

Gut metagenomic profiling of 1,800 African women reveals associations with cardiometabolic health

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Background:

Human gut microbiome research has been primarily conducted in populations from high-income countries, whereas populations from low or middle-income countries have routinely been omitted from large-scale microbiome studies. Therefore, it is unknown whether microbiome and disease associations uncovered in high-income settings replicate in other populations. This is especially fraught in the context of cardiometabolic disease and other diseases that result from the complex interaction of genetics, lifestyle, and environment. Therefore, in partnership with the AWI-Gen Collaborative Centre, we aimed to evaluate gut microbiome associations with cardiometabolic disease in sub-Saharan African populations.

Methods:

Through the AWI-Gen 2 research project, we conducted cross-sectional enrollment of 1,820 women ages 42 - 86 from six Health and Demographic Surveillance Site catchment areas in Burkina Faso, Ghana, Kenya, and South Africa. Inclusion criteria included prior participation in the AWI-Gen 1 research project. Recent immigrants, pregnant women, and first-degree relatives excluded from enrollment. Participants were profiled via biospecimens, anthropometric measurements, and a detailed questionnaire, following a process of community engagement and written informed consent. Gut microbiome composition was analyzed with shotgun metagenomic sequencing. This study was approved by the Human Research Ethics Committee of the University of the Witwatersrand.

Findings:

We present a survey of gut microbiome composition of African populations with various lifestyles and environments, ranging from rural villages in Nanoro, Burkina Faso to urban slum environments within Nairobi, Kenya. Our analysis uncovers a wealth of undescribed microbial genomic diversity from metagenome-assembled genomes, gene catalogs, and viral profiling. Association with covariates reveal microbial correlates of various lifestyle and anthropometric factors.

Interpretation:

Overall, this dataset represents the largest cross-sectional survey of the gut metagenomes of African individuals to date. Notably, this study is limited to six study areas in four countries, and only to women, which highlights the need for continued research in this area. However, this dataset will provide a foundation to test microbial biomarkers for robustness and global generalization, uncover new associations between microbes and cardiometabolic health, and increase representation of African populations in microbiome research.

Source of Funding:

Project funded through the H3Africa AWI-Gen Collaborative Center.

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Background:

The U.S. has arguably the most fragmented healthcare system in the world yet its expenditures are disproportionately distributed among different populations. In particular, noncitizens are significantly less likely to be insured than U.S.-born citizens. There are many factors associated with an individual's healthcare utilization and while studies on immigrants' healthcare utilization are abundant, few assess refugees, who are a vulnerable group that face unique stressors and health risks. Specialized refugee research is needed to understand their healthcare utilization and to avoid potential biases. Thus, the purpose of the present study is to examine possible barriers to healthcare utilization among refugees and the impact it has on health.

Methods:

A secondary analysis of the 2018 Annual Survey of Refugees (ASR) from the Office of Refugee Resettlement was conducted for this study. The 2018 ASR is a national cross-sectional survey and the origins of the participants include the Middle East, Africa, East Asia, Southeast Asia and former Soviet Union. SPSS Statistics was used to analyze data for this study. Descriptive statistics for demographic variables and calculated variables' mean, range and standard deviation were performed. Frequency analyses were conducted to evaluate the extent of healthcare coverage among refugees. Chi-square analyses, univariate logistic regression and multiple logistic regression were also performed.

Findings:

Results examined the extent of healthcare coverage among refugees and perceived health impacted by healthcare status, having a usual source of care, and method in which medical expenses are paid. Differences in healthcare utilization was also assessed based on sex, age, English proficiency, job status, arrival year, and country of birth.

Interpretation:

Regarding limitations, the survey was cross-sectional and causal relationships could not be verified. Also, participants may have replied in a socially desirable manner due to the self-report nature of the study. The study findings add to the literature by providing information on potential factors that impact healthcare utilization among refugees. Findings should be considered when developing programs and policies to increase healthcare utilization among this underserved population. Specifically, policies that influence institutional, administrative, and financial barriers that hinder healthcare utilization among refugee populations.

Source of Funding:

None

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Background:

Unsafe abortion is a leading cause of maternal mortality, and nearly all unsafe abortions occur in developing countries. One opportunity to potentially reduce unsafe abortion is using misoprostol, an abortion pill. Previous systematic reviews have established misoprostol's clinical efficacy as well as barriers and facilitators to abortions within developed countries. However, there remains a gap regarding the experiences and perspectives of actors who directly interact with misoprostol – women and healthcare professionals – in developing countries. Given that abortion is influenced by medical and social contexts, it is important to gain a nuanced understanding of the ethical, cultural, technical, and logistical considerations facing women and healthcare professionals using misoprostol. This information can ultimately be used to inform policy and practice to improve abortion safety through using misoprostol.

Methods:

A systematic search of the empirical literature surrounding women and healthcare professionals' experiences and perspectives of using only misoprostol for abortions in the developing world was conducted. Five electronic databases and the grey literature were searched, and 1436 records identified and screened. Fifteen primary studies qualitative or mixed-method in nature met the predetermined inclusion criteria of the review. These studies were critically appraised using the CASP checklist and data regarding women and healthcare professionals' encounters with using misoprostol for abortion was extracted. Finally, the retrieved data was synthesized following Noblit and Hare's meta-ethnographic guidelines.

Findings:

Six third-order themes emerged following reciprocal translation of the studies. They were grouped into three categories. Themes of improved agency and improved access fell under the category of *empowerment*, with women reporting that misoprostol was private and affordable. Social inequalities and socially informed perceptions were categorized under *social influence*, with marginalized women at risk of exploitation and women and healthcare professionals basing their expectations of the drug on personal interactions with friends and patients, respectively. Finally, the fact that information both mediated experiences and was impeded by traditional barriers was grouped under *information flow*, and showed that women and healthcare professionals require more knowledge surrounding misoprostol use (e.g. correct dosage) but this is made difficult by stigma and legislation.

Interpretation:

Misoprostol provided privacy, autonomy, and a socially acceptable narrative around abortion. It was affordable but accessibility required social networking. Perceptions of misoprostol were anecdotal and there was limited knowledge about dosage and side effects. Stigma and legislation hindered this vital information flow, affecting abortion safety, emotional experiences, and misoprostol's potential.

Source of Funding:

None.

OUTCOMES OF DIFFERENT STEROID DOSING REGIMENS IN CRITICAL COVID-19 PNEUMONIA: A RETROSPECTIVE COHORT STUDY

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Background:

Among therapeutic options for severe and critical COVID- 19 infection, dexamethasone six milligrams once daily for ten days has demonstrated mortality benefit and is guideline recommended at this dose. In practice, variable doses of steroids have been used, especially in critical care settings. Our study aimed to determine the pattern of steroid dosing and outcomes in patients with critical COVID-19.

Methods:

A retrospective cohort study was carried out on all eligible patients admitted to the Aga Khan University Hospital, Nairobi, with critical COVID-19 between 1st March 2020 and 31st December 2021. The intervention of interest was corticosteroids quantified as the average daily dose in milligrams of dexamethasone. A steroid dose of six milligrams once a day was compared to high dose steroid dosing, which was defined as any dose greater than this. The primary outcome measure was in-hospital mortality and secondary outcomes included occurrence of dysglycaemias, superadded infections and duration of critical care admission.

Findings:

The study included 288 patients. The median age was 61.2 years (IQR: 49.7, 72.5), with 71.2% of patients being male. The most common comorbidities were diabetes mellitus (60.7%), hypertension (58%), and heart disease (12.2%). Fifty-eight percent of patients received a standard dose (6mg) of steroids. The mortality rate was higher in the high-dose group compared to the standard-dose group; however, the difference was not statistically significant (47.9% vs 43.7% p=0.549). The two most common steroid associated adverse effects were uncomplicated hyperglycemia (62.2%) and superimposed bacterial pneumonia (20.1%). The high-dose group had a higher incidence of uncomplicated hyperglycemia compared to the standard-dose group (63.6% vs 61.1%). However, the incidence of diabetic ketoacidosis was lower in the high dose group (0.6% vs 6.6%).

Interpretation:

The study found that high-dose steroids in the treatment of critically ill patients with COVID-19 pneumonia did not confer any mortality benefit and were associated with an increased risk of dysglycemia and superimposed infections.

Source of Funding:

Research grant from the Aga Khan University

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Background:

The complex history and current challenges faced in the Gaza Strip, including ongoing conflict and limited resources, has led to a significant mental health crisis. Given the scarcity of mental health care, particularly for children, and the potential benefits of community-based interventions, it was essential to investigate the Sourire program and explore its potential for addressing the mental health needs of school-aged children in this context. Which leads to the following research question, what is the parent-reported and provider-reported impact of a community-based psychosocial intervention program “Sourire” in addressing mental health needs of school-aged children in the Gaza Strip, Palestine?

Methods:

The study employed a primary qualitative research design, utilizing semi-structured individual interviews conducted with 32 parents and 11 providers of the Sourire program in the Gaza Strip and Geneva, Switzerland, which was analyzed using a framework analysis approach with an added social network analysis code. The inclusion criteria for parents in the study are being a parent of a child or adolescent who has participated in the Sourire program, residing in the Gaza Strip, and having the ability to communicate in Arabic. For providers, the inclusion criteria were being a current provider of the program and having the ability to communicate in Arabic or English. Informed verbal consent was obtained for all participants.

Findings:

Parents expressed positive attitudes toward the program by stating observations of behavioral changes in their children, such as reduced agitation and improved emotional expression. Providers in the Gaza Strip identified challenges in delivering psychosocial interventions, including location issues, lack of awareness, and institutional barriers. Opportunities for adaptability were shown by utilizing alternative plans, interactive activities, and questioning techniques to engage participants and overcome obstacles. Despite indicating the lack of lasting community connections past program completion, parents recognized the importance of community connections and support networks in promoting their family's mental health and the need for a positive environment in times of conflict, providing insight into a family system approach.

Interpretation:

The study highlights Sourire program's positive impact on children's behavior and parent/provider attitudes in the Gaza Strip. These findings hold significance for improving interventions and outcomes for children in conflict zones. Strengths of this study include its valuable insights from a challenging context and diverse perspectives. Limitations include potential recall bias, as well as data quality concerns due to electricity issues causing interview disruptions. Future steps include formalized training, distress monitoring, supervision system, and integrating psychosocial programs with therapeutic play.

