support.

Conclusion: Caregivers need social and financial support to provide effective care to their patients. Caregiving is a learning process that needs continuous educational support to adapt to the new caring roles and challenges. Nurses should conduct regular assessments to explore caregivers' needs, challenges, and concerns and provide timely counseling that can facilitate coping.

Recommendation: Further studies should be conducted to assess nurses' perceptions of the importance of cooperating with caregivers in caring for patients with HF

136. TITLE: REVISITING THE STATE OF MICRONUTRIENT DEFICIENCIES AND INTERVENTION PROGRAMS IN EAST AFRICA

Sub theme: Nutrition and Traditional/Alternative Medicines
Contact: mimomed88@gmail.com
Presenter: Amina Ahmed

Background: Micronutrient deficiencies pose a significant public health challenge in East Africa (EA), with the most common deficiencies being iron, zinc, vitamin A, iodine, and folate.

Objective: Therefore, this study aimed to explore the state of micronutrient deficiency and intervention programs in East Africa.

Methods: A comprehensive literature review was conducted using search engines, including google scholar, core, EBSCO, Europe PMC and biorxiv.

Results: Micronutrient deficiencies can lead to various adverse health outcomes, including stunting, anaemia, blindness, cognitive impairment, and increased morbidity and mortality rates. Various intervention programs have been implemented in EA to address these challenges, including food fortification, dietary diversification, supplementation, nutrition education, and agricultural interventions. Food fortification, such as salt iodization programs, has been implemented to address iodine deficiency, while wheat and maize flour is fortified with iron and other essential vitamins and minerals. Micronutrient supplements have been widely used to address deficiencies in vulnerable populations such as pregnant women, lactatin

Conclusion: In conclusion, addressing micronutrient deficiencies in EA requires a comprehensive and multisectoral approach.

Recommendation: These interventions should be context-specific and tailored to the local conditions and needs of the particular population.

137. TITLE: UNVEILING PROMISING LEAD MOLECULES AGAINST SARS-COV-2: AN INTEGRATED IN-SILICO AND IN-VITRO APPROACH

Sub theme: Nutrition and Traditional/Alternative Medicines
Contact: mariana.shayo@muhas.ac.tz
Presenter: Mariana Shayo

Background: The rapid spread of COVID-19 in 2019 had detrimental impacts on health, well-being, and the economy, emphasizing the need for effective treatments to reduce fatalities associated with SARS-CoV-2 infections, despite the remarkable impact of the introduction of immunizations. Machine learning algorithms have significantly enhanced drug development by enabling comprehensive analysis of large datasets, while the combination of natural products (NPs) with advanced computational techniques presents a valuable avenue for drug discovery, leveraging centuries of traditional medicinal knowledge.

Objective: This study Investigated the potential anti-SARS-CoV-2 activities of natural compounds using In-silico, biophysical techniques and In-vitro assays.

Methods: A total of 21 compounds from ChEMBL Database were screened against TMPRSH2 and main protease (Mpro) using molecular simulation studies. Salvinorin A and deacetylgedunin were identified as most potent compounds after a similarity search. The plant rich of the compounds were identified and extracted for downstream analysed .The compounds together with extracts were tested for in-vitro antiviral activity against SARS-CoV-2 using Spike/ACE2 Binding Assay and the Mpro Assay in Vero-E6 cells

Results: Results showed that salvinorin A compound at 50 ug/mL we're able to block 31% of virus replication, also had IC50 at 700 ng/mL. Azadiratcha indica at 25µg/ml inhibit viral replication by 16.6% while Cedrela odorata had IC50 of 4.7 µg/ml

Conclusion: Results from this study indicate the modest activity of the named plants extract and compound against SARS-CoV-2

Recommendation: This study suggest computational synthesis /derivatization of the salvinorin A compound.

138. TITLE: DISCRIMINATION OF TANZANIAN BLACK TEA BY GEOGRAPHICAL ORIGIN AND SEASONAL VARIATIONS OF CHEMICAL CONSTITUENTS USING HPTLC AND NIRS

Sub theme: Nutrition and Traditional/Alternative Medicines
Contact: raphael.shedafa@gmail.com
Presenter: Raphael Shedafa

Background: Tea (Camellia sinensis L) is used worldwide as a beverage after water.Black tea is the most popular form of tea obtained through the complete fermentation of tea leaves. The high consumption of tea is because it is rich in antioxidant compounds, central nervous system (CNS) stimulating and soothing properties, minerals, and other health benefits. Caffeine, L-theanine, and chlorogenic acid are among the key components in tea leaves.

In this study, we developed a reliable method using near-infrared spectroscopy to discriminate black tea from six geographic origins (Kwamkoro, Dindira, Lugoda, Herkulu, Katumba, and Kibena estates).

Objective: This study aimed to determine the geographical origin, presence, and content of caffeine, L-theanine, and chlorogenic acid in black tea available in Tanzania using NIR spectroscopy and HPTLC

Methods: NIR spectroscopy and HPTLC densitometers were used to discriminate black tea based on their geographical origins. The effect of seasons on caffeine, L-theanine, and chlorogenic acid levels in various black tea varieties was also studied using the HPTLC technique. Black tea was classified and identified using a combination of PCA and NIRS for tea clustering.

