CONFERENCE ABSTRACTS

Sub-theme 1: Innovative strategies to fight epidemics and pandemics

1. Evaluating the Yellow Fever Outbreak Response: An Intra-Action Review in Western Equatoria State, South Sudan.

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Background: On December 24, 2023, the Ministry of Health (MOH) of South Sudan declared a Yellow Fever (YF) outbreak after confirming a case in Yambio County, Western Equatoria State. The outbreak response involved multiple stakeholders, including the World Health Organization (WHO), UNICEF, and other partners. Over 166 days, 124 suspected cases and six deaths (Case Fatality Rate: 4.8%) were reported. An Intra-Action Review (IAR) was conducted from June 4-6, 2024, to evaluate the response, identify best practices, and address challenges to improve future outbreak management.

Methods: The IAR employed a structured, interactive methodology, covering eight pillars of the Incident Management System (IMS): coordination, surveillance, case management, infection prevention and control (IPC)/ WASH, risk communication and community engagement (RCCE), vaccination, points of entry (POE), and logistics. Participants included representatives from the MOH, WHO, UNICEF, and other partners. The review involved group discussions, plenary presentations, and consensus-building sessions.

Results: Key successes included timely detection and confirmation of the outbreak, meeting the 7-1-7 threshold (7 days to detect, 1 day to report, and 7 days to respond). The rapid deployment of vaccines from the International Coordinating Group (ICG) led to the vaccination of 465,798 individuals (77% coverage) across five counties. Coordination at national and subnational levels was effective, with weekly RCCE meetings and harmonized community mobilization efforts. However, challenges included delays in laboratory result dissemination, suboptimal resource mobilization, and low incentives for vaccination teams, leading to dropouts and reduced coverage in some areas

Conclusion: The IAR highlighted the importance of timely detection, coordinated response, and community engagement in managing YF outbreaks. Recommendations include strengthening surveillance and laboratory systems, improving vaccination microplanning, enhancing cold chain capacities, and integrating YF vaccination into routine immunization. The findings underscore the need for continuous improvement in outbreak preparedness and response, with a focus on multi-hazard contingency planning and capacity building at all levels.

2. Technical co-operation project omics training: a case study of japan international cooperation agency-technical in country training phase 1 and prospects for phase 2 and beyond-kenya

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Introduction: The Japan International Cooperation Agency (JICA) and the KEMRI partnered to implement a Technical In-country Training (TICT) to enhance research capabilities through skill-based training. This project was initiated in response to identified skill gaps in research, particularly in OMICS techniques, which are critical for advancing infectious disease research. The project aimed to strengthen KEMRI research capacity by enhancing researchers' OMICS knowledge and skills in times of pandemics thus making KEMRI a center of excellence for East Africa region as far as skills transfer and prompt response is concerned during pandemics by incorporating OMICS techniques. This presentation reflects on our experience with TICT phases 1-7 in relation to OMICS.

Methodology: Following extensive surveys to identify skill gaps in OMICS techniques, a tiered training program was developed. A total of 30 participants who included junior, middle, and senior research scientist at KEMRI were randomly selected to participate in the OMICS training from June 2023-January 2025. The training program combined online courses, lectures, and hands-on laboratory experiments conducted at KEMRI laboratories by local and

Japanese trainers. This blended approach provided both theoretical understanding and practical experience in OMICS techniques, such as culturing, serology, isolation,molecular techniques and bioinformatics.

Results: A Total of 30 participants across junior, middle, and senior levels completed the OMICS training. Their knowledge, skills, and technical capacity were significantly enhanced, enabling them to conduct advanced experiments, receive mentorship, and develop and validate POC diagnostic prototypes for epidemic-potential pathogens. Prototypes of diagnostics of pathogens with epidemic potential were developed and validated as viable POC tools.

Conclusion: This initiative has equipped KEMRI researchers with the capacity and technical skills including OMICS to respond to the ever-present threat of infectious diseases in the East Africa region thus creating a center of excellence at KEMRI. Up scaling and following up on this training will be crucial for maintaining and improving these skills, thereby advancing research capabilities. Ensuring long term sustainability of this program is very important for the region thus fostering its continuity in the research Programme.

3. The predominant risk factor for developing a severe case of Covid-19 in Inpatients, Khartoum, 2021

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Background: The Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); commonly known as Corona virus is the worst pandemic the world has faced this century amounting to 115 million cases, in just over a year and 2.56M deaths. This research investigated the predominant risk factor for developing a severe case of Covid-19 in Khartoum leading to hospitalization, the co-morbidities prevalent in these patients, and the case-fatality rate of the virus.

Methodology: It was conducted in the form of a retrospective Cohort study at Jabra Hospital for Emergency and Injuries; currently a Covid-19 isolation center, where the files of the hospitalized C0vid-19 positive patients admitted between the months of Nov 2020 and Feb 2021 were reviewed.

Results: Overall, the Case-fatality rate was found to be 64.7%, strikingly higher than all reported death rates worldwide until date. The majority of the patients presented with fever, cough and shortness of breath and with an underlying chronic condition (73.3%); mainly Diabetes (32.5%) and/or Hypertension (40.8%); both of which are preventable and manageable conditions by lifestyle modifications.

Conclusion: lifestyle habits are the main culprit for death due to Covid-19 and a lot can, and should be done to help those at risk to improve their lifestyles and thus prevent from getting the disease or a severe form of it, and also for those who are not currently at risk to maintain a healthy lifestyle thus also preventing themselves from getting a severe case of Covid-19.

4. High confidence and demand for hepatitis E vaccine during an outbreak in Bentiu, South Sudan: A qualitative study

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Introduction: In response to the 2021 hepatitis E outbreak in Bentiu internally displaced persons (IDP) camp, South Sudanese Ministry of Health with support from Médecins Sans Frontières (MSF) implemented the first-ever mass reactive vaccination campaign with HEV239 (Hecolin; Innovax, Xiamen, China). As part of an evaluation of the feasibility of hepatitis E vaccination as part of an epidemic response, we conducted qualitative research to assess knowledge, attitudes, and practices related to hepatitis E, perceptions about the hepatitis E vaccine, and barriers and facilitators of vaccine uptake in Bentiu camp.

Methods: We conducted eight focus group discussions (FGDs) of 6-8 participants with community leaders, the general population of vaccine-eligible adults, vaccine-eligible pregnant women (vaccinated and non-vaccinated), and healthcare workers. FGDs were separate by gender and were audio recorded, transcribed, and translated to English by trained research assistants. Two coders used inductive thematic analysis to organize emergent themes.

Results: Data were collected in November 2022 (~1 month after the completion of the vaccination campaign). Most individuals had personal experiences with hepatitis E such as being sick themselves or witnessing sick family and/or community members. Hepatitis E was perceived as a dangerous disease, and almost everyone was knowledgeable about transmission pathways. Participants believed children, pregnant women, and the elderly were the highest risk groups. Confidence in the organizations recommending the vaccine and the benefits and effectiveness of hepatitis E vaccine were high. Participants frequently made requests for additional hepatitis E vaccination campaigns and expanded eligibility criteria for vaccination (e.g. for

children and elderly and those outside of the camp). The primary barriers to vaccination among non-vaccinated participants were practical issues related to being away from the camp at the time of the campaign, but participants shared that some in the community were unvaccinated due to fears about injections, social pressure, misinformation about side effects such as infertility, concerns about why some groups were eligible for vaccination and not others (e.g. young children), and a lack of information about the vaccine/vaccination campaigns.

Conclusion: Personal experiences with hepatitis E illness, perceived severity of illness, and confidence in organizations recommending the vaccine were drivers of high demand for hepatitis E vaccines in the first-ever use of the vaccine in an outbreak setting.

5. Insights from a field evaluation of hepatitis E diagnostics during an outbreak in Bentiu, South Sudan

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Introduction: Our understanding of hepatitis E burden has been hindered by the lack of routine confirmatory testing of suspected cases. PCR and ELISA tests are considered the gold standards to confirm hepatitis E; however, they require advanced lab infrastructure that is not available in many settings where hepatitis E outbreaks occur. Rapid diagnostic tests (RDTs) could be a useful surveillance tool but their field performance has not been well characterized. Efforts to evaluate performance are complicated by the imperfect sensitivity of the current gold-standards. We used data from clinical hepatitis E surveillance (March–December 2022) in a health facility in Bentiu internally displaced persons camp, South Sudan to estimate the field performance of PCR (venous plasma), ELISA (venous plasma), and RDTs (venous blood) (Assure) and explore the time course of viremia and antibodies following HEV infection.

Methods: All suspected cases (acute jaundice syndrome) were tested with all three diagnostic tests and had a follow-up visit with repeat testing. We used a Bayesian latent class analysis to estimate the sensitivity and specificity of each test. Among those with a positive test at enrollment, we used accelerated failure time models to estimate the time from jaundice onset to a negative test, separately for PCR and IgM.

Results: Among 1,041 suspected hepatitis E cases, 196 had viral RNA detected by PCR (19%), 278 had IgM antibodies detected by RDT (27%), and 267 had IgM antibodies detected by ELISA (26%). PCR had the lowest average sensitivity (74%, 95% Credible Interval (CrI) 68, 79), though this varied significantly by the time from symptom onset to care seeking. The RDT had a sensivitiy of 93% (95% CrI: 89, 96), and ELISA had a sensitivity 98% (95% CrI: 96, 100). The specificity of PCR was 99% (95% CrI: 97, 99), RDT was 95%(95% CrI: 93, 96), and ELISA was 98% (95% CrI: 97, 99). In this setting, the positive predictive value of a PCR test was 88%, 77% for RDT, and 89% for ELISA. The negative predictive value was above 90% for all tests. The median time to a negative test after jaundice onset was 15 days (95% CI: 13, 18) for PCR and 37 days (95% CI: 26, 49) for ELISA.

Conclusion: In this field evaluation, the Assure RDT had high sensitivity and specificity, underscoring the potential utility of similar RDTs in surveillance for understanding burden of disease and detecting outbreaks

6. Application of Lot Quality Assurance Sampling Survey for quick gap identification and as a prioritization tool for action during water and sanitation related outbreaks

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Background: There are approximately 100,000 people distributed across five sectors in the Bentiu Internally Displaced Population (IDP) camp, in South Sudan. Following a recent Hepatitis E outbreak and reported fund cuts for water, sanitation and hygiene (WASH) services in the camp, a survey on the current WASH situation in the camp was conducted to identify WASH gaps and prioritize areas for action.

Methods: A cross-sectional lot quality assurance sampling (LQAS) survey was conducted. Nineteen households were sampled from each sector using geographic positioning system random sampling. Data were collected using the KoBoCollect mobile application. Weighted averages to population numbers in each sector and confidence intervals were calculated for each indicator.

Results: LQAS survey showed, that 6 out of 13 clean water supply indicators, 7 out of 10 hygiene indicators and 2 out of 4 health indicators didn't meet the minimum target coverage thresholds. Among the clean water supply indicators, only 68.9%% (95% CI 60.8%-77.1%) of households reported water availability six days a week while only 37% (95% CI 27%-46%) had water containers in adequate condition which is less than half of the target coverage required. Among the hygiene and sanitation indicators, only 17.9% (95% CI 10.9%-24.8%) of households had handwashing points in their living area, 66.8% (95% CI 49%-84.6%) had their water jug for cleansing after defecation, only 26.4% (95% CI 17.4%-35.3%) of the households could show one piece of soap and more than 40% of the household's wash bodies at funeral and wash hands in a shared bowl. Households with sanitary facilities at acceptable levels were 22.8% (95% CI 15.6%-30.1%) while only 13.2% (95% CI 6.6%-19.9%) of households have functioning hand washing points by the side of their latrines.Over the previous two weeks, only 57.9% (95% CI 49.6-69.7%) households reported no diarrhoea and 71.3% (95% CI 62.1%-80.6%) no eye infections among children under five years old.

Conclusion: The hygiene and sanitation situation is in dire situation and requires urgent intervention to stop the current hepatitis E outbreak and prevent further WASH-related outbreaks and disease morbidities.

Sub-theme 2: Strengthen one health approach to address communicable and non-communicable diseases

7. Treatment coverage achieved under two enhanced mass drug administration (MDA) regimens for trachoma in the Republic of South Sudan (RSS): Enhancing the A in SAFE (ETAS) trial results

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Introduction: The ETAS trial (NCT05634759) evaluated the cost, feasibility, and acceptability of enhanced MDA. Within ETAS, thirty communities in trachoma-endemic Kapoeta North County were randomized 1:1 to 2 treatment arms.

Methods: A triple-dose arm involved community-wide MDA, with follow-up treatment for children (ages 6 months to 9 years), 2 and 4 weeks later. A biannual arm included 2 community-wide MDA campaigns, 6 months apart.

Results: The triple dose arm included 17,626 participants, with 8,644 (49.0%) children. The biannual treatment arm included 16,974 participants, with 7,852 (46.3%) children. In the triple dose arm, 7,959 (92.1%) children received at least 1 MDA dose (from any round), 6,632 (76.7%) received at least 2 doses, and 5,515 (63.8%) received all 3 doses. In the biannual arm, 7,465 (95.1%) children received at least 1 dose of MDA, and 4,742 (60.4%) received both doses. In this trial, both treatment regimens achieved similar per-protocol coverage [triple dose (63.8%); biannual (60.4%)]. For both strategies, >90% of children received at least 1 dose. However, strategies are required to improve coverage across treatment rounds, particularly for families moving to farms and cattle camps.

Conclusion: Finally, it is important to determine whether these enhanced regimens ultimately resulted in trachoma reductions.

8. Using community-based participatory approaches to improve access to mass drug administration for trachoma elimination in a pastoral conflict area of Kenya

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Background: In Baringo County, Kenya, trachoma remains endemic despite repeated mass drug administration (MDA) efforts, with coverage in one of the wards consistently falling short of world health organization (WHO) targets. The disease is endemic in 12 out of the 47 counties in Kenya. Baringo county is a pastoral conflict, hard to reach area where eight rounds of mass drug administration (MDA) for trachoma have been implemented. In Loyamorok ward, treatment coverage has been below 68% against the WHO recommended threshold of 80%. Community engagements that promote participatory approaches are key to MDA success.

Methods: In this study, we describe community-based participatory approaches qualitatively developed and implemented during the intervention phase of a study that involved a pre-intervention, intervention and post intervention phases and aimed to address barriers of community participation and access to trachoma MDA. Interviews and focus group discussions were used to identify barriers to community participation. Community based participatory approaches were used to develop MDA Strategies to address the barriers.

Results: The barriers identified included power and gender dynamics, rampant insecurity, community myths and misconceptions, migration in search of water and pastures, vastness and terrain and ineffective teams which resulted to unsupervised

swallowing of drugs during MDAs. The MDA strategies co created with stakeholders including effective stakeholder engagement, enhanced social mobilization, community awareness creation on trachoma, effective planning and execution of MDA and implementation monitoring which were implemented during the implementation of 2023 MDA. Overall MDA coverage in the area increased from 67.6% in 2021 to 87% in 2023 thus meeting the WHO threshold of 80%.

Conclusion: The use of community-based, participatory approaches in the development and implementation of data driven strategies has the potential to positively influence MDA coverage for trachoma, and other neglected tropical diseases.

9. An Assessment Study On Level Of Knowledge In Tuberculosis Screening Among The Community Members In Meru County, Kenya

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Background: World over the level of knowledge has been found to influence the occurrence and prevention of tuberculosis infections among communities. In less developed countries, especially those with low household income levels have been adversely affected, with mycobacterium tubercle that causes over 95% mortality. Kenya is not an exception, hence TB is the fourth leading cause of death. About 81,515 of cases were identified and treated in the year 2015. According to 2015 and 2016 survey, the estimated prevalence in Kenya stood at 558/100,000.This is above the WHO which is 233/100, 000.Therefore, the objective of this study was to assess the level of knowledge on the uptake of TB screening among the community members in Meru county Kenya.

Methodology: The study design was cross-sectional survey carried out in Tigania East to assess the level of knowledge on the uptake of TB screening among the residents of Tigania East, Meru County, Kenya. Both qualitative and quantitative methods were used for data collection. The target population was 104,442 respondents from various households, within Tigania East. The sample size of 440 households from the five wards were randomly and proportionately selected. The key health workers and informant from FGDs interviewed were five and seven respectively.

Results: SPSS version 26 was used to analyze both descriptive and inferential statistics Therefore, the majority (68%) (n=288) respectively of the study participants were found to have never been screened for TB. The results were presented-by use of tables and bar- graphs.Chi-Squire was used to establish relationships between the study variables. T TB and religion were also found to be statistically associated with (X^2 =13.103, df 3; p value=0.004,), while religion and monthly income of the study participants were also found to influence and were associated with TB screening.

Conclusion: Therefore, study concludes that the level of knowledge among the residents of Tigania East, Meru County, Kenya, influenced the uptake of TB screening. Furthermore, the study recommends that the Ministry of Health should introduce policies on the implementation of Integrated Public health programme that will target various age groups and social class to equip them with knowledge on the importance of TB screening, causes, signs and symptoms, treatment and prevention to reduce TB incidences among the residents of Tigania East, Meru county and Kenya.

10. Attitudes of Medical Professionals towards Mentally ill patient: A Cross-sectional study at Juba Teaching Hospital

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Introduction: Mental illnesses are characterized by significant clinical disturbances in an individual's behavior, emotional regulation and cognition. According to the WHO, approximately 450 million people worldwide currently suffer from some form of mental disorder, accounting for 14% of the global burden of disease. Conflict-affected populations such as those in South Sudan are more vulnerable to certain mental illnesses i.e. Anxiety, Depression and PTSD. Nevertheless, individuals with mental illness frequently face stigma, prejudice, and discrimination not only from the general public but also from medical professionals. South Sudan has a limited number of trained mental health professionals and insufficient psychiatric facilities leading to a huge treatment gap. The aim of this study is to assess the attitudes of medical professionals towards mentally ill patients.

Methodology: The study was conducted in Juba Teaching Hospital, which is the largest hospital in the country. Participants were recruited through a stratified sampling technique with the aim of equal representation of all professions providing health services. Structured questionnaires consisting of four sets of questions were used to obtain data. The collected data were coded, tabulated and analyzed using MAXQDA software.

Results: Out of the 81 respondents, 77% showed positive attitudes towards mentally ill people. Furthermore, the majority of respondents (72%) are aware of the social and perceived stigma experienced by mentally ill people. Knowledge of mental disorders is shown to be varied across different professions and departments. More than 88% of medical doctors can name more

than 4 types of mental disorders with two or more symptoms. While only nurses working in the emergency and medical departments can only identify 2 types of mental disorders. Depression is the most known type of mental illness (65%), followed by Schizophrenia (20%) and others (15%).

Conclusion: Although the majority of medical professionals showed less stigma and discrimination against mentally ill people, lack of knowledge of mental disorders is clearly seen in all groups and departments of the hospital. There is need to introduce skilled based trainings to enhance capacities of hospital staff to improve patient care and help reduce the burden of mental illnesses.

11. Cancer Patterns in Juba, South Sudan: A Hospital Based Study

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Introduction: Cancer remains a major threat causing high morbidity and mortality worldwide. In underdeveloped countries like South Sudan affected by decades of political unrest and an under-funded healthcare system. There is limited data on cancer studies. The research aims to identify cancer patterns in Juba.

Method: The adapted a cross-sectional study design. All newly diagnosed patients in Juba from 1st January 2019 to 31st December 2023 were extracted from the registers of Juba Teaching Hospital Statistics Department using structured questionnaires. The study used EpiData software v4.7 to ensure quality data entry and SPSS v27 for analysis. Frequencies, percentages, charts related to the cancer patterns were performed.

Results: Of the 989 cancer cases, 455 cases (46%) were male, with a 95% CI of 42.9% to 49.1%. 534 cases (54%) were female, with a 95% CI of 50.9% to 57.1%. The majority of cases were of adults, making up 89.3%, Children 6.2% and Adolescents 4.6% of the total. This indicates the disparity of cancer in relation to sex and age. Most common cancer types were Head and Neck Cancers accounting for 24.6% of cases, with a 95% CI range of 16.7% to 21.7%. Breast cancer follows, with 11.3% of cases (CI: 9.5% to 13.3%). Endometrial cancer ranks third, with 9.2% of cases (CI: 8.4% to 12.4%). There was a marked increase in the incidence of breast, prostate, head and neck cancers.

Conclusion: The head and neck cancer were the most prevalent type of cancer in Juba, followed by breast and endometrial cancers. The growing cancers constitute breast, prostate, and colorectal, hepatocellular carcinoma, and leukemia. Therefore, establish routine breast, prostate, endometrial, cancer screening programs, invest in facilities for diagnostic imaging.

12. Changes in traditional risk factors for cardiovascular diseases in people living with HIV after 5 years of anti-retroviral therapy in Tanzania using LS7

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Background: Since the wide coverage of antiretroviral therapy (ART) globally, people living with HIV (PLWH) are living longer and are facing cardiovascular diseases (CVD) due to HIV-specific, and traditional risk factors. We sought to understand the changes in cardiovascular health (CVH) profiles among PLWH after five years post-ART compared to HIV-negative adults using the American Heart Association's Life's Simple 7 (LS7) to guide primary prevention efforts.

Methods: A cross-sectional analysis was conducted using the HTN& HIV datasets with PLWH and HIV-negative adults recruited from 2015 to 2021 in HIV clinics in Mwanza, Tanzania. Participants were screened every three months at the study sites. Modified LS7 definitions were applied. Difference-in-Difference model employed to investigate associations between HIV status and each LS7 metric overtime.

Results: 402 adult PLWH and 430 HIV-negative adults were included with a median age of 39 (32-46) years. Most PLWH were women (73%, p<0.073). The mean LS7 score was 4.2 (0.6). The proportion of ideal blood sugar was the highest [97.96% (0.3)], and the ideal diet [1.20% (0.2)] was the lowest. Older age and higher education levels correlated with lower total LS7 scores (P = 0.001). Males had an increase of about 0.37 points in the total LS7 score (p = 0.001), compared to female participants. Dietary quality and ideal blood pressure improved 5 years post-ART (Coefficient: 2.96, p = 0.000 and Coef. = 0.542, p = 0.000, respectively). Ideal total cholesterol decreased significantly (Coef. = -2.860, p < 0.001), and a drop in ideal BMI scores (Coef. = -0.642, p = 0.002) over time from intermediate-to-ideal (~1.8 PLWH and ~1.5 HIV neg) to intermediate (~1.6 PLWH and 1.3 HIV neg). PLWH had significantly higher BMI scores (Coef. = 0.412, p = 0.006) and ideal blood pressure (Coef. = 0.768, p = 0.000) than controls. The interaction term for BMI was associated with lower LS7 BP scores (Coef. = -0.401, p = 0.043). Post-ART, PLWH had a significant decrease in ideal physical activity (Coefficient: -0.52, p < 0. 001) and ideal blood glucose (Coef. = -1.218, p = 0.004) compared to the HIV-negative participants (Figure 1). The proportion of low PCE scores was higher.

Conclusion: CVH profiles significantly changed in PLWH following the use of ART. Our results suggest the need for promoting physical activity and weight management. Future research should investigate the effect of individual ART on cardiovascular health profiles and how to integrate the primary prevention approaches in HIV primary care.

13. Characteristics and Treatment Outcomes among Diabetes Patient Seeking Care at Empower Sites in Kenya

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Background: Diabetes Mellitus is one of the four major non-communicable diseases causing about 1.5 million deaths each year globally. By 2040, low income countries are projected to experience 92% increase in mortality due to diabetes. Diabetes poses a public health concern with costly public health implications especially in low middle income countries. It is therefore crucial to examine the risk factors for diabetes at national level to inform policy and national and county based prevention and control programs.

Methods: The study was cross-sectional a retrospective record and data from the SPICE is a digital health platform. diabetes was defined as fasting blood glucose of 7 mmol/l or more or a self- report of previous diagnosis of diabetes by a health care professional or currently receiving treatment for diabetes Descriptive statistics were used to determine the diabetes patients profile in Kenya and logistic regression was used to identify associated factors.

Results: Of the 16,765 diabetes patients included in the study a majority 82.8% were old cases where as a minority 17.2% were new cases. Further, the study participants comprised of 65.5% males and 35.5% females. Most of the study subjects were aged 60 years and above (34.2%), followed by 50-59 age groups (23.8%). Based on body mass index most of the study participants had 20.7% were obese, 33.7% were overweight. Diabetes mellitus type 1 is the most common among the study participants 85.4% followed by diabetes mellitus type 1 at 14.4% whereas gestation diabetes is rare 0.2%. Among the counties included in the study Makueni had the highest number of diabetes patients 29.4% followed by Nakuru County 19.0% on the other hand Nyandarua (0.6%) had the least number of patients.

Conclusion: The highest proportion of diabetes patients was among women and those aged 60 years and above. In addition, Nyandarua County had the least number of diabetes patients. There is need to increase screening rates and to tailor gender-specific health-promotion strategies to curb diabetes type II in Kenya.

14. Clinical outcomes and associated factors amongst HIV persons co-infected with COVID-19 in two large regional referral hospitals in Eastern Uganda

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Introduction: Globally People living with HIV (PLWHIV) are thought to be prone to severe opportunistic infections with COVID-19 inclusive. HIV-infected patients are at a risk of chronic co- morbidities, ongoing inflammation, progressive immune dysfunction, long-term infection by the virus and exposure to antiretroviral drug toxicities while COVID-19 patients are prone to cardiovascular, renal dysfunction, thrombotic, and central nervous system (CNS) complications. This study sought to determine clinical and outcome characteristics of people with HIV and COVID-19 co-infections in two large Regional Referral Hospitals in Eastern Uganda.

Methods: We conducted a retrospective review of medical records of patients who were HIV positive and contracted COVID-19 virus in Mbale and Soroti regional referral hospitals using a data abstraction tool. Data on age, sex, Complete Blood Counts (CBC), Cluster of differentiation four (CD4), Viral Loads and Clinical Outcomes was captured using Kobo collect toolbox, Microsoft Excel and analyzed using STATA version 15.0. Descriptive statistics was done, and frequencies were generated at the univariate level analysis while contingency and comparisons were done at the bivariate level analysis. The penalized logistic regression was conducted at multivariate level to establish the factors associated with COVID-19 severity among PLHIV.

Results: A total of 100 patient records had 38%(n=38) of individuals aged 40-50 years and 62%(n=62) females. Most patients (6 in 10) were peasants with 79%(n=79) having low- income levels. Other than HIV, 3 out of 10 patients had comorbidities. Out of 100 patients, 30 had hematological records, of which 9 had leukocytosis and3 had leucopoenia. Sixty seven percent (67/100) patients had immunologic records, of which 22 had CD4 counts that were <200 cells/mm3. Only 22% of patients had viral load cell counts, of which 8 had unsuppressed viral load. Nineteen percent (19/100) patients had severe COVID-19 and 14% (14/100) died. Socio-demographic factors significantly associated with severe COVID-19 outcomes were Sex (P=0.026), income status (P=0.003), other comorbidities (P<0.0001) and WHO clinical staging (P=0.001).

Conclusion: PLHIV and presenting with COVID-19 co-infection were females, peasants with low-income status. Neutrophilia, Leukocytopenia, social demographic disparities and vulnerabilities amongst HIV and COVID-19 co-infected patients were also observed. Clinical outcomes of HIV and COVID-19 co-infection may therefore vary depending on an interplay between host factors, viral factors and comorbidities.

15. Community Attitudes and Perceptions of Epilepsy in an Onchocerciasis-Endemic Region of Tanzania: Findings from a Mixed-Methods Study

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Introduction: Epilepsy remains a significant public health concern in Tanzania, with affected individuals enduring stigma, whether through actions or perceptions. This study assessed community attitudes and perceptions toward epilepsy in Mahenge.

Methods: A cross-sectional study utilizing a mixed-methods approach was conducted in eight villages in the Ulanga District of Mahenge between August and September 2023. Data were collected through a semi-structured questionnaire with 778 participants and 15 focus group discussions (seven with people with epilepsy). Quantitative data were analyzed using descriptive statistics and logistic regression, while qualitative data were analyzed thematically using NVivo version 14.

Results: Of 778 participants, over half were women (54.6%) with a median age of 41 years and most had completed primary education (79.9%). The majority of participants were aware of epilepsy (96.8%), yet they displayed low knowledge (51%), negative attitudes (45.5%), and perceptions (42.1%) towards the disorder. A low level of understanding was significantly associated with negative attitudes (AOR = 1.89, 95%CI: 1.41–2.53) and perceptions (AOR = 3.22, 95%CI: 2.05–5.04) towards epilepsy. Qualitative findings revealed that epilepsy was often attributed to hereditary factors, infections, witchcraft, and divine punishment. Misconceptions, such as the belief that epilepsy is contagious, were widespread. Traditional healers were commonly sought for initial treatment. Individuals with epilepsy faced stigma, including social isolation, derogatory labels, and barriers to education. Limited awareness of the potential link between epilepsy and onchocerciasis was also observed.

Conclusions: Despite high awareness of epilepsy, there is insufficient understanding, negative attitudes, and perceptions. Community-based education programmes are essential for promoting proper healthcare-seeking behavior and dispelling myths

16. Community Power: How Citizen Assemblies are Transforming Malaria Prevention in Rural Rwanda

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Introduction: Malaria is a global health challenge in Sub-Saharan Africa, and Rwanda is no exception. To combat malaria, community involvement is crucial. Furthermore, the community must own the fight against malaria and be empowered with the necessary skills and information to control the disease. The aim of this study was to describe and identify the sources of information used for malaria awareness and to assess the implementation of malaria control and prevention interventions in Rwanda

Method: A mixed-method study was employed. Quantitative data were collected through interviews with 406 febrile patients using a semi-structured questionnaire and presented descriptively. For the qualitative data, 41 healthcare providers from six health facilities in Rwanda were interviewed using an interview guide and thematically analyzed.

Result: Out of the 406 fever patients, >80% cited receiving health information from governmental hospitals, Citizens' assemblies (CA), and community health workers. Almost all of the healthcare providers (93%, 38/41) endorsed citizen assemblies as the main channels for malaria community education.

Conclusion: Malaria awareness and knowledge in Rwanda is high, with government clinics and community meetings being the primary sources of malaria information. The study identified CAs as an effective way to engage communities in malaria prevention and treatment. To strengthen efforts against malaria, the government should support and expand the reach of CAs, integrating them with the health system so that they can be monitored and evaluated for effectiveness.

17. Community Voices: Addressing Barriers To Malaria Prevention And Treatment In Namayingo District, Uganda

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Background: Uganda faces one of the highest malaria burdens globally, with over 90% of its population at risk. Malaria is the most prevalent illness in the country, responsible for nearly half of all diagnoses and the second leading cause of death. Gender

norms and delays in care-seeking complicate malaria control, particularly for pregnant women and children. Despite extensive malaria control efforts, structural barriers and misconceptions, including reliance on herbal medicine and economic activities like gold mining, exacerbate malaria transmission. This study aimed to leverage community voices to identify key drivers of malaria incidence and barriers to service uptake in Namayingo District, Uganda, to inform targeted interventions.

Methods: Drawing on their Hybrid Peer and Allied Health Worker model, mothers2mothers (m2m) implemented an integrated malaria program in Namayingo district between January and December 2024. This qualitative study involved in-depth interviews with 20 key informants and 15 focus group discussions with m2m program recipients. Thematic areas explored included drivers of malaria prevalence, socio-cultural and economic influences, barriers to healthcare access, and recommendations for driving sustainable impact and improving health outcomes. Data analyzed using an inductive content analytic approach.

Results: Focus group participants included 125 individuals, predominantly women (79%), aged 20-39 years (49%). Key informants included clinical and nursing officers; health workers; m2m Peer Mentors; community leaders; and members of village health teams. The drivers of malaria transmission identified by participants included poverty, poor adherence to household preventive measures, non-use or misuse of mosquito nets, use of herbal medicine, and gold mining activities. Barriers to service uptake included limited access to malaria testing kits, long distances to health facilities, low male involvement in uptake of child health services, and transport challenges. Community health workers and Peer Mentors identified as crucial in education and linkage to care as part of m2m programming.

Conclusion: Expanding malaria programs, enhancing health education, improving healthcare infrastructure, and leveraging community leadership are essential for improving malaria outcomes in Uganda.

18. Detection and Transmission Dynamics of Intestinal Schistosomiasis among Primary School Pupils in Tharaka Nithi County in the Mt. Kenya Highlands

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Background: Emerging infections cause considerable public health problems to humanity worldwide. The presence of Biomphalaria spp. vector snails, the compatibility of the snails with schistosomes,and the prevalence of intestinal schistosomiasis infection in school-going children were determined.The study sought to determine the presence and transmission dynamics of schistosomiasis in Tharaka Nithi, an emerging schistosomiasis transmission focus in the Mt. Kenya highlands. The Epidemiological Triangle Model (ETM), which sheds light on the transmission of infectious diseases, served as the foundation for this study.

Methods: A cross-sectional study design was used. The study targeted 178 students in grades 1–8 from the two primary schools in Tharaka Nithi located along the catchment area of Mukothima and Thanantu rivers. The number of study participants was determined using the Cochran formula. Study participants were selected randomly from the class register while ensuring equal numbers of boys and girls to avoid bias in results. The stool samples collected from the participants were processed using Kato Katz's quantitative screening technique for helminths and formal ether concentration technique for intestinal protozoa. Biomphalaria snails were collected and identified based on morphology. Snails were also bred and experimentally infected with a laboratory strain of Schistosoma mansoni and passed to the F5 generation to check the compatibility with the *S. mansoni* parasite.

Results: The overall mean snail parasite infection rate was 23.51% with a positivity of 19.38% in Mukothima River compared to 27.64% in Thanantu River. Although none of the field sampled snails were found infected with S. mansoni, pupils tested were found to be infected with the parasite with a positivity rate of 15.5%. Other parasites detected included Ascaris lumbricoides with a prevalence of 9.23% and Entamoeba histolytica with a prevalence of 8.48%. Results from the snail susceptibility experiment showed that the snails supported the development of S. mansoni to full patency, indicating the potential to support the schistosomiasis transmission cycle.

Conclusion: Despite not finding any field-sampled snails infected with S. mansoni, the demonstrated compatibility of the snails with the parasite and the finding of infection in school children suggests that transmission is a possibility. Schistosomiasis prevention strategies including deworming programs, school and community environment sanitation, and latrines provision are highly recommended to prevent further spread of the disease.

19. Diabetes and hypertension among HIV positive patients co- infected with COVID-19 in Eastern Uganda: A retrospective study

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Background: Non-communicable diseases (NCDs) are now a public health emergency, especially in the low- and middle-income countries (LMICs) where 85% of premature deaths occur from NCDs. People living with HIV (PLHIV) have a high prevalence of NCDs including hypertension, Diabetes, and obesity, due to the effects of ongoing inflammation, progressive immune dysfunction, long-term infection by the virus and exposure to antiretroviral drug toxicities. It remains unknown, the burden of NCDs among PLHIV co-infected with COVID-19 and their treatment outcomes. Through this study we sought to determine the prevalence and outcomes of NCDs and co-morbidities among HIV and COVID-19 co-infected patients in Soroti and Mbale regional referral hospitals in Eastern Uganda.

Methodology: We conducted a retrospective study at Mbale and Soroti Regional Referral Hospitals using records of patients who were HIV positive and contracted COVID-19 virus from March 2020 to December 2021. The variables captured included socio-demographics namely age, sex, the laboratory test, Diabetes, hypertension, and Clinical Outcomes. Data was captured using Kobo collect toolbox, downloaded in Microsoft Excel and exported to STATA version 14.0 for final analysis. Descriptive statistics were summarized as frequencies and proportions while contingency and comparisons done at the bivariate level analysis.

Results: From 100 patient records, 38% (n=38) were aged 40-50 years and 62% (n=62) females. Most patients (6 in 10) were peasants with 79% (n=79) having low-income levels. In addition, 30.53% (n=29) of the patients had hypertension and 25.84% (n=23) had diabetes. Also, 10 out of 34 (29%) patients with diabetes and hypertension died while 50% (n=17 out of 34) patients with both hypertension and diabetes had long hospital stay. Hypertension and Diabetes were associated with Severe COVID-19 (P<0.0001).