Source of Funding:

None.

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 75

The impact of a nutrition program on BMI percentile in children ages 2-6 years residing in Batey Dos, Dominican Republic.

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Background:

Batey Dos is a Haitian community in the Dominican Republic (DR) impacted by many factors that affect the children's health including lack of food and potable water, lack of electricity, and inadequate housing. A community assessment in 2017 found 80% of children were eating only one meal per day. Centro de Education para la Salud Integral (CESI), a Dominican NGO, in partnership with Pascal's Pantry, an American NGO, instituted a feeding program at Batey Dos in 2017 to improve nutrition, screening, and treatment for parasites.

Methods:

A retrospective study reviewing data from 2017-2018 of Haitian children aged 2-6 years living permanently in Batey Dos that were enrolled in the feeding program. Thirty-two out of 71 children were enrolled after obtaining parental consent. Anthropometric measurements were obtained monthly. Baseline laboratory studies and stool samples were obtained. All children with positive stool samples were treated. BMI and prevalence of stunting were calculated using World Health Organization Anthro and Anthro Plus growth charts. Statistical analysis of the data was conducted using Microsoft Excel 2016 version 22.10 statistical software. Box and Whisker charts were used to express the proportion of anthropometric and parasite outcomes.

Findings:

The provision of a feeding program in this Haitian community with decreased access to food and healthcare had a positive effect on the children's nutritional status and BMI percentile over one year. Seventeen female and 16 male children between ages 2 – 6 were enrolled. At baseline, the female average BMI percentile was 34.98 % and increased in one year by 10.46 %. The male average BMI percentile was 44.81 % and increased by 8.35 %. All children were treated for gastrointestinal parasites at baseline. After one year of the program, 44% of children still had parasites. The children without parasites had a BMI percentile increase of 23.66 percent while the children with parasites had a BMI percentile decrease of 8.77 percent.

Interpretation:

Source of Funding:

<https://www.pascalspantry.org/>

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Background:

Surgeries have shown to be one of the best ways of curing health conditions worldwide but they are associated with complications that could be prevented. Surgical safety checklists introduced by the World Health Organization have been shown to improve teamwork and patient safety in the operating room. Yet, despite the benefits associated with their use, in Neno, its impact was never evaluated.

Methods:

Hospital-based retrospective chart review was conducted from June 2021 to March 2022. A total of 468 surgical cases were included in the study. Checklists were kept as part of each patient's medical record, who had undergone surgery at the two main hospital theatres in Neno District. The collected data were cleaned, coded, entered into excel, and exported to R for analysis. Binary analysis was computed, and the level of statistical significance was determined at $p < 0.05$.

Findings:

The use of a surgical safety checklist was at the median of 41%. Utilization of the surgical safety checklist was 98% in emergency procedures and only 2% used it in elective cases. Despite the usage of the checklist, the development of the complications was the same whether the checklist was used or not.

Interpretation:

The use of a surgical safety checklist in a rural area was promising, despite its use fluctuating and this would need further improvement. Further studies are highly recommended to understand the fluctuation in the use of the surgical safety checklist.

Source of Funding:

This study was supported by the Partners in Health's Impact Grant with the financial support from the Wagner Foundation.

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Background:

As the global population ages, there is a corresponding surge in the prevalence of neurodegenerative diseases, particularly Alzheimer's disease and related dementia (ADRD). While extensive research has been conducted on ADRD in developed nations, a notable gap persists in understanding its impact in low-to-middle-income countries like Uganda. Our study examines the distress and contributing factors caregivers of ADRD patients face in Uganda.

Methods:

We conducted a study in Wakiso, Uganda, among ADRD caregivers. Psychological distress, depression, and quality of life were assessed using the Kessler 10, CES-D, and C-DEMQOL. Data was analysed for sex differences. Outcomes depended on raw scores, with relationships evaluated using logistic regression, adjusted for age and sex. Statistical significance was set at $p < 0.05$.

Findings:

Of 90 participants, 82.2% were female, median age 52. Males' median age was 35. HIV was higher in males (62.5%) than in females (39.2%). UTIs in females were 59.5% vs 31.3% in males ($p=0.040$). 13.5% of females relied on relatives for income. Scales demonstrated strong consistency (0.79, 0.77, 0.87). 64.4% of the caregivers faced distress, 52.2% had poor QOL, and 87.8% showed depression. Regression indicated: younger age linked to lower C-DEMQOL scores (β -coefficient: -0.30, $p=0.016$), fewer children to lower K10 scores (β -coefficient: -4.82, $p=0.040$), and heightened depressive symptoms to higher K10 scores (β -coefficient: 0.33, $p=0.032$).

Interpretation:

ADRD caregivers in Uganda endure significant distress due to various factors. This underscores the need for tailored interventions and support in these countries. Policymakers and health care providers must prioritise caregiver well-being. Additional research is essential to address caregivers' challenges, emphasising the need for context-specific solutions to alleviate burdens and enhance life quality.

Source of Funding:

D43TW010132 Grant supported by Office of The Director, National Institutes of Health (OD), National Institute of Dental & Craniofacial Research (NIDCR), National Institute of Neurological Disorders and Stroke (NINDS), National Heart, Lung, and Blood Institute (NHLBI), Fogarty International Center (FIC), National Institute on Minority Health and Health Disparities (NIMHD)

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Background:

Sinonasal malignancy accounts for 3-5% of head and neck cancers. Squamous cell carcinoma is the most common histological type. Affect males than females (2:1) during the 5th -6th decade of life. Occupational exposures to carcinogens- wood dust, leather dust, chemical industries, agriculture, and construction works have been implicated in these tumors. It is understudied and there are limited publication in low and middle income countries. This study aimed to assess the risk factors (both occupational and non-occupational) associated with sinonasal cancer, histological types, clinical stage, and treatment modalities given at Muhimbili National Hospital (MNH) and Ocean Road Cancer Institute (ORCI) in Tanzania.

Methods:

A descriptive cross sectional study involving 134 histologically confirmed sinonasal cancer participants recruited from September 2022 to March 2023. Approval from MNH and ORCI research committee and MUHAS IRB. Convenient sampling technique, informed consent and assent for <18 years of age were obtained. Very sick and unwilling to consent were excluded. A structured questionnaire was used to collect data, and analysis was done using SPSS version 24, chi-square and fisher's exact test were used, p-value<.05 considered statistically significant.

Findings:

A mean age (\pm SD) of 51.7(\pm 15.6) years and male to female ratio of (1.1:1) of participants were recruited. Most aged above 56 years (41.8%), and majority were from rural areas (53.7%). Majority (64.9%) were involved in agricultural activities, 30(22.4%) had exposure to urea based fertilizers, 40(29.9%) to pesticides and 41(30.6%) to herbicides. Wood dust, leather dust, textiles, the chemical industry, and hairdressers accounted for 15% inclusively. Alcohol consumption accounted for the majority of non-occupational related risk factors (35.1%). Squamous cell carcinoma was the most common histological type (50%) and the majority presented at stage III (44%), and 47.8% received surgery followed by adjuvant chemotherapy, radiotherapy, or combined chemo-radiotherapy as their mode of treatment.

Interpretation:

Most participants were involved in agricultural activities and exposed to related chemical products. Other occupational exposures were less prevalent. Majority presented late, squamous cell carcinoma predominance and multimodality treatment approaches were observed. Global education programs for the community especially in low and middle income countries to raise awareness on risk factors, early signs, and symptoms is recommended, and tailoring treatment modalities based on histological types among Otorhinolaryngologists. The study established prevalence of risk factors though limited by small sample size.

Source of Funding:

Through the 'master's thesis research grant award from Muhimbili University of Health and Allied Sciences-MUHAS for non-communicable diseases.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 112

Applying the Brocher Declaration to short-term experiences in global health in dental education

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Background:

Participating in Short-Term Experiences in Global Health (STEGHs) has become an increasingly popular way for dental students to learn about the global burden of disease and health inequalities that exist around the world. Student programs typically involve travel to another country and doing supervised dental work and oral health promotion activities. However, there is little information available in dental education literature providing guidelines on better practices for STEGHs. Often little is known about the local dental practice laws and ethics guidelines. Applying the Brocher Declaration’s principles to STEGH programs in dental education can increase the likelihood these initiatives will be rooted in ethics and sustainability to benefit all parties involved as well as provide valuable opportunities for dental students to learn about oral health challenges in diverse populations. The purpose of this project was to create a comprehensive set of recommendations for STEGHs in dental education.

Methods:

A taskforce consisting of members of the American Dental Association’s Global Health Workgroup (ADEA GHW) was formed to review the existing literature and ethics principles for global health activities for dental students. The taskforce adapted the Brocher Declaration as the foundation for this work. Consensus about best practices and recommendations for STEGHs in dental education was achieved.

Findings:

The Brocher Declaration, created by the Advocacy for Global Health Partnerships (AGHP), is a comprehensive document outlining best practices for developing ethical and sustainable global health partnerships. The six guiding principles are: (1) mutual partnership with bidirectional input and learning, (2) empowered host country and community-defined needs and activities, (3) sustainable programs and capacity building, (4) compliance with applicable laws, ethical standards, and code of conduct, (5) humility, cultural sensitivity, and respect for all involved, and (6) accountability for actions. The principles of the Brocher declaration may serve as the foundation for best practices for STEGHs in dental education. We present a set of recommendations specific to each principle to guide dental schools in offering STEGHs to dental students.

Interpretation:

Source of Funding:

N/A

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 115

Expert Assessment of an Advocacy Toolkit for Comprehensive Sex Education In Nepal

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Background:

Lack of comprehensive sexual health education and services is one of the major causes for conditions such as “unwanted pregnancies, unsafe abortions, sexually transmitted infections (STIs), human immunodeficiency virus (HIV), and acquired immunodeficiency syndrome (AIDS), as well as intimate partner violence (IPV), physical abuse, accidents, and psychiatric problems” amongst adolescents. Purpose of this project is to develop an advocacy toolkit that can be utilized to develop a comprehensive strategy for the implementation of inclusive, transformative, incremental, culturally relevant, and scientifically Comprehensive Sex Education targeting the adolescents of Nepal.