Results: The findings have shown that the differences in tea quality between the southern highlands (Katumba, Kibena, and Lugoda estates) and north-eastern zones (Herkulu, Kwamkoro, and Dindira estates) were related to caffeine, L-theanine, and Chlorogenic acid contents. HPTLC findings revealed higher content of caffeine (13.17 ± 0.47 mg/g - 21.30 ± 0.58 mg/g), chlorogenic acid (13.20 ± 0.46 mg/g - 19.7 ± 0.47 mg/g), and L-theanine (14.50 ± 0.47 mg/g - 19.20 ± 0.46 mg/g) in Southern highlands of Tanzania (Katumba, Kibena, and Lugoda estates) than caffeine (9.65 ± 0.15 mg/g - 13.57 ± 0.21 mg/g), Chlorogenic acid (0.25 ± 0.11 mg/g - 9.84 ± 0.14 mg/g), and L-theanine (5.88 ± 0.22 mg/g - 15.88 ± 0.51 mg/g).

Conclusion: HPTLC analysis and NIR Spectroscopy are suitable means of assessing the quality control of various teas from different places of origin.

Discriminating black teas based on their chemical compositions was achieved using NIRS and HPTLC techniques, teas with similar chemical compositions were grouped in zones.

The discrimination will enable tea blenders to source teas of desired quality.

Recommendation: HPTLC is recommended if you are interested in the qualitative and quantitative determination of the tea's chemical composition, while the combination of NIRS and PCA is intended to quickly identify the tea's origin.

139. TITLE: CANAL FITTING AND TREATMENT OUTCOMES OF PATIENTS TREATED WITH SIGN FIN NAIL AT MOI

Sub theme: Surgery and Trauma
Contact: olomijimmy@gmail.com
Presenter: Jimmy Olomi

Background: In developing countries, femur fracture treatment often relies on alternative methods like SIGN nails that are locked without the use fluoroscopy. However, limited research has focused on the implications and factors to improve outcome when using these nails.

No published study has assessed the effect of nail fitting on outcomes for patients treated with SIGN Fin nails (which mainly relies on fitting in the femoral canal for its stability).

Objective: To assess the effect of Fin nail canal fitting on treatment outcomes in femur fractures treated with the SIGN Fin nail

Methods: A cross-sectional study was conducted at MOI, involving 118 patients who underwent femoral fracture fixation with SIGN Fin nails between January 2016 and December 2021. Data on patient demographics, fracture characteristics, nail parameters reoperation and pain status were collected from the SIGN surgical database and medical records. Radiographic measurements were performed using Radiant software, and fracture union at one year was assessed using the mRUST score.

Results: Majority of the participants were males under 40 years , of these (96.6%) Had a motor traffic crush, and 82.2% had a canal fill of 80% or more.

Reoperation was 5.9%, this was higher among those with nail occupying <80% of the canal (p = 0.074).

Union was 84.1% and those with a canal fill <80% were more likely to have non-union (p = 0.028).

In this study 42.9% reported pain at 6 weeks higher in those with < 80% canal fill (p < 0.001).

Conclusion: The degree of canal fitting of the Fin nail is an important factor affecting the outcomes of femoral fractures. A higher degree of canal fill was associated with better pain outcomes, lower reoperation rates, and lower non-union rates.

Recommendation: Surgeons should aim for a canal fill of at least 80% when implanting Fin nails

Further prospective studies should be done.

140. TITLE: CHARACTERIZATION OF COLORECTAL POLYP AND ASSOCIATED FACTORS AMONG PATIENTS UNDERGOING COLONOSCOPY AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Surgery and Trauma
Contact: anderday2015@hotmail.com
Presenter: Frank Patrick

Background: Colorectal cancer is the third most common cancer and 2nd leading cancer-related death worldwide. however, screening and surveillance significantly reduce the incidence of colorectal cancer in the United States of America as opposed to other parts of the world. This study will identify the high-risk group for colorectal cancer and hence improve preventive strategies for colorectal cancer.

Objective: This study aims to describe the characteristics and associated factors of colorectal polyps among patients undergoing colonoscopy at Muhimbili national hospital.

Methods: It was a retrospective cross-sectional study conducted from July to December 2022, data was retrieved from Jan 2016 to Jan 2021. Information was obtained from a patient's file, the health electronic database of Muhimbili National Hospital. Data analysis was done using SPSS v26. Descriptive data were presented using a frequency distribution table. A p-value less than 0.05 was considered statistically significant Measure of association for categorical variables was computed using chi-square and odds ratio. Multivariate logistic regression was done to account for confounders.

Results: A total of 588 subjects had complete colonoscopy, male was 57.1%. The mean age of the population was 50 years. 126 subjects had colorectal polyps which is equivalent to 21%. Overall malignant polyp was 38.09% and the rest was malignant. The odds of malignant polyps are 35.1 times higher in polyps ≥10mm compared to polyps <10mm, p-value <0.0001. Lastly, the odds of malignant colorectal polyps were found to be 12.6 times more among current smokers compared to never smoker p-value of 0.006.