Conclusion: The prevalence of hypertension and diabetes was high in this study and associated with Severe COVID-19 disease among the participants. There is thus need for health workers to routinely screen, identify, and treat PLHIV for other infections such as NCDs and COVID-19 in order to avoid the development of severe disease outcomes.

20. Incidence, and Barriers To Uptake Of Health Services and Retention In Care In Namayingo District Uganda—Community Voice Perspective

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Background: There remains a notable gap between the estimated number of new tuberculosis (TB) infections and reported cases. In 2021, 40% of individuals in Uganda living with TB unaware of their diagnosis or unreported. Persistent structural and social barriers exacerbate this gap, misconceptions and inadequate knowledge hinder service uptake and treatment. This qualitative study explored drivers of TB prevalence and incidence, identified barriers to healthcare access and retention in Namayingo from the community's perspective.

Methods: Between January and December 2024, mothers2mothers (m2m) implemented an integrated TB program, drawing on their Hybrid Peer and Allied Health Worker model. For this research, in-depth interviews conducted with 20 key informants, and 15 focus group discussions held with recipients of the program. The study assessed, Barriers and drivers of TB prevalence, Socioeconomic, cultural, and behavioral factors influencing TB transmission, Gaps in existing TB interventions, and Recommendations for improving health outcomes. We used inductive content analysis of data.

Results: A total 125 participants took part in 15 FGDs, with a predominance of females (79%) and the majority aged 20-39 years (50%). Most participants were married (71%), had primary or secondary education (80%), and half (51%) were farmers with 35% identifying as Catholic. 20 Key informants included comprising five m2m Mentor Mothers, five Village Health Team members, three political leaders, five health workers, and one cough monitor. Majority of key informants (55%) were 40-49 years, and 60% held secondary education, with diverse religious affiliations. Drivers of TB; religious reliance on divine healing, poverty, stigma, overcrowded living conditions, and myths about TB. Barriers to service uptake were gaps in TB knowledge, stigma linking TB to HIV, treatment hesitancy, and inadequate laboratory infrastructure. The m2m program noted for improving TB case identification, community awareness, and healthcare access. Recommendations included expanding program coverage, strengthening education, scaling the Peer Mentor Mother model, and enhancing healthcare infrastructure.

Conclusion: Addressing the drivers and barriers identified by community members in Uganda is essential to maximize the impact of TB programs in this setting. Expanding reach, integrating services, scaling a TB Survivors Peer Model, and strengthening community engagement will improve TB prevention and care outcomes.

21. Factors Associated With Reengagement Into Care Following Interruption Among PLHIV On ART In Katakwi District Eastern Uganda

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Background: Reengagement into care following interruptions is vital for maintaining optimal HIV care. Despite efforts, Uganda faces a 20% treatment interruption rate, with only 58% of clients reengaging into care. However, studies on factors associated with reengagement into care are limited and do not provide rural specific context.This study aimed to identify factors associated with reengagement into care among PLHIV on ART in Katakwi District, Eastern Uganda.

Methods: This cross-sectional, mixed-method study investigated factors influencing reengagement into care among PLHIV on ART in Katakwi District. Data was collected from three high- volume Public ART clinics; Katakwi General Hospital, Magoro Health Centre III, and Ngariam Health Centre III—and included 355 adult participants with a history of treatment interruption. Clients who had already reengaged in care were scheduled for interviews during their appointments while the ones that had not yet reengaged were followed up and interviewed in the communities. Quantitative data was collected using standard questionnaire and entered into Excel and analyzed using STATA 18, while qualitative data was collected through focused group discussion. Return to treatment was assessed using frequency counts, percentages, and a 95% confidence interval. Bivariate and multivariate analyses using Chi-square and logistic regression were used to identify predictors, while qualitative data was analyzed by theme.

Results: Return to treatment was 63.9%, influenced by factors including occupation, distance to the health facility, community beliefs, and family support. Clients without an occupation were less likely to return to treatment (AOR = 0.17, 95% CI: 0.04–0.70, p < 0.015), and those living within 5 km of a facility were also less likely to return (AOR = 0.37, 95% CI: 0.11–0.67, p < 0.001). Positive community beliefs significantly increased the likelihood of returning to treatment (AOR = 3.05, 95% CI: 1.78–5.22, p < 0.001). Key qualitative themes included home visits and counselling as facilitators, while limited rural support, inflexible clinic hours, and religious beliefs promoting alternative healing were barriers.

Conclusion: Reengagement on ART was associated with occupation, facility proximity, and community beliefs. Enhancing supportive community beliefs, home visits, and counselling improved return rates, while barriers included limited rural support and inflexible clinic hours. Providing targeted support for unemployed clients, and clients living within the vicinity of the clinics is recommended. Continuous client education at both facility and community levels is essential for improving reengagement rates.

22. Factors Contributing to Occupational Hazards Among Healthcare Workers at Gurei Primary Healthcare Centre (PHCC)

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Background: In the realm of the intricate and perilous work environment, specific obstacles emerge in the quest to ensure the safety of healthcare professionals within this distinctive sector. The inherent mission of providing care for the ill often leads to the suspension of self-preservation behaviours that typically serve to safeguard workers, as a culture of altruistic dedication to patient care prevails. This study aims to explore the various factors that contribute to occupational injuries and hazards faced by healthcare workers in providing health services at Gurei PHCC in Juba. A healthcare worker is defined as all individuals engaged in actions whose primary intent is to enhance health. They make important contributions and are critical to the functioning of health systems. A protected healthcare worker has added benefit to contribute to quality patient care and health system strengthening. The purpose of this study was to assess the factors contributing to occupational risk among healthcare workers in Gurei PHCC.

Method: The study uses a descriptive cross-sectional design employing quantitative methods of data collection. In this cross-sectional study, after the approval of Upper Nile University and acceptance of Gurei PHCC, the questionnaires were used to collect primary data from 58 participants mainly healthcare workers at the facility. The collected data were then analyzed and presented in graphs using SPSS and MS Excel 2016 (version 16).

Results: Our research revealed that the majority of healthcare workers 75.5% were exposed to health hazards and the commonest include cuts, wounds and lacerations 36.2%. Whereas, the leading predisposing risk factors to health hazards were job-related pressure 40.5% and not wearing recommended and necessary PPEs 40.1%. A statistically significant relationship exists between work-related injury experience and lack of enough medical supplies/materials, workspace and poor working environment (p<0.005) in general.

Conclusion: The study contributed to the existing literature and knowledge in this field of study. Therefore, the hospital administration in collaboration with Ministry of Health, and national and international agencies should provide protective gear like gloves and train health workers on the various adverse risks of occupational hazards and how to prevent them. Focus on creating awareness of occupational health hazards at the hospitals by the relevant stakeholders, preventive measures that will incorporate manageable workloads to reduce work-related pressure on the healthcare workers.

23. Geospatial Analysis of Delayed and Non-Delayed Tuberculosis Diagnoses in Nairobi County, Kenya

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Background: Kenya has one of the highest burdens of TB infection, with an estimated prevalence rate of 558 cases per 100,000 among the adult population (NLTP 2016). In 2016, among people who developed TB, only 46% were diagnosed and started on treatment indicating that the gap in case detection points to persistent challenges in TB diagnosis. This current study explored the spatial distribution of diagnostic delays and non-delays in Nairobi County.

Methods: Cross-sectional laboratory-based research was conducted on 222 newly diagnosed patients at Mbagathi County Hospital, Mama Lucy Kibaki Hospital, and Rhodes Chest Clinic in Nairobi County. The study aimed at the spatial distribution of TB cases, both ≥21 days and <21 days since diagnosis. Geographical Information System (GPS) coordinates for the patients' residents were collected and analyzed to identify the pattern of spatial autocorrelation using Moran's I and Hot Spot Analysis to find the clusters of TB cases. Community health workers utilized Kobo Collect's online tool to collect socioeconomic and socio-demographic data.

Results: The spatial analysis of TB cases in Nairobi County demonstrated that delayed diagnosis was significantly spatially clustered. The analysis yielded Moran's Index of 1.987 and a Z-score of 17.87 (p < 0.001) revealing Spatial autocorrelation.

Conclusion: This current study revealed that delayed diagnosis was significantly spatially clustered and was influenced by socio-economic and healthcare-related factors. Delayed cases were clustered in informal settlement areas like Kibera, Mathare, and Mukuru, while non-delayed cases were reported more in affluent areas. Hotspots of delayed cases appeared in the central and western parts of the county. High-high clusters were detected in Njiru, Kayole, Pipeline, and Embakasi, whereas low-low clusters occurred in Waithaka and Nyayo Highrise. These diagnostic delays require targeted interventions that include outreach services, active case finding, and community awareness to improve timely TB diagnosis and reduce community transmission of TB.

24. Integration of NTDs and Social Innovation for elimination of Human African Trypanosomiasis (HAT) transmission in South Sudan

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Introduction: Human African Trypanosomiasis remains a significant public health burden in South Sudan, although cases declined from a historic peak in the 1990s. The escalation of interventions and strategies aimed at eliminating and interrupting HAT is still being hindered by insufficient funding that restricts the mapping of areas where the disease is endemic. The issue is worsened by insufficient government dedication and backing for NTDs. As such, current support for elimination and interruption strategies is donor-driven. The Ministry of Health, with support from partners, work in a consortium to interrupt and eliminate HAT transmission. We aimed to Integrate NTDs and social revolution for HAT elimination and interruption in South Sudan.

Method: Cross-functional mixed methods was implemented. We conducted active screenings at community levels, in Mundri East, West, and Tambura. Passive screening was implemented as a routine intervention at health facilities in eight mapped endemic counties. Supportive supervision to strengthen facility-based intervention was concurrently conducted. Community-based mobilization and SBC orientation meetings were held and cascaded to area chiefs and opinion leaders. Treatment and referral of cases were embedded activities. Training manuals for HCWs were developed and used for training.

Results: In 2021 and 2022, cases started to rise from 10 to 30, and in 2023, 46 HAT cases were diagnosed through passive screening at HFs, whereas 4 cases were identified through active screening. The cases total to 50 cases. 50 cases were referred and treated at Lui Hospital and Tambura, respectively. In 2024, Jan-August 11 cases were diagnosed and treated. During the routine surveillance services, 3 HAT cases were diagnosed in Juba and Trekeka counties. About, 31.6% (35/98) HCWs were trained on case management and 20.4% (20/98) laboratory technicians on diagnosis. 69.3% (52/75) of community-based social mobilizations and SBC agents were oriented toward HAT stigma.

Conclusions: Active and passive screening including behaviour change and communication strategies, remain challenging because of cultural and social norms attaching HAT cases to family bewitches and bad omens. Intensified HAT activities in 2023 increased the number of fresh cases. Areas previously free reported cases. Strengthening surveillance, monitoring and diagnoses is key to the elimination and interruption of HAT transmission in South Sudan need integration of services.

25. Investigating the Rising Cases of Hepatitis B Infections and Associated Risk Factors Among Populations in Juba, South Sudan

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Introduction: Hepatitis B virus infection represents a significant public health challenge on a global scale. It is estimated that more than one million individuals succumb each year to chronic liver diseases associated with this virus. The modes of transmission encompass perinatal transmission during childbirth, unprotected sexual activity, intravenous drug use, exposure to contaminated blood and blood products, as well as certain medical procedures. In South Sudan, there exists a notable lack of data regarding the prevalence of the Hepatitis B virus, its associated risk factors, and the knowledge, attitudes, and practices of the population, particularly among pregnant women who are at an elevated risk for this infection. The study was initiated in response to the rising incidence of Hepatitis B infections linked to various risk factors within populations, particularly in Juba, where approximately ten new cases are diagnosed weekly.

Method: This was a cross-sectional study conducted among a sample of 150 systematically selected among population in five block of Juba City, South Sudan. This descriptive survey uses standardized questionnaire checklists.

Results: The findings revealed that among respondents aged 15-29, significant risk factors included sharing of contaminated sharp instruments 42.7%, a higher susceptibility of HIV- positive individuals to Hepatitis B 27.3%, and exposure to blood and blood products 42.7%. Additionally, transmission risks during childbirth and umbilical cord cutting were noted at 16% and 32.7%, respectively. Other factors included breastfeeding 20%, blood or organ transfusions 16%, and the avoidance of condom use with unfaithful partners 43.3%. Furthermore, widow or widower inheritance was reported at 2.7%, and a concerning 45.3% of respondents had not been vaccinated due to low immunization coverage.

Conclusion: The primary risk factors for Hepatitis B infections encompassed the age group of 15-29, unmarried status, healthcare employment, multiple sexual partners, sharing of contaminated sharp instruments, the vulnerability of HIV patients, exposure to blood products, transmission during childbirth, breastfeeding, blood or organ transfers, lack of condom use with unfaithful partners, widow inheritance practices, low vaccination rates, and a general lack of awareness regarding the causes and preventive measures for Hepatitis B. These challenges significantly heighten the susceptibility of populations to Hepatitis B infections.

26. Knowledge, Attitudes and Perceived Risks of Diabetes Among Students In The University Of Juba
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Introduction: Diabetes mellitus has become a growing health concern globally, particularly in developing countries where its prevalence is increasing among younger populations. University students represent an important group, as they are at a transitional stage in life, often making decisions that influence their long-term health. This study aimed to assess the knowledge, attitudes, and perceived risks of diabetes among students at the University of Juba, South Sudan, in order to better understand their awareness and risk perception regarding this chronic disease.The objective of this study was to assess the level of knowledge about diabetes, the attitudes toward its prevention and management, and the perceived risks of diabetes among students at the University of Juba. Additionally, the study aimed to identify factors that may contribute to gaps in diabetes-related knowledge and attitudes within this group.

Methodology: Sample Size: A total of 424 students from various academic disciplines participated in the study. The participants were selected through a stratified random sampling method to ensure representation from different faculties and year groups at the university. The sample size was determined to ensure statistical significance and reliability of the results.

Results: The study found that while most students had heard of diabetes, the overall level of knowledge about its symptoms, causes, and prevention methods was relatively low. About 93.2% of the respondents were able to correctly identify the risk factors associated with diabetes, and fewer than 25% were aware of the necessary lifestyle changes required to reduce the risk of the disease. In terms of attitudes, a significant portion of students displayed a passive approach towards diabetes prevention, with many perceiving the condition as an inevitable part of aging. However, over 60% of the participants expressed concern about their own risk of developing diabetes, particularly those with a family history of the disease.

Conclusion: The findings suggest that while university students are somewhat aware of diabetes, there are significant gaps in their knowledge and attitudes regarding its prevention and management. The perceived risks of the disease were high, but this awareness did not necessarily translate into active efforts to reduce risk factors or adopt healthier lifestyles. This indicates a need for improved health education programs aimed at increasing awareness about diabetes among students.

27. Knowledge, Attitudes and Practices Regarding Onchocerciasis and Community-Directed Treatment with Ivermectin: A Cross-Sectional Study in South Sudan
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Introduction: Despite decades of ivermectin mass drug administration for the control of onchocerciasis (river blindness) in South Sudan, it continues to cause significant ocular burden in endemic foci. The objective of this study was to assess the community's Knowledge, Attitudes, and Practices (KAP) about onchocerciasis and Community Directed Treatment with Ivermectin (CDTI) in Raga and Deim Zubeir, Western Bahr el Ghazal state (South Sudan).
Methods: A community-based survey was conducted from 21st March to 2nd April 2023 in 11 villages of Raga and Deim Zubeir parishes. From among village residents, consenting persons with eye diseases and their carers were randomly recruited and interviewed about onchocerciasis and about CDTI using a structured questionnaire.
Results: A total of 932 persons participated in the study. The majority (93.8%) of participants had heard of onchocerciasis, 83.4% knew that transmission of onchocerciasis is by blackfly bites, and 33.5% identified that blindness is the main sign of onchocerciasis. Furthermore, 77.8% of participants perceived onchocerciasis as a preventable disease and 84.0% upheld that CDTI is useful. However, 12.3% reported that their relatives had missed ivermectin treatment during the last session. Of the 530 (56.9%) participants who had missed CDTI more than twice in the past, 89.4% gave as reason being absent at the time of drug distribution. A large proportion (55.6%) of participants also reported experiencing side effects after ivermectin intake.
Conclusion: The study community had relatively good knowledge about onchocerciasis and CDTI was considered to be useful to prevent onchocerciasis. However, a considerable proportion of persons still missed ivermectin treatment during CDTI campaigns due to their absence, suggesting that increased awareness and better timing of CDTI may contribute to increasing ivermectin up.

28. Knowledge, practices, and willingness to participate in an antiretroviral waste bottle collection project among HIV patients in Kampala, Uganda

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Introduction: The centralized distribution of antiretroviral therapy (ART) in Uganda presents an opportunity for large-scale HIV program-related waste management. ART medications are supplied through a national system coordinated by the Ministry of Health via the National Medical Stores (NMS) and Joint Medical Store (JMS). With the lifelong use of ART among people living with HIV (PLWH), there is a growing accumulation of ART- related waste, particularly empty plastic medication bottles. Improper disposal poses environmental and public health risks, such as pollution, drug misuse, and unintentional HIV status disclosure. However, Uganda currently lacks formal systems for the proper collection and disposal of this waste.
Methods: This cross-sectional study assessed knowledge, disposal practices, and willingness to participate in a proposed ART waste bottle collection project among PLWH in Kampala. Conducted at seven Kampala Capital City Authority (KCCA) HIV care clinics, the study consecutively sampled 426 PLWH during routine clinic visits. After an initial information session, participants were invited to give consent and complete structured questionnaires. Data were analyzed using R V3.0. Ethical approvals were obtained from the IDI REC and UNCST.
Results: Of the 426 participants, 73% were female, with a median age of 37 years (IQR: 29–48). While 82.9% recognized the harmful effects of plastic waste, 71.8% had never received education on proper disposal. Most disposed of ART bottles via pit latrines (45.3%) or general domestic waste (43.9%). Alarmingly, 34% discarded leftover pills with the bottles, and 58.5% did not separate plastic waste. Stigma associated with ART containers (68.6%) was a significant factor influencing improper disposal behaviors due to fear of status disclosure. Despite these challenges, 94% of participants expressed willingness to return ART bottles and unused or expired drugs to clinics. Marital status was independently associated with this willingness (AOR = 2.54, 95% CI: 1.04–6.79, p = 0.048), possibly reflecting greater support or reduced stigma among married individuals.
Conclusion: While PLWH in Kampala are willing to participate in ART waste return initiatives, gaps in knowledge and stigma remain key barriers. Addressing these through clinic-based education, discreet collection systems, and community partnerships will be vital to the success of sustainable ART waste management programs.

29. Multi-sectorial and community collaboration for mosquito surveillance to accelerate lymphatic filariasis elimination in Mkinga District northeastern Tanzania

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Introduction: Lymphatic filariasis (LF) is a leading physical debilitating disease transmitted by mosquitoes. Mosquito surveillance remains a cornerstone of LF control operations. However, like in many other developing countries, surveillance is impeded by inadequate funding, human resources, and multi-sectoral partnerships in Tanzania. Escalating climatic aspects are associated with the spread of LF transmission, requiring increased funding and human resources, and presenting an unbearable burden to an already overwhelmed health system. Research evidence has shown that community-based interventions and multi-sectoral partnerships are necessary for accelerating the elimination of many neglected tropical diseases. This study aimed to evaluate the effectiveness of multisectoral and community collaboration in accelerating mosquito surveillance activities to enhance LF elimination in the Mkinga district in northeastern Tanzania.

Methods: A cross-sectional mosquito surveillance study was conducted from July to October 2023 in Mkinga district (across five villages) in northeastern Tanzania involving community participants and researchers from Kilimanjaro Christian Medical University College-Pan African Malaria Vector Research Consortium, National Institute for Medical Research, and the Tanzania Meteorological Agency. The Polymerase Chain Reaction for detecting Wuchereria bancrofti was conducted on collected mosquitoes followed by the Pool screening method to determine the prevalence of infection. Secondary data analysis from previous LF vector studies (1991 to 2022), was correlated with climatological data using mathematical modeling to determine the influence of climate change on LF transmission.

Results: A total of 8567 Culex quinquefasciatus, equivalent to 99% of all mosquitoes were captured, with mosquito infection rates of 0.0% at Kichakamiba, 0.0% Mwandusi, 0.07% Mongavyeru, 0.21% BambaMwarongo and 0.79% at Kizingani. Correlation analysis revealed climate change influence (with a Pearson correlation (r) between -0.34 and 0.44) on mosquito infection rate, with a major shift of transmission from Anopheles to Culex.

Conclusion: This study indicates that a multi-sectoral and community collaboration for mosquito surveillance is a successful tool in accelerating the elimination of LF in Tanzania.

30. Predictors of Mosquito Nets Utilization in South Sudan: Statistical Modelling

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Introduction: Malaria burden remains extremely high with unstable upsurge during rainy seasons. This unacceptable burden duty-bound Ministry of Health to intensify coverage, ownership and use of Long-Lasting Insecticide Treated Mosquito Nets (LLINs) in control of malaria. Over 9 million LLINs were distributed in 80 counties to maximized availability, coverage, ownership, and usage. Yet the malaria burden has not been contained despite, free mass campaigns. LLINs remain key preventive interventions and a physical barrier against malaria vectors. A community-based survey aimed to explore knowledge, attitudes, and practices towards LLINs ownership and utilization in twenty-three counties of South Sudan where the malaria burden principally is high.

Methods: A community-based descriptive cross-sectional method implemented in 23 Counties with high malaria burden across 3 regions of Greater Upper Nile, Bahr El Ghazal, and Equatoria. The study began from March to May 2023. A multi-stage cluster sampling technique was used to select 466 household respondents. We administered semi-structured questionnaires to collect data and determine factors that predict the use, of a statistical model using IBM SPSS version 27. Odds ratios 95% confidence intervals and p-values presented. A $p < 0.05$ was exercised to assert statistical significance.

Results: A total of 466 survey interviews were conducted. As a result, the overall utilisation of mosquito nets reached 71.9%. The usage of nets was statistically linked with regions ($p = 0.013$), states ($p < 0.001$), highest educational attainment ($p = 0.047$), main occupation ($p = 0.012$), malaria protection nets ($p < 0.001$), and young children and pregnant women ($p < 0.001$). The odds ratio of educational attainment indicates that for every increase in participants who have attended school, they are twice as likely to use the nets at 95% (CI 0.539 - 3.947). The odds ratio of the useable mosquito net indicates that for every increase of mosquito nets in a household, the household's members are 1.26 times more likely to sleep under the mosquito nets with 95%CI (1.054 - 1.508).

Conclusion. A significant misconception on causes and transmission of malaria was observed in this survey. There's a low utilization and ownership of nets. Increasing coverage, nets availability and targeted health education to mothers and pregnant women on net utilisation and own need to enhancement in South Sudan.

31. Prevalence, risk factors and severity of cardiac autonomic neuropathy (CAN) in patients with Type 2 Diabetes Mellitus at a tertiary hospital in Zanzibar

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Background: Cardiac Autonomic Neuropathy (CAN) is a serious, underdiagnosed complication of long-standing Type 2 Diabetes Mellitus (T2DM), affecting cardiovascular autonomic control and leading to severe conditions such as hypoglycemia, cardiac arrhythmias, silent myocardial ischemia, and stroke. This study aimed to determine the prevalence, risk factors, and factors associated with the severity of CAN in T2DM patients attending a tertiary hospital in Zanzibar.

Methods: A cross-sectional study was conducted at Mnazi Mmoja Hospital, involving 364 T2DM patients. Data were collected using standardized questionnaires, and CAN was assessed with the Cardiac Autonomic Neuropathy Analyzer (CAN 504) using Ewing's tests. Demographic, clinical, and biochemical data were also gathered. Multivariate ordinal logistic regression was used to identify factors associated with CAN severity.

Results: An alarmingly high prevalence of CAN (79.9%) was observed. Of those with CAN, 60.4% had early CAN, 17.9% definite CAN, and 1.6% severe CAN. Significant factors associated with CAN included diabetes duration >10 years (AOR = 3.26, 95% CI: 1.82-5.86, p < 0.001), low income (AOR = 0.20, 95% CI: 0.07-0.57, p < 0.001), and a sedentary lifestyle (AOR = 0.05, 95% CI: 0.004-0.57, p < 0.001). Severe CAN cases were more likely to present with concurrent abnormalities in both sympathetic and parasympathetic systems, with strong associations found for any category of parasympathetic abnormality (AOR = 2.40, 95% CI: 1.29-4.45, p < 0.005; AOR = 5.04, 95% CI: 2.60-9.75, p < 0.001; AOR = 20.38,95% CI: 5.93-69.9, p < 0.001 for mild, definite, and severe abnormalities).

Conclusion: This study reveals a high prevalence of CAN among T2DM patients in Zanzibar. Longer diabetes duration, lower income, and a sedentary lifestyle were significantly associated with CAN presence and severity. Severe CAN cases were strongly linked to parasympathetic abnormalities, often accompanied by sympathetic dysfunction. These findings emphasize the need for regular CAN screening and targeted lifestyle interventions to manage CAN and mitigate cardiovascular risks in T2DM patients.

32. Sanitation, Hygiene Status And Carcass Contamination With Escherichia Coli 0157:H7 At Meat Handling Sites In Iganga Municipality

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Background: Foodborne infections, particularly those linked to *Escherichia coli 0157:H7* contamination poses significant public health risks in developing countries. These infections often result from poor hygiene practices in meat handling sites such as abattoirs and butcher shops. Despite interventions aimed at improving sanitation, the prevalence of meat contamination remains high, especially in rural and peri-urban areas. This study sought to assess the sanitation and hygiene status of meat handling sites in Iganga Municipality, the level of carcass contamination with *E. coli 0157:H7,* and the antibiotic susceptibility profile of *E. coli 0157:H7.*

Methods: This descriptive cross-sectional study involved meat handlers at abattoirs and butcher shops. Data were collected through structured interviews and observational checklists to assess hygiene practices. Carcass swabs were taken from meat samples and analyzed for the presence of *E. coli 0157:H7.* The antibiotic susceptibility of the isolates was determined using the Kirby-Bauer disk diffusion method.

Results: The study revealed that 86.6% of meat handlers had received personal hygiene training, yet improper practices such as low use of personal protective equipment (PPE) and inadequate hand washing persisted. The prevalence of *E. coli 0157: H7*contamination in carcass samples was 16%, indicating significant health risks. Antibiotic resistance was high for commonly used antibiotics like ampicillin and trimethoprim-sulfamethoxazole, though susceptibility to gentamicin and ciprofloxacin remained high. Study respondents who did not undergo any training regarding personal hygiene [AOR=2.48, CI=2.06-3.88, P=0.01] were 2.48 times more likely to have their carcasses contaminated with *E. coli 0157:H7* compared to those who underwent training. Odds of carcass contamination with *E. coli 0157:H7* were 3.11 higher [AOR=3.11, CI=2.02-5.51, P=0.04] among study respondents who reported to have suffered from diarrhea in the last 2 weeks compared to those who didn't. Those who reported to use soap/detergent during hand washing [AOR=0.06, CI=0.02-0.22, P=0.03] were 0.94 times less likely to have their carcasses contaminated with *E. coli 0157:H7* compared to those who didn't use soap/detergent.

Conclusion: Poor hygiene practices and the presence of multidrug-resistant *E. coli 0157:H7* in meat handling sites in Iganga Municipality highlight the need for stricter enforcement of hygiene standards and antibiotic stewardship requiring training for meat handlers hence reducing contamination and safeguarding public health.

33. Soil Transmitted Helminths (STH) and Water, Sanitation and Hygiene WASH): An integrated Approach to Disease Control, a case of Mwibona ward, Vihiga County – Kenya

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Background: Soil Transmitted Helminths (STH) remains a major neglected tropical disease of public health concern in endemic regions, with transmission closely linked to poor water, sanitation and hygiene (WASH) conditions. Mwibona ward in Vihiga County experiences persistent STH transmission due to poor hygiene and inadequate sanitation infrastructure, the objective was to evaluate the impact of integrating WASH interventions with Mass Drug Administration ((MDA) in reducing STH prevalence and reinfection rates.

Methodology: A cross-sectional study was conducted among school-aged children and households in Vihiga County in 2021. Public Health and Laboratory personnel used cluster sampling method to collect 1000 stool samples and analyzed for different species of STH i.e roundworms, whipworms and hookworms. The results showed that whereas the county STH prevalence was at 10.6%, Mwibona ward within the county had the highest prevalence at 31.3%. These data was analyzed alongside WASH related indicators within the area including latrine coverage, use of protected water sources, availability of functional handwashing facilities and knowledge on STH transmission and prevention which were equally low. As an intervention measure to reduce the STH prevalence, community WASH champions and change agents consisting of youths, religious leaders, bodaboda sector among other informal community group leaders were trained and deployed within the ward to advocate for improved WASH practices in schools and the community. Their key roles included; community sensitization on WASH-NTDs, equipping the community with knowledge on installation of homemade handwashing facilities, domestic soap making, promoting proper hygiene and conducting campaigns against open defecation.

Results: An end term survey was conducted in 2024 to measure the impact of WASH interventions advocated for by WASH champions and change agents. The results indicated that there was a great improvement in WASH status within the ward directly relating to the immense drop in prevalence of STH. Use of protected water had risen to 90% and latrine coverage to 87%. The community had embraced hand hygiene by increasing the availability of functional handwashing facilities to 96.7%. The survey also indicated that people's knowledge on transmission and prevention of STH had increased to 72% thus creating community-led demand for proper WASH status in the ward. all these WASH interventions had immensely led to a drop in the prevalence of STH to 18%.

Conclusion: The study underscores the need for a holistic, multi-sectoral approach combining Mass Drug Administration with sustained WASH improvements to achieve long term STH control. Policy recommendations include increased investment in safe water infrastructure, community-led sanitation programs and behavioral change initiatives.

34. Stakeholders' Perceptions on Current Mass Drug Administration Program and the Proposed Fixed-Dose Combination of Ivermectin and Albendazole in Kwale County, Kenya

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Background: Soil-transmitted helminths (STH) are a major public health challenge, especially in resource-limited regions such as sub-Saharan Africa, including Kenya. Mass Drug Administration (MDA) using albendazole or mebendazole is one of the primary strategy recommended by the World Health Organization (WHO) to control STH infections, mainly targeting at risk populations that includes pre-school and school-aged children in endemic areas. Despite high reported coverage rates, there are concerns regarding the effectiveness of these monotherapies, particularly against Trichuris trichiura and Strongyloides stercoralis, as well as the potential for drug resistance. A fixed-dose combination (FDC) of ivermectin and albendazole has shown promise in addressing these challenges. This study explored stakeholder perceptions of the current MDA program and the proposed FDC approach for STH control in Kwale County, Kenya.

Methods: This was a qualitative conducted in three sub-counties in Kwale County—Matuga, Kwale, and Msabweni. Two primary schools were purposively selected in each sub-county Focus group discussions were conducted with parents/guardians while in-depth interviews with teachers, public health officers, pharmacists, and neglected tropical disease (NTD) program managers.

Results: Stakeholders acknowledged the benefits of the MDA program, including percievedimproved classroom concentration among children and reduced health-related disruptions. Strengths of the current program included strong community involvement, effective sensitization campaigns, collaboration between the Ministry of Health and Ministry of Education, and structured monitoring through school-based implementation, ensuring high coverage. However, challenges were noted, including parental hesitance due to misconceptions, logistical issues with drug supply, and the need for improved coordination among stakeholders. The proposed FDC approach was positively received for its potential to enhance treatment effectiveness,

reduce pill burden, and improve compliance. However, concerns were raised about potential adverse reactions, parental skepticism, and the need for clear health communication.

Conclusion: This study highlights the importance of tailored health communication, logistical improvements, and stakeholder engagement to optimize MDA effectiveness and facilitate the introduction of the FDC approach. Addressing these barriers will be crucial for the successful implementation of the proposed treatment strategy.

35. Supervised or Home-Based? Exploring the Best Exercise Approach for Knee Osteoarthritis Management: A Systematic Review and Meta-Analysis

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Background: Knee osteoarthritis (OA) is a common and debilitating condition affecting older adults, often progressing to advanced stages and requiring total joint replacement. In fact, with the aging of the population, articular cartilage, which is a highly specialized tissue producing smooth, painless, and almost frictionless movement, is the most significantly affected during OA progression, with a very limited repair capacity. Additionally, no strict protocol for cartilage repair and regeneration has been established to date. Once the cartilage structure is compromised, osteoarthritic degeneration begins, leading to joint failure and pain as an end result. Diverse management strategies have been documented, and exercise therapy is widely recognized as the first-line approach for preventing and initially managing OA, providing a means to mitigate disability and delay the need for surgical intervention. This systematic review aimed to assess the comparative effects of home-based exercises (HBEs) and supervised exercises on pain relief and disability reduction in patients with knee OA.

Methods: A systematic search of PubMed, Cochrane Library, and ScienceDirect identified randomized controlled trials (RCTs) published between January 2001 and October 2024. Methodological quality of the included studies was evaluated using the Physiotherapy Evidence Database (PEDro) scale, and a meta-analysis was conducted to quantify the efficacy of these interventions. Statistics were performed in RStudio (version 4.3.1), and the statistical significance was predetermined at an alpha level of less than 0.05.

Results: Ten RCTs involving 917 patients were included, ranging from moderate to high methodological quality (PEDro score: 6.3 ± 1.2). Intervention durations ranged from 4 to 12 weeks. Both supervised and HBEs were found to be effective, but supervised exercises demonstrated statistically significant improvements in pain (SMD = -0.45 [95% CI $-0.79; -0.11$], p = 0.015) and disability (SMD = -0.28 [95% CI $-0.42; -0.14$], p < 0.001) compared to HBEs.

Conclusions: Despite the superiority of supervised exercises over HBEs, considering the cost-effectiveness and ease of implementation of HBEs, we developed recommendations to create a hybrid rehabilitation program that combines both approaches to maximize clinical outcomes. In the hybrid model, since supervised approach presents some limitations, such as limited access to healthcare facilities (lack of fitness centers, rehabilitation facilities, specialized equipment, or qualified healthcare professionals, and scarce of public transports), time and financial constraints, especially in the context of low resourced countries, we suggest a supervised exercise session per week against two to three sessions per week of HBEs.

36. The Effect of HIV prevention programs among Key Populations and the observed HIV case identification shift to a Priority Population in Njombe and Mtwara Regions,Tanzania

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Introduction: Studies show that HIV is disproportionately affecting key populations (KPs) as compared to other at-risk priority populations such as adult men and women at risk.

Method: Considering two sub-populations of KPs, men who have sex with men (MSM) and female sex workers (FSW), their HIV prevalence is recorded to be 25% and 26% respectively. This is more than sixfold of the general Tanzania's HIV prevalence among adults 15 years, and above which is at 4.7% (THIS2022/2023). This historically higher HIV prevalence among KPs made Tanzania's government in collaboration with development partners such as PEPFAR and USAID run strategic HIV prevention programs targeting KPs. The EpiC Project is a community-based HIV project funded by PEPFAR through USAID, aiming to control the HIV epidemic among Key and Vulnerable Populations (KVPs) in eleven regions of Tanzania including Njombe and Mtwara through evidenced-based comprehensive combination prevention strategies. The project addresses the needs of the disproportionately affected KVPs, to achieve the UNAIDS' three 95's epidemic control goals. Despite the records of higher HIV prevalence among KPs, the project data in the two regions suggests that there is a caveated trend of HIV case identification rates among KPs compared to other at-risk populations.

Results: From October 2022 to September 2023 case identification was 14% (122/846) in Mtwara and 9% (485/5283) in Njombe among adult men and women at risk while it was 4% (69/1927) in Mtwara and 6% (245/4080) in Njombe among

FSW and MSM combined. The same trend was observed from October 2023 to September 2024 where it was reported at 4% (373/9709) in Mtwara and 4% (803/20623) in Njombe among adult men and women at risk while it was 2% (105/4880) in Mtwara and 3% (194/6039) in Njombe among FSW and MSM combined.

Conclusion: The study suggests that there is a significant drop in HIV cases among KPs that has been attributed to several programmatic efforts targeting KPs leaving behind other at-risk men and women. Rising case identification among priority populations highlights the need for a similar focus. Revising strategies and increasing efforts to extend HIV service packages to priority populations will further advance epidemic control.