Methods:

This evidence-synthesizing project used modified Delphi method to develop an advocacy toolkit After review of evidence, an online survey tool was developed. The Subject Matter Experts (SMEs) panel included stakeholders (health care professionals, parents, adolescents, policymakers, and teachers) involved in the advocacy of Comprehensive Sex Education in Nepal. Descriptive statistics were utilized to analyze quantitative Qualtrics survey data and to identify 80% or greater expert agreement per item. Coding of the qualitative data was used to optimize the advocacy toolkit between rounds.

Findings:

The majority of the subject matter experts agreed to the Comprehensive Sex Education (CSE) advocacy strategies proposed. Participants agreed that local resources can be utilized to advocate CSE. Proper training and skills are required for CSE advocates to advocates. Advocacy requires adequate resources, relevant and specific objectives, communication tools, and timely revision and evaluation of advocacy strategies.

Interpretation:

Lack of comprehensive sexual health education and services is one of the major causes for various reproductive health issues amongst adolescents. This study can help individuals learn about sex education advocacy, work to implement suitable strategies, and institute or safeguard effective sex education initiatives that promote and acknowledge adolescent’s rights to accurate information. Further, it can guide individuals to advocate at the local, national, regional, and global scales, as well as lead collective action to critique policies, alter narratives, and increase demand for high-quality Sexual Reproductive Health Services for adolescent.

Source of Funding:

Project Dissemination Grant, Srinivasan Family Award from
Center for Emerging Markets, D’Amore-McKim School of Business Northeastern University

A Quality Improvement Initiative to Improve Knowledge of a Digital Triage Platform, Smart Triage, Among Caregivers and Community Health Workers in Uganda

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Background:

Triage represents a significant shift in the care provided at health facilities in many low-resource countries, where patients are typically seen on a first-come, first-serve basis. Mothers who arrive early and see other children advancing in the line without an understanding of the benefits of triage can experience anxiety or reduced satisfaction with care. Smart Triage is a digital triage tool for pediatric patients implemented as a quality improvement initiative within the outpatient departments of 6 Ugandan hospitals and one Kenyan hospital. To enhance acceptance of Smart Triage we aimed to educate caregivers about the role of Smart Triage in improving care for critically-ill children.

Methods:

This initiative was conducted at Gulu Regional Referral Hospital (GRRH) and lower-level facilities in its immediate catchment. We consulted with Village Health Teams (VHTs) and local council chairpersons to develop a Smart Triage Caregiver Counselling Card that contained information on timely care-seeking, what to do when arriving at the health facility, and the role of Smart Triage in prioritizing care based on severity of illness. From April 25-28, 2023, with support from the District Health Team, 440 VHTs and 14 hospital staff received training on using the Counselling Card to educate caregivers. VHTs are trusted community members that serve as unpaid links to facility-based care and were trained due to their potential to reach a broad range of caregivers. To evaluate change in caregiver knowledge we conducted a telephone survey of all caregivers whose children were triaged with Smart Triage during baseline (April 17-28, 2023) and post-intervention phases (May 22-June 2, 2023).

Findings:

During the baseline and post-intervention phases, 126 and 147 caregivers responded to follow-up calls, respectively. In both phases, 68% of caregivers did not expect to be triaged. After conducting training on the Counselling Card, the proportion of caregivers who reported learning about triage from nurses in outpatient department (OPD) increased from 39% to 44%. Caregivers also reported learning about triage from other caregivers waiting in the OPD (41% of caregivers in the baseline and 44% in the post-intervention phase), but not from VHTs (0% in both phases).

Interpretation:

Alternative strategies are required to educate caregivers seeking care at hospitals about the role of triage in guiding clinical decision-making and resource use. Such strategies may improve the acceptability and sustainability of quality improvement initiatives implementing triage guidelines at Ugandan hospitals and lower-level facilities.

Source of Funding:

The Wellcome Trust

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 127

Positioning Community Oral Health Workers to Improve Oral Health Literacy, Patient Navigation, and Access to Care for Vulnerable and Minority Populations

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Background:

For children who live in lower-income households, disparities in oral health outcomes persist with a prevalence of dental cavities in permanent teeth of 24%. This is despite efforts to address the needs for this age group over the past 20 years. Community oral health workers (COHWs) can offer culturally informed care that is healing, transformative, and essential for the abovementioned population. COHWs can play a key role in the development and implementation of community partnerships that result in positive health outcomes, as they possess an intimate understanding of the needs of communities of color and can often provide the community members they serve with the most successful and cost-efficient routes to care.

Methods:

Thirteen Latina caregivers from a local Early Head Start program participated in an 8-hour, bilingual oral health training program that provided information and hands-on experiences pertaining to prenatal and children's oral health. Once trained, the 13 COHWs conducted a series of bilingual interactive oral health promotion workshops at local community sites. Pre/post-tests were conducted after each workshop with a total of 157 caregivers of young children. Bivariate analyses were used to assess changes in knowledge, attitudes, and practices of the COHWs and caregivers regarding children's oral health.

Findings:

Significant increases in knowledge were obtained regarding: when a child can brush his/her teeth well alone, the age when fluoridated toothpaste can be used, ways tooth decay can be prevented, when a child's first dental visit should be, and what a pregnant woman with morning sickness can do to protect her teeth. Significant positive improvements were found regarding caregiver's favorable attitude that fluoridated water can help prevent cavities, disagreeing that tap water is dangerous, and agreeing that a parent's dental health affects their children's dental health.

Interpretation:

Targeted, culturally competent oral health programs can improve knowledge, attitudes, and self-reported practices of COHWs and caregivers trained. Although further studies are needed to determine COHWs' potential to reduce ECC in underserved communities, preliminary results support the utilization of this model as a viable option that should be expanded.

Source of Funding:

Colgate's Alliance for a Cavity Free Future

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Background:

Cervical cancer continues to pose a major public health challenge in low-income countries. Cervical cancer screening programs enable early detection and effectively reduce the incidence of cervical cancer as well as late-stage diagnosis and mortality. However, screening uptake remains suboptimal in Uganda. This study assessed correlates of intention to screen for cervical cancer among women in the Kyotera district of central Uganda.

Methods:

We used cross-sectional data collected at baseline for a before and after study to determine the effectiveness of Community Audio Towers (CATs) as a modality of health communication to support cervical cancer prevention. Cisgender women (n = 430) aged 21-60 years without a prior history of cervical cancer screening were surveyed about demographics, sources of health information and cervical cancer screening intentions in 2020. We used generalized linear modelling with modified Poisson regression and backwards variable elimination to identify adjusted prevalence ratios and 95% confidence intervals to determine whether health information source was associated with intention to screen for cervical cancer.

Findings:

Half (50.0%) of the participants were aged 20-29 years of age and only 26.5% had moderate knowledge about cervical cancer. Nearly half (46.0%) considered themselves at risk of cervical cancer and half (50.2%) had intentions to screen for cervical cancer within the next year or sooner. Compared to residents who primarily received their health information from social media and radio, participants who received health information primarily from CATs and TV had lower prevalence of intention to screen for cervical cancer. Participants who resided in rural areas and those who did not perceive themselves at risk of cervical cancer had lower prevalence of intentions to be screened in the next year.

Interpretation:

Given moderate rates of self-perceived risk and intentions to screen for cervical cancer, screening rates are likely to remain suboptimal without intervention. Targeting health information sharing via CATs and TV is likely to reach those with lower screening intentions.

Source of Funding:

None

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Background:

Haiti is the poorest country in the Western hemisphere and has a burgeoning cardiovascular disease (CVD) epidemic. Modeling studies suggest ischemic heart disease is the predominant CVD in low-income countries, but local epidemiologic data is lacking. Using data from the Haiti CVD Cohort Study, we calculated the prevalence of metabolic syndrome (MetS), which confers to an increased risk for metabolic diseases, and compared it to simplified definitions that do not require laboratory values.

Methods:

MetS, measured using enrollment data among participants ≥ 18 years in the Haiti CVD Cohort Study, was defined as having ≥ 3 of the following: elevated waist circumference (WC) (Men: ≥ 94 cm, Female: ≥ 80 cm), hypertension (HTN) (SBP ≥ 130 mmHg or DBP ≥ 85 mmHg or on HTN treatment), reduced HDL-C (Men: < 40 mg/dL, Female: < 50 mg/dL or on treatment for cholesterol), elevated triglycerides (> 150 mg/dL), and elevated glucose (> 100 mg/dL or on treatment for diabetes). We then estimated the prevalence of MetS using three simplified definitions that build upon each other. MetS-1 defines MetS as having high WC and HTN. MetS-2 defines MetS as having ≥ 3 of: MetS-1 criteria, personal history of CVD and family history of CVD. MetS-3 defines MetS as having ≥ 4 of: MetS-2 criteria, self-reported high consumption of fats and oils and smoking or high alcohol use. We compared each of the simplified definitions with the gold standard MetS prevalence to estimate sensitivity and specificity. We conducted Poisson regression to calculate unadjusted and adjusted prevalence ratios.

Findings:

Among 2,793 participants, the prevalence of MetS was 22.0%, and higher in women (30.0% vs 11.1%). Mean age of those with MetS was 52.4 years (SD 12.4). Prevalence estimated using MetS-1 was 22.0%, MetS-2 22.2% and MetS-3 21.7%. Prevalence of males with MetS was highest using MetS-3 versus MetS-1 (28.5 vs 14.6). After adjusting for other variables, we found that sex and older age are associated with MetS. Referencing to the MetS definition, MetS-1 had the highest sensitivity (71.5%, 95% CI = 67.8%, 75.1%), followed by MetS-2 (63.3%, 95% CI= 59.3%, 67.1%) and MetS-3 (59.0%, 95% CI= 55.0%, 62.9%). MetS-1 had the highest specificity (92.0%, 95% CI= 90.7, 93.1), with others $\leq 89\%$.

Interpretation:

The prevalence of MetS in Haiti is high, comparable to that of the United States (23.7%). We found that MetS-1, the most simplified model, may effectively screen for metabolic syndrome in low-income countries where clinical resources may be scarce.