Conclusion: Malignant colorectal polyps are positively influenced by the smoking and endoscopic size of the polyps.

Recommendation: screening colonoscopy is recommended among smokers at age above 50 years, also an early intervention if the polyp is ≥10mm.

141. TITLE: INSURANCE STATUS AND SURGICAL CANCER PATIENT CHARACTERISTICS AND OUTCOMES AT MUHIMBILI NATIONAL HOSPITAL IN DAR ES SALAAM TANZANIA.

Sub theme: Surgery and Trauma
Contact: obedyemmanuel@gmail.com
Presenter: Larry Akoko, Obedi Emmanuel

Background:

Cancer is a leading cause of death among adults in Tanzania. Surgery plays a vital role in the diagnosis, treatment, and palliation of malignancies. Laparotomy is a common surgical approach for abdominal cancer pathologies in Tanzania where access to minimally invasive surgery is limited.

Objective: We aimed to understand abdominal organ cancer patient characteristics and laparotomy outcomes at MNH

Methods: We conducted a prospective observational cohort study of all patients over the age of 18 undergoing laparotomy at MNH from August 1st 2022-December 22nd 2022. Patients were consented and followed during their index and, if applicable, re-admission hospitalization(s), and were contacted 30-days post discharge by telephone. Cancer diagnosis was made via the operative report by the operative surgeon.

Results: Overall, 246 patients underwent laparotomy during the study period. Of those patients, 109 (44%) were diagnosed with cancer. Of the patients with cancer, 54 (50%) were male and the median age was 59 (IQR 45, 65). Insurance status was known in 101 patients and 64 (63%) were insured. Of those with insurance, 57 (89%) were covered by the NHIF. Uninsured patients were significantly more likely to present for an emergency operation versus insured patients (24% vs. 8%, p=0.02). In addition, insurance status was an independent risk factor for death within 30 days post-operatively after controlling for age, sex, evidence of pre-operative sepsis, ASA classification, and and emergency versus scheduled surgery.

Conclusion: At the National Referral Hospital in Tanzania, uninsured cancer patients are more likely to present for emergency surgery, suggesting limited access to care for these vulnerable patients. In addition, being uninsured is independently associated with increased 30-day perioperative mortality.

Recommendation: We recommend expanding insurance coverage to ensure all cancer patients in Tanzania have equal access to medical services.

142. TITLE: OUTCOME OF FUNCTIONAL ENDOSCOPIC SINUS SURGERY AMONG PATIENTS WITH CHRONIC RHINOSINUSITIS AT MUHIMBILI NATIONAL HOSPITAL

Sub theme: Surgery and Trauma
Contact: jajimakonda@gmail.com
Presenter: Jaji Makonda

Background: Chronic rhinosinusitis (CRS) is a major health problem. It affects 5-12% of the general population. CRS is divided into CRS with nasal polyps (CRSwNP) and CRS without nasal polyps (CRSsNP). Treatment of CRS is medical and surgical. Functional endoscopic sinus surgery (FESS) is a standard surgical treatment after failure medical therapy.

FESS was introduced in 2010 at MNH. Unfortunately, there are no studies in Africa and our setting on its outcomes among patients with CRS. This study will provide evidence-based information of this procedure in our country.

Objective: To compare Saccharin transit time and endoscopic scores before and after FESS, and to determine complications of FESS

Methods: A cohort study involving 30 FESS patients who were followed for a month after surgery. Saccharin test and nasal endoscopy were performed before and a month after the operation. Complications of surgery were recorded. Data was analyzed using SPSS statistics software version 26

Results: Age of participants ranged from 11 to 68 years and majority (50.0%) were in the 40–59-year group, with mean age (SD) of 43.2 (14.4). Majority were females (76.7%). Most had CRSwNP (66.7%), and majority underwent primary FESS (80.0%).

The mean saccharin transit time before and after FESS was 19.5 and 10.0 minutes respectively, the mean difference was 9.5 minutes and SD of 14.3, a significant change $p=0.001$.

The mean endoscopic scores before and after FESS were 6.5 and 2.0 respectively, with mean difference of 4.5 and a SD of 2.5, a significant improvement, $p= <0.001$.

Overall postoperative complication was 13%.

Conclusion: FESS is generally safe and significantly improves nasal function in CRS patients, proper follow up after surgery is a key to better outcomes of FESS.

Recommendation: Further studies employing a large sample size and a long follow up period, also smell function of the nose should be evaluated in patients after FESS

143. TITLE: A RARE CASE OF MATURE PULMONARY TERATOMA: A CASE REPORT AND LITERATURE REVIEW

Sub theme: Non-Communicable Diseases
Contact: ayubuphilipo@yahoo.com
Presenter: Ayubu Philipo MD

Background: Teratomas are rare tumors containing different tissues such as teeth, hairs, and glands arising from pluripotent cells of multiple germ cell layer namely, ectoderm, mesoderm and endoderm. These tumors are benign, primarily found in gonadal organs. Although extra-gonadal teratoma are highly uncommon, but rarely occurs in retroperitoneum, sacro-coccygeal, head and neck. When they occur extra-gonadally, they are frequently found in the mediastinum, and with very rare occurrence in the lungs. We are presenting a rare mature pulmonary teratoma in a 50 years old female who to our knowledge, she is the first histologically confirmed case at Muhimbili National Hospital. T

Objective: To describe a rare case of pulmonary mature teratoma, emphasizing the significance of histopathological assessment in confirming the diagnosis and guiding appropriate management.