37. The Impact of Urbanization on The Epidemiology of HIV/AIDS Among Adults Attending Juba Teaching Hospital,Juba-South Sudan: A Cross-Sectional Study

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Introduction: Urbanization, a worldwide phenomenon that proceeds rapidly all around the world, that no region escapes, is the increase in the proportion of people living in towns and cities as a result of people moving from rural areas to cities and towns. Over the past 40 years, global population has almost doubled and built up areas expanded by over 150% urban areas. Urbanization is a key factor mediating the relationship between human migration and HIV/AIDS, particularly since urbanization is occurring faster in Sub-Saharan Africa than any other part of the world. HIV remains a major global health issue having claimed an estimate of 42.3 million lives to date.

Methods: A cross-sectional study design was used to know the impact of urbanization on the epidemiology of HIV/AIDS among adults attending Juba Teaching Hospital, Juba South Sudan. The study ran from October to December 2024. 271 participants were selected using systematic random sampling randomly for the study and primary data was obtained through questionnaires. The data was reviewed, organized, and displayed in the form of graph, tables and pie chart. Positive: 82 people (36.1%) reported that their last HIV test result was positive. The 95% CI for this result is between 30% and 41.9%.

Results: Of 227 respondents, 18-24 years: 13.2% of participants, with a confidence interval (95% CI) of 8.8% to 17.6%; 25-34 years: The largest group, 54.2%, with a 95% CI of 47.6% to 60.8%; 35-44 years: 18.9% of participants, with a 95% CI of 14.1% to 24.2%. Male: 54.6%, with a 95% CI of 48% to 61.2%; Female: 45.4%, with a 95% CI of 38.8% to 52%. Living in Urban Areas. $\chi 2=1.155$, p=0.76. The length of time living in an urban area does not significantly influence HIV test results. Age. $\chi 2=31.077$, p <0.001. Sex. $\chi 2=12.606$, p <0.001. Education Level. $\chi 2=24.706$, p <0.001 and among other factors.

Conclusion: A very high percentage of adults attending Juba Teaching Hospital have been tested for HIV. Among those tested, 36.1% had a positive HIV test result. Urbanization does not appear to have a clear and direct influence on HIV vulnerability in this study. However, factors such as sexual behaviors, education level, HIV awareness, among others play a significant role in determining HIV vulnerability. Adopting these factors, along with reducing stigma and improving access to healthcare, could help mitigate HIV risk in urban populations.

38. The prevalence of chronic headache among medical students in university of juba

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Introduction: Headache is a common neurological disorder, that may have negative impacts on quality of life of the affected individuals causing discomfort and pain, hence impairing their abilities to perform routine activities. A chronic headache (H15) is defined as headache that last 15 days or more per month over a period of months. Prevalence of chronic headache may be affected by age, sex, race and socioeconomic status. And it varies according to the population being evaluated, for instance chronic headache is prevalent among medical students due to prolonged study hours, using computers and phones, long clinical practice hours, anxiety and stress concerning examination, results and academic performance. chronic headache disorder studies are quite limited in our country especially among medical students; therefore, this study aim to determine the prevalence of chronic headache and its associated risks factors and their impacts on academic performance of medical students in university of Juba in South Sudan. The aim of the study is to determine the prevalence of chronic headaches among medical students of the University of Juba.

Methods: This is a descriptive cross -sectional study that was conducted in university of Juba among 385 undergraduate medical students from second years to sixth year, both male and female ranging from 20_35 years old using simple random sampling technique. Data was collected from December 2024 to January 2025 using a self-administered semi-structured questionnaire.

Results: A total of 385 medical students participated in this study. Nearly half were aged 25-30 years; vast majority were males. Whereas 345 (89.6%) unemployed study respondents, only 40 (10.4%) were employed. The prevalence of chronic headaches among Juba University medical students was 40.3%. of the demographic factors, chronic headaches statistically significant associated with age (p < 0.001), sex (< 0.001), Academic year (p = 0.003), occupation (p = 0.045). The chronic headaches interfered with education (p = 0.006), studied or revised (p = 0.043) made students miss classes practices or hospital rounds (p = 0.004), interfered with household work (p <. 0.001), interfered with social life (p <. 0.001).
Conclusion: The prevalence of chronic headaches among Juba University medical students was high. The risk factors that contributed to chronic headaches and its impact were age sex, Academic year, occupation, interference with your education, studied or revised missing classes practices or hospital rounds, interference with household work, interference with social life. Therefore, it is recommended targeted interventions to improve student health and the need for supportive measures and resources for affected students.

39. The Prevalence of Hypertension among University of Juba Teaching Staff

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Introduction: This research examines the prevalence of hypertension (HTN) and its related risk factors among faculty members at the University of Juba in South Sudan. Hypertension is a critical public health issue worldwide, yet there is a significant lack of data regarding its prevalence and effects in South Sudan.
Methods: To fill this knowledge gap, the study utilized a cross-sectional design, involving 121 participants from 11 schools and 3 centers at the university. Data were gathered through self-administered questionnaires and blood pressure measurements, adhering to the World Health Organization (WHO) guidelines.
Results: The findings indicated that 17.3% of the participants were diagnosed with hypertension. A notable gender difference was observed, with a higher prevalence in males (15.7%) compared to females (1.65%). Age emerged as a significant factor, with hypertension rates increasing from 7.79% in the 25-45 age group to 31.7% in those aged 46-66. This trend underscores the critical role of age in the development of hypertension. Additionally, various lifestyle-related risk factors were linked to elevated hypertension rates. Smoking was reported by 20% of participants, while 28% consumed alcohol, and 9.67% had high salt intake. These lifestyle choices contribute significantly to the hypertension burden within this demographic. The study also revealed considerable gaps in awareness and treatment of hypertension among participants. Only 44.62% of those with hypertension recognized their condition, and among those diagnosed, just 66.6% were receiving appropriate treatment. This lack of awareness and inadequate treatment highlight the urgent need for targeted public health initiatives.
Conclusion: In summary, hypertension represents a significant health challenge for the teaching staff at the University of Juba, with broader implications for national health strategies in South Sudan. The results underscore the importance of improving health education, implementing regular screening programs, and promoting lifestyle changes to reduce the prevalence of hypertension and its associated health risks. Addressing these issues is vital for enhancing the overall health outcomes of both the university community and the wider population.

40. Magnitude and Correlates of Overweight or Obesity among Adults with Long-Term Diabetes Mellitus in Rural Uganda: a cross-sectional study

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Background: Overweight and obesity are major risk factors for microvascular and macrovascular diseases associated with significant mortality and morbidity. These disease burdens are heightened in the presence of diabetes mellitus. Therefore, we aimed to determine the prevalence of overweight and obesity and its associated factors among adults with diabetes mellitus in rural Uganda.
Methods: This cross-sectional study was conducted over 5 months, from November 2017 to March 2018. We enrolled 190 adults with diabetes mellitus for at least 5 years at the Mbarara Regional Referral Hospital. We collected demographic and clinical data, and measured body mass index (BMI). The prevalence of overweight/obesity was estimated as the proportion of weight in kilograms divided by the height in meters squared and categorized using the World Health Organization (WHO) STEPs criteria. BMI ≥ 25 kg/m2 was considered overweight or obese. We used binary logistic regression to identify the factors associated with overweight/obesity. Statistical significance was set at less than 5%.
Results: Of 190 participants, 139 (73.16%) were female, the mean age was 61.5± 11.1 years, and the median duration of diabetes diagnosis was 10 [interquartile range, 7-15] years. A total of 122 (64.21%) participants were overweight and obese. In the multivariable logistic regression analysis, smoking (Adjusted odds ratio (AOR) 0.25, 95% confidence interval (CI) 0.10-

0.62), the 1-year increase in the duration of diabetes (AOR 1.08, 95% CI 1.05-1.14),and hypertension (AOR 2.33, 95% CI 1.05-5.15) were independently associated with overweight or obesity.

Conclusion: Overweight or obesity is prevalent among adults with diabetes for at least 5 years in rural Uganda. Individuals with diabetes mellitus may need to regularly monitor their BMI and engage in activities that ensure controlled BMI.

41. Understanding Key Factors Contributing to Mental Health Challenges Among Paediatric Nurses: A Systematic Review

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Background: In recent years, the mental health and well-being of nurses have garnered attention due to the increased risk of mental health challenges associated with their demanding profession. Among nursing specialties, paediatric nurses face unique and intensified challenges that make them particularly vulnerable to stress, burnout, anxiety, and depression.This systematic review aims to identify and analyse key factors associated with mental health challenges among paediatric nurses and explore how these factors interact to influence their well-being.

Methodology: The review protocol was registered in PROSPERO (CRD42024553062) and adhered to PRISMA guidelines. A comprehensive search was conducted across six databases: PubMed Scopus, CINAHL, Web of Science, Medline, and Embase. Eligible studies included both qualitative and quantitative studies that examined factors linked to mental health challenges among paediatric nurses. The quality of the studies was appraised using the Mixed Methods Appraisal Tool (MMAT). Data extraction and synthesis involved qualitative content analysis to identify key factors.

Results: Five studies from China, Turkey, Greece, Canada, and Saudi Arabia were included. The key factors identified were high workload, poor work environment, limited resources, strained interpersonal relationships, lack of support, irregular shift patterns, demanding roles, and financial strain. These factors were significantly associated with increased stress, burnout, anxiety, and depression among pediatric nurses. The interaction of these factors created a complex web influencing their mental health, with supportive work environments and adequate financial compensation mitigating some negative effects.

Conclusion: This systematic review identifies high workload, poor work environment, limited resources, strained interpersonal relationships, lack of support, irregular shift patterns, demanding roles, and financial strain as key factors impacting the mental well-being of paediatric nurses. These factors interact to exacerbate stress, burnout, anxiety, and depression. Effective interventions should include manageable nurse-to-patient ratios, adequate resource allocation, fostering a supportive work culture, flexible scheduling, targeted support for senior nurses, and improved financial compensation. Further research is needed to assess the long-term effectiveness of these interventions.

42. Balancing Benefits and Consequences: Environmental and Community Health Impacts from Upstream Natural Gas Operations - A Review

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Introduction: The advent of advanced extraction technologies, such as hydraulic fracturing and horizontal drilling, has revolutionized the upstream natural gas industry, unlocked vast reserves and significantly boosted production. This surge in natural gas availability has delivered substantial economic benefits, including job creation, revenue generation, and enhanced energy security. However, these advancements have also introduced a range of environmental and community health challenges (Keesstra et al., 2016).Balancing these benefits and consequences is critical for the sustainable development of the natural gas sector. Effective mitigation measures are essential to minimize environmental degradation and protect public health while maintaining the economic advantages that natural gas production provides (Rafindadi & Öztürk, 2015). The demand for natural gas is steadily increasing worldwide, positioning it as a key driver of socio-economic development in both developed and developing nations (Ali et al., 2021). Natural gas infrastructure plays a critical role in reducing greenhouse gas emissions, enhancing air quality, and integrating renewable resources into energy systems (Kinnon et al., 2018).

Purpose: Natural gas operations, particularly in the upstream phase, have been a subject of extensive research due to their environmental and community health impacts. Studies have highlighted the risks associated with methane emissions from natural gas developments, emphasizing the need for greater focus on methane leakage from infrastructure to mitigate

environmental and community health consequences (Alvarez et al. (2012) Fu et al., 2021). The environmental and community health risks from upstream natural gas exploitation and production have been a focal point, underscoring the importance of identifying and regulating these environmental and community health risks for sustainable development (Hasiholan, 2023). Local governments such as Tanzania, holding interests in upstream operations have been scrutinized for their environmental and community health responsibilities, aiming to enhance their effectiveness in fulfilling environmental and community health obligations within the context of Natural Gas activities (Abdurrahman, 2023). Research on the environmental and community health impacts of upstream natural gas operations underscores the need for comprehensive assessments, regulatory measures, and sustainable practices to balance the benefits of natural gas with its potential consequences.

Conclusion: By addressing methane emissions, enhancing environmental and community health responsibilities, and optimizing operations through eco-friendly approaches and advanced modeling techniques, the industry can strive towards more environmental and community health sustainable and responsible practices.

43. Finding Pulmonary Tuberculosis In Children In South Sudan And Uganda: A Prospective Observational Study

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Introduction: Pulmonary tuberculosis (TB) is widely underdiagnosed in children. The World Health Organisation (WHO) recommends two new treatment decision algorithms (TDA) for pulmonary tuberculosis in children that include the history of contact with a TB case, laboratory results (if available), and clinical or clinical-radiological scores (if x-ray available). We assessed the TB diagnostic cascade using the new TDAs and the change in TB case notification rates in routine facility data before and after algorithm implementation.

Methods: Prospective observational diagnostic study conducted in Malakal, South Sudan and Mbarara, Uganda, including all consenting hospitalized and ambulatory children under 10 years of age with signs and/or symptoms suggestive of TB, followed over 2 months. Means, proportions, and confidence intervals were calculated in R.

Results: Among 253 participants enrolled in South Sudan and 503 in the Uganda site, 89.3% and 22.7% were hospitalized, 92.1% and 21.1% had severe acute malnutrition (SAM), and 4.7% and 5.8% living with HIV (CLWHIV), respectively. TB treatment was initiated in 127 (50.2%) children in South Sudan and 115 (22.9%) in Uganda. Principal reasons for starting TB treatment were similar in both sites: algorithms' clinical-radiological score (67.7% in South Sudan, 55.7% in Uganda), contact with TB case (12.6% in South Sudan and 33% in Uganda), positive GeneXpert MTB/RIF (1.6% in South Sudan and 3.5% in Uganda), positive TB-LAM in CLWHIV (0.8% in South Sudan and 3.5% in Uganda). The proportion of children started on TB treatment increased from 1.6% (95%CI: 1.1 - 2.3) before the TDA implementation to 4.8% (95%CI: 3.9 – 5.8) post-implementation in South Sudan and from 0.6% (95%CI: 0.2 - 1.6) to 3.9% (95%CI: 2.6 - 5.7) in Uganda.

Conclusions: These results demonstrate that the new WHO-recommended TDAs can improve the diagnosis of TB in children and increase the number of children initiated on TB treatment in different contexts, including populations with high or low levels of SAM, inpatient and outpatient populations, and with or without x-ray. The TDAs enabled prompt TB treatment initiation in children, mostly triggered by the clinical and clinical-radiological scores. These results highlight the importance of clinical assessment (and radiology when available) as part of a multi-faceted approach to pediatric TB diagnosis in East Africa.

44. High epilepsy prevalence and excess mortality in onchocerciasis-endemic areas of South Sudan

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Background: Epilepsy remains a significant public health concern in onchocerciasis-endemic regions with intense transmission, where the infection is strongly linked to a high epilepsy burden. This study examined epilepsy prevalence, mortality, and the association between onchocerciasis transmission and epilepsy, including probable nodding syndrome (pNS), across five onchocerciasis-endemic counties in South Sudan.

Methods: House-to-house cross-sectional surveys (2021-2024) identified suspected persons with epilepsy (sPWE) and retro-spectively documented deaths among sPWE and individuals without epilepsy (IWE). Epilepsy diagnoses, including pNS, were confirmed by trained clinicians. Onchocerciasis recent transmission was assessed via anti-Ov16 seroprevalence in children aged 3–9 years. Age- and sex-standardised epilepsy, pNS and anti-Ov16 prevalence were calculated, along with age- and sex-standardised mortality rates and standardised mortality ratios (SMRs) with 95% confidence intervals (95%CIs), using IWE as the reference population. Weighted arcsin-transformed linear regression explored the association between epilepsy and anti-Ov16 prevalence.

Results: Among 34,345 individuals screened, 211 deaths occurred in 4,069 person-years for sPWE versus 701 deaths in 82,177 person-years for IWE. Epilepsy prevalence was 4.1% (range=2.3-7.1%), and pNS prevalence was 1.5% (range=0.6-2.2%). Anti-Ov16 seroprevalence among children aged 3–9 years was 23.3% (range=1.4-44.1%). Each 1.0% increase in standardised anti-Ov16 seroprevalence was statistically significantly associated with an average rise of 0.10 percentage points in standardised epilepsy prevalence and 0.04 percentage points in standardised pNS prevalence. Median age at death was lower for sPWE (20 years) than IWE (39 years; Mann-Whitney U-test p-value<0.0001). Standardised mortality rates per 1,000 person-years were statistically significantly higher in sPWE (48.4,95%CI=41.9-55.8) than in IWE (6.1, 95%CI=5.6-6.7). The overall SMR was 6.8 (95%CI=5.8-7.8), indicating sPWE were seven times more likely to die than IWE.

Conclusion: The substantial epilepsy burden in onchocerciasis-endemic regions is driven by both high epilepsy prevalence and increased mortality. Strengthening advocacy efforts is crucial to enhancing onchocerciasis elimination programs, reducing epilepsy incidence, and ensuring consistent access to anti-seizure medication.

45. Physical Activity Levels and Its Associated Factors Among Adults In Vihiga County, Kenya

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Background: Sedentary lifestyle is a major risk factor for cardiovascular diseases (CVDs) which account for 8% of Kenya's non-communicable disease (NCD) burden. Prevalence of physical inactivity remains high globally. There is paucity of data on physical activity levels in rural Sub-Saharan Africa to inform effective interventions. This study sought to establish levels and factors associated with physical activity in a rural population in Kenya.

Methods: A cross-sectional study in Vihiga, a predominantly rural County in Kenya. Participants were adults aged ≥18 years drawn from four community markets. Stratified sampling (stratified by ecological zones and rural urban status) was used to select the four markets and Sampling the Next Customer Exiting the Market method for the respondents. Researcher admin-istered e-questionnaire adapted from International Physical Activity Questionnaire (IPAQ) was used to collect data. Physical activity was calculated as the sum of all Metabolic Equivalents (MET)-minutes/week. Multivariable binary logistic regression analysis was used to identify correlates of physical activity.

Results: Out of the total 375 (m: 49%; f: 51%) participants, 27% were physically inactive (m: 22%; f: 32%;) and 42% engaged in low level physical activity. Majority of the respondents (75.5%) engaged in transportation-related physical activity while only 32% engaged in leisure physical activities. The odds of being physically inactive were 1.93 times higher for females, 2.62 higher for those aged ≥65 years, and 3.62 higher for those with high health literacy. 48% with high health literacy were in the early working age group (15-24 years). Majority (53%) received health information from healthcare workers, and more so for the 60% physically inactive participants.

Conclusions: This study highlights the need for targeted community interventions to address the observed physical inactivity especially among women and older adults in rural Kenya.

46. Assessment of Food Safety Knowledge and Hygiene Practices among Street Food Vendors in Kiambu County, Kenya

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Introduction: Street food businesses have evolved from disorderly, substandard trading to sustainable, significant informal sector businesses. This sector is becoming increasingly significant in the economies of many African countries because of weak economic progress caused by several factors. Despite being associated with numerous socio-economic advantages, the sector has been identi-fied as a possible health hazard resulting from inadequate food hygiene and safety practices during food preparation and serving. This study aimed to investigate food safety knowledge and hygiene practices among street food vendors in Kiambu County, Kenya.

Methodology: The study employed a purposive random sampling method, using a descriptive cross-sectional design, to sample 258 street food vendors across five Sub- counties in Kiambu County, Kenya. Structured questionnaires, comprising both open and closed-ended questions, and observation checklists, were used to collect the required data. Data collected from the research was coded and accurately entered into programming sheets of IBM SPSS Statistics 25 and Microsoft Excel 2016 for analysis. Statistical parameters such as frequencies and percentages were applied in describing the data, and the findings were presented in tables, bar charts, and graphs.

Results: The results showed that street food vendors practiced minimal hygiene and sanitation. Only 24% of the vendors wore aprons and hair caps, 36.4% wore jewelry, and 91.5% handled food and money without washing their hands between services. Over 58.1% of vendors served food with their bare hands, and a majority (64.7%) did not have refrigerators to store foodstuffs. Three-thirds (32.2%) of the vendors disposed of wastewater in the selling area, while 36.4% poured the wastewater on the streets just near the vending area. The presence of flies was observed among 49.2% of the vendors, and a few (9.7% and 14%) vendors operated near garbage areas and sewage drainage. A vast majority (78.3%) were untrained in food hygiene and safety, 76% did not undergo medical examinations, 57.4% were unlicensed, and 79.8% were unaware of foodborne diseases.

Conclusion: The study findings indicate that street food vendors in Kiambu County had poor food safety knowledge and practiced minimal food hygiene and sanitation posing a food safety risk to consumers. Therefore, there is a need to train street food vendors on safe food handling and preparation practices to prevent potential food safety risks. Hence, local authorities should improve the regulatory framework and create opportunities for street food vendors to operate legally and safely to improve the safety of street-vended foods.

47. Insights from seventeen years' experience of quality monitoring and laboratory accreditation maintenance at NIMR-Mbeya Center

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Introduction: Quality monitoring system serves as cornerstone for clinical and research laboratories, ensuring the delivery of dependable results and high levels of satisfaction among customers or patients, both locally and globally. NIMR-Mbeya Medical Research Center (NIMR-MMRC) has a longstanding commitment to maintaining the quality of laboratory services and testing through its external quality assurance (EQA) system and accreditation programs. This retrospective study seeks to offer insights into the performance of the NIMR MMRC safety laboratory over the seventeen-year accreditation period with the College of American Pathologists (CAP), the objective is to evaluate the experience of quality monitoring and laboratory accreditation maintenance at NIMR-Mbeya Center for seventeen years.

Methodology: A retrospective evaluation was done on quality indicators across various sections of the NIMR-MMRC safety laboratory, including Hematology, Serology, Biochemistry, Viral Load, and Immunophenotyping. The evaluation considered nine key indicators aligned with CAP standards, such as TAT, CAP-EQA performance, competency, lot-to-lot testing, quality management, safety incidents, equipment maintenance, CAPA, inventory control, and audit reports, spanning seventeen years from 2007 to 2023.

Findings: The overall performance of EQA proficiencies in the last sixteen years from 2007-2023 was above 90%. Of which >95% was observed in hematology, clinical chemistry, viral load and immunophenotyping sections, and 100% was observed from serology section. Furthermore, the report based on CAP audits which was done after every two years since 2007 were 99% ± 0.5% as overall performance in all audited key quality indicators. Lastly the threshold for external quality control panel reports to pass was ≥80% compared to 95% as criteria for CAP ISO 15189 to be accredited.

Conclusion: High-quality monitoring and management plans are vital for reliable results. Despite operational challenges, NIMR MMRC Safety Laboratory has maintained high standards for 17 years. Therefore, continuation of external EQA schemes and audits is crucial for ensuring consistent provision of dependable results.

48. Awareness of pre-exposure prophylaxis for HIV prevention among men who have sex with men (MSM) in Rwanda

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Background: HIV remains a global public health concern, and pre-exposure prophylaxis (PrEP) is an effective prevention strategy for populations at high risk, including men who have sex with men (MSM). Rwanda incorporated PrEP into its national HIV prevention guidelines in 2018. However, data on PrEP awareness among MSM in Rwanda remain

scarce. This study examined the demographic, behavioral, and social factors associated with PrEP awareness among MSM in Rwanda.

Methods: This study involved secondary data analysis from a cross-sectional Bio-Behavioral Surveillance (BBS) survey conducted in 2024 using respondent-driven sampling (RDS). Descriptive statistics assessed PrEP awareness proportions. Using Stata 17 logistic regression models were used for bivariate and multivariate analysis to identify predictors. Adjusted odds ratios (AOR) with 95% confidence intervals (CI) were calculated, and statistical significance was set at p<0.05.

Results: We analyzed data of 3757 MSM and of them with nearly a half (48.1%) aged 18 to 24 years, the proportion of MSM aware of PrEP was 48.57% (95% CI: 45.76–51.39). Regional disparities revealed significantly higher awareness in the North (aOR: 2.66; 95% CI: 1.80 – 3.94) and South (aOR: 1.45; 95% CI: 1.07–1.97) compared to the East. Sex workers (aOR: 29.29; 95% CI: 6.25–137.29) and self-employed individuals (aOR: 3.37; 95% CI: 1.53–7.42) demonstrated the highest likelihood of awareness compared to agro-farmers and other occupations, such as merchants (aOR: 2.87; 95% CI: 1.47 - 5.60) and carpenters (aOR: 2.42; 95% CI:1.06 - 5.50), were also significantly associated. Of the behavioral factors included only condom use during sex (aOR: 1.34; 95% CI: 1.04 – 1.72) Similarly, as social factors, higher likely likelihood was also among those who heard or received messages about HIV/AIDS in the last six months (aOR: 2.75; 95% CI: 2.12–3.57). Interestingly, loss of respect in the community did not affect participants' awareness on PrEP, instead it was associated with higher likelihood (aOR: 1.59; 95% CI: 1.15–2.18).

Conclusion: Nearly half of MSM in Rwanda are aware of PrEP, with awareness influenced by regional behavioral, and social factors. Targeted interventions addressing regional disparities are essential for improving PrEP awareness and utilization among MSM. Strengthened outreach and educational campaigns can enhance HIV prevention efforts.

49. Malaria parasite burden in settings across Uganda receiving different combinations of mosquito vector control interventions

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Background: Uganda registered an additional 597,000 new malaria cases in 2023. Indoor residual spraying (IRS) and insecticide treated bed nets (ITNs) are the main mosquito vector control interventions in Uganda. There is limited evidence on the long-term impact of co-deployment of multiple control measures on Plasmodium falciparum parasite and disease burden. This study compared Malaria burden in settings (Gulu and Yumbe districts) receiving different combinations of mosquito vector control measures.

Methods: 937 participants from over 400 Households and 200 Villages in Yumbe District participated in this study. In this district, both IRS and ITNs have been simultaneously deployed. Data was collected over a period of Six months. Findings were compared with that of another study in Gulu district. From 2014 till this date, ITNs have been the main mosquito vector control methods in Gulu. Household demographic and clinical information were captured. Field-based malaria testing was conducted using Rapid diagnostics kits. The quantification of the malaria parasites was done using a thick and thin film. Chi Square statistics: Monomial, binomial and multinomial regressions were done in STATA (ver 18). The unit of measure was individuals and households for demographics and clinical interventions respectively.

Results: 98.42% of Households in Yumbe district use both IRS and ITNs while 86% of households in Gulu district owned at least one bed net. 75% of the nets were distributed by the Government and impregnated by a pyrethroid. Malaria test positivity was 50.6% among participants from households with IRS + ITNs while it was 66.48% among participants from households with bed nets alone. There was no significant difference in malaria test positivity among participants from households with no bed nets and those with at least one. 52% of participants from households without bed nets tested positive for malaria. Test Positivity stood at 40%, 28%, 28%, 23% and 11% for participants from households with one, two, three, four and five bed nets respectively. IRS significantly protect against new infection (RR=1.103). Children <5 years carry a higher parasite burden.

Conclusion: Simultaneous deployment of bed nets and IRS does not significantly reduce Malaria Prevalence or test positivity. In both settings, children under 5 years carry the biggest parasite burden. We are not certain if the addition of Vaccine to the arsenal of malaria control will come with real additional benefit.

50. Prevalence of depression and its associated factors among adolescent living with HIV in Post Conflict Juba City, South Sudan

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Introduction: Depression is a leading cause of disability worldwide and major contributor to overall global burden of disease. depression cause adolescents on HIV care and treatment to de-engage from treatment hence poor treatment outcomes. This

study was to determine the prevalence of depression and associated factors among adolescents living with HIV in post-conflict Juba City South Sudan.

Methods: This was a cross-sectional study with 467 adolescents living with HIV in post-conflict South Sudan. Participants were randomly selected from Juba Teaching and Al Sabah Children Hospital. A questionnaire in Kobo application was used to collect information on socio- demographic, sexual and substance use history. MINI 7.0.2, DSM-V and MINI Kid depression diagnostic tools were used to assess depressive Symptoms. Data was downloaded and exported into STATA 14.0 for univariate, bivariable and multivariable analyses.

Results: 21.2% of the adolescents aged 10 to 24 years living with HIV had depression. After adjusting for multiple factors, the prevalence of depression has a positive association with marriage (aPR 2.9, 95% CI 1.30-6.51, p=0.009); changed care givers (aPR 2.5 95% CI 1.16-5.51, p= 0.020); had family history of depression (aPR 3.02 95% CI 1.63- 5.58, p<0.001); drank alcohol on a weekly basis (aPR 3.02 95% CI 1.15-10.78, p=0.028); reported history of rape (aPR 3.31 95% CL 1.58- 3.96, p= 0.002) and had hospital admission in the previous 12 months (aPR 3.36, 95% CI 1.87 - 6.05, p=0.001). The prevalence of depression has negative association in adolescents who have showed some interest in social support (aPR 4.64, 95% CI 1.37-15.64, p= 0.013) and in those whose caregivers showed interest in their activities (a PR 0.25, 95% CI 0.06- 0.98, p=0.047).

Conclusions: The study found that one in five adolescents living with HIV in post conflict Juba City has depression hence necessitating urgent interventions for their treatment and psychosocial support by the Ministry of health department of mental health and the supporting partners HIV care and treatment. The identified factors associated with depression (family history of depression, changed of caregiver, rape, alcohol drinking, hospitalization and social support from caregiver) could be used by the Ips to screen and identify adolescents who needed additional treatment and support during each of their clinical visit.

51. Reaching the 1st 95 in South Sudan - A program to optimize HIV case finding through a multi-strategy and Data Driven Approaches in Western and Central Equatoria States, South Sudan

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Background: South Sudan remains in a serious humanitarian crisis which exacerbates the HIV Epidemic. With only 35% of the PLHIV identified, South Sudan is not on track to achieve the 95-95-95 UNAIDS targets by 2030. Targeting HIV testing services (HTS), fast- tracks the identification of PLHIV and addresses the HIV testing gap which might delay epidemic control. We describe, aggregate, and synthesize targeted HIV testing models implemented by the Catholic Medical Mission (CMMB) in South Sudan amidst the complex emergency.

Methods: Between October 2023 and January 2025, differentiated models of targeted HTS were implemented by the CMMB. The multi-strategy targeted testing offered modalities such as active index testing, HTS for clients in pediatric nutrition, tuberculosis and antenatal/labor/delivery clinics with the aim of optimizing testing volumes, improving efficiencies and increasing the positivity ratio under the complex emergency.

Results: Of the 201,510 HIV tests conducted 64% were women and 56% were older than 15 years. A total of 2,025 tested HIV positive, representing a yield of 1% and 1.1% among women and men respectively, across all age categories. Index testing registered the highest yield both at facility (6.0%) and community (4%) levels followed by the TB clinic, and all other modalities were 1% or below. Provider Initiated Testing and Counselling (PITC) in out-patient department had the highest number of clients tested, however, the yield was low.

Conclusions: Although, the results are consistent with other settings which have asserted index contact testing as an effective model in identifying PLHIV; the findings provide a critical imperative insight into feasible targeted HTS models under complex emergencies. PITC improves access to HTS, however, the yield is relatively low. Adapting a concise targeted testing package will increase the identification of PLHIV to enhance positivity yield and accelerate the attainment of the 1st 95 in a complex emergency environment.

52. Challenges of diagnosis and management of ureteric fistula at FISPRO in Democratic Republic of the Congo

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Background: Ureteric injury is a potential complication of pelvic surgery, particularly during gynecologic procedures, where the ureter can be inadvertently damaged. This injury often results in ureterovaginal fistulas, presenting significant diagnostic and management challenges, especially in low and middle-income countries. Advanced imaging modalities are typically unavailable in these settings, complicating the localization and treatment of ureteric fistulas. This study aims to investigate the challenges in diagnosing, localizing, and managing ureteric fistulas in North Kivu, Democratic Republic of Congo.

Methods: This prospective hospital-based study was conducted from November 2020 to September 2024 at FISPRO an specialized fistula care facility at Butembo Fistula Hospital (BFH), in North Kivu in DRC. The study included 20 patients with ureteric fistulas referred from various health facilities. Patients were selected based on permanent urine incontinence following complex surgeries and clinical signs suggestive of ureteric fistula. Diagnostic procedures included clinical assessments, three-swab tests, abdominal ultrasound scans, and renal function tests. Surgical exploration was performed to confirm, localize then treat the ureteric fistulas.

Results: The study population included 20 patients, aged 24 to 59 years (mean age 37 years), with a mean parity of 6 (range 1 to 11). The primary interventions leading to ureteric fistulas were caesarean sections (6 cases), emergency hysterectomies (9 cases), and scheduled hysterectomies (5 cases). The time interval between the primary intervention and the onset of urine leakage ranged from 0 to 8 days (mean 3 days). Ultrasound scans showed normal findings in 20% of cases, hydronephrosis in 55%, pyelonephritis in 20% and 5% of renal failure. Surgical interventions lasted 3 to 4 hours (mean 2,5 hours), with blood transfusions administered in almost the cases. Post-operative complications included wound infections (4 cases), anemia (3 case), schock(3 case). Ureteric catheter placement was effective, with all 20 patients cured.

Conclusion: Ureteric fistulas in North Kivu primarily resulted from complex gynecological surgeries, particularly caesarean sections. Diagnostic and management challenges were significant due to limited resources and imaging modalities. Despite these challenges, surgical intervention had a high cure rate. The study highlights the need for improved diagnostic tools and management strategies in low-resource settings to enhance patient outcomes.

53. Healthcare Providers' Perspectives on Influencing Factors and the Sustainability of Psychosocial Support Services for Children and Young People Living with HIV in East Africa

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Background: The third 95 target of the UNAIDS 95-95-95 framework, focused on HIV viral load (VL) suppression, remains suboptimal among children and young people living with HIV (CYPLHIV) in East Africa. VL suppression depends on medication adherence, which in turn, is influenced patient-related factors, health facility related factors and socio-economic factors. Thus, it is essential to explore health care providers' perceived factors influencing psychosocial support services to children and young people living with HIV in East Africa context.

Methods: We conducted a qualitative comparative case study using semi-structured interviews with 29 counselors and social workers from four East African countries (Kenya, Rwanda, Tanzania, and Uganda) providing PSS to CYPLHIV in HIV clinics. Data were analyzed using a combination of deductive thematic analysis and inductive coding. The analysis was conducted manually using an Excel sheet template to identify similarities and differences within and across contexts.

Results: The findings focus on three themes: (1) Enabling factors for PSS delivery, (2) Hindering factors, and (3) Sustainability. Enabling factors mentioned in at least one country include staff training, availability of materials, infrastructure, guidelines and standards operating procedures, Non-governmental Organization support, multidisciplinary teamwork, client participation, and safe spaces. Hindering factors include lost follow-ups, late HIV disclosure, financial constraints, medication issues, inadequate funding, food insecurity, stigma, counseling challenges, lack of caregiver support, emotional gender-based violence, family conflicts, staff shortages, heavy workload, nomadic lifestyles, limited infrastructure, imprisonment, delinquency, disruptive behaviour, slow service delivery, medication refusal, depression, transport issues, and pill burden. Despite numerous challenges, most participants confirmed the sustainability of PSS services even without funding, except in Uganda, where all participants believed sustainability was possible.

Conclusion: The findings from this study highlighted enabling factors and hindering factors for psychosocial support services according to health care professionals' perspectives. These findings highlight the need for targeted strategies to overcome barriers and ensure sustainable psychosocial support services delivery.

54. Evaluating the Effectiveness of First-Aid Training for Road Traffic Accidents Among Commercial Motorcyclists and Cyclists: A Quasi-Experimental Study

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Background: Road traffic injuries have recently become the leading cause of death among children and young adults aged 5 to 29 worldwide. During road traffic accidents, life- threatening conditions such as respiratory failure, cardiac arrest, and severe bleeding can lead to brain hypoxia, potentially resulting in death or permanent disability if first aid is not administered within the first five minutes. Research indicates that the fastest ambulance response time in Europe is approximately 10 minutes, highlighting a critical gap in immediate first-aid care. To address this issue, some countries have implemented nationwide first-aid training programs for laypeople who may become bystanders during road accidents. For instance, 78% of Norway's population has first-aid knowledge and skills. In contrast, while unverified sources suggest that various groups receive first-aid training in Rwanda, there is a lack of concrete data on the scope and effectiveness of these sessions. In Rwanda, as in other East African countries, commercial motorcyclists and cyclists are often among the first bystanders at road accident scenes. This study aimed to assess the effectiveness of first-aid training sessions in improving motorcyclists' and cyclists' knowledge, attitudes, self-efficacy, and practical skills related to providing first aid to road traffic accident victims in Rwanda.