Source of Funding:

Funding comes from the NHLBI (grant numbers R01HL143788 and D43TW011972).

Abstract N°: 140

Prevalence of violence victimization and poly-victimization among female sex workers in Haiphong, Vietnam: A cross-sectional study

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Background:

Female sex workers (FSWs) are affected disproportionately by violence perpetrated by multiple types of perpetrators. This cross-sectional study is the first to describe the prevalence of violence victimization and poly-victimization among FSWs in Haiphong, Vietnam.

Methods:

A time-location sampling recruitment methodology was used to enroll 310 FSWs in Haiphong, Vietnam. An adapted version of the WHO-Multi-Country Study on Violence against Women Survey Instrument was administered to assess physical, sexual, economic and emotional forms of violence perpetrated by an intimate partner, paying partner/client, and/or others (e.g., relatives, police, strangers and other FSWs) during adulthood. The ACE-Q scale was administered to assess adverse childhood experiences (ACEs) before age 18 years. Univariate descriptive statistics and violence prevalences were calculated. Spearman's correlation was used to develop a covariance matrix of continuous measures for IPV, client violence, other violence, and ACEs. Patterns of poly-victimization were depicted using a Venn diagram.

Findings:

The median age of FSWs in the sample was 33.1 years (IQR 22-42), 45.4% were immigrants from other provinces in Vietnam, and most (64.2%) had less than a high school education. For any violence by clients, lifetime prevalence was 70.0%, with a 12-month prevalence 61.3%. Lifetime prevalence of intimate partner violence (IPV) was 62.1%, and 12-month prevalence was 58.2%. Lifetime and prior 12-month prevalence of physical and/or sexual violence by other perpetrators (OPV) was 14.2% and 18.1%, respectively. Sixty-five percent of FSWs reported at least one type of ACE. Overall, 22.0% of FSWs reported having experienced all three forms of violence (IPV, client violence and OPV) and at least one ACE in their lifetime. Correlations (r) between violence by a client, IPV, OPV, and ACEs scores ranged from 0.31 to 0.39 ($p < 0.001$).

Interpretation:

In Haiphong, FSWs are exposed to high rates of multiple forms of violence by multiple perpetrators. The high burden of violence on FSWs urgently requires interventions to reduce exposure and its cascading heightened risks of other adverse health outcomes.

Source of Funding:

D43-training grant from the Fogarty International Center to Emory University.

Abstract N°: 156

Decolonizing Global Health by Shifting Approaches and Agendas: Sustainably Empowering Healthier Local People

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Background:

Minimal benefit and inadvertent harm commonly result from the health services of professionals from wealthy nations who briefly visit resource-limited ones. Yet there are six less common approaches to doing global health work—the most effective of which use sustainable, evidence-based methodology to empower communities and improve health status. Comparing approaches and following only empowering ones encourages local people to access more control over their health and health care. This critical activity decolonizes global health, which has historically been a field of top-down interventions from wealthy nations.

Methods:

The goal of decolonizing global health should be central to the activities of both local people and outsider participants. Outcome 1 was the identification of seven major approaches to global health work through literature review, supplemented by broad experience in a variety of global health initiatives. Outcome 2 was the evaluation of approaches over four desired variables: sustainability, community empowerment, following an evidence base, and effectiveness at improving health status. Outcome 3 was the identification of common agendas driving each approach.

Findings:

Identified were two *traditional approaches*: short-term medical service and health facility-building, and five *empowering approaches*: clinical capacity-building, health systems strengthening, professional disaster relief, public health capacity-building, and community-based health programs. The two traditional approaches perform negatively across all four of these desired variables. The five empowering approaches have opposite claims, except that disaster relief does not aim to be sustainable. Traditional approaches mainly serve outsiders and reinforce colonial dynamics, being driven by *negative agendas*: government/military, corporate, donor-driven, tourism, outsider-only education, and charity service and construction. Empowering approaches prioritize local agency, equity, and decolonization, being driven by *positive agendas*: community health service improvement, education, and empowerment.

Interpretation:

The goal of decolonization remains unmet by myriad global health programs. The many *individual* outsiders in search of global health work can use this conceptual framework to identify organizations following empowering approaches and positive agendas. This framework can also be used by both outsider *organizations* and those of local people to evaluate the utility of their approaches and agendas, with the aim of pivoting to ones which have more potential to sustainably improve community health status.

Additionally, this framework can support fruitful global health partnerships. This is more likely to occur when local and outsider groups decide on approaches and agendas that closely match. Even so, partnerships must be locally-led in order to justly shift power from outsiders to communities in resource-limited nations: decolonization.

Source of Funding:

None

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Program/Project Abstract

Abstract N°: 161

Equipping health workers with GPS to locate and address the hotspots of malnutrition and soil-transmitted helminths in rural and hard-to-reach areas in Rwanda

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Background:

Malnutrition and intestinal parasites are major public health problems in Rwanda, especially among children. Geospatial data can help identify the areas with the highest burden of these conditions and inform targeted interventions. This study aimed to train healthcare workers on the use of Global Positioning System (GPS) mapping to locate and address the hotspots of malnutrition and intestinal parasites in Musanze district, a rural area in northern Rwanda. In collaboration with academic and public health centers, we developed and implemented a bundle of interventions in communities with hotspots of malnutrition and soil transmitted helminths.

Methods:

We conducted a cross-sectional survey of 1,200 children aged 6-59 months from 30 villages. We collected data on anthropometric measurements, hemoglobin levels, and stool samples for parasitological examination. We also collected GPS coordinates of each household and village. We used spatial analysis techniques to identify clusters of malnutrition and intestinal parasitism, and to explore the association between these outcomes and environmental and socioeconomic factors. We then implemented a community-based intervention that included mass deworming, nutritional supplementation, health education, and water, sanitation, and hygiene (WASH) improvement. We repeated the survey after six months to evaluate the impact of the intervention.

Findings:

The baseline survey revealed that 38.7% of children were stunted, 15.3% were underweight, 9.2% were wasted, and 28.4% were anemic. The prevalence of intestinal parasites was 51.8%, with *Entamoeba histolytica* (22.4%) being the most common species. We identified significant spatial heterogeneity and clustering of malnutrition and intestinal parasitism at both household and village levels. We found that malnutrition and intestinal parasitism were associated with low elevation, high population density, poor WASH conditions, and low maternal education. Over 90% of trained health workers were confident in using, generating, and analyzing GPS data. The intervention reduced the prevalence of stunting by 12.4%, underweight by 8.7%, wasting by 5.6%, anemia by 14.2%, and intestinal parasitism by 36.5%. The intervention also reduced the spatial variation and clustering of these outcomes.

Interpretation:

GPS mapping is a useful tool to locate and address the hotspots of malnutrition and intestinal parasites in rural Rwanda. Training health workers and equipping them with GPS capability enable an evidence-based and comprehensive community-based interventions to reduce the burden of these conditions and improve the health and well-being of children.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 163

Advancing Veterinary Medical Education in Ethiopia – A ‘Focus Forward’ Methodology for the Identification and Prioritization of Innovative Solutions to Implement the 2020 National Curriculum

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Background:

A partnership between the University of Gondar College of Veterinary Medicine and Animal Science (UoG-CVMAS) and The Ohio State University (OSU) College of Veterinary Medicine formed through a World Organisation for Animal Health (WOAH)-sponsored Twinning Program in 2015. The activities of this Twinning Program culminated in the development and implementation of a UoG-CVMAS curriculum aligned with the *WOAH Recommendations on the Competencies of Graduating Veterinarians (‘Day 1 graduates’) to Assure National Veterinary Services of Quality* and the *Veterinary Education Core Curriculum*. This curriculum became the model for implementing the new 2020 National Veterinary Curriculum across Ethiopia; however, many colleges have faced significant technical and educational challenges to fully implement the new curriculum at their home institutions.

Methods:

To identify challenges in implementing the new 2020 National Veterinary Curriculum, faculty, and administrators from Ethiopian veterinary medical colleges were invited to participate in a mixed methods needs assessment, comprised of an online survey followed by institutional focus group discussions to clarify and expand on the collected information. The needs assessment results will be shared with participants and other stakeholders, including representatives from the Ministry of Education, Ministry of Agriculture, and the private sector during an in-person action planning workshop in February 2024. The workshop will be conducted using the Focus Forward methodology developed by the OSU team. This methodology uses a two-step collaborative process to socialize the results of the needs assessment while generating and prioritizing innovative solutions based on the needs and realities of the institutions involved.

Findings:

Expected outcomes of the Focus Forward workshop include a summary of prioritized challenges and solutions as determined by multisectoral stakeholders. A report highlighting the workshop's outcomes, including recommendations for the next steps, will be generated to further support the national strategy for harmonizing veterinary medical training.

Interpretation:

Incorporation of the WOA Day 1 Competencies by all veterinary medicine colleges across Ethiopia will help strengthen the country's Veterinary Services and, in turn, animal, human, and environmental health. This methodology is adaptable to other One Health issues and scalable for use at subnational as well as regional levels.

Source of Funding:

Sub-award through Iowa State University via WOA and BMGF.

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Background:

With about 17% of the global population, Africa bears 25% of the global burden of disease, yet it contributes less than 2% of the world's health research output. This has been attributed to lack of research infrastructure, limited funding, lack of adequate training. We sought to explore the factors that influence the practice of clinical research among physicians in Cameroon.

Methods:

We conducted an electronic survey targeting Cameroonian physicians practicing within and outside Cameroon. The survey included closed-ended, open-ended, and Likert scale questions. It was available in both French and English, the official languages in Cameroon. To assess factors associated with research participation, we computed crude odds ratios using the Mantel-Haenszel test and determined adjusted odds ratios through logistic regression analysis.

Findings:

A total of 222 physicians responded to the survey. The average age of participants was 33.7 years and 35.7% were female. The majority (72%) practiced in Cameroon, 52% were general practitioners. Additionally, 20% held master's degrees, and 4.1% possessed PhDs. While 92% of participants expressed interest in research, 56.1% lacked peer-reviewed publications. Factors hindering research involvement included limited funding (89.8%), inadequate training (76.6%), institutional support gaps (72.3%), and insufficient research infrastructure (67.6%). Being a specialist (OR = 3.19; 95% confidence interval (CI): 1.03 - 9.89, p = 0.04), additional post graduate training (OR = 18.47, 95% CI: 2.00 - 170.20, p = 0.01), knowledge of Good Clinical Practice standards (OR = 1.82, 95% CI: 1.09 - 3.05, p = 0.02), and completion of a research protocol (OR = 7.44, 95% CI: 2.64, 21.01, p < 0.001) were independently associated with current research participation.