Methods: A 50-year-old woman presented at Surgical Department of Muhimbili National Hospital with chronic cough and chest tightness for over 30 years, unresponsive to various medications. A comprehensive evaluation of the patient's medical history, clinical symptoms, and imaging workup and clinical laboratory investigations were conducted. The CT results revealed a cystic pulmonary mass located in the right middle lobe which was excised and submitted for histopathological analysis.

Results: Microscopically, the submitted tissue specimen revealed a well capsulated cystic tumor composed of epidermis and dermal adnexal, respiratory epithelium, cartilage and intestines. No features of malignancy seen, hence the diagnosis of a mature pulmonary teratoma was concluded.

Conclusion: This unique and rare case whose resected tissue were submitted for histopathology workup is one of the result of efforts by Tanzanian government to train cardio-thoracic surgeons who are able to render treatment within the country.

Recommendation: The diagnosis of a rare pulmonary teratoma should be considered in differential diagnosis of pulmonary masses.

144. TITLE: THE BURDEN OF RESPIRATORY CONDITIONS IN THE EMERGENCY DEPARTMENT OF MUHIMBILI NATIONAL HOSPITAL IN TANZANIA IN THE FIRST TWO YEARS.

Sub theme: Communicable Diseases and Antimicrobial Resistance +One Health
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Presenter: Harrieth P Ndumwa

Background: Globally, respiratory diseases cause 10 million deaths every year. With the COVID-19 pandemic, the burden of respiratory illness increased and led to significant morbidity and mortality in both high- and low-income countries. This study assessed the burden and trend of respiratory conditions among patients presenting to the emergency department of Muhimbili National Hospital in Tanzania and compared with national COVID-19 data to determine if this knowledge may be useful for the surveillance of disease outbreaks in settings of limited specific diagnostic testing.

Objective: To understand the burden and trends of respiratory conditions among patients presenting to the EMD of Muhimbili National Hospital in Tanzania.

Methods: The study used routinely collected data from the electronic information system in the Emergency Medical Department (EMD) of Muhimbili National Hospital in Tanzania. All patients presenting to the EMD in a 2-year period, 2020 and 2021 with respiratory conditions were included. Descriptive statistics and graphical visualizations were used to describe the burden of respiratory conditions and the trends over time and to compare to national Tanzanian COVID-19 data during the same period.

Results: One in every four patients who presented to the EMD of the Muhimbili National Hospital had a respiratory condition – 1039 patients per month. Of the 24,942 patients, 52% were males, and the median age (IQR) was 34.7 (21.7, 53.7) years. The most common respiratory diagnoses were pneumonia (52%), upper respiratory tract infections (31%), asthma (4.8%) and suspected COVID-19 (2.5%). There were four peaks of respiratory conditions coinciding with the four waves in the national COVID-19 data.

Conclusion: There is a high burden of respiratory conditions among patients presenting to the EMD of Muhimbili National Hospital. The trend shows four peaks of respiratory conditions in 2020-2021 seen to coincide with the four waves in the national COVID-19 data.

Recommendation: Real-time hospital-based surveillance tools may be useful for early detection of respiratory disease outbreaks and other public health emergencies in settings with limited diagnostic testing.

145. TITLE: UPTAKE AND ASSOCIATED FACTORS OF CERVICAL CANCER SCREENING SERVICES AMONG WOMEN ATTENDING REPRODUCTIVE AND CHILD HEALTH CLINIC IN DODOMA.

Sub theme: Non-Communicable Diseases
Contact: omarykipuli@gmail.com
Presenter: Omary Nassoro

Background: Cervical cancer mortality can be avoided if proper preventive measures which include Human Papilloma Virus (HPV) vaccination, timely cervical cancer screening (CCS), and treatment of precancerous lesions are taken by women. Despite the increasing availability of cervical cancer screening services in Tanzania, only about 11% of eligible women were reported to have been screened.

Objective: To determine uptake, associated factors and implementation challenges of cervical cancer screening among women attending at RCH clinics in Dodoma municipal council.

Methods: A cross-sectional study using both quantitative and qualitative methods was conducted among women of reproductive age in RCH clinics and 7 RCH in-charges. MS Excel and STATA were used for data management and analysis. Bivariate analysis using the Chi-square test was used to assess relationship between the uptake of CCS and independent variables. Multivariable poisson regression was used to determine independent factors associated with the uptake of CCS. Thematic analysis was used to analyse the Qualitative data.