Method: A pre-and post-intervention study design was used to assess knowledge, attitudes, self-efficacy, and practical first-aid skills among motorcyclists and cyclists. A total of 95 commercial motorcyclists and cyclists participated in the two-day training program. A paired t-test was conducted to analyze changes in knowledge, attitudes, self-efficacy, and practical skills related to first aid in road traffic accidents.

Results: The findings demonstrated significant improvements in participants' knowledge, attitudes, self-efficacy, and practical skills, with all measured items showing a p-value of less than 0.001.

Conclusions: This study suggests that first-aid training can enhance the knowledge, attitudes, self-efficacy, and practical skills of laypeople who are likely to be bystanders at accident scenes, potentially saving lives following road traffic accidents. Therefore, scaling up first-aid training for laypeople is recommended as an additional strategy for reducing deaths and disabilities associated with road traffic accidents.

55. Changing Clinical Characteristics of Severe Malaria in Eastern Uganda

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Background: Malaria remains a major public health problem in Sub-Saharan Africa (SSA). Uganda has one of the highest malaria burdens globally, with malaria accounting for over 20% of outpatient visits and approximately 15% of inpatient deaths. Despite significant progress, 95% of the population remains at risk, resulting in an estimated 12 million malaria cases annually, disproportionately affecting children under five and pregnant women. In this study we describe the clinical spectrum and outcomes of childhood severe malaria in Eastern Uganda.

Methodology: This was a prospective cohort study conducted from October 1, 2021, to September 30, 2022 and nested within the Malaria Epidemiological, Pathophysiological and Intervention studies in Highly Endemic Eastern Uganda (TMA 2016SF-1514-MEPIE Study) at Mbale Regional Referral Hospital. Children aged 60 days to 12 years who at admission tested positive for malaria and fulfilled the clinical WHO criteria for surveillance of severe malaria were enrolled to the study. Laboratory analyses were done. Data were analysed using STATA V15.0. The study had ethical approval.

Results: A total of 300 participants were recruited, of whom 247/300(82.3%) completed day 28 follow up. The overall median age was 4.6years (Range 2months - 11.8). Most children 164/300 (57.7%) were under 5 years, and 171/300(57.0%) were males. The common clinical features were prostration 236/300 (78.7%), jaundice in 205/300(68.3%), severe malarial anaemia in 158/300 (52.7%), Blackwater fever 158/300 (52.7%) and multiple convulsions 51/300 (17.0%). Prolonged hospitalisation was found in 56/251(22.3%) and was associated with hypoxaemia OR 6.3 (95% CI: 2.1, 18.1), P=0.001. The overall mortality was 19/300 (6.3%). The mean parasite density was 136,000 parasites/μl (36 - 2,791,400). Highest parasite density was 386,000 parasites/μl in hypovolemic shock and the lowest was 54,917 parasites/μl in spontaneous bleeding. Mean parasite density for Cerebral malaria, multiple convulsions, respiratory distress and anemia were 146,000 parasites/μl, 201,000 parasites/μl, 199,000 parasites/μl and 109,000 parasites/μl respectively. Hyperparasitaemia constituted 26.5% (100/377), 30.6% being under 5. Only 31% (117/377) of the participants presented with only one clinical form of severe malaria. Over-all mortality was 3.4% (12/377).

Conclusion: In this study, the common clinical features for severe malaria in children in Eastern Uganda were prostration 236/300(78.7%), jaundice 205/300(68.3%), severe malarial anaemia 158/300 (52.7%), Blackwater fever 158/300 (52.7%) and multiple convulsions 51/300 (17.0%). A lower parasite density was also noted in severe malaria compared to >50,000 parasites/μl referenced by the WHO.

56. Association Between Fruits & Vegetable consumption, Physical Activity and Biological Measurements among adults in Vihiga

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Background: Cardiovascular diseases (CVDs) remain a significant public health burden in Kenya. Inadequate intake of fruits and vegetables and physical inactivity are modifiable behaviors that contribute to CVDs risk factors such as hypertesion, obesity and Dislipedemia. To adress the growing issue of CVD burden in the country, it is important to understand the fruits and vegetable intake and physical activity patterns of the population and their interplay with health indicators for CVDs. This study sought to assess the association between intake of fruits and vegetable, Physical Activity and cardiovascular health biomarkers among adults in Vihiga County.

Methods: This was a mixed methods cross sectional survey done in Vihiga County, Kenya. A three-stage cluster sampling method was used to select a calculated sample of 600 respondents from Vihiga's five sub-counties. Purposive sampling was used to identify key stakeholders and community members for Key Informant Interviews and Focus Group Discussions. Quantitative data was collected through reseacher administered e- questionnaires adopted from the WHO STEPS survey questionnaire and analysed using SPSS 22.0. Qualitative data was collected using interview guides, audio-recorded, transcribed and analysed manually using thematic analysis.

Findings: 564 respondents (Female: 72%; Married: 66.4%; Secondary & post-secondary education: 30.2%) were interviewed in this study. Majority (85%) of the population consuming less than 5 servings of fruits and/or vegetables per day. Average servings of fruits and vegetables was 3/day. 79% of the respondents had dyslipidemias with the highest abnormal lipid profile being Low HDL at 57.8%. 52.1% of the respondents had high levels of physical activity while 35.3% had hypertension. There was a significant association (p value> 0.05) between adequate intake of fruits and vegetables and physical activity and hypertension where majority of those highly physically active (64.6%) and those with hypertension (45.1%) had adequate intake of fruits and vegetables. Other factors associated with consumption of fruits and vegetables were education level and occupation.

Conclusion: This study's findings highlight a high number of the people in the community consuming inadequate amounts of fruits and vegetables, coupled with a high prevalence of dyslipidemia and hypertension. Comprehensive public health interventions are necessary to promote consumption of fruits and vegetables and regular physical activity to reduce the CVDs risk in the county.

57. Knowledge, Attitudes, Ownership and Utilization of long-lasting insecticide mosquito nets in South Sudan

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Background: Malaria remains a major cause of illness and death in South Sudan. Its burden is high among children under five and pregnant women. Long-lasting insecticide- treated nets (LLINs) are freely distributed in South Sudan, but their correct and consistent usage is still low. LLINs remain a key preventive intervention. Our surveys aimed to explore knowledge, attitudes, and practices towards correct and consistent LLIN ownership and utilization across South Sudan counties that recorded high morbidity cases of malaria.

Methods: A descriptive cross-sectional survey purposively implemented in 23 selected counties with high malaria incidences reported in DHIS2. A multi-stage cluster random sampling was used to collect data from the respondents. Trained enumerators were employed to administer a questionnaire installed on tablets along with a modified observation checklist adopted from the malaria indicator survey. Kobo collect v.2022.2 was used and SPSS^{TM} version 27 was used for analysis, with a significance level set at 0.05.

Results: A total of 466 interviews were completed, whereby 73% were females. Between 25–34 years with 34.3% (95% CI 30–39). 60.1% (95%CI 55.4 - 64.4) had not received a formal education, 8.2% (AOR 5.8 - 10.5) were employed in public, 91.8% (89.5 - 94.2) in the private sector, 95% (CI 0.9 - 3.2) practice religion. Overall ownership and utilization were 72.3% and 71.9%, respondents aged <=34 years' net usage was 72.6% than >=35 years. 73.1% of females used LLINs. Religious participants used more LLINs with 72.2%. while those with formal education slept under LLINs than non-religious. Occupation was associated with net utilization (AOR = 3.586, 95% CI 1.247 - 10.316, p-value =0.012). Knowledge of sleeping under LLINs as a malaria protective measure was related to its utilization (AOR = 5.284, 95% CI 3.371 - 8.283, p-value <0.001). Attitudes of sleeping under LLINs only for young children and pregnant women, AOR = 0.435, 95% CI (0.285 - 0.663), p-value <0.001.

Conclusion: The majority of respondents had a better understanding of malaria transmission but poor conceptions about causation. Low utilization of LLINs revealed. A need to improve community KAP towards LLIN usage through health education and promotion to pregnant mothers and U-5 children mothers or caregivers.

58. Completing the trachoma map in the Republic of South Sudan (RSS): Results of three baseline prevalence surveys in Eastern Equatoria State (EES), 2023-2024

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Introduction: Baseline trachoma prevalence estimates inform county-level SAFE (Surgery, Antibiotics, Facial cleanliness, and Environmental) interventions. Since 2001, the RSS Ministry of Health (RSS-MoH) has implemented SAFE in parts of the country. However, as of 2022, three counties in EES were missing baseline mapping.

Methodology: From 2023-2024, we surveyed Torit, Magwi, and Ikotos counties using multistage cluster-randomized sampling design. Certified graders screened all participants for trachoma clinical signs and collected dried blood spots (DBS) for individuals > 1 years old. Additionally, Torit-based teams collected ocular swabs for *Chlamydia trachomatis* infections among children 1-9 years. During the surveys 9,293 individuals were examined from 2,414 households, and 9,269 DBS and 1,346 swabs were collected.

Results: Trachomatous inflammation—follicular (TF) prevalence among children ages 1-9 years ranged from 0.8% (95% confidence interval [CI]: 0.4-1.7%) in Magwi and 7.3% (95% CI: 3.3-15.7%) in Torit. Trachomatous trichiasis (TT) in adults ≥15 years ranged from 1.05% (95% CI: 0.59-1.86%) in Magwi and 1.41% (95% CI: 0.81-2.44%) in Torit.

Conclusion: Torit and Ikotos were above World Health Organization elimination thresholds (TF<5%; TT<0.2%) and thus require SAFE interventions. Magwi requires S, F, and E interventions until TT levels are <0.2%. These final EES baseline surveys help to inform RSS-MoH's county-level trachoma elimination strategies.

59. Determinants of hand hygiene behaviors in flood affected areas of South Sudan: A formative research study

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Introduction: South Sudan experienced one of heaviest floods in 2021 with the Upper Nile region the most affected. The floods submerged a large part of the region destroying housing, cattle, farm lands and physical infrastructure and blocked access routes. This created one of the biggest extreme weather event crises in the country with scores moving into the Internally Displaced Persons (IDP) camps some of which were newly created. The research set out to investigate the determinants of hand hygiene behaviors in these camps.

Methods: Mixed method approaches were employed to collect data in 4 IDP camps in Bentiu county, Unity State, in May and June 2023. Overall, 5 KIIs were conducted with 5 WASH partners and 12 FGDs with Camp residents. This was in addition to mapping of WASH infrastructure and 50 handwashing demonstrations. A short questionnaire was conducted with 50 participants demonstrating how they usually conduct handwashing with more or less water available.

Results: Individuals in the IDP camps reported mostly washing hands with water only. On rare occasions, soap, ash, cow urine and crow soap (local plant) were used. In the handwashing demonstrations, only 36.9% of the participants demonstrated using soap. Participants reported that school going children and women were more likely to wash hands than others. Camp residents reported mostly washing hands after visiting the toilet, before and after eating food, when visibly dirty and the need to feel fresh. Using cutlery or eating oily/smelly decreased or increased the need for soap before or after eating. Behavior setting and physical environment were found to be the main determinants of handwashing practices. Main barriers to handwashing included lack of soap, water, handwashing facilities and materials such as buckets. Flooding affects handwashing behaviors through reduced humanitarian access, submerging handwashing stations. It has also encouraged handwashing using contaminated flood water.

Conclusions: Though camp residents are largely knowledgeable on critical handwashing times and the importance of soap, handwashing behaviors were not optimal due to a lack of access to essential materials such as soap, water and washing stations. Extreme weather events such as floods are predicted to increase in frequency and intensity with climate change thus finding ways to sustainably improve handwashing in these changing contexts is essential.

Subtheme 3: Harnessing digital solutions to strengthen health systems

60. Leveraging Digital Solutions and Cross-Border Surveillance to Enhance Epidemic and Pandemic Preparedness

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Background: The rise of infectious diseases like SARS, Ebola, and COVID-19 has highlighted the urgent necessity for improved epidemic preparedness. Despite advancements in global digital health technologies and cross-border monitoring,

significant disparities persist, particularly regarding the fair distribution of diagnostics, vaccines, and treatments. The incorporation of AI, machine learning, and real-time data sharing presents promising solutions, but their application remains uneven, especially in resource-limited areas. The purpose of this study is to assess the effectiveness of digital health technologies and cross-border surveillance in epidemic preparedness, with a focus on scalability, vaccine distribution equity, and real- time monitoring capabilities.

Methodology: A mixed-methods approach will be employed to evaluate the effectiveness of digital health technologies and cross-border surveillance, where a case study from the COVID-19 and Ebola responses will be used providing real-world examples to assess the impact of digital health technologies and cross-border surveillance during epidemics. Statistical models will be employed to analyze the effectiveness of AI, machine learning, and real-time data sharing for monitoring and controlling epidemic outbreaks. Expert interviews and industry consultations will also be used to explore challenges related to the scalability of vaccines, diagnostics, and therapies, particularly in low-resource settings.

Results: Preliminary studies indicate that while digital solutions and surveillance networks have evolved, 50% of high-risk countries have yet to fully deploy these systems. Vaccine access remains a major issue, with low-income countries receiving only 60% of the necessary immunizations as of 2022. The study aims to further identify the challenges related to scaling diagnostics and therapies in these settings.

Conclusion: The study will offer recommendations for enhancing digital health integration, increasing cross-border collaboration, and ensuring equitable access to health resources, with a particular focus on addressing disparities in low- and middle-income countries

61. Leveraging Media Monitoring to Reposition Public Health Intelligence: Lessons from Kenya, January 2024 – February 2025

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Background: Media monitoring (MM) in public health surveillance is an innovative approach that leverages various mass media platforms to gather and analyze information about public health threats. Kenya conducts MM in the broader context of event-based surveillance (EBS) which utilizes priority signals to detect acute public health threats.

Methods: A team of national surveillance officers (SO) was formed and trained on MM. Daily, the SOs searched various media platforms including print media e.g., newspapers and magazines; broadcast media e.g., television and radio; and digital media e.g., Epidemic Intelligence from Open Sources (EIOS), websites, social media, and blogs. Subject, place, and time filters focused the searches, while inbuilt notifications enhanced search timeliness. Reports that matched the priority signals were notified to sub-national SOs if in-country and to the Head of Disease Surveillance and Response if cross-border for verifications and initial response. Data were captured using a Google sheet with variables on the broadcast date, media, date of onset, type of threat, brief description, scope, date of notification, verification, and response. Data on signals, media, threat, scope, and process were summarized using proportions; distributions illustrated using maps, and timeliness in reporting in days using the median.

Results: A total of 219 signals were detected, including 128 (58.4%) through EIOS and 26 (11.9%) from The Star Newspaper. Up to 209 (95.4%) signals were in-country from 45 of the 47 (95.7%) Counties with concentrations proximal to the international transport corridor. Human health-related signals were 149 (68.0%) with 97 (65.1%) being on "Any event that causes public health anxiety/concern". None of the cross-border signals were verified. Of the 75 (35.9%) in-country signals verified, 47 (62.7%) were true, and 9 (19.1%) responded to. The median time for reporting was 0 days, with a range of 0-61 days for social media.

Conclusion: Media monitoring is critical to early warning and response systems to public health threats locally and regionally. Opportunities for improvement exist in advocacy and expansion investments, cross-sectoral collaborations, and regional communities of practice.

62. Malaria Data Quality Audit A game changer in early detection and monitoring of malaria Epidemics: A situational analysis of west Pokot County, Kenya

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Introduction: In Kenya, 26 counties and 128 sub-counties are classified as highland epidemic-prone and seasonal transmission zones. These areas are monitored for potential epidemics through weekly malaria surveillance data reported from health facilities to the higher levels every Wednesday using the IDSR weekly Epidemic Monitoring Form (MOH 505). A malaria Epidemic Preparedness and Response (EPR) dashboard within the Kenya Health Information System (KHIS) allows the visualization and monitoring of malaria trends in all the reporting facilities in Kenya. The dashboard has alert and action thresholds for each reporting facility for early detection of outbreaks.

Methodology: we conducted a retrospective review of records for DQA in west Pokot County from 25th August to 4th September 2024 by accessing data in MOH 505,204 B and KHIS for the reporting period, Epiweeks 25 through 29 (16th June-21st July 2024) from 12 health facilities using a DQA data abstraction tool. We checked for Completeness, availability of malaria data collection tools, and completeness of key variables in OPD register MOH 204 B (OP No., Age, Sex, Temperature recording, Weight, Diagnosis, Malaria coding, and diagnosis). Reporting Accuracy, we compared physical data in MOH 505 with the reported cases in electronic KHIS. The data collected was analyzed in epi info and presented in frequencies and proportions.

Results: of the 12 facilities assessed 10 (83.3%)had experienced true malaria upsurges,2(16.7%) had artificial upsurges, on data accuracy only 4(33.3%) had data concordance between MOH 505 and KHIS, malaria reporting tools were 100%, timeliness was 7 (100%),3(80%), 2(0%), facilities performed poorly on malaria variables on weight and Temperature while age, sex, Opd numbers, malaria codes, and diagnosis scored 100%. Overeporting was 16%(2) while underreporting was 50% in 6 facilities.

Conclusion: Data dis-concordance was noted between different malaria reporting tools MOH 204,505 and KHIS(DHIS2). True malaria upsurges were experienced despite the underreporting of suspected and confirmed malaria cases in most facilities. Poor and inconsistent recording of vital signs (weight and temperature) was reported, as well as incomplete/inaccurate use of standard reporting tools (MOH 204B, MOH 505, MOH 705A&B). There was weekly reporting instead of daily reporting for MOH 705 (A&B). OPD revisits were inconsistently captured.

63. Translating Science for Better Health Emergency Preparedness through global Health Security Interface: a Challenge in Low income Countries

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Background: Global health security is the existence of strong and resilient public health systems that can prevent, detect, and respond to infectious disease threats, wherever they occur in the world, therefore, Countries, communities and organizations *must be able to respond immediately and effectively* to potential health threats and emergencies caused by any hazard based on health emergency preparedness guidelines. Health Emergencies represent some of the greatest risk to the global economy and security especially in low income settings. The paper is aimed to highlights on the contractual gaps that existed on the application of health security interface from high income and low income settings through One Health Intelligence.

Methods: the paper reviewed related literature from published journals in both local and international using ACM Digital Library, Web of Science,Paperity, IEEE xplore, Public library Science,EBSCOHORT,Jstor.org,Pubmedand ProQuestdata bases to avoid publication bias.

Results: it was demonstrated that CDC, WHO- International Health Regulations, Integrated Sentinel Surveillance for Influenza and other Respiratory viruses, One Health Intelligence for Emerging Health Threats Detection, Pathogen Genomic in Health Emergencies Preparedness and Response existed in high income settings contrary to low income settings.

Conclusion: it is concluded that health governance, International health regulations, Universal Health Coverage, Pandemics, health emergencies and weak health systems not only cost lives but pose some of the greatest risks to the global economy and security faced today, therefore, it is recommended that urgent donors from low income settings can make a difference in protecting health on the frontlines of humanitarian crises.

64. A situation assessment on demand-and-use of locally generated research evidence among sub-national public healthcare workers: a case of pilot facilities in Kenya

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Introduction: Evidence-based decision making is crucial for strengthening healthcare systems, particularly when healthcare workers are actively involved in the research process. In Kenya, there is limited evidence on public healthcare workers in effectively utilizing research evidence in their decision-making processes. The objective was to assess public healthcare workers'

capacity to acquire, access, adopt, and apply locally generated research evidence for evidence-informed decision making (EIDM) in pilot facilities in Kenya.

Methodology: The study used a cross-sectional study (descriptive) design in six pilot counties in Kenya namely Bungoma, Isiolo, Kitui, Makueni, Nyandarua and Taita Taveta counties. These facilities were purposively selected based on an in-house generic criterion. Target population included all public healthcare workers and hospital managers in the county referral and sub-county hospitals. A self-administered, semi-structured questionnaire was used to collect data.

Results: A total of 62 public healthcare workers participated in the survey with 72.6 percent had been involved in health research activity before. Over 82.3percent reported that they had technical skills to identify and interpret research findings. Over 64.5percent of the respondents had accessed research evidence that was pertinent to their current work. While, 54.8 percent reported that they had appraised the relevance of available evidence. While 37.1percent of the respondents were able to synthesize the multiple research studies into evidence briefs/lay summaries.

Conclusion: The findings indicate that while public healthcare workers can generally acquire and understand individual research studies, they struggle with synthesizing, contextualization, and communicating research findings effectively, which limits their ability to influence decision-making processes. The Curriculum developers should develop locally-appropriate training tools and customize participatory learning methodology to enhance healthcare workers' capabilities in accessing, synthesizing, and applying locally generated research evidence.

65. Assessment of Health Information System Maturity in South Sudan: A data-driven Advancements, Deficiencies, and Investment Priorities

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Introduction: Health Information System (HIS) Maturity pertains to the degree of advancement, integration, and efficiency of a nation's health information system. It evaluates the capability of a health system to gather, manage, analyse, and utilize health data for informed decision-making and the formulation of policies. The assessment offers a method for enhancing HIS, pinpoints deficiencies and opportunities for investment in health data management and also acted as bolsters evidence-based decision-making, improves collaboration among health institutions. The maturity score is expressed on a scale of 100 from nascent maturity 0-30% to fully matured 91-100%. Each component provided an overall score, enabling countries to identify gaps and develop targeted initiatives. South Sudan made strides in developing health information resources, statistical bulletins, performance assessments and data quality reviews, demonstrating a commitment to monitoring health sector performance. International Form of Medical Certificate of Cause of Death (2016) adopted and District Health Information System 2 (DHIS 2) at all levels. The lack of a system for death registration and cause-of-death reporting highlights the need for civil registration and vital statistics (CRVS), limitation hinders decision-making. Absence of online, open-access platform. Data integration into DHIS2 is still underway, lack of unification and interoperability, and low digital adoption.

Methodology: The World Health Organization's (WHO) HIS Functionality (Maturity) generic tool was adopted. A self-assessment tool pinpoint strengths and areas needing attention. Instrumental in evidence-based decision-making, and data generation. Monitoring and evaluation, health information and system administrators participated in a 3-day workshop. A focal person submitted validated responses. WHO consolidated, analysed, and presented findings.

Results: Data analysis capacity achieved 58%, Data systems, and use score 37%, signifying a low maturity, data generation 35%, governance 33%, population denominator 67%, data analysis 63%, higher functionality. Disease surveillance, data quality 50% to 57%. Birth, death, and cause-of-death 25%, workforce 34%. Completeness is 62%, and indicator data is 57%. Registered deaths cause-of-death and death registration coverage 0%, indicating a lack of cause-of-death documentation. Death notification 20%, none registered officially.

Discussion and Conclusion: Low maturity requires the development of financing health information systems, policies, strategic plans, Master facility lists, data architecture, facility assessments, population health surveys, births, deaths, and causes of death. Strengthen supportive supervision, South Sudan's HIS maturity score stands at 40.5%, categorized as Minimal Maturity. The score indicates considerable deficiencies across HIS components.

66. Evaluating the Efficiency of DHIS2 system in COVID-19 Surveillance: A Case Study of Nairobi County

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Background: The COVID-19 pandemic underscored the need for robust health data systems. DHIS2, an open-source software developed by the Health Information Systems Programme, supports data collection and visualization but originally

lacked integration of COVID-19 data in Kenya's health records. This study explores DHIS2 customization to incorporate pandemic surveillance data in Nairobi County, offering valuable insights for real-time monitoring. Objectives were to assess the customization of DHIS2: Evaluate the modifications made to the DHIS2 system to incorporate COVID-19 surveillance data in Nairobi County, to explore the effectiveness of DHIS2 for pandemic data tracking: Investigate the system's ability to aggregate, visualize, and export data in various formats for effective monitoring and decision-making, to highlight the role of DHIS2 in real-time public health interventions: Demonstrate how DHIS2 enhanced accessibility to COVID-19 data, supporting immediate and informed public health measures and To identify the broader applicability of DHIS2: Examine the potential of DHIS2 as a scalable and adaptable tool for monitoring other infectious diseases in Kenya's health system.

Methods: The DHIS2 system, integrated with a PostgreSQL database, was customized to track COVID-19 cases. Using data indicators, the system aggregated information for visualization, with options for data export in tables, charts, and GIS formats.

Results: The system produced customizable reports and facilitated comprehensive COVID-19 data visualization. This approach enhanced data accessibility for decision-making, especially for real-time tracking and public health interventions.

Conclusion: DHIS2's adaptability offers an efficient solution for integrating COVID-19 surveillance into Kenya's health system. Leveraging this system for infectious disease monitoring, DHIS2 can enhance data management with offline synchronization, mobile data collection, and visualization capabilities, supporting responsive public health measures.

67. Evaluating the usage patterns, enablers, and barriers of the East Africa Community Health web portal as a single-point- of-access of information

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Introduction: Knowledge transfer platforms are online platforms or systems that facilitate the sharing and transfer of knowledge and expertise within organizations/communities. The East African Community (EAC) web portal provides a platform for a single-point-of-access of information by stakeholders, thus profiling the vast capacity available in the regional health sector. The problem revolves around the inconsistent usage and utilization of the health web portal within the EAC Partner States. The objective was to assess the enablers and barriers to the wide use of the EAC health web portal for health information by citizens in EAC Partner States.

Methodology: The survey employed an explanatory sequential mixed methods design, using both qualitative and quantitative approaches to target different population groups from the EAC Partner States. Using archived stakeholders' email directory, a digital questionnaire was sent via email to all clients who had previously interacted with the Commission. Online consent was obtained before participants completed the survey, with minimal personal identification collected through data cookies. Data validation, normalization, transformation, and triangulation were performed during the exploratory data analysis.

Results: The online survey received 57 (sample= 175) targeted respondents from 6 EAC Partner States participated. Over half (53.6%) of respondents worked in government departments. The EAC health information portal had global audience (208 countries). Online users had EAC (4%), the rest of Africa (21%), and outside Africa (75%). Between August 2022 and August 2024, the portal received 190,584 hits, translating to an average of 254 daily users. Over 98% of these users were first-time visitors. Enablers included knowledge/information quality had a strong correlation with use (r=0.63), service quality (r=0.60), and user satisfaction (r=0.54). Perceived net benefit had strong correlation with system quality (r=0.69), and use (r=0.56). EAC citizens searched the EAC health information portal for regional conferences/upcoming webinars (24.5%); General information (17.0%); and the YEARS Program (17.0%). Barriers to use of utilization of the portal included technical challenges; content and data issues; and user experience and interface problems.

Conclusion: The portal's perceived advantages are associated with its system quality and the availability of health information. However, its full potential is not being realized due to a high bouncing rate and users' lack of awareness about the portal's existence and significance. This necessitates the Commission organizing a regional validation workshop involving ICT focal persons (health sector). The objective is to validate findings and ultimately develop sustainable recommendations regarding the portal.

68. Factors Affecting the Utilization of Logistics Management Information System in Public Health Facilities: Case of Juba County, South Sudan

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Introduction: The Logistics Management Information System (LMIS) plays a pivotal role in enhancing the efficiency of healthcare supply chains, particularly in resource-constrained settings such as South Sudan. The information on the factors influencing LMIS utilization is scant in the country. This study aimed to investigate the factors affecting the utilization of LMIS in public health facilities in Juba County.

Methodology: The study employed a mixed method, using both quantitative and qualitative data collection and analysis approaches. A total of 84 structured questionnaires were distributed to all members of the population: pharmacists and medical store managers as census techniques to gather quantitative data, which were analysed using IBM SPSS Version 27. Descriptive statistics were used to summarize the data. Additionally, four focus group discussions were conducted to collect qualitative data, which were thematically analysed using NVIVO software.

Results: Of the study respondents, 44% of the respondents were female; 7% were under 25 years old, 36% were between 25-34 years, 39% were between 35-44 years; 20% were Medical Store Managers, 6% were Nurses, 4% were Pharmacists, 42% were Pharmacist Assistants, 14% were Record Managers, and 4% were Storekeepers. The mean score for LMIS Utilization was 2.23, indicating the low frequency use (23.9%). On other hand, there was "*high health commodities quantification using LMIS are accurate*." for the weight average of individual factors affecting the utilization of LMIS was 1.41, the staff had low motivation in using the LMIS effectively in your role. The quality of technical support provided for the LMIS was low as it was below the weight average of technological factors (2.68). The leadership support and the resources allocation for the effective use of LMIS had low mean scores (1.67 and 1.83) since the weight average of organizational Factors was 2.17.

Conclusion: Enhancing LMIS utilization requires a multifaceted approach motivating staff, providing quality technical support, and allocating optimal resources for effective use of LMIS.

69. How Power BI visualization was implemented to enhance DHIS2 data use for HIV programs in South Sudan

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Background: The District Health Information System version 2 (DHIS2) is South Sudan's national Health Management Information System (HMIS) platform, adopted by the Ministry of Health (MOH) for the collection, analysis, validation, and management of patient data nationwide. DHIS2 has been scaled progressively across all states and counties for all health programs, including HIV due to its strong community support, offline capabilities, interoperability with other health information systems (HIS), and adaptability to diverse sectoral needs. The DHIS2 captures HIV indicators across the continuum of care – HIV testing services, antiretroviral therapy (ART), prevention of mother-to-child transmission (PMTCT), and viral load. However, DHIS2 is limited in advanced data visualization and reporting, which are critical for facility staff with limited data analysis skills to interact with and interpret the data. To address this, Power BI, a business intelligence tool, was explored to complement DHIS2 and enhance its dashboards and reports by providing interactive, visually engaging data charts and tables.

Methods: With technical support from ICAP and HISP South Sudan, the MOH gathered requirement specifications for the enhanced dashboard based on recent program needs and implementation priorities. The team extracted the data from DHIS2 using two methods: DHIS2 – Power BI connector developed by BOA Systems and APIs, a simplified integration layer, which automates authentication and data transformation, offering a more user- friendly and efficient way to extract data. These methods allowed Power BI to import organizational metadata, data elements, and dynamic dimensions like attributes and category options.

Results: The DHIS2 and Power BI integration transformed DHIS2 data into a structured model and facilitated the calculation of key HIV indicators. The designed dashboard was reviewed and tested by stakeholders, including the MOH, PEPFAR agencies, and implementing partners. Version 1.0 of the Power BI dashboard linked to DHIS2 was released and ready for implementation at all levels. Data refreshes were configured for real-time updates, ensuring continuous access to up-to-date HIV data. In addition to the Power BI dashboard customization, the initial DHIS2 dashboard was reviewed and enhanced.

Conclusion: The integration of DHIS2 with Power BI has significantly improved data visualization to facilitate its use for patient care and programmatic decision-making in South Sudan. Stakeholders at various levels can now interact more effectively with HIV data. The collaboration between the MOH and stakeholders was essential in designing and validating the Power BI dashboards. The MOH is committed to promoting the use of the enhanced DHIS2 and Power BI dashboards.

70. Implementation of DHIS2 System for National HIV Response Program Performance Monitoring in South Sudan (2019 – 2024)

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Background: A robust Health Information Management System (HMIS) is essential for monitoring the performance of a national HIV response program. Such a system should generate timely and reliable data that is available and easily accessible to program managers throughout the response program. District Health Information System Version Two (DHIS2) is one tool implemented in numerous low- and middle-income countries to provide a robust HMIS. Generic in nature, the tool collects, validates, analyzes, and presents aggregate and case- based data. In this abstract, we document the key steps taken in the rollout of the DHIS2 system and the implementation of the system in monitoring the national HIV response program in South Sudan.

Methodology: In 2018, the Ministry of Health (MOH) transitioned its HMIS from DHIS1.4 to DHIS2, significantly shifting from a fragmented, paper-based, and inferior HMIS to a harmonized digital system used at collection and service delivery points. Between 2016 and 2021, the MOH, Donors, and partners implemented a series of DHIS2 rollout interventions. These interventions included establishing the DHIS2 Technical Working Group, conducting system readiness assessment, reviewing service registers and monthly summary forms, and system customization using the revised monthly forms (datasets), system testing, and deployment. HIV data collection and reporting tools were among the service registers and the monthly summary forms.The national HIV response program procured and distributed information, communication, and technology (ICT) equipment in 10 public hospitals and 236 PHCCs and PHCUs and printed and distributed revised HIV registers and monthly summary forms. Users received training before the MOH rolled out the system in the health facilities. Standard Operating Procedures (SOPs) were developed and distributed to the facilities to enhance system use. During the implementation, HMIS leadership, coordination, and governance were strengthened, and capacity was enhanced through supportive supervision, mentorship, and refresher training. As a result, the MOH and partners successfully used data from the DHIS2 to model the 2022 burden of the HIV pandemic in South Sudan using spectrum estimates and projection software.

Results: As of June 2024, 72,670 clients (all ages) currently receiving Antiretroviral Therapy (ART) were reported through the system, representing over 90% of all clients.

Conclusion: Although sizeable progress has been made in implementing the DHIS2 system in South Sudan for monitoring the national HIV response program, more needs to be done to achieve its long-term sustainability.It is crucial to address key challenges: system interoperability, workforce capacity and incentives, reporting timeliness, and data use capacity at all levels.

71. Implementing the first Electronic Medical Records (EMR) system in South Sudan – lessons learned, benefits, and challenges.

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Background: South Sudan's national HIV program faces significant challenges in meeting the UNAIDS 2030 goal of 95-95-95, partly due to its reliance on paper-based records. Weak data quality, and delays in accessing patient information, impact treatment continuity. To address these issues, the Ministry of Health (MOH) collaborated with CDC through ICAP and other partners and launched the OpenMRS, an open-source, modular, and interoperable Electronic Medical Record (EMR) system that is sustainable, flexible, and has strong community support. Implementing EMR is a crucial step towards improving healthcare quality and patient management, focusing on the ART module for HIV care, with plans to expand its use to other health programs under the MOH.The EMR is deployed in five ART clinics across three states and aims to enhance healthcare efficiency by providing a platform for capturing, storing, and accessing patient information for informed decision-making. The embedded clinical decision support flags reduce medical errors and optimize care delivery.

Methodology: The MOH, donors, partners, healthcare providers, and software developers developed the system requirement specification that guided the customization and held regular meetings to ensure the system met South Sudan's standards and the paper-based service tools. Tested data elements and the user interface, and feedback was incorporated. Facilities assessed for deployment – power sources, space for EMR equipment, internet connectivity, and end-users' attitude towards using digital systems. A South-to-South learning visit to Lesotho in 2024 provided valuable insights into the EMR implementation approach. Deployed in five phase-1 sites in July and September 2024 on a local area network (LAN). Data clerks were recruited and trained with end-users to enter legacy data into the system.

Results: Legacy data entry progress – three sites finalized data entry, and two sites' average progress is 70%. Preliminary results indicate improvements in data retrieval, clinical decision-making, and service delivery, particularly at Munuki PHCC and Al-Sabah Children's Hospital. Further benefits comprise enhanced data quality with mandatory fields and validation rules embedded, fewer missed opportunities for ARV drug refills, better tracking of viral load testing, and advanced HIV disease detection.

Conclusion: EMR can be scaled up across South Sudan depending on stakeholders' willingness to support digital health transformation at policy, technical, and implementation levels – availing power at EMR sites, end-user training, and continued policy support and other infrastructural upgrades are key adaptive strategies, EMR could significantly improve South Sudan's healthcare delivery and outcomes.

72. Living in Information Limbo: The Experience of Internally Displaced Persons in South Sudan

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Background: Internally displaced persons (IDPs) in South Sudan face profound challenges in accessing reliable information, exacerbating their vulnerability and limiting their ability to make informed decisions regarding health, security, and livelihood. This study presents findings from an Information Ecosystem Assessment (IEA) conducted in Upper Nile, Central Equatoria, and Eastern Equatoria states to examine the information needs, sources, access barriers, and trust dynamics among IDPs and host communities.

Methods: Using a mixed-methods approach—including focus group discussions, key informant interviews, and community surveys—the study reveals that IDPs primarily rely on informal networks, religious leaders, and limited radio broadcasts for information. However, access to credible information is severely restricted by factors such as government censorship, security threats to journalists, poor infrastructure, economic hardship, and digital exclusion.

Results: The findings indicate that while radio remains a key source of information, its reach is hindered by limited coverage and frequent power shortages. Social media platforms, though increasingly used, are inaccessible to many due to low internet penetration and affordability constraints. Misinformation and rumours further complicate the information landscape, particularly concerning health-related issues such as COVID-19. Additionally, marginalized groups, including women and people with disabilities, face greater barriers to information access due to cultural and structural inequalities.