Interpretation:

This study highlights the multifaceted challenges faced by physicians in Cameroon regarding research engagement. Despite a high level of interest in research, substantial barriers hinder their active participation. Increasing funding opportunities, enhancing training programs, and strengthening research infrastructure is crucial in narrowing the gap in Africa's contribution to global health research and ultimately benefitting healthcare advancement in the region.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 198

Age Difference in Healthcare Costs and Palliative Care Utilization Among Patients with a Solid Metastatic Cancer

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Background:

Cancer is the leading cause of death in Singapore. Additionally, Singapore has a large, and still growing, aging population. However, the impact of age on end-of-life healthcare utilization for Asian cancer patients has not been fully investigated.

Methods:

The cohort study recruited 600 advanced cancer patients from two different tertiary outpatient cancer clinics in Singapore. A retrospective study was conducted using patient survey data and patient billing records among 600 Singaporean cancer decedents from 2016–2021 over multiple survey waves. Each wave was conducted at an interval of 3 months each. Age was categorized as <50, 50-70, and 70+ for the purpose of this study. Cost in each spending category and the number of visits in each spending category were summed per patient. Then, they were averaged over the number of waves for which each patient had data. Two different models, a generalized linear model (GLM) and a two-part model (TPM), were utilized to determine if there was a significant difference in healthcare costs and palliative care utilization between age groups when controlling for various factors such as cancer type, gender, ethnicity, education, financial burden, and symptom burden. GLM was used for all analyzing average costs and TPM was used for analyzing average visits.

Findings:

After controlling for cancer type, gender, ethnicity, education, financial burden, and symptom burden, the oldest age group had significantly higher costs when compared to the youngest age group in average total costs ($\beta = 0.000$, CI: -1.0946, -0.3586), average total inpatient costs ($\beta = 0.000$, CI: -1.8482, -0.9152), average total unplanned costs ($\beta = 0.002$, CI: -1.7907, -0.4025), and average total planned costs ($\beta = 0.001$, CI: -1.1111, -0.26298). Additionally, the middle age group had significantly higher average inpatient costs when compared to the youngest age group ($\beta = 0.002$, CI: -1.0676, -0.2711). In palliative care usage, the oldest age group had significantly higher number of visits when compared with the youngest age group as well ($\beta = 0.054$, CI: [-0.0188, 2.0573]).

Interpretation:

The study findings suggest that treating oncologists should be acutely aware of the patient's age in order to better provide the kind of end-of-life care which would best suit the patient. Despite controlling for various demographic and patient characteristics, these findings still hold true and age differences in utilization has implications for adequate end-of-life care in cancer patients.

Source of Funding:

None

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Background:

Pregnancy-related complications remain a global challenge, with low-and middle-income countries bearing the highest burden. Predicting the absolute risk of adverse birth outcomes will facilitate the delivery of early preventative and therapeutic interventions. We developed a validated risk prediction model for low birth weight that meets the criteria for clinical use in Ethiopia.

Methods:

We conducted a prognostic study using a prospective maternal and child health cohort in the Birhan Health and Demographic Surveillance System (BHDSS) site, Amhara region, Ethiopia. All pregnant women who enrolled in the maternal and child health cohorts in the BHDSS during 2018 - 2021 included a total of 2,076 live births. We analyzed data from 2,076 live births. After fitting a bivariable logistic regression, predictors with p-value ≤ 0.25 were added to a multivariable logistic regression model to select variables for the final model. A classification and regression tree (CART) was also used to select predictors. The model was presented with a nomogram, suited to clinical use. Measures of predictive model accuracy, discrimination and calibration, were calculated. Bootstrapping was used for internal validation. Clinical utility of the model was assessed using the decision curve analysis (DCA).

Findings:

The incidence of LBW was 9.44% (95% CI: 8.2%, 10.8%). We identified seven predictors: previous maternal complication, previous fetal complication, pregnancy induced hypertension, average maternal body weight, average diastolic blood pressure, preterm delivery, and gravidity. The prediction model had an area under the curve (AUC) of 0.67 (95%CI: 0.63, 0.72) and calibration of p-value = 0.844 in the development data. After internal validation, the corrected discrimination AUC value was 0.639 (95%CI: 0.59, 0.68) and calibration of p-value = 1.00. The DCA showed that the net benefit of utilization of both models was better. The CART identified four predictors: preterm, gravidity, average maternal body weight, and previous fetal complication with the discriminative ability of 0.601 (95%CI: 0.566, 0.635).

Interpretation:

We developed a new and simple predictive model to identify pregnancies leading to LBW babies that could aid in early decision-making for prevention.

Source of Funding:

This study was financially supported by Bill & Melinda Gates Foundation (Ref.no.OPP1201842).

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Background:

Despite progress in reducing maternal and child mortality globally, adverse birth outcomes have been observed to be disproportionately high in low- and middle-income countries (LMICs). Developing and validating a prediction model for adverse birth outcomes allows for early risk detection and prevention strategies. This systematic review aimed to assess the performance of existing prediction models for adverse birth outcomes and provide a comprehensive summary report of their findings.

Methods:

We used the Population, Index prediction model, Comparator, Outcome, Timing, and Setting (PICOTS) approach to retrieve studies PubMed/MEDLINE, Scopus, CINAHL, Web of Science, AJOL, EMBASE, and the Cochrane library. We searched for grey literature using WorldCat, Google, and/or Google Scholar. Data were extracted using the CHecklist for critical Appraisal and data extraction for systematic Reviews of prediction Modelling Studies (CHARMS), and analyzed for risk using the Prediction model Risk of Bias Assessment Tool (PROBAST). We descriptively reported results in tables and graphs.

Findings:

We included 115 prediction models: composite adverse birth outcomes (6), low birth weight (17), small for gestational age (23), preterm birth (71), and stillbirth (9). Maternal clinical and medical characteristics were the most widely used prognostic factors for preterm and low birth weight prediction, while uterine artery pulsatility index was used for stillbirth and small for gestational age prediction. The discrimination performance of preterm birth prediction ranged from an area under the curve of 0.51 to 0.83. Only 6% of the models reported model calibration.

Interpretation:

Current adverse birth outcome prediction models have poor to excellent discrimination performance, but most did not report calibration performance. Inconsistent prognostic factors were included for each adverse birth outcome prediction. Prediction models with consistent prognostic factors and warranted external validation should be accessible to practitioners.

Source of Funding:

This review is financially supported by Bill & Melinda Gates Foundation (Ref.no.OPP1201842),

Developing Impact-based Heat Thresholds for Caribbean Countries: A Pilot Study

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Background:

In this project, we explore the development of a health impact-based heat threshold for general early warning in the Caribbean country of Grenada. The findings of this project will then be used as a blueprint for developing a methodology for evidence-based heat warning systems in Caribbean countries. This pilot is supported by the World Health Organization/Pan American Health Organization (WHO/PAHO) heat health work in the region of the Americas. The work builds on initiatives in other WHO regions, specifically the European region, and the joint guidance document produced by the World Meteorological Organization (WMO) and WHO.

Methods:

A two-fold approach, including morbidity and mortality proxies, was utilized in the pilot study in Grenada. A distributed lag non-linear model (DLNM) model was used to determine the effects of seven meteorological thermal comfort indices on daily emergency room visits, hospital admissions, and deaths.

Findings:

Changes in the unit value of temperature and heat index were found to have the most significant effects on health during the period 2014-2019. The relative risk of mortality increased to 120-700%, in the immediate period, with heat index at 35 – 45°C. Hospital admission risk increased to 100 – 200% with heat index from 39 – 45°C after six lag days. After six lag days, relative risk of emergency room visit increased to 100% when heat index was 45°C. Relative risk of mortality increased to 190%, in the immediate period, when maximum temperature was 33°C. A 3-tiered warning system within the ranges of temperature and heat index values is recommended for Grenada.

Interpretation:

This study explores the development of a practical scientific methodology for developing impact-based heat thresholds in Caribbean countries. Threshold-based heat early warning systems are considered an important public health measure. However, in many tropical climates where temperature seasonality and day-to-day variability are muted, it can be challenging to identify appropriate thresholds for heat early warning. This study provides an opportunity to explore potential thresholds to effectively reduce heat-related mortality and morbidity in Caribbean countries.

Source of Funding:

None

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Background:

Adverse birth outcomes (ABOs), such as low birth weight, preterm birth, stillbirth, congenital birth defects, neonatal mortality, and macrosomia are associated with pregnancy. These ABOs have negative effect on maternal and child health. Understanding the determinants contributing to these outcomes are crucial for designing and implementing interventions aimed at improving well-being of mothers and neonates. This study aimed to investigate the determinants of adverse birth outcomes among pregnant women attending the Kintampo Municipal Hospital in Ghana.

Methods:

A hospital-based, unmatched prospective case-control study was conducted between August 2022 to April 2023 to enrolled 408 (137 cases and 271 controls) pregnant women attending antenatal clinic at the Kintampo Municipal Hospital into the study. For every case that was enrolled, two consecutive unmatched controls were also enrolled. Structured questionnaire was used to elicit information on socio-demographic characteristics, obstetric related factors, history of maternal risky behavior, service provided at antenatal care clinic to mitigate the risks of ABOs, and birth outcomes. Data was analyzed using STATA version 15. Multiple logistic regression analysis was fitted to identify the determinants of adverse birth outcomes. Statistical significance was set at $p < 0.05$.

Findings:

The mean age of cases and controls were respectively 27.9 ± 6.4 and 27.9 ± 6.3 years. Pregnant women who were given ITNs had 2 folds increased odds of ABO compared with those who did not receive ITNs (aOR = 2.03, 95%CI: 1.20, 3.45). Women who had at least 8 antenatal care (ANC) visits were 68% less likely to deliver babies with ABO compared to those who had less than 4 ANC visits (aOR = 0.32, 95%CI: 0.15, 0.69). Women whose partners had basic education were 47% less likely to have an ABO compared with women whose partners had no formal education (aOR = 0.53, 95%CI: 0.29, 0.96).