Results: A total of 463 women were enrolled and the prevalence of cervical cancer screening was 25%; 95%CI=21%-29%. Women with secondary education (aPR = 0.6; 95%CI =0.44-0.89), unemployed women (aPR =0.4; 95%CI = 0.23-0.76) and women who were not aware of cervical cancer screening (aPR = 0.4; 95%CI =0. 13-1.00) were less likely to screen for cervical cancer compared to their counterparts. Inadequate number of Health Care Workers (HCWs) for provision of CCS, Women's lack of readiness for screening and misconception on CCS procedures were frequently mentioned to deter CCS uptake.

Conclusion: Uptake of CCS among attendees of RCH clinic is below the National target of 60% of all eligible women. Education level, occupation and awareness of symptoms of cervical cancer were found to be associated with CCS uptake.

Recommendation: RCH staff should provide education on cervical cancer screening, address misconceptions about screening procedures and Government should ensure adequate number of HCWs to provide screening services.

146. TITLE: FACTORS ASSOCIATED WITH MATERNAL SATISFACTION OF CARE AMONG WOMEN WHO DELIVERED AT KISARAWE HOSPITAL

Sub theme: Maternal Newborn and Child Adolescent Health
Contact: nyarucharyalex@gmail.com
Presenter: Alex Nyaruchary

Background: The WHO has emphasized that countries should monitor and evaluate maternal satisfaction in public health care sectors to improve the quality and efficiency of health care and a means of preventing maternal mortality. Despite of this international emphasis, studies in Tanzania like in sub-Saharan African revealed the discrepancies in care provided during childbirth which causes negative impacts to mother's and neonate's health and wellbeing.

Objective: This study aimed at assessing factors associated with maternal satisfaction among women who delivered at Kisarawe hospital in Coastal Region

Methods: A descriptive cross-sectional design using a quantitative approach was used. The simple random sampling technique was used to obtain a sample size of 242 participants. Data were collected using a questionnaire that contained 52 items on different aspects of delivery care service. Bivariate and Multivariate logistic regression was used to analyze data where the Chi square and Fisher`s exact test were used to identify predictors for maternal satisfaction during labour and delivery.

Results: The overall proportion of 71.1% of mothers participated were satisfied with care provided during labour and delivery, however, satisfaction varied in different variables of care. About 36.4% of participants were satisfied with the process of care provision, 85.5% were satisfied with physical facilities, 90.5% were satisfied with accessibility of care and 95.5% were satisfied with outcome of care provided.

Conclusion: From this study findings, majority of respondents were extremely highly dissatisfied with care in the variable of the process of care provision especially in aspects of respectful maternity care, client provider relationship, informational sharing and emotional support.

Recommendation: The health system management need to be focus on strategies to improve respectful maternity care, client-provider relationship during labour and delivery, and information sharing during labour and delivery, and emotional support for laboring and delivering women.

Ageing Health Care, are we ready?

The globe is undergoing a rapid transition process. For instance, the total number of senior citizens (people aged ≥ 65 years) outpaced that of under-fives worldwide for the first time in human history back in 2020.The phenomenon of ageing as a concept is well understood on evolutionary and biological grounds. Besides, there appears to be an agreeable conceptual framework within which the principles of ageing and longevity can be formulated. Conversely, the ageing phenotype is significantly heterogenous and at most individualistic at all levels, from the whole body to molecular one. Moreover, the process and pace of ageing are not determined by any specific gerontogenes.

Likewise, in clinical frameworks, the term geriatrics has grown rapidly as a sub-specialty of medicine since the second half of the 20th Century. It is both an art and a science discipline. The art of geriatric medical practice still greatly relies on William Osler's words (a sustaining love for ideals) and, at practical level, the ability to recognise similarities and to distinguish clinically significant differences. However, geriatric medicine has identified itself as the medicine of the gaps. [3] The gaps between say psychiatry and orthopaedics; when handling for instance a multimorbid senior citizen with dementia, who also happens to have multiple hip fractures, as a result of recent episode of fall while bathing. Besides, geriatric medicine is forced to compete in the therapeutic window of 'evidence-based medicine'. [3] However, senior citizens have been customarily left out in most clinical trials of the past and present, for a multitude of what appears to be logical exclusion criteria in clinical research protocols; especially those originating from the industry. In reality though, it is indeed the old aged people who consume developed drugs and medical devices the most in the population pyramid. To this end, at the level of the discipline and the society, there is an interplay but yet often a significant antagonistic interaction, of what appears to be ageing process versus ageism. They range from unjustified evolution of pension systems to say safety measures on reaction times in driving licence protocols to people of advanced calendar age, irrespective of their physiologic/pathologic stata. It is a worrisome, unhealthy and unethical trend if left without interventions.