Conclusion: This study underscores the urgent need for inclusive communication strategies that expand radio coverage, integrate trusted community voices, and utilize culturally tailored messaging. Humanitarian organizations and policymakers must prioritize investments in infrastructure, digital literacy, and media freedom to bridge the information gap. Strengthening community-centred information systems can enhance resilience and empower IDPs with the knowledge necessary to make informed decisions about their well- being. Addressing these challenges is crucial for fostering stability and supporting long-term recovery efforts in South Sudan.

73. Perceptions Towards Use Of Social Networking Groups For Health Education And Information Among Middle Aged Female Adults

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Introduction: The rapid growth of social media has presented new opportunities to utilize these platforms for health communication and education. The purpose of this study was to determine the utilization level, experiences and perceptions towards the use of social networking groups for health education and information on health issues among women of childbearing. The specific objectives were: to identify the types of social networking groups; to describe the perceptions towards social networking groups and to describe the challenges faced while seeking information in Social Networking groups for education and information on health issues affecting them.

Methods: This was a descriptive cross-sectional study carried out among the AFYA online group using an online questionnaire with a response rate of 34% from a population of 308. Cluster sampling and convenience sampling techniques were used in this study. Data was cleaned, coded and entered into SPSS version 25. This study mainly employed descriptive analysis.

Results: The findings of this show that most had tertiary level (66%) and majority were single (61%) and were in Entrepreneurship (24%) and students (24%) and government workers (15%) for their occupation. Majority were Christians (85%) with 16% being Muslims. They mainly live in urban areas (82%). The main health issues inquired on WhatsApp (above 60%) were; treatment, evaluation of doctor, experience on various doctors, communicating with health workers, sharing experience with the group. The perceptions towards social networking on health issues are: it's very useful (41%); somewhat

satisfied (34%) to very satisfied (32%); somewhat confident (43%), completely confident (21%), very confident (19%); with most definitely recommending (40%) and some recommending with reservations (45%). There was moderate trust (40%-50%) in all social media platforms.

Conclusion: In conclusion, there is high use of social media in health education and information seeking mainly on pregnant issues, breastfeeding, maternal health issues, Covid-19, selecting hospital, doctor, treatment, experience of doctors. There is a positive perception towards the use of social media networks amidst the false information mainly experienced. There is need for policies that will guide in ensuring credible information is provided on social media platforms to users seeking information on various health issues.

74. Understanding the Role of Data Governance in Implementing Digital Health Systems: A Case of Digitisation of the Health System in Kenya

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Introduction: The adoption of advanced technology has significantly enhanced health systems globally, regionally, and nationally. Kenya has made tremendous efforts in the digitisation of its health system to enable Universal Health Coverage (UHC). The country established a Digital Health Agency (DHA) through a legal framework to oversee the digitisation agenda. We conducted a rapid survey through key informant interviews to understand the role of data governance in implementing digital health systems.

Methods: Using a cross-sectional study design, data were collected from key informants and published reports. Participants were drawn from the Ministry of Health, faith-based health facilities, and private health facilities. The selection of participants was purposive, and researchers' opinions were also accepted since they were part of the implementation team. Quantitative analysis was performed.

Findings: To enhance digitization, the country developed a framework named the Digital Health Superhighway. This super-highway incorporated the electronic Health Information Exchange for sharing data between common resources such as shared health records and the client registry, among others. Acknowledging that data governance was crucial for the implementation of the superhighway, the country developed relevant policies and regulations to ensure that digital technologies are used ethically, securely, and effectively. A significant legislative framework was the Digital Health Act (2023), which established the Digital Health Agency (DHA), a government agency charged with managing digital health systems. Appropriate legislative digital health regulations and guidelines for certifying digital health solutions were published. Subsequently, the government constituted the DHA by deploying staff and digital health infrastructures. The DHA built the Integrated Health Management Information System to provide data for informed decisions across all pillars of the health system, including human resources, service delivery, and healthcare financing. The government committed to supporting three pre-selected Electronic Medical Records (EMRs) for implementation but allowed other prequalified EMRs to integrate at a fee. Despite comprehensive stakeholder engagement, some stakeholders encountered challenges in integrating their systems with the digital superhighway. While some appreciated the concept of consolidating all digital systems under one umbrella, others expressed reservations, considering cybersecurity threats and anticipated downtimes due to the digital divide.

Discussion: The use of technology brings both technical and organisational challenges. Technical challenges relate to the acquisition and support of ICT, while organisational challenges include capacity building and concerns about confidentiality and privacy. This study shows that good data governance reinforced through a legal framework can lead to a well- functioning digital solution.

75. Newborn and stillbirth routine data recording and reporting systems from health facilities: findings of the IMPULSE observational study in Central African Republic, Ethiopia, Tanzania and Uganda

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Background: Newborn and stillbirth indicator data for decision making arises from health facilities and transmitted to district data offices. Understanding the Routine Health Information System recording and reporting systems from health facilities, specifically for newborn and stillbirth indicators.

Methods: The IMPULSE study phase 1 assessed RHIS recording and reporting systems for newborn and stillbirth data in 96 health facilities (14 in Central African Republic [CAR], 24 in Ethiopia, 29 in Tanzania and 29 in Uganda) between November 2022 and July 2024. Data were collected using the "Every Newborn-Measurement Improvement for Newborn & Stillbirth Indicators (EN-MINI) Tools", analysed with descriptive statistics stratified by country and health system level. We conducted interviews with key informants for user- perspectives to barrier and enablers for RHIS improvement, analysing by reflexive thematic analysis.

Findings: We found the average number of printed registers for maternal and newborn data in health facilities, ranged between 3.2 in Tanzania to 6.8 in Uganda. In CAR, an average number of 2 handwritten registers were also found. Among 10 specific registers assessed, only a standardised labour and delivery register was available in all sites, with a lack of dedicated postnatal care and newborn registers. Electronic reporting systems such as DHIS2 were available in 28.6% of health facilities in CAR and 96.3% in Tanzania. Data flow of newborn and stillbirth indicators from health facilities to data offices varied: in Uganda and Tanzania there were multiple paper and electronic monthly reports. Among 10 core indicator data elements, data elements highly available (>80%) in RHIS were 10 in Tanzania and Uganda, eight in Ethiopia and five in CAR. Responders reported the need for standardization and simplification of reporting tools as well as dedicated neonatal forms.

Conclusions: Study findings suggest fragmentation, duplication, high staff workload in recording and reporting newborn and stillbirth indicators in RHIS in all countries. Country-specific actions targeted to reduce the double burden of paper and electronic registers/forms as well as to improve availability of standard registers and core indicator data elements dedicated to newborn and stillbirth may be considered to improve newborn and stillbirth data quality and health.

76. Improving reporting of HIV commodity stock status in an ART-accredited site in Kampala, March to August 2024

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Background: HIV commodity stock status monitoring refers to routine tracking of current quantity of available antiretrovirals (ARVs) and HIV test kits (HTKs) at a health facility. To inform stock status and redistribution plans, the Ministry of Health monitors weekly HIV commodity stock status across the 31 HIV-accredited sites in Kampala using the Real-time ARV Stock Status monitoring tool (RASS). However, by end of March 2024, only 4 (12%) sites had submitted all their reports for the first quarter. We conducted a continuous quality improvement project to improve weekly reporting of ARVs and HTKs from 0% in March 2024 to 100% by August 2024 at one of the none reporting ART-accredited site in Kampala, Uganda.

Methods: We adopted quality improvement team members in charge of RASS for the project at the selected ART-accredited site. The selected site is a high-volume site for HIV care clinic and was among the none reporting sites. We conducted a baseline study using data abstracted from the RASS dashboard in March 2024. We identified factors leading to non- reporting using the fishbone cause analysis technique and identified the tested suggested changes to improve reporting using the 5 why technique. We used the Plan Do Check Act (PDCA) method to monitor the progress.

Results: At baseline in March 2024, the selected ART-accredited site submitted zero (0%) reports. We identified the root cause of the problem as lack of staff orientation and training. We orientated and trained 2 newly transferred RASS users in April 2024 which improved reporting from 0% to 80% in May 2024. We tracked reporting using RASS dashboard and introduced weekly WhatsApp reminders when reporting delays were detected. This further increased percentage reports from 80% to 100% by August,2024.

Conclusion: Orientation of new personnel on weekly RASS reporting and weekly reminders contributed to the improvement of reporting in the selected ART accredited site. We recommend continuous orientation and refresher training of new personnel and weekly reminders to ART- accredited sites in Kampala to improve HIV commodity reporting.

Subtheme 4: Improve health financing and social protection, access to quality healthcare and services to accelerate the achievement of universal health coverage

77. Stakeholder Perspectives of Maternal and Newborn Health Prioritization in South Sudan: A Policy Analysis

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Background: The maternal and neonatal mortality in South Sudan is among the highest in the world and among other fragile and conflict-affected countries. The neonatal mortality rate (NMR) was estimated at 39 deaths per 1,000 live births in 2022 and

the stillbirth rate was estimated at 28 deaths per 1000 live births in 2019. While globally the maternal mortality ratio (MMR) was 211 deaths per 100,000 live births in 2017, South Sudan's MMR was 1,150 deaths per 100,000 live births, which was the highest in the world. The most recently estimated MMR of 1,223 (year 2020) is still the highest in the world. Within an evolving political economic context, this study aims to capture perspectives of current actors on drivers of the stagnating investments in maternal and newborn health (MNH).

Methods: A descriptive case study guided by the health policy analysis triangle to explore contextual factors, policy content, actors' roles and implementation processes for MNH policy and practice. A total of 20 key informants from government, humanitarian and development organizations, civil society, donors and health providers were interviewed.

Results: According to respondents, MNH was a priority in South Sudan due to the presence of various legal and policy frameworks. However, financial investment in MNH programs was inadequate due to the government focus on peace and stabilization, and the fragmented parallel systems run by international actors. Funding for MNH was also affected by ongoing conflicts and disease outbreaks, which diverted attention away from the issue. National initiatives to expand service coverage and funding are either inadequate or not well studied. For instance, public funding for health services has been less than 1 dollar per capita and persistently between 2-4% of the national budget over the years, far below the Abuja Declaration of 15%. Respondents also reported failure to implement a proposed government-driven initiative, the Maternal Mortality Reduction Fund, that was supposed to be set up at the level of the Presidency and run by Ministry of Health. In addition, gendered attitudes and norms continue to impede care seeking, service provision and inclusivity in decision-making for improving MNH prioritization. Stakeholders highlighted the need for accountability to sustain progress and close policy implementation gaps.

Conclusion: This study highlighted relevant challenges and opportunities for improving MNH outcomes in South Sudan and similar fragile contexts. Government ownership of the MNH agenda is needed, so is strengthening of national initiatives, gender equity, actor coordination and accountability mechanisms.

78. Enhancing Human Papillomavirus (HPV) Immunization Coverage through Integration with COVID-19 Vaccination Efforts in Njombe Region, Tanzania

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Background: In response to the COVID-19 pandemic, the Vaccine Action Network (VAN) project demonstrated innovative and coordinated efforts to protect public health. The focus was to mitigate the pandemic's impact by improving COVID-19 immunization coverage while integrating the efforts with expanding immunization coverage of routine vaccines and providing HPV vaccination to adolescent girls. The HPV vaccine was one of the government's key strategies towards eliminating cervical cancer in Tanzania. The VAN started in December 2022 while the COVID-19 and HPV vaccination coverage was 83.4% and 83% respectively in Njombe Region.

Methodology: The VAN implementation team adopted the integration approach of comprehensive services with a dedicated team of community health workers, health care Providers (HCPs), and recorders. The HPV vaccination door-to-door campaign started in January 2023 and went parallel with the effective administration of COVID-19 vaccination to the targeted populations. Whereby, more HCPs were trained on the HPV vaccine thus increasing the number of trained HCPs, supporting the distribution and storage of HPV vaccines, and conducting joint supportive supervision for all immunization activities. These efforts increased the number of vaccinated people by countering misinformation related to vaccines and explaining how they help protect people and prevent illnesses.

Results: The HPV vaccination campaign aimed to vaccinate all eligible girls and young adults. The vaccination efforts were successful, by the end of the campaign in December 2023, 10526 adolescent girls had been provided with the HPV vaccine as part of collaborative efforts to improve immunization uptake. This achievement increased immunization coverage to 102%, thus making an increase of 19% from when the integration efforts started in January 2023. Further, the team facilitated the distribution of routine vaccines to 168 health facilities which helped to maintain the progression of routine immunization.

Conclusion: The success of the VAN-supported HPV immunization campaign was largely due to coordination, efficient planning, and collaboration with RHMT/CHMTs as well as local leaders. The approach optimized community resource utilization and ensured broad coverage, which are guiding principles for future public health interventions. This led to the core project goal attained and other related immunization initiatives achieving remarkable.

79. Characterization of key and Vulnerable populations Accessing HIV Mobile Testing Services in Mbeya and Songwe regions from 2019-2021, survey from Mobile Laboratory

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Introduction: HIV remains a public health concern in many sub-Saharan African countries including Tanzania. THIS survey report for 2022-2023 shows HIV prevalence among adults aged 15 years and older was >4.4%. High HIV prevalence rates are observed in key and vulnerable groups. Young girls, adolescents and PWUD/PWID are at highest risk. The objective was to describe the characteristics of the key and vulnerable populations in relation to the HIV status.

Methodology: A mobile diagnostic laboratory team operated in districts of Mbeya and Songwe regions in areas that are potentially hotspot for HIV transmission. KVPs were consented before HIV testing and collection sociodemographic data was done. Data and HIV results were entered into database. Retrospective data from 2019-2021 were analyzed by STATA 17 to identify the characteristics incident cases

Results: From the 2019 to 2021, we screened over 12000 individuals in HIV spots in Mbeya and Songwe districts. The following groups were reached: 557 Adolescent Girls and Young Women, 675 clients of Female Sex Worker (FSW), 107 fishermen, 705 miners, 183 People Who Use Drugs (PWUD), 32 truck drivers, 685 bar workers and 1205 Female workers. Overall, PP had 13% HIV prevalence KP had 17% HIV positivity. The following is HIV prevalence listed from the highest to the lowest in the groups tested: 25% in Bar workers, 24% for PWUD, 22% among truck drivers, 21% among miners,17% for FSW, 15% for clients of FSW, 13% for AGYW and the lowest 12% was among fishermen.

Conclusions: Female sex worker and their clients contributes largely to HIV transmission. Mining areas has high incidences in HIV transmission. Targeted strategies for prevention of HIV transmission need to focus on hotspots and KVP if we are to attain HIV epidemic Control by 2035.It is possible to achieve higher linkages to care if client-based approaches are implemented.

80. Refashioning HIV Services to Increase uptake of services among men in Western Equatoria, South Sudan

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Introduction: Amidst a complex emergency in South Sudan, men demonstrate disproportionately poor uptake of HIV services, constituting 'a blind spot' in the fight against HIV compared to their female counterparts. Addressing the gender gap in HIV services uptake is required for successful ART scale up and ultimate HIV Epidemic Control.

Methods: Between July and September 2024, CMMB in collaboration with the Star Support Group (SSG), implemented the "Community Health Post" (CP) a differentiated service model in Yambio Town, South Sudan. The model is a Faith-Engaged Community Model designed to target men. It harnesses existing community platforms — markets, and "boda boda"/ Motorcycle taxis stations — and resources to deliver more accessible and convenient HIV services. The model harnessed existing community platforms dominated by men and adolescents and resources to deliver "male friendly" services. Together with the model core values, the location and its pillars facilitate the men's reframing of ART-friendly masculinities that favor the uptake and use of services. The model is also designed to address the time, resources and stigma constraints of accessing HIV services from traditional clinic settings by men.

Results: Between July and September 2024 - a total of 2,919 individuals accessed HTS at the CPs of whom 66 tested positive corresponding to an overall yield of 2.3%. More men (58%) accessed the services compared to women (42%). Whereas more men were tested, most positive cases were women (64%) compared to males. The age group 26-29 and 35-39 recorded the highest positive cases for both genders. These findings suggest that CPs can play an important role in supporting men's engagement in HIV treatment and care services in similar settings.

Conclusions: Adopting the CP model enhances men's engagement in HIV services and improves their access to HTS, ART, Adherence, VL and thus, quality of life. The model provides an opportunity to improve the gender imbalances historically present in HIV programs in South Sudan and the region. The implementation of the model highlights the need to integrate core values, specific pillars, human centered design approaches, motivational counselling and multi-stakeholder engagement to foster the process of refashioning ART-friendly masculinities and effectiveness.

81. Population Health Needs and Health Systems Readiness in the Context of Universal Health Coverage implementation in Bomet County, Kenya

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Introduction: One major challenge in implementing Universal Health Coverage is ensuring that services reach those most in need and the hardest to reach (SDG, 2016). There is need to understand the population needs and the health system's ability to provide the health services in the wake of UHC implementation. This study therefore sought to understand the critical

elements needed for a successful UHC roll out in Kenya.The objective was to Determine and explore Population Health Needs and Health Systems Readiness in the Context of UHC implementation in Bomet County, Kenya.

Methodology: Study design: A Convergent Parallel Mixed Methods, This study was part of a larger study that covered 12 counties of Kenya and but this data is only for Bomet County. The Population were Facilities'-in charges, women of reproductive age, youth and the elderly (60yrs & above). Sampling- Quantitative: health facilities (n-62) were assessed using stratified random sampling method. For qualitative: 9 FGDs were conducted and participants were purposively selected from the community health units (CHU) linked to the selected health facilities. Data Collection:For quantitative data, SARAM tool was administered to facility in-charges and Qualitative data was collected using FGD guides administered to elderly persons, youth and women of reproductive age. Data analysis: Quantitative -Exploratory data analysis (EDA) technique was employed. For qualitative data, the Framework Method was used.

Findings: The service readiness index scored 68.8%. Only 19.4% of the health facilities had all the essential medicines. Standard precautions for infection prevention scored 91.7%, diagnostic capacity 68.4%, and basic equipment 63.2%. Human resources scored 8.8%. Lack of drugs was also a concern from the community: "The challenge we get here is inadequate drugs. "We are sent to the chemists to buy drugs and as youth we don't have money." (FGD, Youth),"Other than human resource, we have a lab but our lab is not fully equipped," Facility in-charge.

Conclusions: The health facilities in Bomet County were not adequately equipped to offer the much- needed health services. County Government should invest more in essential drugs and human resource for health.

82. A facility-based Evaluation of Health Service Availability in South Sudan

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Introduction: South Sudan is experiencing prolonged conflict and humanitarian challenges that affect the delivery of health interventions. The healthcare system is underdeveloped and stretched across states. Significant challenges like donor-driven healthcare delivery, limited infrastructure, instability, untrained healthcare workers, inadequate funding, and complexities of integrating humanitarian response with a long-term concrete continuum of care. The health service availability assessment is a mechanism for surveillance of service provision across the country.

Method: The WHO service availability tool was adopted and contextualised. Install on Android tablets. Data was collected online through ODK for July/August/September. Oriented field supervisors and assistants. Data collection was online. Service availability dashboard developed. The tool is customised in DHIS2 for data collection and dashboard updating. Analysis in ODK, Excel, ArcGIS, and SPSS V27. Generated proportions for facilities, and composite index by averaging each public health functions.

Results: Reporting rates, in Lake in July are 75%, in August 80% and in September 33%, Western Bahr Gazal, 58%, 57% and 21%, Western Equatoria 22%, 26% and 16% and lowest in Greater Pibor and Abye 0%. Facilities operating hours, closed 0.29%, <5 days 12.69%, 5 days 63.13% and 7 days 23.89%. 72% were PHCU, 58% were PHCC, 43% were County hospitals, 59% were State hospitals and 47% were within 7 days a week in August, availability in July and August by 38%, 41% in September increased. HSTP 44%, non-HSTP 40% in September a rise from 38% and 37% in July, Disease prevention 53% −56%, health promotion 46%-53%, available rehabilitation 5% were least available followed by diagnostic 14% to 16%, health inputs 27%, Range from 24% Infrastructure, to 32% Health Information. Service delivery 28% low score and ranges from 23% in Lake to 33% in Ruweng. The least stock-outs in Lakes are 21% and the highest in Warrap & Ruweng 27%. governance average 29% with 24% in Lakes and 33% in Warrap. infrastructure availability 24%, variations 21% in Central Equatoria, 27% in Warrap. HR availability index is 25% with 19% in Lakes and 28% in Western Bahr El Ghazal. Nurses availability in HSTP ranged from 24%-26%, non HSTP facilities 25%-24%. The health budget declined from 20% -to 1%2018/2019-2019/2020 fiscal years.

Conclusion: Health service availability is constrained by instability, limited infrastructure, and healthcare worker shortages. Overall service availability was low with variations.

83. Access to Surgical Services in Central Equatoria State, South Sudan: A Baseline Cross-Sectional Assessment to Inform National Surgical Policy and Planning

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Background: Access to safe, equitable, and affordable surgical and anesthesia care is critical to reducing the burden of surgical diseases in Africa. To understand the state of access to surgical care in South Sudan we conducted a baseline assessment of

surgical services at the Central Equatoria State (CES) in May 2024.The objective of this study was to survey public healthcare facilities in CES, South Sudan capable of providing essential surgical services. We utilized their capacity to perform cesarean section, laparotomy, and open fractures management (Bellwether procedures) as a proxy measure to assess the current state of their workforce, infrastructure, financing, information management, and service delivery.

Methods: A validated and contextualized Surgical Assessment Tool that was developed by the Harvard Program on Global Surgery and Social Change (PGSSC) and the World Health Organization (WHO) was used at the facility level to collect data on key pillars of surgical care. Data was summarized descriptively using percentages, mean (standard deviation), and median (minimum, maximum) and visually in graphs, charts, and tables.

Results: All three public health facilities were found capable of providing the Bellwether procedures for their catchment population. However, we found out that workforce availability, financing, and surgical infrastructure were major constraints on the delivery of surgical care. The SAO specialists' density at the assessed facilities was 2.27 SAO specialists per 100,000 population. Specialized surgical procedures such as repair of cleft lip and palate, clubfoot, and shunt for hydrocephalus were not available at all the assessed facilities. No health facility had a magnetic resonance imaging machine. Additionally, the total average annual facility budget for the facilities was $918,850, ranging from $3,960 to$800,000 at the teaching hospital, which is too low for the operations of these health facilities.

Conclusion: Our findings showed that even if Bellwether procedures are routinely practiced in the study hospitals, access to quality and affordable care is compromised by workforce availability, financing, and surgical care infrastructure. We recommend that the National Ministry of Health scale such a survey to the remaining healthcare provision sites and based on the results take bold steps to improve access to surgical services. This should start with developing a national surgical policy and strategic plan, which aims to improve surgical infrastructure, surgical workforce, financing, and other pillars of surgical and anesthesia care in South Sudan.

84. Assessment of Quality Indicators of Laboratory Services at Ruhengeri Level 2 Teaching Hospital

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Introduction: Quality of laboratory services is a critical component of healthcare delivery, ensuring accurate diagnosis, timely interventions, and better patient outcomes. At Ruhengeri Level 2 Teaching Hospital, laboratory services play an essential role in patient care. The evaluation of quality indicators allows to identify strengths and weaknesses in the laboratory's performance which will enhance the overall quality of laboratory services, ultimately contributing to improved patient care and hospital performance.

Methodology: This retrospective study was conducted at Ruhengeri Level 2 Teaching Hospital's laboratory department from January 2023 to December 2023 to evaluate key quality indicators where the pre-established quality indicators in all phases of testing processes were assessed. Those indicators are sample rejection rates, internal quality control (IQC), stock-out status, equipment downtime, external quality assurance and turnaround time (TAT). Structured data sheet was used for data collection from archived records and in Health Information Management System.

Results: The sample rejection rate was observed to be 4%, with most rejections attributed to improper sample collection or labeling errors. For Internal Quality control the laboratory maintained a compliance rate of 95% for routine IQC procedures, which indicated good control practices in place, though minor issues were noted in the handling of reagents and equipment calibration. The laboratory faced frequent stock-outs for critical reagents, particularly in the molecular biology department, where the stock-out rate reached 15% for essential testing kits. The equipment downtime was reported to be 7%, with the highest incidence observed in the microbiology and hematology departments due to equipment malfunctions and the need for repairs. The average of Turnaround time (TAT) for test results was 48 hours for routine tests, with a **5%** delay noted in urgent cases. The turnaround time for molecular biology tests for HIV, HBV, and HCV was found to be slightly higher, averaging 72 hours, due to the complexity of these tests and sample processing times.

Conclusion: The quality of laboratory services at Ruhengeri Level 2 Teaching Hospital was generally good; however, issues such as stock-outs, equipment downtime, and delays in turnaround times, particularly for molecular biology tests, were identified as areas of concern. Therefore, the findings highlighted the need for improvements in supply chain management, timely maintenance of laboratory equipment, and better management of turnaround times, especially for specialized tests.

85. Availability of Health Services in Primary Schools in Juba City

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Introduction: School health services (SHS) refers to the need based comprehensive services rendered to pupils, teachers and other school personnel to promote, protect their health, prevent and control diseases and maintain their health (1). This study

aimed to understand the current state of health services in primary schools which is vital for identifying gaps and improving health outcomes for pupils in Juba city central Equatorial state South Sudan. This study was based on three specific objectives; the quantity of health services in primary schools, the accessibility of these health services to pupils and barriers faced by schools. This study would be significant to influence policy decision improving health services provision in primary schools, guiding stake holders in implementing necessary changes to support pupils' health and can serve as model for similar research on other regions facing comparable challenges.

Methodology: A cross-sectional study design type was carried out in primary school in juba city using 60 questionnaires and 11 observation checklists. Data was analyzed using SPSS.

Results: A total of 60 primary schools were studied, 46 were private schools and 14 were public. 33 primary schools offer health services, 22 have no sickbays while 11 have sickbays. 10(99.9%) primary schools have trained professional healthy personnel from school with sickbay. First aid (90.9%) is the highly healthy service offered with nutrition being less offered (9%). 63.6% of the schools with sickbay offered analgesic.

Conclusion: In conclusion, the current status of school health services results in poor school health provision; thus, the Ministry of Health and its relevant health divisions and subdivisions should task stakeholders (PTA, Teachers and School management team) to provide all the essential health services required for the functioning of the school health program.

86. Choice of Medical Specialties and Influencing factors among The Final Year Medical Students at University of Juba, South Sudan

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Introduction: The medical field is a dynamic and demanding profession that requires a deep commitment to patient care and a strong foundation in medical knowledge. The choice of a medical specialty path is a significant decision for final year medical students, as it will shape their professional lives and the impact they can make on society. This research aimed to explore the factors that influence the choice of medical specialties among final year medical students and to better understand their aspirations and preferences within the medical field at university of Juba (UoJ).

Methodology: A cross-sectional study design was used to determine medical career choice and influencing factors among final year medical students at university of Juba, South Sudan. The study ran from October 2024 to February 2025. The estimated sample size for this study is 112 participants. Primary data was obtained through questionnaires. The data obtained was reviewed, organized, and displayed in form of tables. Logistic regressions were computed to determine factors influencing medical career choices.

Results: Of the study respondents, male were 77 students, making up 68.8% of the sample. The 95% Confidence Interval (CI) for this proportion ranges from 59.8% to 76.8%. Female were 35 students, making up 31.3% of the sample. The CI for this proportion ranges from 23.2% to 40.2%. There was a mix of interests in more general fields like General Medicine and Obstetrics & Gynecology, while students were less likely to choose specialties like Anatomy, Biochemistry, and Nuclear Medicine. The most statistically significant factors affecting postgraduate decisions include gender (p = 0.001), financial prospects (p = 0.025), professional challenges (p = 0.008), stress levels (p = 0.011), flexible working hours p = 0.005, and the sense of calling (p = 0.031). The odds ratio (OR = 10.21) suggests that gender was a significant predictor of the specialty choice, but its p-value was 0.999, meaning it was not statistically significant. Financial prospects predictor has a coefficient of -2.588 and a very low odds ratio (OR = 0.075), indicating that financial prospects negatively influence the likelihood of choosing certain specialties.

Conclusion: By focusing on these key areas, medical education programs can better support students in making informed decisions and guide them towards a career path that aligns with both personal interests and the needs of the medical field.

87. Community Perceived Priority Actions for Creating a Primary Healthcare System Interface for Cardiovascular Disease Prevention: The Health Kiosks in Markets (HEKIMA) Study in Rural Kenya

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Background: In Kenya, Non-Communicable Diseases (NCDs) account for 39% national mortality with cardiovascular diseases (CVDs) leading at 14%. There are stark inequities associated with the NCD burden, risk factors and access to health services. Most disability- adjusted life-years (DALYs) due to NCDs and injuries occur before the age of 40years, and among the poor due to limited access to health services in rural areas. A contextually appropriate community-based intervention to promote access to CVD preventive services is a necessity. Community markets are social institutions with untapped potential for public health. Embedding health-promoting interventions into culturally familiar contexts can lead to sustained changes. This study

sought to establish the community's perceived priority actions for creating a primary healthcare (PHC) system interface for CVD prevention and control.

Methodology: A mixed methods study design using concept mapping participatory research, was conducted in Vihiga county located in Western Kenya. A total of 35 stakeholders aged above 18years and residing in the county took part in the study. The obtained data was analyzed using the group wisdom app a concept mapping analysis tool, that allows for obtaining stakeholder perspectives while reducing the influences of power.

Findings: Priority areas for creating HEKIMA as identified by the stakeholders were availability of equipment and drugs (24 statements), location of the kiosks (14 statements) trained personnel to provide services at the kiosks (13 statements) and health promotion (19 statements). Some of the foreseen barriers by the stakeholders were the health seeking behavior of the community (12 statements) and the referral system and compliance (11 statements). There was agreement on the potential wide reach of HEKIMA services and awareness creation.

Conclusion: For HEKIMA to succeed in enhancing access to CVD preventive services, it must overcome systemic barriers, ensure quality care, engage the community effectively and align with national health policies promoting universal health coverage. While its effectiveness will rely on strategic location choices, cost considerations, community sensitization, and addressing local cultural practices.

88. Community-Based Networks Integration into Boma Health Initiative: South Sudan Experiences

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Introduction: The healthcare system in South Sudan experienced severe deterioration from 1930s until 2005, and again in 2013-2016 protracted conflicts. These extended periods of conflict severely disrupted health, education, economic, and social infrastructures, resulting in over 8 million individuals lacking sufficient healthcare access. Following the Comprehensive Peace Agreement in 2005, health organizations implemented fragmented, disease-specific initiatives within the same communities. This resulted in service duplication, ambiguous roles and responsibilities among Boma Health Workers (BHWs), the absence of a cohesive health system, and inefficiencies in service delivery. To address these, Ministry of Health restructured the healthcare system into three levels: Primary, Secondary, and Tertiary care. This restructuring was launched on March 30, 2017, during the 3rd National Health Summit in Juba, leading to the establishment of Boma Health Initiative (BHI), which aimed to enhance healthcare accessibility for local communities. BHI is fundamental to community health efforts, striving to bridge the gaps between households, communities, and health facilities. BHWs are tasked with delivering integrated health education, promotion, and disease prevention services.

Method: This evaluation employed a mixed-methods approach, combining qualitative and quantitative data collection techniques. A survey tool was administered to BWH, administrators, healthcare workers, and beneficiaries in urban and rural areas, purposively selected to assess maternal and child health. Interviews with health ministry representatives, Boma Health Secretariat, NGOs gather the best practices, challenges, and strategies for improving healthcare provision. Documents from the Ministry of Health, UNICEF, and WHO were reviewed.

Findings: The evaluation showed progress in key recommendations such as scaling BHI coverage from 25% to 50%, integrating community-based health programs under BHI, harmonizing incentives for community health workers, enhancing domestic funding for sustainability, streamlining BHW roles and supervision under the Ministry of Health, strengthening BHI structures and coordination across all levels, and improving gender- transformative approaches were thematic areas presented by various respondents.

Conclusion: Integration of BHI services into existing services has generated demand and Improved health and hygiene education. Evaluation reduces missed opportunities for vaccination and Increases immunization. Strengthen linkages and sustain coverage. Increase community acceptability and reduce cost. Integration created teamwork among community-based networks, built trust, improved institutional delivery. Defaulters' tracing improved and services were brought closer to the people. The challenges of increased work overload on BHWs, drug stock-out and supplies, Low pay, poor working conditions, skills, and knowledge gaps limited integration and a majority of cadres not in government pay roles.

89. Demographic Predictors of Inpatients' Postdischarge Stay in Referral Hospitals in Kisumu County, Kenya

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Introduction: Globally, inpatients continue to unnecessarily prolong their stay in referral hospital wards upon their medical discharge. This causes congestion in wards, hospital reinfection, relapse, death of PDS inpatients, and financial burden to hospital management. This study aimed to investigate the demographic predictors of inpatients' postdischarge stay in Jaramogi Oginga Odinga Teaching and Referral Hospitals (JOOTRH) and Kisumu County Referral Hospital (KCRH) in Kisumu County, Kenya.

Methodology: The study adopted a correlational cross-sectional research design and used mixed methods of data collection. Hospital records estimated that 200 inpatients experienced PDS out of which a sample of 133 was calculated using Yamane's (1967) formula. A stratified and systematic random sampling techniques were used to select inpatients in the 14 wards. additionally, key informant and in-depth interviews were used to collect qualitative data from 10 key informants who were purposively selected. Further, a binary logistic regression analysis where p-values <0.05 was considered statistically significant Odds ratios and 95% confidence intervals were reported. Finally, thematic analysis was used to analyze qualitative data and quantitative results were corroborated with verbatim quotations.

Results: The findings established that demographic characteristics of PDS inpatients namely age (P-value 0.01), gender (P-value 0.03), marital status (P-value 0.02), and nature of the illness (P-value <0.0001) were key demographic predictors of PDS. The majority 72 (54.13%) of the respondents in this study were female. In the age cohort, 43 (32.33%) were aged 20-29 years. In terms of marital status, majority 40 (30.08%) of the respondents were married and most of the respondents 74 (55.64%) had chronic diseases, while 59 (44.36%) had acute illnesses, among which the majority 88 (66.17%) had reached the primary level; hence, 86 (64.66%) unemployed respondents.

Conclusion: Individual demographic factors associated with the vulnerability of PDS inpatients to becoming PDS victims in referral hospitals. Elderly individuals, males, unmarried individuals, and chronically ill individuals were more at risk of experiencing episodes of PDS. Older people with complex health needs are particularly vulnerable to PDS. Additionally, males, especially middle-aged individuals, are associated with deviance, rendering them social misfits who face neglect due to their social relationships in hospital wards and thus PDS. The chronically ill were perceived as burdens by their family members, whereas the unmarried experienced PDS due to insufficient social support. comes of the PDS.

90. Health-related quality of life among adult patients with cancer in Uganda – a cross-sectional study
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Introduction: The study aimed to investigate the prevalence and factors associated with poor health- related quality of life in adults with cancer in Uganda.

Methods: The cross-sectional study surveyed 385 adult patients (95% response rate) with various cancers at a specialized oncology facility in Uganda. Health-related quality of life was measured using the EORTC QLQ-C30 in the Luganda and English languages. Predetermined validated clinical thresholds were applied to the instrument to identify patients with poor health-related quality of life, that is, functional impairments or symptoms warranting concern. Multivariable logistic regression was used to identify factors associated with poor health-related quality of life in six subscales: Physical Function, Role Function, Emotional Function, Social Function, Pain, and Fatigue.

Results: The mean age of the patients was 48 years. The majority self-reported poor functioning ranging between 61% (Emotional Function) to 79% (Physical Function) and symptoms (Fatigue 63%, Pain 80%) at clinically concerning levels. These patients were more likely to be elderly, without formal education, and not currently working. Being an inpatient at the facility and being diagnosed with cervical cancer or leukemia was a predictor of poor health- related quality of life.

Conclusion: Improvement of cancer care in East Africa requires a comprehensive and integrated approach that addresses various challenges specific to the region. Such strategies include investment in healthcare infrastructure, for example, clinical guidelines to improve pain management, and patient education and support services.