Interpretation:

Aside the known determinants of ABOs, this study found that receiving ITNs increased the odds of ABOs among women. Further research is needed to unravel how receiving ITNs increased the odds of ABO. To intensify education on the need for pregnant women to attend ANC as soon as they miss their periods.

Source of Funding:

Kintampo Municipal Hospital

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Program/Project Abstract

Abstract N°: 214

Addressing the Critical Need for a Reliable, Cost Effective EMR System for Global Health Outreach Programs: A Novel Approach by Mission Plasticos

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Background:

Global health outreach programs face challenges when providing care in resource-limited settings including lack of stable internet, budget constraints, and the need to care for a large volume of patients in a short period of time. In facing these challenges, outreach programs, including medical and surgical missions, require a form of record-keeping to ensure appropriate care documentation that can be stored and accessed by local and visiting teams for follow-up purposes and care optimization. Of the electronic medical records (EMRs) available for use in global health, many are cost-prohibitive for smaller organizations and are built for specific types of outreach and therefore lack organization-specific customizability. To address this need, in August 2022 Mission Plasticos, a 501c3 non-profit organization that provides reconstructive surgical care to medically underserved communities, developed a new EMR tool for their global health missions that is free, accessible without internet, user-friendly, customizable for other organizations, and can be updated and improved as needed. Mission Plasticos aims to share this novel, open-source EMR so that other organizations may benefit from adopting its use.

Methods:

By combining readily available technology and extensive experience, Mission Plasticos developed and implemented a cost-effective Google-Sheets-based EMR tool for managing patient data during and after medical missions. The tool was piloted during a Mission Plasticos mission trip to Argentina in September 2022 and qualitative feedback collected from users was used to further improve the EMR.

Findings:

The use of this tool on the Argentina mission yielded notable advantages, including enhanced communication accessibility, improved reliability in record-keeping, and heightened continuity of patient care. Specifically, it facilitated the establishment of a shared database with the host facility and healthcare providers, and the collected EMR data holds promise for future research endeavors and ongoing analysis of the EMR's pros and cons. However, during the mission in Argentina, certain limitations of the EMR system became apparent, including redundant data fields and challenges in uploading photographs. These issues have since been successfully addressed in the latest version of the EMR.

Interpretation:

Medical missions have been criticized for their short-term impact; however, the use of an EMR that is shared with local providers can increase continuity of care. This EMR has the potential to increase the standard of care for patients served by global health outreach programs.

Source of Funding:

None

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Background:

Perhaps best-known for its famed eagle hunting festival, Bayan-Ölgii province is nestled amongst the Altai mountains in the far west of Mongolia and is home to over 110,000 Kazakh minority persons. As Mongolia's only Muslim and Kazakh-majority province, Bayan-Ölgii presents unique strengths and challenges in the area of women's health. Importantly, despite technical improvements in maternal healthcare and a nationwide decrease in maternal mortality, it is of great concern that the maternal mortality rate in Bayan-Ölgii has not decreased over recent years. Moreover, there is a lack of research that addresses potential causes and solutions to these apparent issues of Kazakh women's health. Thus, our study aims to explore the state of maternal health in Bayan-Ölgii, including its strengths, weaknesses, and future considerations.

Methods:

The following is a descriptive case study which took place at the Obstetrics Department of the General Hospital in Bayan-Ölgii. The study involved clinical observations, outcome data from the local hospital and public health databases, and focus groups and interviews with 15 practitioners and 12 pregnant women. Inclusion criteria included any obstetrician or pregnant woman at the General Hospital who volunteered to participate. All interviews were anonymous and no identifying information was asked or recorded. The study was reviewed by the Institutional Review Board at Children's Hospital Los Angeles and determined to be exempt.

Findings:

Based on observations and interviews, the maternity department at Bayan-Ölgii has grown into a well-equipped facility with strengths such as engaging in prenatal care contracts and admitting women with high-risk pregnancies. While our study revealed areas of need at the practitioner and hospital levels, such as the desire for continued medical education and technological maintenance, we found that many weaknesses and thus potential interventions seem to lie at the community level in order to improve women's health before and up to the time that they become pregnant. Some primary needs include improving women's nutritional intake, decreasing the prevalence of maternal comorbidities, increasing access to health education and prevention, and bringing awareness to the impact of cultural gender roles on maternal health.

Interpretation:

Study limitations include a small sample size and potential researcher bias during observations and interviews. Strengths involve the depth and detail used to explore a complex, multifactorial topic. By elucidating specific areas of weakness, we hope future efforts of intervention can be focused to the unique needs of the community.

Source of Funding:

Saban Summer Research Fellowship, Pasadena Guild Chair

Out-of-pocket payment for maternal healthcare and its catastrophic effects in the era of free maternal and child health policy in Ghana

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Background:

The economic burden of seeking healthcare can have detrimental effects on households. Ghana introduced a free maternal and child healthcare policy with the goal of removing financial barriers to accessing maternal and child healthcare. Despite this policy, significant out-of-pocket (OOP) payments for maternal healthcare services have been reported. This study examines OOP payments for maternal healthcare and its catastrophic effects as well as the determinants of incurring catastrophic OOP payments for maternal healthcare services in Ghana.

Methods:

Health facility exit interviews were conducted with 414 mothers in two regions of Ghana (Asante and Upper West regions). The prevalence of OOP payments for antenatal, delivery and post-natal related services were calculated. Catastrophic OOP healthcare payments were computed for total household expenditure and household non-food expenditure at 5%, 10%, 20% and 25% thresholds. The determinants of incurring catastrophic payments at different threshold of household expenditure were determined using logistic regression.

Findings:

The study found a high prevalence of OOP payments for maternal healthcare services. The mean OOP payments for all three categories of services was \$128.44. The total OOP for antenatal, delivery and post-natal was \$51.64, \$70.25 and \$7.53 respectively. Non-medical supplies made up about 58% of total OOP payments for maternal health services. The three highest OOP items were supplies 32%, consultation/treatment 20% and laboratory 18%. As high as 73% and 90% spent in excess of 5% of total household expenditure and household non-food expenditure on maternal healthcare. Correlates of incurring catastrophic healthcare payments at 5% threshold of household expenditure were facility location ($p < 0.001$, OR=0.15 CI:0.74-0.29), place of residence (p -value= 0.026 OR=0.48, CI:0.25-0.92), and household size (p -value=0.035, OR=0.49, CI:0.26-0.95)

Interpretation:

OOP payments for maternal healthcare is very prevalent resulting in high levels of financial catastrophe despite Ghana's free maternal health policy. This has a high potential to push households into poverty and to reduce access to maternal healthcare. There is need for reforms in the current policy and its implementation.

Source of Funding:

ARC Life Course Centre (CE200100025) & African Studies Centre, University of Michigan.

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Background:

Cardiovascular disease (CVD) risk factors are increasing in many sub-Saharan African countries and disproportionately affecting communities in urban slums. Despite this, the contextual factors that influence CVD risk among slum communities have not been fully documented to guide interventions to prevent and control the disease. This study explored the drivers of CVD risk factors in slums in Kampala, Uganda.

Methods:

This qualitative study employed focus group discussions (FGDs) to collect data among slum residents. A total of 10 FGDs separate for gender and age group were held in community public places. Discussions were audio-recorded, transcribed, and transcripts analysed thematically with the aid of Atlas ti 7.0. Study themes and sub-themes are presented supported by participant quotations.

Findings:

Five themes highlighted the drivers of CVD risk factors in slum communities. (1) Poverty: a critical underlying factor that impacted access and choice of food, work, and housing. (2) Poverty-induced stress: a key intermediate factor that led to precarious living with smoking and alcohol use as coping measures. (3) The social environment which included socialisation through drinking and smoking, and family and peers modelling behaviours. (4) The physical environment such as the high availability of affordable alcohol and access to amenities for physical activity and healthy foods. (5) Knowledge and information about CVD risk factors which included understanding of a healthy diet and the dangers of smoking and alcohol consumption.

Interpretation:

To address CVD risk in slums, broad-ranging multisectoral interventions are required, including economic empowerment of the slum population, stress reduction and coping interventions, and alcohol legislation. Also, there is a need for community CVD sensitisation and screening as well as increasing access to physical activity amenities and healthy foods within slums.

Source of Funding:

Makerere University School of Public Health under the Small Grants Programme

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Background:

In 2020 and 2021, Governments across the globe instituted school closures to reduce social interaction and interrupt COVID-19 transmission. We examined the consequences of school closures due to COVID-19 across four sub-Saharan African countries; the Democratic Republic of Congo (DRC), Nigeria, Senegal, and Uganda.

Methods:

We conducted a qualitative study among key informants including policymakers, school heads, students, parents, civil society representatives, and local leaders. The assessment of the consequences of school closures was informed by the Diffusion of Innovations theory which informed the interview guide and analysis. Interview transcripts were thematically analysed.

Findings:

Across the four countries, schools were totally closed for 120 weeks and partially closed for 48 weeks. School closures led to: i) Desirable and anticipated consequences: enhanced adoption of online platforms and mass media for learning and increased involvement of parents in their children's education. ii) Desirable and unanticipated consequences: improvement in information, communication, and technology (ICT) infrastructure in schools, development and improvement of computer skills, and created an opportunity to take leave from hectic schedules. iii) Undesirable anticipated consequences: inadequate education continuity among students, an adjustment in academic schedules and programmes, and disrupted student progress and grades. iv) Undesirable unanticipated: increase in sexual violence including engaging in transactional sex, a rise in teenage pregnancy, and school dropouts, demotivation of teachers due to reduced incomes, and reduced school revenues. v) Neutral consequences: engagement in revenue-generating activities, increased access to phones and computers among learners, and promoted less structured learning.

Interpretation:

The consequences of school closures for COVID-19 control were largely negative with the potential for both short-term and far-reaching longer-term consequences. In future pandemics, careful consideration of the type and duration of education closure measures and examination of their potential consequences in the short and long term is important before deploying them.