1. THE BURDEN OF HIV DRUG RESISTANCE IN THE ERA OF DOLUTEGRAVIR USE IN TANZANIA: FINDINGS FROM THE NATIONAL REPRESENTATIVE SURVEY

Doreen Kamori 1,7, Godfrey Barabona 1,8, Joan Rugemalila 2 , Werner Maokola 3 , Mucho Mizinduko 4 ,Macdonald Mahiti 1 , Amon Sabasaba 4 , Linda Mlunde 5 , Salim Masoud 1 , Davis Amani 5 , Erick Mboya 5 ,Anath Rwebembera 4 , Takamasa Ueno 1,8 , Prosper Njau 3 , Beatrice Mutayoba 3 , Andrea Pembe 6 , Bruno Sunguya 5,7

Background: Despite significant progress in ART scale-up, treatment success among people living with HIV (PLHIV) in Tanzania and other similar resource-limited settings in sub-Saharan Africa (SSA) has not been fully appreciated. In March 2019, Tanzania introduced a WHO recommended Integrase Strand Transfer Inhibitor (INSTI), dolutegravir as a default first-line regimen in the HIV treatment program. Dolutegravir-based regimens are known to rapidly suppress HIV viral load and have a high genetic barrier to resistance. We conducted a nationally-representative cross-sectional survey a year later to determine HIV viral suppression rates and the burden of HIV drug resistance among PLHIV in Tanzania.

Methods: Blood samples, demographic and clinical information were obtained from PLHIV attending thirty-six HIV care and treatment centres. HIV Viral load (HVL) was estimated using the COBAS 8800 TaqMan (Roche Molecular system). Viral suppression was defined at HVL < 1000 copies/mL and HIV drug resistance (HIVDR) genotyping was performed from DBS and plasma samples with VL≥ 1000 copies/mL. HIV genes (reverse transcriptase, protease, and integrase) were amplified by PCR and directly sequenced. The Stanford HIVDR database was used for HIVDR interpretation.

Results: A total of 2039 PLHIV were recruited; of these, adults and children were 57.5% and 42.5% respectively. Viral suppression rates were 96.1% and 89.1%, in adults and children, respectively. Hereby, adults and children on the dolutegravir-based regimen recorded viral suppression rates of 96.4 % and 91.3%, respectively; while the lowest suppression rates was observed in PLHIV on protease inhibitor-based regimen at 78.8% and 85.4%, respectively. HIVDR was detected in 71.5% of PLHIV with high viremia. HIV drug resistance mutations (DRMs) were present in 78.3% of children and 57.8% of adults. Importantly, 5.8 % of participants had INSTI DRMs including major DRMs: Q148K, E138K, G118R, G140A, T66A and R263K.

Conclusion: Dolutegravir-based regimens show promise for treating HIV in Tanzania. However, there are still barriers to optimal treatment outcomes such as the emergence of dolutegravir HIVDR among PLHIV in Tanzania.

2. ACTIVITY OF CD4 MIMETIC COMPOUND YIR-821 AGAINST VARIOUS HIV-1 CLINICAL STRAINS

Kaho Matsumoto1, Takeo Kuwata1, George P Judicate2,3, Takamasa Ueno1, Hirokazu Tamamura4, and Shuzo Matsushita1

Background and purpose: HIV infection starts by binding CD4 on human cells to Envelope (Env) on the viral surface. Small CD4 mimetic compound (CD4mc) binds to CD4 binding site in Env and can inhibit the infection by blocking the interaction between CD4 and Env. In addition, it also stabilizes Env in a open conformation that enhances neutralization by antibodies against the CD4-induced (CD4i) epitope. We recently developed YIR-821, a novel CD4mc, which has potent antiviral activities with low toxicity. In order to assess the possibility of clinical application of YIR-821, we tested its antiviral activities using a panel of HIV-1 pseudoviruses from various subtypes.

Methodology: We cloned the HIV-1 env gene from blood samples of HIV-1-infected patients (31 subtype B, 16 subtype A, 13 subtype C, 7 subtype D, and 16 chimeric samples). Binding assay was performed by flow cytometry using HEK293T cells expressing Env. Entry inhibition/neutralization activities were determined by infection of pseudoviruses against TZM-bl cells. ADCC activity was determined using CEM NKr-CCR5 cells infected with recombinant viruses and the CD16 expressing NK cell line.

Results: Entry inhibition activity was observed in 13/31 of subtype B, 9/16 of subtype A, 5/13 of subtype C, 6/7 of subtype D, and 13/19 of chimeras(IC50<50μM). Enhancement of binding activity of αCD4i antibody was observed in all subtypes significantly. Enhancement of neutralization activity was observed in 13/31 of subtype B, 6/16 of subtype A, 3/13 of subtype C, 4/7 of subtype D, 8/19 of chimeras by anti-CD4i antibody, and 11/31 of subtype B, 9/16 of subtype A, 5/13 of subtype C, 3/7 of subtype D, and 8/19 of chimeras by IgG, which was purified from the corresponding patient. Enhancement of ADCC activity was seen against all the 6 recombinant viruses of subtype B.

Conclusion: YIR-821 was effective against more than half clinical samples belonging to various subtypes. This suggests that YIR-821 has the potential to be applied for a clinical use.

3. TRADITIONAL RISK FACTORS FOR CARDIOVASCULAR DISEASES AND THEIR CORRELATES AMONG TREATMENT NA VE HIV- INFECTED ADULTS INITIATING ANTIRETROVIRAL THERAPY IN URBAN TANZANIA.