91. Impact of reimbursable out-of-pocket expenditures on hospital utilisation for maternal and child healthcare: evidence from the BabyGel study
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Background: Direct non-medical expenses, such as transportation and inpatient stay costs, can delay access to maternal and child healthcare services, increasing morbidity and mortality. This study examined the impact of reimbursing transport costs and providing inpatient subsistence money on the frequency of hospital visits among women of different socio-economic status (SES) within the BabyGel study in eastern Uganda.

Methods: Our sub-study enrolled 2,748 mother-baby pairs from the BabyGel study. This sub-study was conducted in Budaka and Mbale districts in eastern Uganda between February 2022 and April 2024. From 34 weeks of pregnancy until three months

after childbirth, we recorded the number of hospital visits for illness and the amount of money reimbursed for transportation and subsistence during inpatient stays. An index of household socio-economic status (SES) was constructed using Multiple Correspondence Analysis (MCA) based on assets, housing conditions, and access to services. MCA is well suited for creating SES indices from binary categorical variables. Households were classified into three groups of SES: low, middle, and high. Descriptive statistics were used to characterise the sample. A negative binomial regression was applied to predict the frequency of hospital visits, while a gamma regression predicted reimbursed out-of-pocket expenditures. All analyses were conducted using Stata Version 18.

Results: The mean (SD) age of mothers was 25.1 (6.1) years. The majority, 82.6%, lived in rural areas, 66.7% had primary education, and 95% did not have a regular salary. Most households (94.3%) had access to an improved water source, although 29.7% had to walk over 30 minutes to access water and only 9.1% had a handwashing facility with water and soap within these households, 18.1% of mothers reported that they always washed their hands with soap. The proportion of deliveries taking place in health facilities was high (83.7%). Mothers in the low socio-economic status (SES) group received the highest reimbursement ($7.58), followed by those in the middle SES group ($6.91), and those in the highest SES group only received $4.41. Mothers in the high SES group visited health facilities less frequently (2.18 visits on average) and spent 37% less (exp $(-0.47) \approx 0.63$) on hospital visits compared to those in the low SES group, who had the highest number of visits (3.03).

Conclusion: Reimbursing transportation costs and providing support for inpatient subsistence, have the potential to improve access to maternal and newborn care services and could be particularly beneficial for mothers in the lowest socio-economic status.

92. Pharmaceutical Trade and Inclusive Growth: Implications for Global Healthcare Access and Economic Development

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Introduction: This study examines the impact of pharmaceutical trade on inclusive growth, with a particular focus on its implications for healthcare access and economic development. Given the critical role of pharmaceuticals in public health and economic progress, understanding the trade dynamics in this sector is essential for shaping policies that promote equitable growth.

Methods: The study employs a pooled Ordinary Least Squares (OLS) regression model to analyse the relationship between pharmaceutical trade openness and an inclusive growth index. The analysis controls for GDP per capita, education levels, and infrastructure development. Data for this study were obtained from reputable global sources, including the United Nations Commodity Trade Statistics Database (UNCOMTRADE) for pharmaceutical trade data, the United Nations Conference on Trade and Development (UNCTAD) for the inclusive growth index, and the World Bank's World Development Indicators (WDI) for control variables. The dataset covers 105 countries for the year 2021.

Results: The findings indicate a statistically significant positive relationship between pharmaceutical trade openness and inclusive growth. This suggests that increased pharmaceutical trade enhances both economic progress and equitable healthcare access. The results highlight the potential role of pharmaceutical trade in strengthening health financing, improving supply chain efficiency, and expanding access to essential medicines, particularly in low- and middle-income countries.

Conclusion: Policymakers should consider trade policies that facilitate the equitable distribution of pharmaceuticals while addressing affordability and regulatory challenges. However, this study is limited by its reliance on a single-year dataset, which restricts the ability to establish causal inference. Future research incorporating longitudinal data and advanced econometric techniques is needed to provide a deeper understanding of the complex dynamics between pharmaceutical trade, healthcare accessibility, and inclusive growth. Further studies should employ longitudinal data and advanced econometric techniques to explore causal relationships more robustly. Examining how different trade policies, intellectual property regulations, and regional trade agreements affect pharmaceutical access and inclusive growth would provide deeper insights. Additionally, investigating the role of domestic pharmaceutical production and its interaction with trade policies could enhance our understanding of how to create a more inclusive global pharmaceutical market.

93. Public Financing evaluation for Nutrition in Burundi: Towards a healthy population and productive human capital

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Context: Investing in nutrition programs is beneficial both morally and economically, as it saves lives and boosts human capital and economic growth. Analyzing budgets is crucial for advocating increased funding, which can improve nutritional

outcomes. This study aims to analyse government budget allocations for nutrition by tracking the budgets allocated to interventions with direct and indirect effects to carry out evidence- based advocacy for adequate nutrition funding.

Methodology: This evaluative study, carried out in collaboration with the Executive Secretariat of the Multisectoral Platform for Food Security and Nutrition and various governmental and non- governmental stakeholders, (UNICEF), focused on collecting data relating to public budgets allocated to nutrition as set out in 2023-2024 Finance Acts. Data collection forms were used.

Results: The 2016-2023/2024 Finance Acts show an increase in budget allocations for nutrition in Burundi, rising from 14.1 billion to 31.2 billion Burundi francs, marking an overall increase of 2.5%. Annual increases of 0.42% in budget allocations have taken place between 2017 and 2023/2024. In 2023/2024, funding for nutrition constituted 0.31% of GDP, a slight increase from 0.25% the previous year, with 0.8% of the total budget devoted to nutrition through five key systems. This still low rate should be increased in order to achieve the nutrition objectives. Of the nine Ministries in the Platform, only five have budget allocations for nutrition in 2023/2024. The Ministry of National Education and Scientific Research received the largest share, 61.5%. The average budget implementation rate for nutrition funding is 87.1%, although this varies considerably from year to year. Funding sources have shifted from a predominance of domestic resources (2017-2021/2022) to more external funding (2022-2023/2024). The challenges of funding nutrition include the difficulty of tracking allocations, insufficient data on returns on investment, and a focus on short-term results rather than long-term sustainability.

Conclusion: Budget analysis for nutrition is complex. The low rates recorded during this analysis are largely due to the budget nomenclature, which does not reflect nutrition, posing a budget tracking problem. To address the nutrition underfunding need, advocacy for increased financial support, share nutrition investment performance data, and prioritize nutrition throughout the budget process.

94. Self-medication practices and associated risk factors among students at University of Juba

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Introduction: Self-medication is the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of prescribed drugs for chronic or recurrent diseases or symptoms. Research shows that the practice is widespread among university students most likely due to academic stress, financial constraints, and easy access to medications. Although self-medication can provide quick relief for minor ailments, it poses significant risks such as misdiagnosis, adverse reactions, and antimicrobial resistance. There is currently scare evidence on self-medication in South Sudan. Therefore, this study assessed the prevalence and associated factors of self-medication among the University of Juba students.

Methods: A cross-sectional descriptive study was conducted at the University of Juba. A three-stage sampling technique was used to select 423 students. Data was collected through researcher-administered structured questionnaires. Descriptive statistics and chi-squared tests were performed using IBM SPSS 23.0.

Results: The prevalence of self-medication among the University of Juba students was 75%. Analgesics, antibiotics, and anti-malarial medications were the most commonly used. Peer influence (p value = 0.02), source of information (p =0.004), quality of sleep (p = 0.034) and frequency of self-medication (p < 0.001). Factors that were significant were raised to the logistic regression mode which confirmed their influence on self-medication; peer influence (95% CI = 0.442 - 0.962; p = 0.031), source of information (95% CI = 0.0985 – 1.492; p =0.07), quality of sleep (95% CI = 1.019 – 2.010; p = 0.03) and frequency of self- medication (95% CI = 0.227 – 0.584; p < 0.001).

Conclusion: Self-medication is highly prevalent among university students at the University of Juba. Practice is influenced by Peer influence, source of information, quality of sleep and frequency of self-medication. The study recommends strengthening regulations, improving access to health services, and increasing awareness.

95. Service availability in the first three months of the Health Sector Transformation Project Implementation, South Sudan

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Introduction: The Health Sector Transformation Project (HSTP) is currently one of the largest health funding sources in South Sudan, designed to support 1,158 health facilities out of the approximately 1,975 facilities nationwide. The project began implementation in July 2024. Ministry of Health (MOH) and World Health Organization (WHO) developed a Service Availability Monitoring Tool to assess the availability of essential health services and the overall capacity of facilities since the implementation of the HSTP including Non-HSTP facilities. Here we report the service availability scores in the first three months (July – September 2024).

Methodology: A service availability monitoring tool was used to assess the availability of essential health services and the overall capacity of facilities. Data collected online through ODK for July/August/September by field supervisors and field assistants trained in the use of ODK; a service availability dashboard was developed and the tool was customized in DHIS-2 for subsequent data collection and updating of dashboard. Overall service availability score was generated by averaging the proportions of facilities that reported to have each of the services by public health functions. A five-point Likert scale was used to assess inputs. Weights were assigned on the levels with the least having a weight of 1 out of 5. A weighted score was calculated based on the degree of agreement and this was used as the measure for the availability of the specific health inputs. Analysis was generated (for the three months) for all the domains focusing on tracking trends and patterns in service availability, input availability, and facility performance across various categories to provide actionable insights for improving health service delivery using scores - Minimal (0-25%), Low (25%-50%), Moderate (50%-75%) and High (75%-100%).

Results: Overall service availability remained constant in July and August at 38% and increased to 41% in September; Progress in both HSTP and non HSTP supported facilities (shows interventions are working in both types of facilities); HSTP (44%) and non-HSTP (40%) supported facilities in September compared to 38% and 37% in July respectively show increase.

Conclusion: Progress in both HSTP and non HSTP supported facilities shows interventions are working in both types of facilities. Nevertheless, there is a significant difference between HSTP and Non-HSTP facilities at the end of the third month. Overall, there is low availability but scaling up the interventions and implementing any lessons learnt is likely to lead to improved service availability.

96. Community-Directed Ivermectin Treatment in Maridi, South Sudan: Evaluating the Impact of Onchocerciasis Awareness Campaigns and Biannual Distribution on Therapeutic Coverage

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Background: A high burden of onchocerciasis and low coverage of community-directed treatment with ivermectin (CDTI) have been observed in many parts of South Sudan. In Maridi County, CDTI was reintroduced in 2017, supplemented by various interventions aimed at improving treatment coverage and reducing disease transmission.

Methods: Through successive community-based surveys, we assessed the impact of an onchocerciasis awareness campaign and the transition from annual to biannual ivermectin distribution on CDTI coverage in Maridi County. Additionally, we analyzed trends in ivermectin distribution since 2017 and identified key factors influencing ivermectin uptake.

Results: Over the past years, CDTI program performance in Maridi has fluctuated due to security challenges, limited funding, misconceptions about ivermectin, and poor coordination of mass treatment campaigns. However, community-based surveys conducted between 2018 and 2024 revealed a significant improvement in therapeutic coverage following the shift from annual CDTI (2017–2019) to biannual CDTI (2021 onward). Coverage increased from 40.8% in 2017 to 70.3% in 2023. Factors associated with higher ivermectin uptake included younger age, male gender, multiple information sources on CDTI, and awareness of the link Copyright 2025 10th EAHSC powered by WPAbstracts Pro between onchocerciasis and epilepsy.

Conclusion: This study demonstrated that reinforced awareness campaigns alongside biannual CDTI can significantly improve ivermectin treatment coverage. The findings highlight a critical opportunity for the health system to strengthen its onchocerciasis elimination efforts, particularly in remote and conflict-affected communities in South Sudan.

97. Performance of Community Health Promoters in Mwea West Sub-County, Kirinyaga County, Kenya

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Background: Community Health Promoters (CHPs) play a vital role in delivering primary healthcare, particularly in low-resource settings. Their performance is crucial in achieving Universal Health Coverage (UHC). However, variations in performance and contextual challenges hinder their effectiveness. This study assessed the performance of CHPs in Mwea West Sub-County, Kirinyaga County, Kenya, and examined socio-demographic and contextual factors influencing their effectiveness. The study aimed to: (i) assess the performance of CHPs in Mwea West, (ii) identify socio-demographic factors influencing CHP performance, and (iii) explore contextual determinants affecting their effectiveness.

Methods: A sequential explanatory mixed-methods study was conducted between September and December 2023. Quantitative data was collected from 187 CHPs using structured questionnaires based on the Community Health Workers

Assessment Improvement Matrix (CHW AIM) Framework. Data was analyzed using descriptive statistics and logistic regression to identify associations. Qualitative data from Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) was analyzed thematically to provide deeper insights.

Results: Only 34% of CHPs met the performance threshold. The primary roles performed included home visits (72%), community dialogue and action days (69%), and documentation/information management (55%). Socio-demographic factors positively associated with performance included being female (p=0.005), attaining secondary education (p<0.001), and having community support (p=0.009). Contextual factors that improved performance included reduced workload (p=0.043), serving ≤30 households (p=0.03), refresher training (p=0.001), supportive supervision (p=0.038), provision of CHP kits (p=0.003), and logistical support (p=0.020).

Conclusion: The study highlights suboptimal performance among CHPs in Mwea West due to workload constraints, inadequate training, and limited supervision. Addressing these factors through targeted policy interventions, enhanced training, and resource provision will strengthen CHP effectiveness, reinforcing their role in primary healthcare and UHC implementation.

98. Programmatic Outcomes of A Chronic Care Unit In A Humanitarian Setting: The Msf Experience In Malakal, South Sudan

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Introduction: MSF has been working in collaboration with MoH in Malakal, Upper Nile State, South Sudan, since 2013, an area with high morbidity and mortality of chronic conditions (CC). Unstable context, stigma, and weak health systems are major barriers to access chronic care, hence innovative strategies are needed. A Chronic Care Unit (CCU) pilot project was proposed as a people-centered approach model of care which aimed at integrating management of patients with CC while optimizing quality of care and improving quality of life. The aim of this abstract is to describe the intervention and present the cohort outcomes data.

Methods: CCU program has been implemented in April 2023 with 50 trained staffs. A descriptive analysis was done on routinely collected data from January to December 2024. The targeted population were people living with CC, including infectious diseases, non- communicable diseases and mental health (MH) disorders. The people-centered care included nutrition support; patient support, education, and counselling (PSEC); mental health and psychosocial support, pregnancy and anticonception, and palliative care. Each team consisted of a nurse (triage and vitals), clinical officer (medical consultation), counsellor (PSEC), and supervised by a medical doctor.

Results: A total cohort of 3185 patients were enrolled in the CCU from May 2023 to December 2024. Of those, total 1807 patients (7% <15y) enrolled from January to December 2024. An average of 575 consultations/month and 151 new patients/month reported, which required one extra clinical officer in each site. Four percent (n=71) patients had more than one comorbidity. The active cohort at the end of the period was 1549, and the reported outcomes were 16% (n=287) lost-to-follow-up (LTFU), 2% (n=31) deaths and 13% (n=227) declared cured in 2024. Distribution of diagnoses represent 26% Tuberculosis, 18% HIV, 16% Hepatitis B, 15% Hypertension, 7% Asthma/COPD, 6% MH disorders, 4% epilepsy, 4% DM, 1% Hepatitis C, 1% Leprosy, 1% Heart failure and 1% other diagnoses.

Conclusions: The descriptive data analysis of this large cohort showed a significant high burden of chronic conditions in Malakal and thus the program required extended human resources, despite of high LTFU. The most prevalent conditions were TB and HIV, followed by Hepatitis B and Hypertension. The outcomes of this cohort evidenced the feasibility of integrating chronic care in humanitarian settings.

99. Strategic Health Purchasing as an Enabler of Health Systems Resilience in Fragile States: Evidence from South Sudan

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Background: Strategic Health Purchasing (SHP) is vital for strengthening health systems, especially in fragile states like South Sudan, where governance, financing, and institutional capacity challenges persist. Despite its potential, SHP implementation in South Sudan faces hurdles such as weak governance, fragmented financing, and heavy donor reliance. This study assesses SHP's role in enhancing health system resilience amidst fragility.

Methods: Using the Strategic Health Purchasing Progress Tracking Framework, complemented by literature reviews and key informant interviews, the study evaluated SHP in South Sudan. It focused on two health financing schemes: the government budget and the Health Sector Transformation Project (HSTP). Data were collected on governance, purchasing functions (benefit specification, contracting, provider payment), and performance monitoring. Thematic analysis of interviews and document reviews provided insights into SHP challenges and opportunities.

Results: Findings reveal high donor dependency, limited government control over purchasing decisions, inefficiencies, weak accountability, and misaligned health priorities. The Basic Package of Health and Nutrition Services (BPHNS) is overly ambitious, leading to implementation gaps due to resource constraints, workforce shortages, and inefficient procurement. Contracting and payment mechanisms are fragmented, causing delayed payments, weak financial oversight, and inconsistent provider incentives. Despite improvements in health information systems, monitoring and evaluation face data quality and reporting challenges.

Conclusion: SHP is crucial for strengthening health system resilience in fragile states like South Sudan. Key policy implications include governance reforms, improved public financial management, alignment of purchasing with government priorities, and reduced donor dependency. Recommendations emphasize institutional capacity building, improved contracting and payment mechanisms, enhanced domestic resource mobilization, and strengthened disaster preparedness. These measures are essential for sustainable health financing and improved health system resilience in South Sudan.

100. The importance of scientific conferences in improving medical services in South Sudan

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Introduction: Scientific conferences play a vital role in enhancing the quality of medical services in South Sudan by fostering knowledge sharing, collaboration, and capacity building among healthcare professionals. These events provide a platform for clinicians, researchers, and policymakers to exchange ideas, discuss challenges, and explore innovations tailored to the country©s unique healthcare needs.

Method: This short communication highlights the significance of such conferences in addressing gaps in medical education, improving clinical practices, and fostering partnerships essential for advancing healthcare delivery in South Sudan, focusing on practical solutions and emphasizing collaboration. **The role of scientific conferences** Knowledge sharing and capacity building Networking and collaboration Advancing medical education Policy advocacy Promoting research Cultural exchange Addressing health challenges Enhancing public awareness. Despite their benefits, organizing scientific conferences in South Sudan faces challenges such as funding constraints, limited local expertise, and logistical issues. To overcome these hurdles, partnerships with international organizations, donor support including medical equipment suppliers and pharmaceutical companies, and virtual conferencing options should be explored.

Conclusion: Scientific conferences are indispensable tools for improving medical services in South Sudan. By fostering knowledge exchange, professional development, and collaboration, these events play a pivotal role in addressing the country's healthcare challenges. Continued support and investment in such initiatives are essential for building a robust and sustainable healthcare system.

101. Healthcare managers' perspectives on direct health facility financing in Tanzania

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Introduction: Health systems in low- and middle-income countries often face severe resource constraints and are implementing reforms to improve accountability and efficiency. Healthcare managers and governance structures are key for the successful implementation of these reforms. This study aimed to examine the implementation of the direct health facility financing (DHFF) in Tanzania, focusing on the perspectives of key management actors; health facility in-charges and members of council health management teams (CHMTs).

Method: This study used a cross-sectional, quantitative survey design with a web-based questionnaire administered to all heads of public health facilities (N=561) and members of CHMTs (N=288) in the Kilimanjaro and Morogoro regions. The survey was conducted from July 2023 to September 2023. First, we provided an overview of the demographics of healthcare managers, the main health facilities in which they work, and the reported implementation of DHFF governance. We conducted

multivariate logistic regressions to explore the relationship between healthcare managers' perceptions of DHFF implementation, challenges, resource change scores, controlling for health manager and facility characteristics.

Results: A total of 348 health managers participated in the study, including 144 members of the CHMTs and 204 health facility in-charges. 23% of health facility in-charges had received DHFF-related training in the previous 12 months, while 79% of accounting staff reported having received other relevant training. 76% reported that supportive supervision explicitly includes DHFF considerations. 92% of CHMT members reported a decrease in administrative workload following DHFF implementation, compared to 80% of facility managers. Positive perceptions of autonomy in planning, budgeting and fund management were widespread (88% facility in-charge and 95% CHMTs). Health managers with higher levels of education reported positive perceptions of strong DHFF governance. Urban facilities were more likely to report higher overall DHFF governance (OR = 3.19, CI = 1.73 - 5.88). As the number of staff trained in DHFF increased, the positive perceptions of challenges also increased (OR = 1.62, CI = 1.04 - 2.51). Facility managers with a university degree perceived a successful impact of DHFF in increasing their financial resources (OR = 17.8, CI = 2.33 - 135.22).

Conclusion: This study suggests that, implementation of the DHFF was positively received by health facility managers. The DHFF appears to have led to improvements in resource mobilization and financial incentives in health facilities, potentially contributing to overall efficiency in the provision of health services.

102. Bridging Cancer Care Gap in East African Community; Challenges and Opportunities

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Introduction: Cancer is a leading cause of death worldwide, the global burden is estimated at 20 million new cases and 10 million deaths in 2022, World Health Organization (WHO), predicts 35 million new cancer cases in 2025, and 70% of the deaths fall disproportionately on low and middle-income countries (LMICs). Cancer incidence in the East African Community (EAC) is estimated at 349,500 new cases, 236, and 904 deaths in the year 2022. The Cancer estimates on South Sudan in 2022 showed 6, 874 new cases, and 5,081 deaths. Although International organizations such as the WHO, International Atomic Energy Agency(IAEA), and International Agency for Research on Cancer(IARC) have been supporting scaling up global cancer control capability throughout all cancer continuum worldwide, with special focus on (LMICs) and some countries of East Africa Community, However the findings from a cancer situation assessment in South Sudan, of the EAC, conducted by South Sudan's Ministry of Health and WHO in 2020, concluded that cancer services are unprecedented in the Country. This presentation assesses the state of cancer services in the East African Community, focusing on South Sudan.

Methodology: Using published literature, this presentation provides an overview of the current state of cancer care in the EAC and recommendations to bridge the gap, by reviewing published research and papers in literature in PubMed, EMBASE, Cochrane Library, and UpToDate from December 26th, 2024 to January 23rd, 2025, as well as raw data from public and private facilities in South Sudan.

Result: The landscape of cancer care in the EAC is appalling, several factors widen the cancer care gap, including but not limited to lack of funding for cancer research, inadequate cancer education or awareness, absence of screening programs, diagnostic facilities, cancer registries and lack of trained cancer care providers, lack of access to cancer care.

Conclusion: The Cancer Burden in the East African Community is enormous, therefore there is an urgent need to bridge the gap and scale up cancer care capacity, by encouraging governments of member states to mobilize the resources necessary to form their National Cancer Control Programs and establish Cancer Centers, as well as urging Secretariat of EAC to engage regional and international stakeholders to support cancer control programs and cancer centers, moreover, requesting the WHO, the IAEA, and the IARC to extend support to neglected cancer services in the EAC.

103. Experiences of adult patients with cancer at a Specialized cancer care facility in Uganda

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Background: The experiences of adult cancer patients in low-income countries regarding health care and infrastructure are largely undocumented. This study aimed to describe the experiences of adult men and women receiving treatment at a specialized cancer facility in Uganda.

Method: Thirty-two adult patients with cancer (≥18 years) with varying cancer diagnoses participated in 5 focus group discussions and a key informant interview at Uganda's specialized oncology facility. The interactions were audio-recorded, transcribed verbatim, and analyzed using thematic analysis.

Results: The participants had both advanced and early-stage cancers of varying ages (19–79 years). Four themes emerged, the Organization of care, Personal challenges, Mental suffering, and Satisfaction with care. The Organization of Care theme included categories describing rough sleep, poor food supply, inadequate facilities, and drug shortages. Personal challenges include high treatment costs and delays in accessing care. Mental suffering comprises 4 categories: stigma, isolation, abandonment, and emotional distress. Satisfaction with care included improved health outcomes and professionalism.

Conclusion: Participants predominantly reported negative experiences, whereas those with early-stage disease primarily emphasized positive experiences. Nurses must heighten their awareness of cancer and its treatment, cultivate empathy, and engage positively with both patients and their families. A psychosocial oncology care center to cater to the emotional, physical, and spiritual challenges experienced by these populations.

104. Impact of implementing bottom up quantification on health commodities availability in Dodoma Region, Tanzania: pre and post implementation

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Background: The availability of health commodities is crucial for providing quality healthcare services. Both clients and healthcare providers experience greater satisfaction when these commodities are readily accessible to meet their needs. However, many countries worldwide face challenges in ensuring sufficient availability and rational use of health commodities, often dealing with budget constraints and the need for improved management systems. Enhancements in data visibility and the Logistic Management Information System (LMIS) have been pivotal in addressing these issues. In Tanzania, a top-down quantification approach was in place until 2018, but this changed in 2019 with the introduction of a bottom-up approach. This shift followed a Holistic Supply Chain Review conducted in 2017 (HSCR, 2017), which highlighted stock fluctuations in facilities that stemmed from the lack of self-quantification of stocks. The study aimed to assess the functionality of the new bottom-up quantification (BuQ) approach, identify areas for improvement, and evaluate the effect of this approach on the availability of health commodities in the Dodoma region of Tanzania.

Methods: This study employed a quantitative design, collecting primary data from 194 randomly sampled healthcare facilities in Dodoma. Data were collected from 164 dispensaries, 21 health centers, 7 council hospitals, 1 regional referral hospital and 1 zone referral hospital. Later on, data were validated in Excel and analyzed using SPSS v27. A paired t-test statistic was utilized to compare mean results before and after implementation, with a confidence interval of 95%, and a p-value of <0.05 considered statistically significant.

Results: The findings demonstrated a positive impact of the BuQ approach on the availability of health commodities. Specifically, availability increased from a mean of $68 \pm 16.40\%$ in 2019 to $78 \pm 12.85\%$ at a 95% confidence interval with a p-value of 0.0001. Furthermore, the study indicated that 69.59% of the facilities had healthcare workers who were formally trained, while 30.41% received on-the-job training for quantification. Staff engagement during the quantification process was also reported at 77.84%.

Conclusions: Results revealed that implementing the bottom-up quantification has positively influenced the availability of health commodities in the facilities studied. However, some challenges were reported by healthcare workers in implementing BuQ, additionally factors such as funding availability, effective management of health commodities, regular medicine audits, and timely deliveries from suppliers remain vital for ensuring adequate availability at healthcare facilities.

105. How to conduct an effective Stakeholder Engagement in Global Surgery: Insights from the 1st Pan-Tanzanian Gastroschisis Symposium

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Background: Care for babies born with gastroschisis in varies across and within low resource countries, with a mortality rate of up to 100%. Sustaining existing effective evidence-based interventions are hindered by a lack of understanding of context-specific needs. We aimed to share our approach to understand barriers/facilitators and design strategies to improving care for newborns with gastroschisis in Tanzania through stakeholder engagement.

Methods: A 2-day workshop was conducted, adopting the Project Mid-way Evaluation design from the Hyper Island Toolbox. Guided by the Inspire, Define, Observe, Analyze, Refine, Test (IDOART) model, participants systematically reflected, analyzed and iterated on the adopted Gastroschisis Care Bundle under implementation. We used Expert Recommendations for Implementing Change Framework and Consolidated Framework for Implementation Research to map strategies to overcome specific barriers identified.

Results: Multidisciplinary team of 40 healthcare provider, policymakers, academicians, researchers, media and family/community participated. Their median age was 36 (range: 24 – 67) years old. Providers' median experience caring for newborns

with gastroschisis was 24 (range: 0 – 240) months. Key barriers were inconsistent use of care protocols, associated costs, inadequate advocacy and engagement of key stakeholders, poor pre-hospital care and lack of incentives. We successfully revised and adapted care protocols and scheduled capacity building programs, advocate for resource mobilization, and engagement/ partnership with policymakers as key strategies for sustainability.

Conclusion: This method is effective and feasible in in engaging key stakeholders to sustainably address similar global surgery challenges and scaling up of EBIs. Global surgery problems face multiple complex implementation challenges that need local knowledge and expertise for sustainable change. Hence this method can be useful in other global health issues especially epidemics and pandemics which are complex, may have efficacious interventions and evidence but needs local knowledge to put them into practice for better outcomes.

106. Priority strategies to improve uptake of cervical cancer screening services in Nyeri County, Kenya: nominal group technique

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Introduction: Cancer of the cervix is the fourth most common cancer affecting women worldwide. In Kenya ∼ 9 women die annually from cervical cancer. Cervical cancer screening ensures early diagnosis and treatment of precancerous lesions therefore averting deaths. Worryingly, the uptake of screening among women in Nyeri County is ∼ 38.6% despite having capacity to conduct comprehensive screening at 13 health care facilities. A recent mixed methods study from our group found that despite receiving information about the screening, perceptions of cost, pain and side effects associated with the procedure and unawareness of health facilities offering screening were a hindrance to uptake. This research sought to gain consensus on priority strategies to improve cervical cancer screening uptake among women of reproductive age (WRA) in Nyeri County, Kenya.

Methods: The Nominal Group Technique (NGT) was used with three different groups of stakeholders (WRA, health care providers (HCPs), policy makers). The five phases of conducting NGT were followed i.e. silent generation of ideas, round-robin, discussion, individual voting and prioritization. Tallying the ideas scores gave rise to ranking thus prioritizing the top five strategies. Informed consent and voluntary participation were ensured throughout the study.

Results: The WRA prioritized mandatory screening at six weeks after childbirth, creating more awareness, home self-testing with HPV-DNA self-collecting kits, increasing the accessibility, collaboration with all partners and friendly reception in the screening facilities. The health care providers prioritized mobilization and creating more awareness, integration of screening with other services, training and motivating health care providers to screen, having more community outreach sessions to special groups, and allocation of more resources for screening. The policy makers prioritized creating awareness and mobilization, integration with other services, training more HCPs comprehensively on cervical cancer screening, offering financial support to screening, and providing adequate supplies.

Conclusions: WRA and professional stakeholders in Nyeri county prioritized diverse strategies for improving cervical cancer screening. The priority strategy that emerged across all the three groups was creating more awareness on cervical cancer screening in the community. Informed by this, efforts are underway to design and evaluate the implementation of awareness strategies.

107. Study of Different Contralateral Summarization Procedures Following Breast Cancer Surgery

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Introduction: The modern goal of breast cancer treatment has gone beyond cure and includes symmetrization procedures to maximize patient satisfaction, improve aesthetic appearance, and achieve symmetry. This study evaluated different contralateral symmetrization procedures following breast cancer surgery. This study evaluated the types of contralateral symmetrization procedures, complications and their management, patient satisfaction and aesthetic outcome, and early detection of occult lesions.

Methods: This was a retrospective study conducted on 30 female patients who underwent breast cancer surgery followed by contralateral symmetrization procedures at Alexandria University Main Hospital, Egypt, between May 2010 and December 2017. The evaluation entailed the type of symmetrization, complications and their management, patient satisfaction and aesthetic outcomes, and detection of contralateral occult lesions.

Results: The mean follow-up period was 42.6 ± 19.6 months. 27 cases underwent immediate contralateral Reduction Mammoplasties, and 3 cases underwent contralateral Mastopexies (two immediate and one delayed). We reported 3

postoperative complications in contralateral reduction mammoplasties (17.6%), versus 14 complications in ipsilateral breasts (82.4%). The mean contralateral complications were infection and delayed wound healing, managed by frequent dressing changes. The study experienced 2 cases (6.7%) of recurrences; 1 case of distance recurrence occurred after 2 months postoperatively treated by systemic chemotherapy, while 1 case of local recurrence recurred after 17 months postoperatively treated by simple mastectomy. Patient satisfaction was excellent in 9 cases (63.3%), good in 6 cases (20%), fair in 3 cases (10%), poor in 1 case (3.3%), and 1 case wasn't assessed. Regarding the doctor's assessment was excellent in 23 patients (76.7%), good in 5 cases (16.7%), and fair in 1 case (3.3%), and 1 case (3.3%) wasn't assessed, without occult lesion detected in the contralateral breast.

Conclusion: Immediate contralateral breast symmetrization procedures are safe, associated with minimal complications, and yield superior aesthetic outcomes, excellent patient satisfaction, as well as relieve the symptoms associated with pendulous breasts, while offering a chance to examine suspicious contralateral glandular tissues.

108. Patient satisfaction survey in a public hospital: Remera Rukoma District Hospital, Rwanda, 2023

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Background: Patient satisfaction is a crucial indicator of healthcare quality, influencing outcomes and providing insights for improvement. This study aims to assess patient satisfaction levels, and associated factors, and identify areas for enhancement at Remera, Rukoma District Hospital (RRDH) in Rwanda, where such data was previously lacking.

Methods: A cross-sectional study using a mixed approach of data collection was conducted, involving 384 participants (164 inpatients, 220 outpatients). Quantitative surveys and qualitative interviews were employed. Patient satisfaction was categorized as Very Satisfied ($> 70\%$), Satisfied (50–69.9%), or Not Satisfied ($\leq 49.9\%$). Data analysis included descriptive statistics, bivariate logistic regression, and thematic analysis of qualitative data.

Results: The study comprised 37.8% male and 62.2% female participants. Overall, 52.6% were highly satisfied, 29% satisfied, and 18% not satisfied. Among outpatients, 35.9% were dissatisfied with cashier services, and 46.9% with pharmacy wait times. Inpatients showed 74.4% satisfaction with the admission process, but 69.5% reported delayed test result feedback. Educational level significantly influenced satisfaction, with uneducated participants showing lower odds of satisfaction compared to university-educated ones (cOR = 0.409, 95% CI: 0.186–0.897, $p = 0.026$). Qualitative findings highlighted issues with wait times, communication, and service consistency.

Conclusions: While overall satisfaction at RRDH was positive, the study identified areas needing improvement, particularly in communication, wait times, and service delays. Education level was significantly associated with satisfaction level. Addressing these factors, beyond operational efficiency, may significantly impact patient satisfaction. Enhancing communication, managing expectations, and optimizing service delivery are crucial for maintaining satisfaction and improving service quality.

Subtheme 5: Reproductive maternal, neonatal, child and adolescent health

109. Prevalence and Associated Risk Factors Of Hepatitis B Virus Infections Among Women Of Reproductive Age In Juba City, South Sudan

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Introduction: Hepatitis B virus (HBV) is a partially double-stranded, enveloped virus with a circular DNA genome. This virus increasingly infects the population. Information on HBV infections in South Sudan is limited. This study aimed to examine the prevalence and major risk factors of HBV infections among women of reproductive age in Juba City, South Sudan.

Method: This study adapted a quantitative cross-sectional research design to assess prevalence and risk factors of HBV infections among these women. The study sites were seven health facilities in Juba. A validated semi-structured questionnaire was used to collect data from the 1808 randomly selected women. The study used EpiData software v4.7 for quality-assurance data entry and Stata v15 for analysis. Chi squared tests and logistic regression model were performed to determine association and likelihood respectively.

Results: Among the 1808 women, the burden of HBV infections was 11.2% and nearly half were unaware of their HBV status. The HBV infections were significantly associated with blood transfusion (p <0.001), surgical operations (p <0.001), and close contact with a case of HBV (p < 0.001). The women who had close contact with a case of HBV infections were 2.5 times more

likely to be infected (OR: 2.487, 95% CI: 1.549 - 3.995). Women who had a history of surgical operations were more likely to be positive for HBV by 12.6% compared to those who had had no surgery (OR: 1.126, 95% CI: 0.614 - 2.067). The women who receive blood transfusions were more likely to be infected HBV (OR: 1.134, 95% CI 0.594 - 2.166).

Conclusion: The prevalence of HBV infections among these women was high and nearly half of them were unaware of their HBV status. It is associated with blood transfusion, surgical operations, and close contact with cases of HBV. The study recommends the improvement in tailored health promotion, antenatal HBV screening, blood transfusion, surgical procedures, birth dose vaccines.

110. Sexual -Transmitted Diseases Among Pregnant Women and Voluntary Counseling and Testing Attendants in Malakal Town, Upper Nile State, South Sudan

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Background: The HIV indicator in South Sudan shows that the HIV prevalence estimate for the country is 3.1% making the estimated people living with HIV/AIDS (PLWHA) to be 155,000. The HIV epidemic is likely to grow worse due to existence of several factors that favor the transmission of the disease (AIDS) in South Sudan. These include the lack of access to HIV prevention and care service, lack of awareness among the communities, polygamy, wife inheritance and traditional practices. This study was undertaken to evaluate the seroprevalence of HIV and STDs among pregnant women and voluntary counseling and testing attendants in Malakal Town, and to determine the possible risk factors that might have promoted the rapid spread of HIV and AIDS among the local population.