Source of Funding:

Bill & Melinda Gates Foundation Opportunity ID: INV-019313

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Background:

Healthy lifestyle practices including physical activity, healthy diets, non-smoking, reduced alcohol consumption and stress reduction are important in the prevention of metabolic CVD risk factors such as hypertension, overweight and obesity, diabetes and hyperlipidaemia. Owing to current lifestyle changes, the increasing burden of CVD and importance of healthy behaviours, the need for strategies to increase uptake of healthy lifestyles among sub-Saharan African populations are apparent. This study explored the factors influencing uptake of healthy lifestyle practices among adults following implementation of a community CVD prevention programme.

Methods:

This was a descriptive qualitative study conducted among purposively selected adults who had engaged in a community CVD prevention programme. Data were collected using in-depth interviews, which were audio recorded and transcribed verbatim. Study transcripts were read into NVIVO 12.6 software for coding and analysis guided by thematic analysis following the semantic approach.

Findings:

This study found variations in uptake of healthy lifestyle practices for CVD prevention with most changes reported for dietary behaviour especially in vegetable and fruit intake, reduction of salt intake and fats and oils consumption. Changes in physical activity were also notable. On the other hand, participants were slow in making changes in alcohol consumption, smoking behaviours and stress reduction. The barriers to uptake of healthy lifestyle practices were individual such as limited capability or skills, structural such as limited physical activity facilities, and social such as cultural and peer influence. Relatedly, the facilitators of practices uptake were individual including knowledge and personal determination to change, and social including social support from family and the community.

Interpretation:

Conclusions: Insights from understanding the uptake of lifestyle practices should guide planning and design of community programmes with an emphasis on removing barriers and strengthening facilitators building on the intermediate motivating factors and considering individual needs and expectations.

Source of Funding:

European Commission through the Horizon 2020 research and innovation action grant agreement No 733356

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Background:

The disease burden of breast cancer is increasing in low- and middle-income countries (LMICs), including Nigeria. Delay in diagnosis is a significant barrier to improving breast cancer outcomes in LMICs. Breast cancer management guidelines are available for low-resource settings, however data on breast cancer care from these settings remains scarce. This study aimed to summarize demographic characteristics, clinical features, and management of breast cancer in Lagos, Nigeria.

Methods:

We completed a retrospective review of patients presenting to the Nigerian Sovereign Investment Authority-Lagos University Teaching Hospital Cancer Center in Lagos, Nigeria. Medical chart data was extracted from patients with either a confirmed histopathological diagnosis of invasive breast cancer or a suspected diagnosis of breast cancer in 2021. Variables were summarized with descriptive statistics.

Findings:

A total of 336 patients were included. The age of patients ranged from 22 to 93 years (mean 49.2, median 48.0). Nearly all patients were women (98.8%). Histopathological confirmation of breast cancer was completed in 315 (93.8%). Clinical signs of metastatic breast cancer at presentation were observed in 174 (51.8%), and 283 (84.2%) underwent imaging studies for metastasis. Lymph node evaluation for staging was completed in 134 (39.9%). Surgery was the most prevalent treatment, received by 239 (71.1%), followed by chemotherapy (n = 257, 76.5%) and radiation therapy (n = 227, 67.6%). Hormone receptor and HER2 receptor immunohistochemistry was performed in 247 (73.5%) and 251 patients (74.7%) respectively. The most common receptor subtype was triple negative breast cancer (n = 135, 40.2%). Out of the 99 patients (29.5%) who had estrogen receptor and/or progesterone receptor positive breast cancer, 57 (58%) received hormone therapy. Out of the 39 patients (11.6%) who had HER2 receptor positive breast cancer, 1 (0.3%) received HER2 targeted therapy.

Interpretation:

Patient data provides insight into breast cancer management in Nigeria. Immunohistochemistry was performed often to characterize breast cancer receptor types. Approximately half of patients presented with evidence of late stage disease. Interventions to improve prompt breast cancer detection may help reduce the burden of late stage breast cancer in LMICs.

Source of Funding:

None.

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 239

The Mental and Psychosocial Effects of Forced Migration on Women: Qualitative Study in Málaga, Spain

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Background:

Forced migration is a global crisis affecting millions, placing women in an especially vulnerable situation. They encounter numerous hazards such as gender violence, sexual exploitation, and barriers to accessing quality healthcare. These difficulties are exacerbated by factors such as age at the time of migration, legal status, and length of stay, which impact their mental and psychosocial health. This study focuses on Málaga, Spain, a key point in the migration and refuge network. It seeks to unravel the complexities and multiple challenges that these women face, with the aim of developing specific and culturally sensitive support services that promote their social and psychological integration.

Methods:

The study employed a qualitative design, using semi-structured interviews with 24 women from eight different countries, including Colombia, Cuba, El Salvador, Morocco, Peru, Russia, Ukraine, and Venezuela. The interviews were conducted at Red Cross facilities in Málaga, Spain, to ensure participant confidentiality and safety. Data was collected and analyzed using thematic framework analysis with N-vivo version 14 software. The research sought in-depth insights into the participants' sociodemographic and migratory backgrounds, cultural identity, acculturation experiences, and mental and psychosocial well-being.

Findings:

The women, irrespective of their cultural background, encounter both shared challenges and unique opportunities. Their forced migration often stems from economic instability, scant employment options, and severe human rights violations. Emotional and psychological strains are notably significant, emphasizing the crucial role of mental health during their resettlement. Effective communication and outreach, spearheaded by organizations like the Red Cross, emerged as essential factors in connecting these women to available support services.

Interpretation:

The study underscores the necessity for comprehensive, culturally sensitive support services, promoting effective social integration. It calls for policies that are both holistic and tailored to the unique challenges faced by this vulnerable demographic.

Source of Funding:

None

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Scientific Abstract

Abstract N°: 245

Reaching the 3rd 95 Target in the Philippines: A Qualitative Study of Provider Perspectives on the Barriers and Facilitators to Viral Load Suppression

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Background:

Left unattended, HIV transmission poses major public health threats and undermines the existing susceptible antiretroviral therapies (ART) available globally. To curb the epidemic in the Philippines and guide quality improvement (QI) initiatives for HIV medical management, root causes of incomplete suppression and treatment failure must be addressed. This paper sought to explore and define the prevalent themes surrounding provider perspectives on the barriers and facilitators to viral load suppression (VLS) for treatment-experienced and complex patients in the Philippines.

Methods:

We employed purposive sampling of the Complex Medical Management (CMM) Network in the Philippines site of the HEALTHQUAL project through the University of California, San Francisco. The categories for sampling were physician specialty, facility type, and region. Inclusion criterion for participants was ability to speak English or Cebuano. Semi-structured interviews were conducted with thirteen participants, four of whom were from a primary level facility (community clinic), one from a secondary level facility, and eight from a tertiary level facility. Their responses were inductively coded and thematically analyzed.

Findings:

Overall, participants discussed nine barriers and four facilitators. The major themes deduced from most participants were barriers of 1) a limited drug formulary that compromised client needs and constrained regimen stewardship, 2) poor federal forecasting that contributes to stock outs, and 3) lack of access to viral load testing and drug resistance testing. Some key facilitators identified by all participants were an unofficial medication sharing system, as well as family support to the patient. Other findings included stigma, the impact of COVID-19, and mental health as barriers, with facilitators being community support and interprofessional team-based care.

Interpretation:

Policies that source greater funding for treatments and testing, plus organizational planning within the Philippines DOH, may alleviate system-level barriers physicians encounter in their medical management of HIV. For the CMM Network, QI lectures can cater to certain facility and physician-level barriers, such as regimen development techniques within resource limitations, task-sharing, and comprehensive adherence counseling. This is the first qualitative study to guide a QI intervention in the country and was completed with the aid of a local organization, the Sustained Health Initiatives of the Philippines. Some limitations include a language barrier, lack of patient perspectives and other healthcare roles, and having only one coder. To minimize bias, community leaders and experts in global HIV care were consulted throughout analysis.

Source of Funding:

University of California Global Health Institute's Master Student Stipend Award 2023

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Background:

The global health response to the COVID-19 pandemic exacerbated existing inequalities and brought forward the imperative to address the injustices that the current model of global health continues to champion. Through our study, we explored the gendered impacts of the pandemic, and how our response could be improved to address the contextualized needs (i.e., food insecurity, job loss and linked distress) of women living in urban slums in Dhaka, Bangladesh.

Methods:

We conducted 32 (25 women, 17 men) in-depth qualitative interviews with residents of 3 informal settlements (slums) in Dhaka, Bangladesh between January–March 2021 over the phone. The respondents were selected with help from our NGO partner BRAC with consent from those listed in the database. Further two rounds of 15 (12 women, 3 men) IDIs done with respondents purposively selected from first cohort between June–November 2021 for longitudinal data. The recorded interview data was transcribed and coded for thematic and discourse analysis done.

Findings:

Through cases presented from residents of informal settlements (slums) in Dhaka, Bangladesh, we found that for most of our respondents the fear of starvation caused by the loss of livelihoods during lockdown overshadowed their fear of the pandemic. The pandemic response led to job and income loss, food insecurity and failed to consider the disproportionate burden on women – particularly the more vulnerable women, e.g., female-headed households, frontline workers, women with disabilities, minority groups etc. Additionally, informal settlements are extremely congested, and the supply of clean water is rare and erratic, making social distancing and hygiene practices difficult to follow.

Interpretation:

The study is unique in its in-depth exploration of pandemic experience of vulnerable women, whose stories are often made invisible. The findings illustrate the imperative to decolonize the global health response and develop more contextualized responses that address their concerns and distress. This can only be possible through the prioritization of social science and humanities research to better understand the needs of these communities.

Our findings speak to the need adopt a humanitarian lens in developing decolonized responses to future pandemic, with contextualized approaches that does dismiss the basic survival needs of a large majority of the country's population. We recommend the explicit need to identify the current oppressive structures to be able to develop decolonized responses to future pandemics particularly for LMICs.

Source of Funding:

["Gender & COVID-19"](#) project funded Bill & Melinda Gates Foundation

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Background:

The issue of disrespectful and abusive care of women during childbirth worldwide has brought respectful maternity care (RMC) to the forefront of the global discussion on the quality of maternity care. RMC, used synonymously with Person-centered maternity care (PCMC), is care that centers women's experiences, preferences, needs, culture(s), and values. Assessing the alignment between patient and provider perceptions of RMC is crucial for improving quality of care, as previous studies have shown that discordance hinders trust and effective communication needed to achieve RMC.