Tosi Mwakyandile1, Grace Shayo1, Philip Sasi1, Ferdinand Mugusi1,2, Godfrey Barabona3, Takamasa Ueno1,3, Eligius Lyamuya1,2

Background: Cardiovascular diseases (CVDs) have become an important cause of morbidity and death among people living with HIV and/or AIDS (PLHIV) in the developed world during the era of the widespread use of antiretroviral therapy (ART). Little is known of the burden of, and traditional risk factors for CVDs among PLHIV in developing countries including Tanzania despite also having widespread use of ART.

Objective(s): To determine the traditional risk factors for CVDs and their correlates among ART naïve PLHIV initiating ART.

Methods: A cross-sectional analysis of baseline data of 430 participants of a trial intending to study the effect of low-dose aspirin on HIV disease progression among HIV-infected individuals initiating ART was done. Traditional risk factors for CVDs studied were age, alcohol consumption, cigarette smoking, individual and family history of CVDs, diabetes mellitus (DM), hypertension, obesity/overweight, and dyslipidaemia. A generalized linear model (robust Poisson regression) was used to determine the predictors for risk factors for CVDs.

Results: The median (IQR) age was 37 (28, 45) years. Females were the majority (64.9%). The most prevalent risk factors for CVDs were dyslipidaemia (88.3%), alcohol consumption (49.3%), overweight/obesity (29.1%), and hypertension (24.8%). The correlates of dyslipidaemia were WHO HIV clinical stage 3 and of overweight/obesity were alcohol consumption and WHO HIV clinical stages 2 and 3. Being overweight/obese predicted the occurrence of hypertension.

Conclusion: Traditional risk factors for CVDs in the treatment naïve PLHIV initiating ART are like the ones in the general population, with dyslipidaemia being more prevalent than in the general population. Identifying these risk factors and managing them at the time of ART initiation may lower future CVDs among PLHIV.

4. AGE-DEPENDENT PNEUMONIA AND T-CELL RESPONSES IN THE LUNG OF SARS-COV-2 INFECTED MICE

Chatherine Silas Mtali1, Rise Kurokawa1, Omnia Reda2, Yorifumi Sato2, Masahiro Ono3,4, and Takushi Nomura1

Background

COVID-19 pneumonia is prevalent in older adults, and disease severity is associated with aging. The dysfunction of innate, humoral, and cellular immunity is suggested to be involved in the exacerbations of COVID-19, but the detailed mechanism of the pathogenesis remains unclear. Thus, we focused on reactive T-cell dynamics in the subacute phase of SARS-COV-2 infected mice in the lungs with severe/mild pneumonia to elucidate the adaptive immune responses associated with SARS-COV-2 severity.

Materials and methods

In the following infectious experiment, we used Nr4a3-Timer mouse, which enables in vivo analysis of the temporal dynamics of TCR signaling. Old (n=7) and middle-aged (n=7) mice were inoculated intranasally with 1.0×105 TCID50 (30µl) of SARS-CoV-2/QHmusX. Old (n=6) and middle-aged (n=6) mock-infected mice were inoculated with 2% FBS containing DMEM. All mice were followed up with daily weight measurements and euthanized under anesthesia at five dpi. We evaluated pneumonia levels by visual analysis. Lung mononuclear cells were isolated by enzymatic treatment. The obtained cells were subjected to evaluation of cell populations and antigen-reactive T-cells in the lung by flow cytometric analysis.

Results

All infected mice exhibited body weight loss after SARS-CoV-2 infection. Old infected animals exhibited more significant body weight loss and slower recovery with significantly higher pneumonia levels compared to middle-aged mice. The middle-aged mice induced significantly higher levels of reactive T cells in the lungs than the old mice. In both middle-aged and older mice, inflammatory cells infiltrated the lungs.

Conclusion

Middle-aged mice induced highly T-cell responses, leading to viral control and suppression of SARS-CoV-2 pneumonia. The aging-related decline in T-cell responses in old mice may contribute to the severity of SARS-CoV-2 pneumonia, indicating a role in immune aging in COVID-19 pathogenesis.

5. NEUTRALIZING ANTIBODIES AGAINST SELECTED OMICRON SUB-LINEAGES AMONG INFECTED AND OR VACCINATED INDIVIDUALS IN DAR ES SALAAM, TANZANIA

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Background: As the world wrestled to control Sars-CoV-2 in 2020, Tanzania had opted for herd-immunity and selectively exercised Sars-CoV-2 preventive measures. This left the population highly exposed to the virus, which may have influenced the immunity generated. Three years post-pandemic, surveillance data on circulating variants is not public, only one-in-five have received at-most one shot of the monovalent vaccine and there is limited information on the population immunity to Sars-CoV-2. Hence we conducted a study to profile cross-neutralizing antibodies against new omicron sub-lineages in sera from adults in Tanzania during the B4/5 active wave.