Methods: A cross – sectional study was conducted and total of 2000 participants were screened; and specimens were obtained from venous blood, cervical swab and urine. Specimen analysis was conducted through various methods, which included Enzyme-Linked Immunosorbent Assay (ELIA), Western Blot, Immunochromatographic Test (ICT), Culture on New York City Medium (NYCM), microscope. Data was then analysed by computer SPBS then presented in form of tables, pie-charts and statistical significance checked by Chi- square.

Results: showed that out of the 2000 participants who were screened, ten (0.5%) were HIV- reactive, fourteen (0.75%) were syphilis-reactive, three (0.15%) Trichomonas Vaginalis, and one (0.05%) was *Neisseria gonorrhea*. Every HIV-reactive was confirmed by Western Blot. Regarding the use of condoms, only 100 (20%) of the 500 subjects declared a regular condom users.

Conclusion: None of the participants who use condom was found positive for any of the investigated STD, and it's recommended that there was urgent need for ordinate efforts against HIV, Syphilis and other STDs in addition to sustained public awareness campaigns that promote safe sex, abstinence, faithfulness and the use of condoms consistently and correctly.

111. A Case Study on the Causes of Maternal Deaths Among Pregnant Mothers in the Maternity Ward of Juba Teaching Hospital, 2022

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Introduction: South Sudan exhibits the most elevated maternal mortality ratios within sub- Saharan Africa. Owing to limited data on maternal mortality in Juba, County, and the previously reported high estimates of maternal mortality in South Sudan Ministry of Health, health sector Strategic plan and annual performance review (HSSP 2023-2027). We aimed to evaluate the factors contributing to maternal deaths in an urban context in Juba City. This was achieved by contrasting the profiles of women who succumbed to maternal-related causes with those from the same demographic who had utilized antenatal clinic services during the corresponding timeframe.

Method: A case study was conducted in the maternity ward of Juba Teaching Hospital in 2022 to investigate the factors contributing to maternal mortality among pregnant women. Data was collected through questionnaires, which facilitated the gathering of information, and analysis was performed either manually or using Excel software, with results presented in figures and tables. The study involved a total of 60 health workers, aged between 15 and 50 years.

Results: Analysis revealed that 12% had primary education, 20% had secondary education, 55% had attended an institute, and 13% were university graduates. The health workers providing maternal care services identified the primary causes of maternal deaths: 20% were attributed to abortion, 47% to delays in reaching health facilities, 7% to accidents, and 26% to complications during labour. The pregnant women who participated in this study and sought maternal care services at Juba Teaching Hospital were aged between 15 and 45 years. The age distribution of respondents was as follows: 35% were aged 15-17 years, 50% were aged 18-25 years, 5% were aged 26-35 years, and 10% were aged 36-45 years. Consequently, a significant proportion of young girls (35%) are at risk of maternal mortality due to a lack of health education, as noted in the recommendations.

Conclusion: The analysis indicated that many maternal deaths were linked to inadequate access to healthcare, poor road conditions, and insufficient transportation, which were highlighted in the recommendations. Enhancement of community health education and awareness, particularly for mothers regarding co-infections, improve socio-economic conditions and conduct further research in these areas.

112. Assessing the Effectiveness of the Complementary Nutritional Program on Pupil Health and Academic Performance in Public Primary Schools in Munuki Block, Juba County, as of May 2023

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Introduction: This research aimed to examine the impact of a complementary nutritional program and its effectiveness on the academic performance of primary school students in the Munuki block of Juba County, conducted from March to May 2023 as part of an undergraduate study.

Method: Quasi-experimental study was implemented, the investigation focused on 3 schools: Seven Days Adventist School, Mary Kalong Primary School in Hay Mauna, and Gudele West Primary School in Gudele Block Eight. A sample of 10 students was randomly selected from each institution, ensuring gender balance, to assess the program's influence on academic performance about various factors, including environmental conditions, health, and issues related to hunger. Schools were categorized into 2 groups: The control group, represented by Gudele West Primary School, and the experimental group, which included Seven Days Adventist and Mary Kalong Primary Schools, both participated in a feeding program provided by ADRA Organization. This study employed both quantitative and qualitative methodologies to descriptively analyze the effects of the feeding program on academic performance. Data collection instruments included observations, questionnaires, records, interviews, and focus group discussions across 3 selected schools. A combination of purposive maximum variation sampling and snowball sampling techniques was utilized to achieve the study's sampling objectives.

Results: A significant difference in academic performance between students at the experimental schools, Seven Days Adventist and Mary Kalong, compared to the control school, Gudele West, with a 20% variation attributed to nutritional factors, a notable 40% difference was observed in performance related to the health status of respondents, alongside other influencing factors such as environmental conditions, the nature of the school (public vs. private), academic year stability, and teaching quality.

Conclusion: The demographic of respondents shows variation from 3 different categories of socio-economic status ranging from lower, medium and higher in one of the exposed schools detected by interview ability to pay the school fees and other school expenditures such as transport clothing and examination fees which in turn plays influential moral of the pupil in private schools. It proves that private schools do perform better than public school due to teaching stability and skills of teaching staff. This variation is between 4 respondents scoring distinction level in MKE is seen neither in SDSE or WFPC school. Pupil's fail three subjects are subjected to a school drop-out of 10% in MKE.

113. Assessment of Malnutrition Status Among Children Aged 6-59 Months Attending Primary Healthcare services in Juba, South SudanA

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Background: South Sudan has a history of famine, drought, and civil war, and until now there has been an unstable economy. As a result, malnutrition is becoming a third burden after malaria and diarrhoea among children aged 6-59 months, and it's a global public health problem. The situation worsens due to socio-economic factors, such as low standard of living, and inability to meet basic needs, namely adequate food, healthcare, water and sanitation. The objective was to assess the malnutrition status of children under five years old and risk factors.

Methods: A prospective cross-sectional design and a questionnaire were used to obtain data. 384 children aged 6-59 months were recruited and 344 consented with a 90% response rate. MUAC for age/Z-score was used to categorize children as severely malnourished <11.5 mm, Moderate between 11.5 -12.5 mm, Mild 12.6-13.4 mm and Normal 13.5 mm and above. Data was analyzed in SPSS 27.0. Using the Chi-square test, linear by linear and logistic regression model. A $p < 0.05$ level is considered significant.

Result: Of 344 children, 15.1% had severe acute malnutrition, 18.6% moderately, 47.4% mild, and 18.9% were normal. Among males, 48.5% were mild, 26.6% moderate, and 42.3% severely acute. In females, 51.5% had mild, 73.4% had moderate, and 57.7% had severe acute. Child gender, age, oedema, anaemia, appetite loss and mother's age ($P < 0.05$) associated

with malnutrition. Female children (OR =0.443, p= 0.011) are at higher risk than males. Children with Anemia (OR= 3.333, p= 0.008) were malnourished compared to no Anemia. Children with elderly mothers (p= 0.050) had a lower risk than children with younger mothers. Older Children ($p<0.001$) had a lower risk than younger ones.

Conclusion: The majority of children, 81.1% were malnourished. Awareness of feeding practices, underlying causes of malnutrition, vaccination, food security and poverty reduction are calls to action.

114. Determinants of Low-Birth-Weight Prevalence Among Children Born Between May 2024 and October 2024, (In Leer County, Unity State, South Sudan)

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Introduction: Low birth weight (LBW), defined as a birth weight of less than 2.5 kg, is a critical public health issue linked to neonatal morbidity, mortality, and long-term health complications. No study has been conducted to assess maternal factors determining the birth weight of neonates previously in Leer. Thus, this study aims to determine the prevalence and risk factors associated with low birth weight in Leer.

Methods: The study was conducted in communities. This study investigated the determinants of LBW, emphasizing maternal, socioeconomic, healthcare, and environmental factors in a resource-limited setting. A cross-sectional study design was utilized with a sample of 168 mothers and their infants. Data were collected through structured questionnaires covering demographic characteristics, pregnancy history, maternal health, healthcare access, socioeconomic status, and environmental factors. Statistical analysis included chi-square tests and logistic regression to identify associations between LBW and potential predictors.

Results: The prevalence of LBW was 26.8% (n=45). Significant predictors included inadequate prenatal visits (<2 visits), associated with a 2.3- fold increased risk of LBW (p=0.02). Maternal anemia (10.7%) and preeclampsia (5.4%) were strongly correlated with LBW, with odds ratios (OR) of 2.8 (p=0.01) and 3.6 (p=0.03), respectively. Socioeconomic factors such as lack of formal education (82.1%) and no household income (88.1%) were significantly associated with LBW (p<0.05). Environmental hazards (85.7%) and displacement due to conflict (26.2%) also showed a statistically significant relationship with LBW, increasing the odds by 1.9 times (p=0.04).

Conclusion: The findings reveal that LBW is influenced by a complex interplay of maternal health, inadequate prenatal care, socioeconomic disparities, and environmental stressors. Comprehensive strategies, including improving prenatal care access, addressing maternal health conditions, mitigating environmental risks, and promoting socioeconomic empowerment, are essential for reducing LBW prevalence.

115. Factors Contributing to Increased Number of Pregnant Mother's with Anemia in Rural Areas, Cross Section Study at RCH Kabanga Hospital in Kigoma

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Background: Anemia is the most common blood disorder affecting global population nearly about 1 billion peoples. It is more common in women than in men during pregnancy and in children and elderly. The mean minimum acceptable hemoglobin level during pregnancy by WHO criteria is taken to be 11g/dL (PCV of 33%) in the first half of pregnancy and 10.5 g/dL in the second half of pregnancy. Anemia in pregnancy is regarded as a major risk factor for unfavorable outcome of pregnancy. The study of anemia in pregnant women has to be studied so as to reduce maternal and fetal morbidity and mortality rate regarding on daily complications resulting from anaemia to pregnant woman. The main objective was to assess the factors contributing to Anemia in pregnant among women attending at RCH and how to prevent the problem.

Methodology: The study was cross-section conducted in Kigoma Tanzania at hospital and the sample size of study was 100 samples from pregnant mothers at Kabanga RCH who were sampled by using convenient technique and requested to submit blood sample for Hb estimation and filling the prepared questionnaire. The obtained data was analysed by using SPSS and tabulated graphically.

Results: The samples collected were from 100 pregnant mothers, where by 40 samples were examined to have Anemia with Hb of 9g/dl.

Discussion: The overall results indicated that low awareness, traditional culture and low social economic status contributed for the results.

Conclusion: The results of research alert the government to continue impacting knowledge on the effects of anemia to pregnant mothers

116. Factors Influencing Malnutrition in Children Undre Five Accessing Health Services at Kator PHCC

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Introduction: Children less than 5 years old are particularly vulnerable and susceptible to a myriad of health and developmental problems worldwide. Information on factors influencing malnutrition in children under five years of age is unavailable. The study aimed to assess factors of malnutrition among these children at Kator PHCC.

Methods: This study adapted a quantitative cross-sectional study design to assess factors of malnutrition among these children at Kator PHCC, Juba South Sudan. A structured questionnaire was used to collect data from the 291 randomly selected mothers of these children. The study used EpiData software v4.7 to quality assured data entry and SPSS v27 for analysis. Frequencies, means and standard deviations were performed as well as regression models to determine association of malnutrition with the factors.

Results: The largest proportion of mothers had tertiary education (34.9%; CI: 30.5%–40.3%), indicating a relatively high education level for many participants. 68.5% of children were female (CI: 63.6%–73.3%), suggestively higher than the 31.5% who were male (CI: 26.7%–36.4%). At Kator PHCC, a high prevalence of moderate malnutrition exists (41.8%). Male children were more likely to experience severe malnutrition (42.5%) compared to female children (57.5%). Malnutrition as statistically associated with individual factors (p < 0.001), household factors (p < 0.001). R Square: 0.171 indicates that 17.1% of the variance in malnutrition can be explained by the predictors in the model. This model was statistically significant, suggesting that community, individual, and household-level factors collectively have an impact on malnutrition.

Conclusion: Individual factors (like parental education) are moderately important but considered less impactful compared to the other two factors, leading to a Low classification. Household factors (location, income, size) are seen as strongly influencing food security, with a high consensus. Community factors (poor dwellings, access to sanitation, water, and electricity) a strongly increase the risk of malnutrition, and are also rated High. Therefore, encourage collaboration between local governments, community organizations, and international agencies to create integrated strategies addressing both the immediate needs of food security and the underlying causes, such as poor infrastructure and low income.

117. Foetal Factors Associated with Preterm Births among Mothers Delivering at Kiambu Level Five Hospital, Kenya

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Introduction: A preterm birth is one that occurs before 37 weeks of pregnancy. Around 134,000 of Kenya's 1.5 million yearly births are preterm births. The main objective of this study was to determine foetal factors associated with preterm births among mothers delivering at Kiambu Level 5 Hospital.

Methods: The study design was unmatched case-control. The study was conducted in the maternity ward of Kiambu Level 5 Hospital. The study population was a mother-child pair at Kiambu level 5 hospital maternity unit. Mothers who had term and preterm babies were controls and cases, respectively. The sample size was 97 cases and 291 controls. Consecutive and systematic random samplings were used to choose cases and controls, respectively. The ratio of controls to cases was 3:1. Structured questionnaires and data extraction forms were used to collect the data. Data was analyzed using both descriptive and inferential statistical techniques with the aid of Statistical Package for Social Scientists (SPSS) version 26. Inferential statistics was done using binary logistic regression.

Results: The study results indicated that mothers whose babies had foetal distress were 10.5 times more likely to give birth to a preterm baby compared to those whose babies did not have (OR=10.45 (95% CI = 3.99– 27.41, P <0.001)). Mothers whose babies did not have movement before delivery were 10.4 times more likely to give birth to a preterm baby compared to those whose babies had (OR=10.42 (95% CI = 3.26– 33.33, P<0.001).

Conclusions: The study found relevant findings that have paramount importance for preterm birth reduction programs. Therefore, there is need for proper management of antenatal mothers, and further studies are needed to determine other factors influencing preterm births.

118. A Qualitative Study of Knowledge, Perceptions and Barriers to Cervical Cancer Screening among Women in Nairobi County, Kenya

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Background: Cervical cancer is a major public health concern in the sub-Saharan Africa region. In Kenya, it contributes substantially to the country's cancer burden as it is the second most common cancer among women, accounting for 5,236 new

cases and 12.4% of all female cancers annually. Data from the Nairobi Cancer Registry (2019) indicates that Cervical Cancer had an incidence rate of 46.1 per 100,000. Despite Cervical Cancer screening being one of the key pillars to the 2018 WHO Call to Action to Accelerate Cervical cancer elimination by 2030, the screening uptake is still low among eligible women in Kenya. This study sought to explore the knowledge, perceptions and barriers to cervical cancer screening among women seeking health services at selected health facilities in Nairobi County.

Methodology: This qualitative study was conducted between November and December 2023. It utilized Focus Group Discussions to collect information on knowledge, perception and barriers to screening from women seeking health services at selected health facilities in Nairobi County, Kenya. The participants were purposely recruited from women seeking MCH and CCC services, which integrate cervical cancer screening. Interviews were conducted using interview guides by a trained researcher and all discussions were audio recorded and transcribed/translated verbatim. Analysis was done thematically.

Findings: Majority of the participants (n=52) were married women (70%), mean age 36yrs, mainly self-employed (32%) and had secondary level education (43%). Majority viewed cancer as a deadly disease that has no cure. Cervical cancer was mostly known as a cancer that affects women but can be cured if detected early. There were divergent views on knowledge of causes as some mentioned that it was caused by a virus and spread by men, while others perceived that it is a hereditary disease; caused by wearing wet undergarments; frequent abortions among others. Fear was the major barrier to screening. Fear of death, suffering, stigma, pain from use of speculum and having to manage other diseases came out prominently. Shame, financial challenges, misconceptions, religious beliefs and lack of spousal support were also mentioned. Also highlighted were health system barriers like staff shortages, high treatment costs and long waiting times.

Conclusions: Tailored outreach programs and educational interventions are essential to increase knowledge and alleviate fear and misconceptions on cervical cancer screening among these women. There is need for policies to address system barriers such as staff shortages, high cost on preventive procedures and long turn-around times.

119. Dietary Patterns, Risk Factors and Occurrence of Hemorrhoids Among Pregnant Mothers Attending ANC Clinic at a Private Faith-Based Hospital in Western Kenya

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Introduction: Hemorrhoids are a common public health problem both in general population and among pregnant women and continue into postpartum. The purpose of this study was to determine the prevalence of hemorrhoids, risk factors and dietary patterns among pregnant mothers attending Ante-Natal Clinic (ANC).

Methods: The study design was quantitative, descriptive, cross-sectional study, a case-study of pregnant mothers attending ANC clinic. The sample size was 110 with 70 pregnant mothers participating in the study with a response rate of 64%. Purposive, cluster sampling and convenience sampling techniques were used. Data was collected using a self-administered closed ended, structured questionnaire. Data was entered into the statistical Package for Social Sciences, (SPSS) version 25 and the descriptive analysis of the data was done using measures of central tendency and dispersion and proportions. Then inferential analysis was done using chi-squares, correlations, Analysis of Variance (ANOVA) with confidence interval of 95%. Interpretation of the statistics was made based on p-value = 0.05. All the ethical considerations were ensured, informed consent, voluntary participation and withdrawal amongst others.

Results: The findings show the participants were mainly aged between 18 years and 38 years with a mean, median and modal age of 25 years. They had a median and modal gestational age of 25 weeks and ranging between 9 weeks and 37 weeks. About 20% of the women experienced Grade 1 hemorrhoids. They key risk factors were overweight (55.70%), constipation (51.40%) and ulcers (51.60%). They managed the hemorrhoid symptoms by exercising by walking (64%), reduce taking salt (62%), drink more water (61%), reduce their sugar intake (60%), eating watermelon (56%), drinking more milk (53%), bed rest (53%), drinking more porridge (49%), and taking green bananas (41%).

Conclusion: There is a low prevalence of hemorrhoids with mild hemorrhoid symptoms due to the high intake of fruits, vegetables, fluids and high fiber foods and engaging in healthy exercise activities and recommended hemorrhoid management and control measures. The study recommends the development of policies and guidelines to guide the dietary and lifestyle practices for those pregnant mothers prone to hemorrhoids.

120. Estimated Use of Emergency Contraceptive Pills in Mainland Tanzania

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Background: The actual consumption of emergency contraceptive pills in Tanzania is not well known. One study used importation data to estimate the consumption rate at the national level. Other studies were restricted to a few northern districts and

hence cannot provide a countrywide picture. Concerns from members of parliament and noises and rumors from the media about a tremendous increase in the use of emergency contraceptive pills among women of reproductive age called for the conduct of this study. The study estimated the consumption of emergency contraceptive pills among women of reproductive age in Tanzania.

Methods: Primary data on the use of emergency contraceptive pills was collected from 1,419 women of reproductive age (15 – 49 years) randomly selected in 8 municipal councils of Mainland Tanzania. Secondary data on the use of emergency contraceptive pills and the population of women of reproductive age for the years 2022 and 2023 were obtained from the web-based District Health Information Software (DHIS2), Pharmacy units of the Ministry of Health (MoH), and the Tanzania Demographic Health Survey (TDHS) respectively. The total defined daily dose (DDD) for emergency contraceptive pills was calculated using the formula: DDD_{total} = (Volume X strength in mg)/DDD. Then, the calculated DDD per 1000 inhabitants per year (DID) was computed as (DDD_{total}/population) *(1,000/365). The DDD/patient indicator was calculated to express the total exposure to ECPs in accordance with a defined study period.

Results: The annual consumption rate of emergency contraceptive pills was 0.2009 per 1,000 women days at household level and 0.007 per 1,000 women days when Pharmacy Unit data were used. A significantly low rate was estimated (0.0067 per 1,000 women days) using DHIS2 data. Percent of repeat users of emergency contraceptive pills increased from 25% in 2022 to 32% in 2023. A significant increase in repeat use was noted in Masasi council, from 34% in 2022 to 96% in 2023.

Conclusion: The consumption of emergency contraceptive pills among women of reproductive age is not alarming. However, relying on DHIS2 data hugely underestimates the consumption rate. To get a more accurate estimation, there is a need to capture emergency contraceptive pill sales data from private outlets. The escalating repeat use of emergency contraceptive pills in Masasi council calls for targeted interventions to inspire women of reproductive age to use available regular family planning methods.

121. Evolution and determinants of antenatal care services utilization among women of reproductive age in Rwanda: a scoping review

Corresponding author: Emile Sebera

Affiliation: Mount Kenya University

Background: Maternal and child health remains a global priority, with antenatal care (ANC) recognized as essential for ensuring positive pregnancy outcomes. Despite significant improvements, in low- and middle-income countries, ANC service utilization remains low in Sub-Saharan Africa. This paper contributes to the understanding of the evolution and determinants of ANC service utilization among women of reproductive age in Rwanda.

Methods: This review focused on studies published between 2010 and 2024 and examined the factors associated with ANC utilization in Rwanda. Two reviewers independently performed screening of the abstracts and full texts and conducted data extraction and synthesis. The aggregated odds ratios for various factors associated with ANC service utilization were presented in forest plots, created using GraphPad Prism version 10.

Results: The review included 11 studies and 1 report on ANC service utilization in Rwanda. By 2019-2020, 47% of women had received ANC in the first trimester, and 59% had four or more visits. Higher education levels, better wealth status, health insurance coverage, and small household size are associated with adequate ANC service utilization. Conversely, a significant distance from health facilities and unwanted pregnancies were associated with lower odds of adequate ANC utilization. Delayed ANC was more likely among women with higher parity, those who lacked social support, and those with no or only primary education.

Conclusion: Rwanda has made considerable strides in improving ANC services. Addressing barriers such as distance to healthcare facilities, education, and economic disparities is crucial for enhancing maternal and child health outcomes. This review underscores the need for targeted interventions to achieve the World Health Organization recommendations of 8 antenatal care visits and sustainable development goals related to maternal and child health in Rwanda.

122. Impact of Community Strategy on Uptake of Reproductive Tract Infections Health Services Among Young Street Females in Eldoret Municipality, Kenya

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Affiliation: Mount Kenya University

Introduction: Reproductive tract pathogenic microorganisms are one of the major causes of adverse health outcomes among women in both developed and developing countries. Documented research reports that, despite the current intervention of establishing a dedicated clinic for this demographic, the uptake of reproductive health treatments among young street females

(YSF) in Eldoret municipality is quite low. Community strategy as an intervention has been proven to be effective for the uptake of other reproductive health services but there is little information regarding its impacts on reproductive tract infections health service uptake among YSF in Eldoret municipality. The current study aimed to assess health-seeking behaviors and the impact of a community strategy on YSF's use of reproductive health care.

Methods: A pretest-post-test quasi experimental with a qualitative and quantitative approach was applied among the YSF aged 10-24 years. The study used structured questionnaires and key informant interviews to collect data from the respondents. Vaginal swabs and blood samples were obtained from the respondents and taken to Moi Teaching and Referral Hospital laboratory for identification of pathogenic microorganisms. Data were analyzed using IBM SPSS V.26. The strength of the relationship between variables was tested using logistic regression. Community strategy which was the study intervention composed of health education, syndromic screening, and referrals to the health facility. Tables, charts, and graphs are used to present descriptive statistics.

Results: A total of 77 young street females from Eldoret municipality participated in the study. The respondents aged less than 15 years were ten (13%) while those who were aged more than twenty years were (62%). A significantly higher proportion of respondents reportedly sought treatment for RTI following the roll out of the intervention (68.1%) when compared to those who sought treatment at the pre- intervention phase (63.0%) difference: 5.1% (95 confidence interval (CI) 5.0% -39.2%), z= 2.534, p = 0.011).

Conclusion: The implementation of the community strategy package revealed a positive outcome as it contributed to increased knowledge and uptake of health care services. The study also revealed T. vaginalis and T. Pallidum as the key pathogenic colonizers. The study recommended the integration of the community strategy package in policies that seek to improve the health care of young street females in Eldoret municipality. The study recommends the adoption of the community strategy as an intervention to increase the uptake of RTIs health services and promotion of the reproductive health of YSF.

123. Knowledge, Attitude and Uptake of Cervical Cancer Screening Among the Female Population at Gulu University

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Affiliation: Gulu university, Uganda

Background: Cervical cancer remains a significant public health issue, particularly in low-resource settings like Uganda, where it is the leading cause of cancer-related deaths among women. Screening is crucial for early detection and prevention, yet knowledge, attitudes, and screening uptake among university students and staff remain poorly understood. This study aimed to assess the knowledge, attitudes, and uptake of cervical cancer screening among the female population at Gulu University.

Methods: This cross-sectional study employed a quantitative research design and was conducted at Gulu University among 335 female students and staff aged 25–49 years. The age range was selected to focus on women at higher risk of developing cervical cancer, as it aligns with Uganda's national cervical cancer screening guidelines, which recommend screening for women aged 25 and above. A stratified random sampling technique was used. Data were collected using a structured questionnaire following informed consent and analyzed using Stata version 18. Descriptive statistics were used to assess knowledge, attitudes, and screening uptake.

Results: A total of 335 participants completed the survey, with a median age of 27 years (IQR: 26–30). Most participants were students (83.3%, n=279), primarily from the Faculty of Education (30.8%, n=103). Regarding religious affiliation, 43.6% (n=146) identified as Catholic, and 32.5% (n=109) as Anglican. Overall, 83.3% (n=279) demonstrated good knowledge of cervical cancer, although specific knowledge gaps regarding its causative agent and symptoms persisted. A negative attitude toward screening was reported by 52.5% (n=176). Screening uptake was low, with only 31.3% (n=105) of participants having been screened. Barriers to screening were categorized into structural and personal factors. Structural barriers included a lack of awareness of screening locations (35.4%, n=84) and concerns about screening-related pain (32.9%, n=78). Personal barriers included perceived good health (23.6%, n=56) and shyness (8.0%, n=19). Faculty and academic year appeared to influence knowledge and screening attitudes, with senior students exhibiting more awareness than first-year students, suggesting that exposure to health education may impact knowledge and screening decisions.

Conclusion: Despite high awareness of cervical cancer, knowledge gaps and negative attitudes contribute to low screening uptake among female students and staff at Gulu University. Addressing structural barriers by improving access to screening services, particularly within the university medical unit, and addressing personal barriers through targeted educational campaigns and counseling could enhance uptake. Future large-scale studies should explore additional contextual factors influencing screening behaviors to inform evidence-based interventions.

124. Knowledge, Perception and Practices of Young Adolescents Regarding Family Planning Methods Use at Jarama Health Center-Ngoma-Rwanda

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Introduction: The WHO defines family planning as the capacity of someone or couples to anticipate and to have the desired number of children with intervals between their births. Recently Teenage pregnancy is a global health issue whereby 21 million young people aged 15-19 years old become pregnant each year, and 50% of them were not intended. In Rwanda, teenage pregnancy is also a public health issue since the rate increased by 17.5% of teenage pregnancies within 5 years from 2017 to 2022, and the Eastern province, where JARAMA HC lives, contributes the largest number to this rate. For Rwanda to deal with this issue, establish different mechanisms that will be achieved in 2050 to address the high population growth rate, which include increased reproductive health information through different theaters, the ASRH program, and others, and accessibility of all methods for free at public hospitals and services, particularly for the youth, to avoid unplanned pregnancies. Although these mechanisms were established, there is a high rate of teenage pregnancy at JARAMA HC. Therefore, this study aims to assess knowledge, perception, and practices of young adolescents regarding family planning methods use at the JARAMA health center in the Ngoma District.

Methodology: A quantitative approach and descriptive cross-sectional study will be conducted among young adolescent people aged between 10 and 19 years old attending JARAMA Health Center. A systematic random sampling will be employed to select participants who were enrolled in the family planning program. Sample size will be determined using the Yamane formula. Data will be collected using a structured questionnaire, which will be designed to collect required data, and it will be analyzed using SPSS version 30.0.0.

Conclusion: This study will help the policymakers to focus on the prevention of unwanted pregnancy, and it will also help the government to know the gap that leads to increased teenage pregnancy. The researcher will also apply a similar study to other regions for establishing the mechanism of preventing unwanted pregnancy.

125. Predictors of Violence Against Women and the Help-Seeking Behaviours in Rwanda: Systematic Review

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Background: Violence against women, particularly intimate partner violence and sexual violence, are the major public health problems and violation of women's human rights globally. In Rwanda, the prevalence of intimate partner violence has increased in recent years, despite the country's progress in gender equality. Understanding the predictors of violence and help-seeking behaviors among women is crucial for developing effective interventions to address this persistent issue.

Methods: A systematic review was conducted from April to October 2024, using PubMed, Google Scholar, Medline, Embase, Cochrane, and grey literature to identify studies on violence against women in Rwanda and respective help-seeking behaviors. Articles were selected based on PICO framework criteria, published in English between 2010-2024, and underwent a four-stage selection process involving multiple reviewers. The National Institutes of Health Quality Assessment Tool was used to evaluate study quality through 14- point assessment criteria.

Results: The systematic review included 9 articles that focused on women's violence in Rwanda, examined the patterns or predictors of violence or help-seeking behaviors, and were published in peer-reviewed English journals between January 2010 and January 2024. The review identified several key categories of factors influencing the occurrence of violence against women and help-seeking behaviors among women in Rwanda. Sociodemographic predictors such as age, education, and social support were found to significantly impact women's vulnerability to violence. Economic and lifestyle factors, including household wealth, financial decision-making, and partner alcohol use, also played a critical role. The analysis further revealed positive and negative help-seeking behaviors, with barriers such as social stigma, economic dependence, and cyclical patterns of abuse hindering women's ability or willingness to seek support.

Conclusion: The review provides a comprehensive understanding of the multifaceted predictors and complex dynamics of help-seeking for intimate partner violence among women in Rwanda, underscoring the need for tailored, multi-pronged interventions.

126. Prevalence and associated factor of Syphilis among women engaged in transactional sex in Rwanda

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Background: Globally, every year, there are approximately 12 million cases of Syphilis reported and most of them are found in sub-Saharan Africa. The objective of this research was to determine the prevalence and elements linked to Syphilis in women engaged in transactional sex in Rwanda.

Method: A cross-sectional investigation was carried out among 2542 participants from 12 study sites in Rwanda in May 2023. Univariate, bivariate, furthermore, multivariate logistic regression analyses were used to evaluate potential factors associated with the phenomenon.

Results: The research revealed a 33.83% prevalence of syphilis among study participants. Among them, 495 (19.72%) did not attend school, 1346 (53.63%) had primary education and 669 (26.65%) reported to have secondary or higher education. Of 2542 participants, 1467 (57.71%) did use condoms at their first sexual intercourse. The bivariate logistic Regression showed that study participants aged from 25 and above were more likely to have syphilis infection. In multivariate logistic regression, study participants that used alcohol before having sex they had higher likelihood of testing positive for Syphilis (aOR= 1.74 [95%CI: 1.2 – 2.5]) compared to the ones who did not. To not have been tested for HIV in the last 12 months was found to be associated with having Syphilis (aOR = 1.44 [95%CI: 1.17 – 1.76]) compared to the ones who have been tested for HIV.

Conclusion: The findings revealed the prevalence of Syphilis among women engaged in transactional sex was 33.83% and it was positively associated with having 25 years old and above, being divorced or widow and call community health intervention for that specific group of people.

127. Prevalence and Associated Factors of Family Planning among Students of Health Training Institutes in Juba: A Cross Sectional Descriptive Study

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Introduction: Family planning (FP) is less prevalent in South Sudan yet information on the subject is scarce and varied from one source to another. This study assessed the prevalence and associated factors of family planning among students at health science training institutes in Juba City.

Methods: This was a cross-sectional survey of students' self-reported utilisation of FP methods. Four hundred randomly selected students from all the five health training institutes (HTIs) in Juba City participated in the study. Data collection was done using a pretested structured questionnaire. IBM SPSS 23 software was used for data analysis. Chi squared tests and regression analyses were performed to determine the associated factors.

Results: Among the 400 participants, the modal age group was 25-34 years old, 188 (47%) were males and 212 (53%) were females while the majority (44%) were married. The lifetime use of FP methods was 77.3%, of which modern contraceptive use was 22%. FP was more prevalent among participants aged 45-50 (85.7%) and females (80.7%). Eighty-seven percent of divorced couples and 91.3% of traditional believers reported practicing FP. More nursing/midwifery cadres within the professional category reported practicing FP, as well as 90.4% of rural respondents. Eighty-three percent of respondents working in pharmacies said they practice FP, compared to 68.1% of those working in clinics. FP practice was similar among participants who knew about FP (78.9%) and those who denied having knowledge of the practice (72.5%). Marital status ($p < 0.001$), religion ($p < 0.001$), residence ($p < 0.001$), and place of work ($p = 0.037$) were significantly associated with FP.

Conclusion: The prevalence of family planning among students at Health Training Institutes in Juba City is high compared to national estimates, but the modern contraceptive prevalence rate is still low. It is significantly associated with marital status, religion, residence, and place of work. There is a need to continue the FP promotion efforts.

128. Prevalence of Depression amongst pregnant women attending Juba Teaching Hospital

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Introduction: Depression in pregnancy affects up to 10% of women around the world with higher rates in developing countries. Mental health conditions are further recognized as a public health concern in poor and conflict-affected populations such as those in South Sudan. In this contexts, mental illnesses are usually under-diagnosed due to stigma. Moreover, data about these conditions are extremely limited. Therefore, the aim of this study was to assess and estimate the prevalence of depression amongst pregnant women in Juba, South Sudan.

Methodology: This study was conducted amongst women attending antenatal care (ANC) and postnatal ward in Juba Teaching Hospital (JTH). Data was collected by means of a structured questionnaire which featured questions about the reproductive and socio- economic status. Depression evaluation was done using the Edinburgh Postnatal Depression Scale (EPDS). This is a self-rating questionnaire that evaluates the feelings of respondents in the last seven days. A cut off point/score of ≥ 13 was used to determine whether the mother have depression or not.

Results: Prevalence of depression amongst pregnant women in JTH was 67.6%, with the majority attending the ANC (78.8%). A high percentage of depression is seen amongst full time housewives (79.7%), while only 21.3% were employed. 10.2% of respondents reported existing chronic illness mainly syphilis, diabetes and hypertension.

Conclusion: The study had estimated a high prevalence of depression amongst pregnant women attending JTH. There is a clear correlation between pregnancy-associated depression and employment. Other factors such as level of education, marital status and type of marriage (polygamous marriages) contribute to the incidence of the condition. The study recommends the integration of depression screening into ANC to ensure that mothers are given proper care and counselling.

129. Provision of care services contributing to the prevention of HIV and mother-to-child transmission in the Far North region of Cameroon

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Background: PMTCT aims to reduce the risk of HIV infection among children exposed to a mother living with HIV. The healthcare services that contribute to this prevention are implemented at the operational level by health facilities. This study aimed to assess the provision of PMTCT care in the health facilities of the Lake Chad health districts in the Far North region of Cameroon

Methods: This was a cross-sectional descriptive study exhaustively targeting health facilities in the Mada and Kousseri health districts in the Lake Chad basin of Cameroon. Data were collected using a questionnaire administered face-to-face to health staff involved in antenatal consultations, HIV prevention and PMTCT interventions in the targeted health facilities.

Results: The survey covered 17 health facilities among which 11 (64.7%) in Kousseri and 6 (35.3%) in Mada. All health facilities (100%) reported implementing HIV prevention activities, including 8 (47.1%) for pregnant women and 8 (47.1%) for all age groups. Thirteen (76.5%) carried out these activities only in health facilities, three (17.6%) in health facilities and communities. Out of the 17, 10 (58.8%) conducted counselling relating to HIV prevention measures and 4 (23.5%) had a psychosocial assistant. Among the screening tests, 15(88.2%), 9 (52.9%) and 7 (41.2%) health facilities systematically offered screening tests for HIV, syphilis, and hepatitis B, respectively during pregnancy. Antiretroviral treatment of women was systematic in all health facilities, but 3 (17.6%) reported difficulties in getting women to adhere to antiretroviral treatment. The availability of PMTCT inputs was one of the obstacles to the implementation of PMTCT and represented one of the key parameters of vertical HIV prevention, given that at the time of the survey, only 13 (76.5%) health facilities had available nevirapine.

Conclusion: The provision of services contributing to PMTCT in health facilities in the Far North region of Cameroon is limited, as it does not cover all recommended interventions.

130. Risk factors for food contamination among children 6-59 months discharged from community management of acute malnutrition (CMAM) programmes for severe acute malnutrition (SAM) in Aweil East, South Sudan

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Introduction: Children under five years of age are particularly vulnerable to severe acute malnutrition (SAM), and the risk factors associated with relapse to SAM are poorly understood. Possible causes are asymptomatic or symptomatic infection with enteric pathogens, with contaminated food as a critical transmission route.

Method: This cross-sectional study comprised a household survey with samples of child food (n=382) and structured observations of food preparation (n=197) among children aged 6-59 months who were discharged from treatment in community management of acute malnutrition (CMAM) programmes in Aweil East, South Sudan. We quantified *Escherichia coli* and total faecal coliforms (TFCs), measured in colony-forming units per g of food (CFU/g), as indicators of microbial contamination of child food and identified associated risk factors for this contamination. A modified hazard analysis critical control point (HACCP) approach was utilized to determine critical control points (CCPs) followed by multivariate logistic regression analysis to understand the risk factors associated with contamination.

Results: Over 40% of samples were contaminated with E. coli (43% >0 E. coli CFU/g, 95%CI 38-48%), and 90% had >10 TFCs (CFU/g) (>10TFC CFU/g, 95%CI 87-93%). Risk factors associated (p<0.05) with child food contamination included if the child fed themselves (95% CI 1.16, 3.44, log[odds] = 2.20), exposure to animals (95% CI 0.28,1.68, log[odds] = 0.97), and feeding with a spoon (95% CI -7.81, -1.54, log[odds] = -4.17).

Conclusion: This study highlights strategies that can support interventions that reduce food contamination exposure in young children and help further protect those who are highly vulnerable to recurrent exposure to diarrhoeagenic pathogens.

131. Role of adolescent girls in Human Papillomavirus vaccination decision making in Africa: a systematic review

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Introduction: HPV vaccination rates remain low in many African nations, with fewer than a third of girls receiving at least one dose. A key factor influencing uptake is the decision- making process, where adolescent girls though often overlooked play an important role. While school-based programs and family influence shape vaccination decisions, understanding the agency of adolescent girls in accepting or influencing HPV vaccine uptake is crucial. The aim of this systematic review is to draw together and summarize findings on the role of adolescent girls in HPV vaccination decision making process in the context of African countries.

Methods: The methodology for this review adhered to the PRISMA guidelines. A comprehensive systematic search was conducted across six databases: CINAHL Plus, Child Development & Adolescent Studies, PsycINFO, SocINDEX, PubMed, and Web of Science. The Mixed Methods Appraisal Tool (MMAT) was used to assess the quality of the included studies. A total of 37 studies met the inclusion criteria and were analysed. To ensure the validity of findings, data extraction was conducted in duplicate by two independent reviewers. For qualitative data, a coding framework was developed, from which descriptive themes were constructed to synthesize the results. Any discrepancies were resolved through discussion and consensus with two additional reviewers. Due to the limited availability of quantitative data, a meta-analysis was not performed. However, descriptive statistics were used to report the quantitative findings.

Results: The results showed variations in autonomy and/or shared decision-making roles, where adolescent girls themselves or parents or dyad (parent-adolescent girls) decide on vaccination. Other family members may be consulted or the decision making may extend beyond family to involve others like healthcare workers, teachers and community leaders. The proportion of adolescent girls who would autonomously make decision to be vaccinated ranged between 15.4 – 27%, while the proportion of parents supporting HPV vaccination decision making by adolescent girls varied between 4% – 81%. Adolescent girls play five main roles in HPV vaccination process: recipient of HPV vaccination information; conduit of the information; educating and influencing parents and peers; assenting and receiving HPV vaccine; and conforming to or rejecting vaccination decisions made by adults.

Conclusion: Planners and implementers of HPV vaccination need to understand the autonomy of adolescent girls in making health decisions and the important roles they play in order to improve HPV vaccination coverage. This review supports an ongoing study on adolescent girls' autonomy and roles in HPV vaccination.

132. School re-entry among adolescent mothers in the context of nurturing care for children 0-3 years in Kenya

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Introduction: Adolescent motherhood presents significant social and educational challenges in Kenya, despite the existence of policies and frameworks advocating for universal education and gender equality (MoE 2020). The Kenyan re-entry policy provides for the unconditional re- admission of adolescent mothers to school, yet its implementation is hindered by challenges such as unclear directives, lack of monitoring systems, stigma from peers and teachers, insufficient funding, limited parental involvement, financial constraints, and inadequate childcare services. These barriers limit the ability of adolescent mothers to resume and sustain their education while addressing their children's needs as mothers. Despite the existence of studies on the implementation of school re-entry policy and guidelines, majority are silent on the well-being of the child. Zizi Afrique Foundation undertook a study to generate evidence on the connectedness of school re-entry and the well-being of children aged 0 to 3 in Kenya in 2024.

Methods: The study employed an exploratory design and used qualitative approach, that included 27 in-depth interviews with adolescent and experiential mothers, 7 focus group discussions with school-going adolescents, and 65 key informant

interviews with other stakeholders. Qualitative data were collected through audio recordings and observations, then thematically analyzed using NVIVO software.

Results: The findings reveal that adolescent mothers experience significant psychological stress, disrupted schooling, strained relationships, and financial difficulties. Adolescent mothers missed school to address their children's healthcare needs, while poverty and limited resources constrained their ability to provide nurturing care. These challenges negatively impacted both the mothers' educational outcomes and the well-being of their young children.

Conclusion: The study recommends the development of comprehensive guidelines to address gaps in school re-entry policies and provide adequate support for nurturing care. Tailored interventions, including financial assistance, stigma reduction initiatives, and accessible childcare services, are critical to enabling adolescent mothers to balance education and caregiving responsibilities effectively.

133. Sexual Behavior and Teenage Pregnancy: A Scoping Review

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Background: Teenage pregnancy remains a significant global health and socio-economic issue, particularly in low- and middle-income countries. Adolescents' sexual behavior, including early initiation of sexual activity, unprotected intercourse, and lack of comprehensive sexual education, plays a pivotal role in the prevalence of teenage pregnancies. Understanding the complex relationship between sexual behaviors and teenage pregnancy is essential for designing effective interventions to reduce adolescent pregnancies and improve sexual and reproductive health outcomes for young people.

Methodology: This scoping review aims to explore the existing literature on sexual behavior and teenage pregnancy. A comprehensive search of electronic databases, including PubMed, Google Scholar, and JSTOR, was conducted using terms related to sexual behavior, teenage pregnancy, adolescence, and contraceptive use. Eligible studies were selected based on inclusion criteria, focusing on adolescent sexual behavior patterns, contraceptive use, and pregnancy rates. Data was synthesized through qualitative analysis to identify key themes and trends across studies from diverse geographical settings.

Results: The review identified multiple factors influencing teenage pregnancy, including early sexual initiation, peer pressure, lack of knowledge on contraceptives, socioeconomic status, and family dynamics. Studies revealed a strong correlation between inconsistent contraceptive use and higher pregnancy rates among teenagers. Additionally, cultural and regional differences significantly impacted sexual behavior and access to reproductive health services. Educational interventions and sexual health programs were found to be effective in delaying sexual initiation and promoting contraceptive use.

Conclusion: This review highlights the importance of addressing sexual behavior in adolescent populations as a key strategy to reduce teenage pregnancies. The evidence suggests that comprehensive sexual education, access to contraceptive methods, and support systems are critical to improving reproductive health outcomes for teenagers. Policymakers and health professionals should prioritize these areas when designing programs aimed at reducing teenage pregnancy rates.

134. Uptake of cervical cancer screening among women aged 30 and 49 years in Rwanda: A scoping review

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Background: Cervical cancer is a critical global health challenge, particularly in low and middle-income countries. Sub-Saharan Africa bears a disproportionate burden, with approximately 660,000 new cases reported globally in 2022 and 94% of 350,000 deaths occurring in resource- limited settings. In Rwanda, Cervical cancer screening rates remain low, with only 11.7% of women aged 35-45 undergoing screening. The country's targeted 90-70-90 strategy: vaccinating 90% of girls by age 15, screening 70% of women between 35-45 years, and ensuring 90% of women with identified cervical diseases receive appropriate treatment and care. This scoping review examined factors influencing cervical cancer screening uptake and existing barriers among women aged 30-49 in Rwanda.

Methods: Following the PRISMA-ScR protocol, comprehensive searches were conducted across PubMed, Scopus, Web of Science, and Google Scholar using the database's specific strategies. Articles were selected based on predefined criteria: they focused on cervical cancer screening, involved women aged 30-49, used Rwandan data, and were published in English between 2000 and 2024. Three independent reviewers screened studies, and quality was assessed using NIH and qualitative research evaluation tools.

Results: Twelve studies revealed complex factors influencing screening uptake. Women with higher economic and education levels demonstrated higher screening likelihood. Facilitators included innovative strategies like integrated health services and self-collection methods, with significant support from urban and rural respondents. A reported screening probability gap between rural and urban populations remained small, ranging from 3.3% to 3.6% across age groups. Key barriers included

poor cervical cancer knowledge (only 23% understood HPV's role), procedural fears and stigma, financial constraints, and healthcare system limitations.

Conclusion: The review highlights multifaceted challenges in cervical cancer screening among Rwandan women. Despite significant barriers, Rwanda shows promising potential through innovative strategies like self-collection methods and integrated healthcare services. The findings underscore the need for targeted health education, culturally sensitive interventions, and comprehensive approach.

135. Attitudes and Perceptions About Family Planning Among Juba Residents

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Background: Family planning (FP) is a critical public health intervention to control fertility rates and improve maternal and child health outcomes, particularly in developing contexts like Juba, South Sudan. Despite its significance, FP uptake remains low in Juba, constrained by cultural, socio-demographic, and economic factors. This study aimed to assess the attitudes and perceptions of FP among Juba residents in Munuki Block and to identify the factors influencing the use of FP services.

Method: A cross-sectional study was conducted among 424 residents aged 15–49 years, both male and female, employing structured questionnaires to collect data on demographic characteristics, knowledge, attitudes, perceptions, and FP service access. The multistage sampling procedure was used where Munuki block was purposely selected and neighborhoods were stratified then households were selected using systematic random sampling where every 10th household was chosen and Eligible individuals within selected households were randomly chosen to participate. The data were analyzed using SPSS, results were presented using tables, graphs and pie charts, with descriptive statistics summarizing the findings and chi-square tests identifying associations between variables.

Results: The majority of the respondents were in the age bracket of 25-34 years (48.1%, n=204) while 24.1% (n=102) were aged 15-25 years, 19.8% (n =84) were between the age 35-44 years and finally only 8% (n=34) of the respondents were above 40 years. The factors that influence perceptions of family planning among Juba residents; Age ($X^2 = 79.109$, $p < 0.001$, type of Marriage ($X^2 = 8.011$, $p = 0.018$), level of education ($X^2 = 33.691$, $p < 0.001$), religion ($X^2 = 19.099$, $p < 0.001$), Occupation ($X^2 = 120.963$, $p < 0.001$).

Conclusion: The study underscores the significant role of socio-demographic and cultural factors in shaping attitudes and perceptions toward family planning among residents of Juba. While awareness of family planning methods is relatively high, misconceptions, cultural resistance, and fear of side effects hinder broader acceptance and usage. Younger, educated, and self-employed individuals displayed more favorable perceptions, highlighting the potential impact of targeted interventions. To improve family planning uptake, efforts should focus on community-driven education, addressing misinformation, and enhancing accessibility to affordable and culturally sensitive services. Engaging religious and community leaders as advocates for family planning could foster greater acceptance, contributing to improve maternal and child health outcomes in Juba.

136. Factors Associated with Modern Contraceptive Use Among Men and Women of Reproductive Age In Kwale County, Kenya

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Background: Developing economies are characterized by rapid population growth resulting from high fertility rates, high birth rates, and steady declines in death rates, which significantly burden reproductive health. The Kenyan Coast demonstrates these challenges by having the second lowest modern contraceptive uptake prevalence rate in the country at 38.3% and more than half of the residents not using any contraceptive. This study aimed to examine modern contraceptive methods and associated factors among men and women of reproductive age in a rural county in Kwale County, Kenya.

Methodology: This was a public health facility study in Kwale County, Kenya. A master facility list was accessed from the county ministry of health offices and used as the sampling frame. level 4 health facilities in each of the 5 centers, dispensaries, and sub-county hospitals in the sampled sub-counties in Kwale were sampled. Each sub county allocated facilities equally in the county, getting 4 health facilities. A sample size of 400 was used to ease allocation to various health facilities. Written informed consent was sought from the participants before data was collected through a face-to-face interview using a semi-structured questionnaire. The data was analyzed using SPSS Ver. 22.0 statistical software (IBM Corp., 2013.)

Results: A total of 394 participants were included in the study with 199 (50.5%) females and 195 (49.5%) males. Sex, perception, decision maker on contraceptives, and the number of children independently had a significant association with contraception use after retention. The participants currently using contraceptive methods were 230(58.4%) as the leading

contraceptive in use was implants. A high proportion of participants (95.7%) had heard of contraceptives from health facilities, with three of the contraceptives well known; injectables (78.4%), pills (61.4%), and condoms (60.7%). The main reason for using contraceptives was to space children. A positive perception was made that contraceptives are effective in avoiding pregnancy, I approve the use of contraceptives, and that contraceptives are expensive. It was also indicated that both man and woman are responsible for making the decision. Males were more likely to use modern contraceptives compared to females. The odds of modern contraceptive use were lower for those with negative contraceptives compared to those with positive perception.

Conclusion: The study recommends enhancing awareness by initiating community education programs, improving access to contraceptives, addressing the different side effects, encouraging male involvement in family planning, and promoting policies that promote gender equality in reproductive health.

137. Prevalence of emergency uses of contraceptives among students at University of Juba

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Introduction: This study aims to assess the prevalence and factors associated with the use of emergency contraceptives among students at the University of Juba (UoJ), South Sudan. Given the high rates of unintended pregnancies and the associated health risks, understanding the knowledge and usage patterns of emergency contraceptives is crucial for improving sexual and reproductive health outcomes in this population.

Method: A cross-sectional study design will be employed, utilizing quantitative methods to gather data from a representative sample of students. The study will explore students' awareness of emergency contraceptives, their perceptions regarding access, and the socio- demographic factors influencing their use.

Result: A total of 385 were estimated to participate in this study with a response rate of 98.4%. of the students who consented to participate in this study, more than half were aged 20 - 24 years, 203(53.6%). The prevalence of emergency contraceptive (EC) use among students at the University of Juba was 176 (46%). Whereas 131 (96.3%) had heard of emergency contraceptive (EC), only 3.7% did not hear about EC. it was religion (p = 0.009) and "it is sinful acts to use EC" (p = 0.041) were statistically significant associated with use of EC.

Conclusion: The prevalence of contraceptive use among students at the University of Juba was low. It was religion and "it is sinful acts to use were statistically significant associated with use of EC. Therefore, it is recommended that initiate health promotion among University of Juba students, to improve and increase the use of emergency contraceptives services and traitor focus health programming that will motivate female students to use emergency contraceptive.

138. Prevalence and perceptions of voluntary medical male circumcision among the students of the University of Juba in South Sudan

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Introduction: Voluntary Medical Male Circumcision is one of the key interventions adopted by the international community to fight heterosexual spread of HIV. The technique has been shown to reduce the heterosexual spread of HIV by 60%. Despite being a cultural practice in some parts of South Sudan, male circumcision prevalence is not clearly understood across the country. In addition, it is not currently in the national health policy. This study aimed to assess the prevalence and perceptions of voluntary medical male circumcision among the students of the University of Juba in South Sudan.

Method: This cross-sectional study involved collection of data from respondents randomly selected from six schools. We sought to answer questions on prevalence and factors associated with VMMC. Respondent-administered semi-structured questionnaires were used for data capture. The software SPSS 23 was used for data analysis. Descriptive statistics and cross tabulations were carried out and frequency tables and pie charts were used for data presentation.

Results: Out of 391 students interviewed, 84.65% were aged 16 - 30 years old, 90% were Christians with most (77.7%) being single. The prevalence of VMMC was 83.6%. Most (90.3%) of the students have positive attitudes and perceptions towards VMMC and would recommend a male relative to get circumcised. The decision to get circumcised is influenced by age (p < 0.001), marital status (p < 0.001), religion (p < 0.001) and state of origin (p < 0.001).

Conclusion: Most participants are circumcised and have positive perceptions towards VMMC. Age, marital status, religion and state of origin influence VMMC uptake. The study recommends a countrywide study, scale up of the current VMMC program in addition to tailored health education and awareness to influence behavioral change and thereby create demand for VMMC services among those still opposed to the service.

139. Prevalence of Syphilis and Associated Factors Among Pregnant Women Attending Antenatal Care in Juba Teaching Hospital, Juba, South Sudan

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Introduction: Syphilis is an infectious disease caused by the bacterium Treponema pallidum. It poses significant long-term health risks for mothers and can lead to severe complications during pregnancy. If not treated, it may result in spontaneous abortion, stillbirth, and other adverse outcomes, including congenital syphilis. This study aimed to assess the prevalence of syphilis and its associated factors among pregnant women receiving antenatal care in Juba.
Method: A cross-sectional study was conducted at antenatal clinics within Juba Teaching Hospital. A total of 40 pregnant women who provided consent were enrolled in the study, utilizing a standardized questionnaire to gather information on the prevalence and associated factors of syphilis in Juba, South Sudan. Data collection was performed using a systematic random sampling method. Quantitative data were thoroughly analyzed with Microsoft Excel, while qualitative data were summarized and analyzed manually through content analysis.
Results: The findings indicated that 30% of the participants were diagnosed with syphilis. Among those diagnosed, a significant proportion had never used condoms; specifically, 58% reported condom use, while 42% had not. This suggests that condom usage plays a crucial role in the health of both partners. Furthermore, the study found that most women who experienced pregnancy loss were those who tested positive for syphilis, indicating that syphilis is a primary contributor to abortions and miscarriages among pregnant women in antenatal care. The data revealed that 5% of respondents had lost one child, compared to 3% who had lost two children. Additionally, most women recognized that attending antenatal care reduces risks to the unborn child.
Conclusion: Given the increasing rate of abortion, the government must take action by enhancing health policies and ensuring access to treatment, particularly for those in rural areas.

140. A Study of The Knowledge, Attitudes And Practice Of Condom Use Among Students In The School of Medicine And Engineering, University of Juba

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Background: The possibility of unsafe sexual behavior among medical and engineering students seems to be eminent. The purpose of this study conducted from November 2024 to January 2025. was to explore the knowledge, attitudes and practice of condom use among students in the Schools of Medicine and Engineering, University of Juba, as well as factors influencing their attitudes and perceived barriers in discussing condom use.
Methodology: A cross-sectional study was used to address the specific objectives of the study on a sample of 422 respondents using a simple random technique. A self-administered questionnaire with both open and closed ended questions were designed and used as a data collection tool. The data was analyzed manually by use of pens, tally sheets, and a calculator; presented in form of percentages, tables, bar graphs, and pie-charts using the Microsoft excel computer program.
Results: Overall findings for 421 of the 422 respondents (1 non-respondents) reveal that 99.5% of the respondents are aware of condoms, with 87.1% reporting use of condoms during their first sexual encounter and only 15.7% using condoms consistently. Inconsistent usage was evident, with 63.5% using condoms sometimes. The result also showed that 94.7% of the respondents have positive attitudes towards condom use since they acknowledged condom effectiveness in preventing STIs and unwanted pregnancy. A substantial portion of the respondents (83.2%) did not perceive condom use as conflicting with their sociocultural and religious beliefs, while 16.8% did. Meanwhile perceptions associated with condom use such as distrust (40.2%) and infidelity (26.1%) present significant challenges underscoring the need to tailor educational interventions to address cultural barriers to condom use.
Conclusion: The study concludes that while awareness of condoms is high, significant gaps in consistent use and knowledge persist. Sociocultural and behavioral factors, including misconceptions about condoms, perceived reduction in pleasure, and substance use, hinder effective condom use. Additionally, sociocultural and religious influences continue to shape attitudes toward condoms, impacting their acceptance and use. Addressing these barriers is critical to promoting safer sexual practices and reducing the prevalence of HIV/STIs.

141. Cervical Cancer Screening Program in South Sudan, Progress and Challenges

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Background: The African Region is disproportionately affected by cervical cancer, with 19 Member States having the highest burden of cervical cancer globally. In South Sudan, recent data from the Global Observatory shows that, cervical cancer was the most common cancer in all ages after breast cancer, accounting for 749 cases (10.9%) in 2022. This situation is explained by socioeconomic and cultural factors as well as lack of health care facilities to offer such services.

Methods: South Sudan Health Sector Strategic Plan (HSSP) 2023-2027 has prioritized cervical cancer prevention through Human Papilloma Virus (HPV) vaccination and scaling up of cervical cancer screening and treatment services.

Results: The HSSP plans to scale up coverage for cervical cancer screening to 30% of PHCC facilities and hospitals throughout the country in order to achieve the WHO target for cervical cancer prevention by the year 2030.

Conclusion: The cervical cancer screening and treatment of premalignant lesions program in South Sudan has made notable progress in expanding access to services, improving the quality of care, and raising awareness about cervical cancer. With continued support, strategic investments, and increased coordination among stakeholders, the program has the potential to further reduce cervical cancer incidence and mortality in South Sudan.

142. Ovarian Cancer and Primary Peritoneal Carcinomatosis: Similarities and Challenges of Management in East African Community

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Introduction: Ovarian cancer is a fatal gynecologic cancer with a median 5-year survival of less than 50%, most cases present in the advanced stages with widespread peritoneal carcinomatosis. Furthermore, the similarity between Epithelial Ovarian Carcinomatosis (EOC) and Primary Peritoneal carcinomatosis (PPC) in terms of presentation, biological behaviors, and treatment options constitutes an additional challenge in resources-limited Institutions. Cytoreductive Surgery (CRS) followed by platinum-based Chemotherapy was considered the standard of care for several decades. The combination of CRS and hyperthermic intraperitoneal chemotherapy (HIPEC) in treating the EOC and the PPC offers a promising survival advantage in high-volume cancer centers. Furthermore, the emergence of poly (ADP-ribose) polymerase (PARP) inhibitors and antiangiogenic agents, opened a new window for targeted treatment. However, optimal CRS plus HIPEC remains unprecedented in Low and Middle-Income Countries (LMICs) and East African Community (EAC) thereof. This article evaluates the challenges surrounding the management of EOC and PPC in the EAC.

Methods: This is a case series, presenting 5 cases of Ovarian and Primary Peritoneal cancer, who underwent CRS in Juba Teaching Hospital (JTH) within the period between September 2024 to 1st March 2025, the articles review was searched in PubMed, Embase, MEDLINE, and the Cochrane Library regardless of year of publication.

Results: Among 5 cases, 4 cases (80%) had ovarian cancer, while 1 case (20%) had Primary Peritoneal Carcinomatosis, the median age was 50 years. All of them (100%) underwent upfront optimal cytoreductive surgery, and postoperative Pathology revealed;3 cases among EOC (75%) had moderate-grade serous ovarian carcinoma, 1 case (25%) had high-grade serous ovarian carcinoma, and 1 case was malignant mesothelioma. All patients did not receive adjuvant chemotherapies, HIPEC or PARP inhibitors due to the nonexistent of these agents in public Hospitals, while their prices at private facilities are not affordable for patients and their families.

Conclusion: Despite the similarities between ovarian cancer peritoneal carcinomatosis and Primary Peritoneal Carcinomatosis, their treatment has undergone a significant evolution over the last two decades, from the CRS plus Platinum-based systemic chemotherapy, through the addition of the HIPEC to the surgery followed by platinum-based adjuvant chemotherapy, to the current stage of cutting-edge advances of the emergence of (PARP) inhibitors and antiangiogenic agents. However, these advances, remain scarcely in the EAC, which highlights an urgent need for the provision of essential chemotherapeutic agents, HIPEC devices, and disposables for the standardization of ovarian cancer and peritoneal carcinomatosis in the region.

143. Predictors of Iron-Rich Foods Consumption Among Children Aged Between 24-59 Months in The Eastern Region, Of Burundi

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Background: Infantile anaemia is a major public health problem throughout the world, particularly in sub-Saharan Africa. Burundi is no exception. One of the main causes of childhood anaemia is iron deficiency due to the consumption of iron-rich foods. There is little data on the factors associated with the consumption of iron-rich foods in Burundi. The aim of this study was to determine the prevalence of iron-rich food consumption and associated risk factors in children aged 2-5 years in the Butezi health district in order to provide results that could inform decision-makers in the fight against micronutrient deficiency malnutrition.

Methods: A cross-sectional study was conducted among 602 mother-child pairs in the Butezi health district. Consumption of iron-rich foods was defined as consumption of at least 2 of the following foods: legumes, meat, eggs and green vegetables. A descriptive statistical analysis, an univariate analysis and a multivariate analysis with logistic regression were used to describe and identify the factors associated with the consumption of iron-rich foods.

Results: Only 41.20% of the children had eaten iron-rich foods the day before the survey. Most of the children in the study ate more legumes and green vegetables than meat and eggs. Male children, the mother's high level of education, ownership of small and large livestock, nutritional education, the husband's involvement in the child's nutrition and the frequency of meals were the factors associated with good consumption of iron-rich foods.

Conclusion: Based on the results of this research, interventions focusing on access to nutrition information, raising awareness of good feeding practices among children, the importance of parents' joint management of children's diets, and increasing household ownership of cattle could help increase the consumption of iron-rich foods and reduce anemia among children aged 24 to 59 months in the Butezi health district.

144. Prostate cancer in patients with suspected benign prostate hypertrophy in Juba, South Sudan: A retrospective study

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Introduction: Prostate cancer carries a high morbidity and mortality especially when not diagnosed early. Patients in resource limited countries tend to be diagnosed late and hence delayed surgery for benign prostate hypertrophy (BPH).

Method: This was a retrospective study, from 1st January 2019 to 31st December 2020, on patients who underwent prostatectomy. Demographic and clinical data were extracted from their medical records.

Results: This study involved 101 patients who had had simple open prostatectomy. Ages ranged from 49 to 98 years, mean 68 +/- 8.98 years. The largest group (37.6%) was aged 71- 80 years, p=0.001. Two thirds (66%), presented with urinary retention, p=0.03. Histopathological examination showed that 49.5% had BPH. Prostate cancer was found in 28.8%, p=0.082. Almost half (49.5%) were diagnosed histopathologically as having BPH. Prostate cancer made up 28.8% with most patients in the age range 61-80 years, p= 0.456.

Conclusion: The prevalence of prostate cancer remains high among patients undergoing prostatectomy for suspected BPH. A national awareness campaign coupled with targeted screening of patients above 40 years could increase early detection of prostate cancer and reduce morbidity and mortality.

145. Effect of Female Partner-Led Brochure Method on Knowledge and Intention for Prostate Cancer Screening Among Men in Kiambu County, Kenya

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Background: Prostate cancer (PC) is a major public health concern globally, with high morbidity and mortality rates. Despite its impact, screening rates remain low, often due to misconceptions and lack of awareness. Early screening is crucial for reducing PC burden, yet in Kenya, prostate cancer screening (PCS) uptake is only 4.4%. This study evaluated the effectiveness of a female partner-led brochure intervention in improving knowledge and intention for PCS among men in Kiambu County, Kenya.

Methods: A randomized controlled trial (RCT) was conducted among 279 male participants aged 40–69 years in Kiambu County. Multistage sampling was used to select participants. The intervention involved female partners receiving gain-framed and loss-framed brochures with information on PC screening, while the control group received general health brochures. The Chi-square test was used to assess differences in knowledge and screening intention between control and intervention groups, and a difference-in-difference (DID) analysis determined the overall intervention effect.

Results: The intervention groups demonstrated a significant increase in prostate cancer knowledge and screening intention compared to the control group. The DID analysis showed a higher increase in knowledge among participants exposed to loss-framed brochures (Mean DID = 5.264, 95% CI: 3.804–6.724) compared to gain-framed brochures (Mean DID = 4.989, 95% CI: 3.561–6.418). Screening intention was also significantly higher among those exposed to female partner-led interventions, with loss-framed messages yielding the greatest impact.

Conclusion: Female partner-led interventions using both gain and loss-framed messaging effectively increase knowledge and screening intention for PC. Loss-framed brochures demonstrated slightly better results, suggesting that emphasizing potential consequences of non-screening may be more persuasive. These findings highlight the importance of gender-sensitive health communication strategies in addressing prostate cancer screening gaps in Kenya

146. Study of The Knowledge, Attitude and Practices of Condom Use Among Students of University of Juba

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Background: The possibility of unsafe sexual behavior among medical and engineering students seems to be eminent. The purpose of this study conducted from November 2024 to January 2025. Was **t**o explore the knowledge, attitudes and practice of condom use among students in the Schools of Medicine and Engineering, University of Juba, as well as factors influencing their attitudes and perceived barriers in discussing condom use.

Methodology: A cross-sectional study was used to address the specific objectives of the study on a sample of 422 respondents using a simple random technique. A self-administered questionnaire with both open and closed ended questions were designed and used as a data collection tool. The data was analyzed manually by use of pens, tally sheets, and a calculator; presented in form of percentages, tables, bar graphs, and pie-charts using the Microsoft excel computer program

Results: Overall findings for 421of the 422 respondents (1non-respondents) revealthat99.5% of the respondents are aware of condoms, with 87.1% reporting use of condoms during their first sexual encounter and only 15.7% using condoms consistently. Inconsistent usage was evident, with63.5% using condoms sometimes. The result also showed that 94.7% of the respondents have positive attitudes towards condom use since they acknowledged condom effectiveness in preventing STIs and unwanted pregnancy. A substantial portion of the respondents (83.2%) did not perceive condom use as conflicting with their sociocultural and religious beliefs, while 16.8% did. Meanwhile perceptions associated with condom use such as distrust (40.2%) and infidelity (26.1%) present significant challenges underscoring the need to tailor educational interventions to address cultural barriers to condom use.

Conclusion: The study concludes that while awareness of condoms is high, significant gaps in consistent use and knowledge persist. Sociocultural and behavioral factors, including misconceptions about condoms, perceived reduction in pleasure, and substance use, hinder effective condom use. Additionally, sociocultural and religious influences continue to shape attitudes toward condoms, impacting their acceptance and use. Addressing these barriers is critical to promoting safer sexual practices and reducing the prevalence of HIV/STIs.

Subtheme 6: Herbal and Traditional Medicine

147. Integration of Traditional Medicine into the Burundian Healthcare System: Lessons from the Tanzanian Context

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Introduction: According to the World Health Organization (WHO), traditional medicine (TM) plays a vital role in public health, particularly in developing countries and Africa, where over 80% of the population relies on it as an alternative to primary healthcare. WHO encourages member states to integrate TM into national healthcare systems, recognizing its significant contribution to enhancing public health services. In this global context, Burundians have long relied on TM products and services, with approximately 90% of the population utilizing them in rural and urban areas. This trend is also observed in various African countries, including those in East Africa, such as Tanzania.

Methodology: From a socio-anthropological perspective, a study using qualitative methodology and ethnographic techniques was conducted in 2024 in two major cities in Burundi and Tanzania. Data were collected through semi-structured interviews with traditional healers and herbalists from the Jabe traditional medicine market in Bujumbura and from Kariakoo in Dar es Salaam, as well as from officials in public healthcare institutions, academic researchers, and through both participant

and non-participant observation in both countries. Documentary research supplemented the primary data, and a thematic analysis was applied.

Results: Study results reveal that Burundi and Tanzania are advancing TM practices at different rates. In collaboration with the WHO, researchers from academic institutions, and traditional healers, the Ministry of Health in Burundi recently developed a strategic plan to promote TM over the next five years (2023-2028). This strategic plan outlines the steps, protocols, and standards to integrate TM products and services into the healthcare system. In contrast, while Burundi is still in the planning phase, Tanzania has made significant progress, achieving many of these milestones. Thus, an institute of traditional medicine established within a research institution, such as the Muhimbili University of Health and Allied Sciences (ITM-MUHAS), is already operational and well-equipped regarding personnel and facilities. This institute provides improved and regulated products for treating various diseases. In both countries, production units of improved traditional medicines are transforming the sector alongside traditional healers. Furthermore, Tanzania has begun the integration process on a trial basis, with some regional hospitals establishing departments of TM.

Conclusion: Traditional medicine is being promoted in Burundi and Tanzania, with efforts underway to integrate its products and services into national healthcare systems at different levels. The progress made in Tanzania could serve as a valuable inspirational model for effectively integrating TM into Burundi's national healthcare system.

148. Perceptions, attitudes, and practices regarding traditional medicine use among families with mental disorders in Rwanda

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Introduction: Traditional medicine (TM) remains widely used globally, with the World Health Organization (WHO) estimating that 65%–80% of the world's population relies on it as their primary healthcare option. In Africa, approximately–80% of individuals use TM due to accessibility, affordability, and cultural beliefs. In Rwanda, around 70% of the population consults traditional healers before seeking modern medical care. This practice is particularly concerning for mental health conditions, where delays in appropriate treatment contribute to increased morbidity, mortality, and disability. Limited integration of TM into Rwanda's formal healthcare system raises concerns about safety, efficacy, and delayed biomedical healthcare utilization. This study assesses the perceptions, attitudes, and practices regarding traditional medicine use among families with mental disorders in Rwanda. To assess perceptions, attitudes, and practices related to traditional medicine use among families with mental disorders in Rwanda.

Methodology: A cross-sectional study was conducted across all 30 districts and 416 sectors of Rwanda. A multi-stage cluster sampling method was used to select representative households. Data were collected through structured questionnaires administered to household representatives, traditional healers, and healthcare providers. Additionally, key informant interviews and focus group discussions provided qualitative insights.

Results: The study found that 72.4% of households reported using traditional medicine for mental health conditions. Socioeconomic status significantly influenced TM use, with individuals from lower-income households being 2.5 times more likely to use TM than those from higher-income backgrounds (OR = 2.5, 95% CI: 1.8–3.4, p < 0.001). Additionally, 68.3% of respondents perceived mental illness as being caused by spiritual or supernatural forces, contributing to delays in seeking biomedical care. Among TM users, 56.7% reported that traditional healers were their first point of contact when seeking treatment. The most commonly used traditional remedies included herbal treatments (49.2%), spiritual healing (32.8%), and ritual practices (18%).

Conclusion: This study highlights the widespread use of traditional medicine for mental disorders in Rwanda, driven by cultural beliefs and accessibility. The findings emphasize the need for policies to integrate traditional medicine into the formal healthcare system while ensuring safety and efficacy. Public health strategies should focus on awareness campaigns to promote timely biomedical care and reduce delays caused by reliance on TM.

149. Prevalence of Traditional Medicine Use Among Patients Attending the Diabetic Clinic at Mulago National Referral Hospital-Kiruddu

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Introduction: There is some evidence that patients with diabetes use complementary and alternative remedies to address general and diabetes-disease specific health concerns. Data on the efficacy and safety of traditional medicines (TM) used for treating diabetes is still a challenge in Uganda. To establish the prevalence of use of herbal medicine among adults diagnosed with diabetes attending Mulago National Referral Hospital, in order to generate evidence to inform management of diabetes in Uganda.

Methods: A hospital-based cross-sectional study was conducted among 352 patients with diabetes attending the diabetes clinic in Mulago National Referral Hospital. Data on prevalence, classification and reasons for traditional medicine use was collected using standardized questionnaires, key informant interviews and focus group discussions. Modified Poisson regression analyses were used to examine factors associated with use.

Results: Overall, 31% (109/352) of the study participants reported they had used traditional medicines. Reasons for use of traditional medicine were easy access to TM, household member's recommendations, repeated marketing by herbalists and the mass media which played a big role in persuading individuals to use traditional medicine.

Conclusions: The study showed that herbal medicine is widely used among patients diagnosed with diabetes in Uganda. Reasons for use were easy access to TM, household members' recommendations, repeated marketing by herbalists and the mass media which played a big role in persuading individuals to use traditional medicine. We therefore recommend that it is important for health professionals routinely inquire from patients with diabetes about past or current use of traditional medicines. Advertising of herbal products in markets and public spaces should only be allowed for registered products whose safety and efficacy have been verified by the Uganda national drug authority (NDA).

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