Methods: A cross-sectional study was conducted at Muhimbili-National-Hospital. Plasma neutralization was determined at 50% inhibition dose(ID50), using pseudo-virus-neutralization assay against BA.1, BQ.1.1 and Xbb1.5. Neutralization titers are reported in median(IQR) and were compared between groups using Wilcoxon rank sum test, p-values <0.05 were considered statistically significant.

Results: The study participants (N=121), were categorized into three groups; the vaccinated-individuals n=69, 60%males, median-age[IQR]=40[30,51], 84% received one-dose of Ad26.COV2.S; the infected-vaccinated; n=26, 56%males, and median-age[IQR]=50[40,70], 100% received one-dose of Ad26.COV2.S; and infected only, n=26, 54% females, median-age[IQR]= 40[31,54]. The median (ID50) against BA.1, BQ.1.1 and Xbb1.5 decreased by 2.2- to 18.4 to 33 folds (p=0.01) respectively compared to the ancestral strain (D614G). Regardless of what came first, those who were infected and vaccinated, had significantly higher median neutralization titers against D614G, BA.1, BQ.1.1 and Xbb1.5 compared to those vaccinated or infected only; Those who got breakthrough infection, had higher median ID50 for all variants; the difference was statistically significant for the Xbb1.5 (p=0.03) compared to those vaccinated after infection.

Conclusion: The infected-vaccinated participants showed better cross-reactive immunity to all omicron sub-lineages compared to infected or vaccinated only groups. Participants who suffered breakthrough infection, had significantly higher ID 50 for the Xbb1.5 compared to those who got vaccination after infection.

6. NEUTRALIZING ANTIBODIES AGAINST CORONAVIRUSES IN HIGHLY SARS-COV-2-EXPOSED TANZANIAN HEALTH CARE WORKERS

Godfrey Barabona1, Doreen Kamori1,2 Isaac Ngare1,Ambele Mawazo2 Lilian Nkinda,2 Bruno Sunguya1,2, Eligius Lyamuya1,2, Takamasa Ueno1,2

Background: Natural or vaccine-induced heterologous (cross-reactive) adaptive immunity against SARS-CoV-2 and other coronaviruses can provide a robust defence against current and future coronavirus outbreaks. In this study, we investigate cross-reactive neutralizing antibodies against SARS-CoV-2 Omicron sub variants and other coronaviruses in sera obtained from frontline healthcare workers in Tanzania, two years since the beginning of the pandemic.

Methods: Whole blood samples from 200 HCW from two hospitals in Dar es Salaam were tested for IgG and IgM against SARS-CoV-2 spike protein using qualitative immunoassay. In addition, total SAR-COV-2 against RBP was measured using a quantitative ELISA. Neutralization capacity of antisera against Human corona virus NL63, SARS-CoV-1, MERS and SARS-CoV-2 –omicron subvariants BA.1, BQ1.1 and XBB1.5 was determined using pseudo virus neutralization assay

Results: Only 19.5% of healthcare workers (HCW) had received at least one dose of vaccination, with the majority (84.6%) having received a single dose of the Johnson & Johnson vaccine. The SARS-CoV-2 spike IgG antibody was detectable in 94% of the recruited HCW. Among the 186 serum samples tested, we found that 94% could neutralize the wild-type SARS-CoV-2, while 32.8% could neutralize SARS-CoV-1. Interestingly, all samples (100%) were able to neutralize NL63, but none showed neutralization against MERS. We observed a strong correlation between neutralizing antibody titers for SARS-CoV-2 and neutralizing titers for SARS-CoV-1. However, there was no correlation between neutralization titers against NL63 and either SARS-CoV-2 or SARS-CoV-1. When analyzed for cross reactivity against the new omicron sub variants, compared to BA.1, variants BQ1.1 and XBB1.5, demonstrated increases resistance to neutralization by antisera. However, being vaccinated was associated with better cross-reactive neutralization against both, the new omicron subvarinants and SARS-CoV-1.

Conclusion: Despite highly exposure to SARS-CoV-2 in our study population, being vaccinated improved the breath of the elicited humoral immunity.

7. CELLULAR IMMUNE RESPONSES TO SARS-COV-2 VARIANTS

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Although the Omicron variants of the SARS-CoV-2 show resistance to the vaccine-induced neutralizing antibody responses, they retain susceptibility to the cellular immunity. We characterized vaccine-induced CD8 T lymphocytes specific for various SARS-CoV-2 variants and identified HLA-A*24:02-restricted CD8+ T lymphocyte subset that strongly suppressed Omicron BA.1 replication in vitro. Mutagenesis analyses revealed that a G446S mutation, located just outside the N-terminus of the cognate epitope, augmented T cell receptor recognition of this variant. In contrast, no enhanced suppression of replication was observed against cells infected with the prototype, Omicron BA.2, and Delta variants that express G446. The enhancing effect of the G446S mutation was lost when target cells were treated with inhibitors of tripeptidyl peptidase II, a protein that mediates antigen processing. Taken together, the results demonstrate that the G446S mutation in the Omicron BA.1 variant affects antigen processing/presentation and potentiates antiviral activity by vaccine-induced T lymphocytes, leading to enhanced T cell recognition towards emerging variants.