Methods:

In this quantitative secondary analysis, data from 660 patients and 288 providers across 25 health facilities across 4 Malawian districts were analyzed. Spearman's Rank Test measured patient and provider PCMC score correlation, while a Bland-Altman Plot was used to visualize mean differences. Descriptive analysis was used to assess facility characteristics, while a bivariate linear regression was used to explore associations between facility factors and (1) differences in patient-provider PCMC scores, and (2) individual PCMC scores. Multivariate analysis was then used to explore significant variables from bivariate analysis on patient and provider PCMC scores.

Findings:

Facility means of patient and provider PCMC scores yielded a low correlation coefficient of 0.02. The Bland Altman plot indicated provider scores were 10% higher on average than patient scores. Bivariate analysis found only the facility structural aggregate score (SAS) positively associated with provider-patient score differences. Statistically significant negative associations emerged between (1) patient PCMC scores and facility type, SAS, and privacy, and (2) provider PCMC scores and SAS and privacy.

Interpretation:

The low correlation between patient and provider scores suggests discordance between Patient and Provider perspectives of PCMC in Malawi. The highest divergence between patients and providers occurred in the structural score, where perceived provision of RMC increased for providers while patient RMC experience decreased. This suggests improved facility infrastructure does not guarantee higher patient satisfaction or reduced barriers to patient-centered care. Prioritizing patient-provider relationships and effective communication should thus be central for enhancing RMC in Malawi.

Source of Funding:

None (Capstone Project)

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 253

A 5-step process for recruitment of participants in social media interventions: Lessons learned from a pilot digital campaign in West Africa

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Background:

African youth experience the highest burden of adverse sexual reproductive health (SRH) outcomes globally and have unequal access to SRH resources. The *Plan4Life campaign* is a SRH themed Facebook pilot program focused on family planning decision-making of West African girls. In West Africa, 1 in 6 people have internet access and more than 42% use social media. Internet and social media complement traditional forms of health communication for youth, hard-to-reach and diverse populations. Although use of mobile technology and social media have increased in global health education promotion and programming, few social media interventions occur in African countries. This project identifies best practices and strategies to recruit and retain West African youth in a digital research Facebook intervention. Literature and pilot findings were used to develop a 5-step recruitment process for youth social media interventions.

Methods:

In May 2023, participants from three West African countries (Burkina Faso, Côte d'Ivoire and Sénégal) were recruited to the Plan4life campaign pilot using two approaches (Facebook post and paid ads). Seventy-eight applications were screened; 64 participants were program eligible and invited using direct and indirect outreach. Participant engagement (acceptance rate, dropout rate, study interaction) and recruitment steps were assessed.

Findings:

The Facebook ad (~25 euro) produced 59,712 Facebook views, 443 intake survey views, 246 intake survey starts, and 72 submissions compared to 43 Facebook views, 26 intake survey views, 19 intake survey starts and 6 submissions from one Facebook post. It was feasible to recruit 64 participants in ~2-weeks. About 66% of participants enrolled; 62% were male, 66% resided in Senegal and 71% ages 15 to 24. Participants dropping out early totaled 24%. Due to sociopolitical unrest and social media censorship in Sénégal between May-June 2023, the pilot timeline was extended.

Interpretation:

Projects with time and resources constraints should opt for paid ads to maximize recruitment. Researchers in regions experiencing political unrest should consider a contingency plan due to potential internet and power disruptions. More research on recruitment methodology of emerging social media applications for African youth is needed.

Source of Funding:

Gates Foundation C'est La Vie Phase II, University of Alabama Birmingham.

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Background:

Resilience is the ability to make positive adaptations despite experiencing negative life events. Adverse childhood experiences (ACEs) are prevalent among Native American (NA) youth and are linked to long-term health concerns. Nevertheless, they possess protective factors that mitigate negative effects from trauma exposure. The Menominee Nation has been proactive in implementing a “Model for Resilience” to provide health services that have dramatically improved the lives of its members.

Methods:

This cross-sectional study was designed and executed in partnership with a community advisory board (CAB) of Menominee Nation members and researchers to investigate the association between ACEs and resilience among Menominee youth. Resilience was measured using the Child and Youth Resilience Measure (CYRM-28) and CAB-Added measures of cultural resilience questions. ACEs were measured using the ACE Response survey. Statistical analysis compared scores on the CYRM-28 and CAB-Added measures for each ACE item and composite scores. Multiple linear regressions modeled the relationship between reporting ACE items and composite resilience scores.

Findings:

Among 297 students surveyed, family support was the most positively reported resilience item, followed by strength to resist peer pressure, and helping elders (CAB added measures). Parental separation or divorce was the most frequently reported ACE, followed by household member imprisonment, household member substance use, and bullying. The ACE associated with the highest decrease in both the CYRM-28 and CAB-added resilience measure was feeling unloved or unsupported by family. There was a negative linear relationship between total number of ACEs and total resilience scores. The lowest aggregate resilience score on the CAB-Added measures occurred when students reported familial violence.

Interpretation:

The interconnectedness of NA communities and their cultural values builds resilience, which broadly impacts health outcomes, especially when experiencing negative life events. NA youth who experience ACEs benefit from family and cultural support that correlate with increased resilience. Lower resilience associated with familial violence or neglect suggests the importance of supportive, safe family environments. The interconnectedness of NA communities helps youth develop a heightened level of resilience and thrive despite experiencing ACEs.

Source of Funding:

This project was funded through support by the National Institutes of Health, NIGMS 1S06GM127793 01-6108.

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Program/Project Abstract

Abstract N°: 261

Integration of national level workforce training needs in high risk districts for Rabies in a Regional Risk Communication and Community engagement course towards the elimination of Rabies by 2030 in Uganda.

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Background:

Annually, Uganda records 16,414 human dog bites associated with severe morbidity and mortality among human Rabies cases. The country is targeting to eliminate Rabies by 2030 to achieve optimal global health. The Africa One Health University Network identified and integrated training needs and situational analysis of Rabies in a regional Risk Communication and Community Engagement course on rabies in Africa.

Methods:

A cross sectional, descriptive study was conducted, involving fifteen key informants drawn from national and sub-national level representing human health, animal health, agriculture, and wildlife and twelve focus group discussions with high-risk community members. Open ended questionnaires were used to collect data. We reviewed the legal framework demonstrating laws and policies on rabies control and prevention in Uganda. The data from the key informant interviews was analyzed through content analysis; coding the key information and making important quotes verbatim from the responses by participants to indicate views and insights.

Findings:

We established gaps in the knowledge, workforce development needs, attitudes, and practices from fifteen high risk districts for Rabies in Uganda. These informed modules and content required for the regional Risk Communication and Community Engagement course for health communities.

Interpretation:

The merging capacity building, in-service workforce gaps and community needs to eliminate Rabies by 2030 are in line with the recommendations set by OIE and the Uganda national Rabies elimination strategy. These needs were integrated in a regional RCCE course designed for in-service professionals designed by Africa One Health university Network.

Source of Funding:

This study was made possible by the generous support of the American people through the U.S Agency for International Development (USAID) to Africa One Health University Network Transition Award #7200AA22CA00014. The contents and associated materials are the responsibility of the authors and do not necessarily reflect the views of USAID or the U.S. Government.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 268

Characterizing the referral care continuum among complex obstetric cases in the Blantyre District of Malawi: A quantitative analysis of a midwifery-led project

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Background:

Despite high rates of facility delivery and skilled attendance at birth in Malawi, maternal mortality remains high underscoring the need to improve quality of care. With many deaths occurring at the tertiary level of care, our multinational, midwifery-led team aimed to understand the characteristics of referral care and documentation driving care delays and poor maternal outcomes. The subsequent goal of this project was to inform midwife-led solutions that ensure all women with pregnancy or birth complications receive timely and comprehensive care.

Methods:

Maternity patient charts from seven Blantyre District primary health centers referred to QECH between March 2019-March 2020 were extracted and reviewed. Descriptive and bivariate analyses were conducted in RStudio to summarize individual- and facility-level characteristics and to assess factors significantly ($p < .05$) associated with referral care and outcomes.

Findings:

Among 398 birthing women, half (54%) were between 18 and 24 years-old and one-third (32%) were referred from a facility more than 10km from QECH. Most were referred during the intrapartum period (80%), admitted to the labor ward (98%) in stable condition upon arrival (70%), and discharged (92%). Compared to survivors, mothers who died ($n=10$) were significantly more likely to have been referred from a facility >10 km away, to have arrived in critical condition, and 100% experienced complications during their stay ranging from postpartum hemorrhage to cardiac arrest. Incomplete referral forms and variable data integrity likely further contributed to delays in care. A sub-analysis of 239 mothers for whom the average time between complication identification and seeing a provider at QECH could be calculated, found significant variance by facility with an average of 1.75 hours (SD: 0.80) from the closest facility and 5.05 hours (SD: 7.22) from the furthest. Compared to those with shorter referral intervals, those whose referrals took four or more hours were more likely to come from a referring facility >10 km away ($p=0.06$), to be referred during the antepartum period ($p < 0.01$), and to experience a complication post-referral at QECH ($p=0.02$).

Interpretation:

Strengthening referral infrastructure, communication and documentation, and reducing total referral time are key to improving care quality and outcomes for complex obstetric cases. Providers across the care continuum need additional training and support to ensure timely interventions and comprehensive, continuous referral care.

Source of Funding:

Funding generously provided by the Wyss Medical Foundation.

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Background:

Adolescents and young adults (AYA, 14-24 years) bear a disproportionate burden of new HIV infections in Nigeria and are more likely to have worse HIV outcomes compared to other age groups. However, little is known about their access to recommended sexual health care services including HIV testing, sexually transmitted infections (STI) testing, sexual behavior patterns, awareness and/or access to pre-exposure prophylaxis (PrEP) and overall risk for HIV. In this study, we evaluated cross-sectional secondary data from a randomized controlled trial among AYA in Nigeria focused on increasing uptake of HIV self-testing (HIVST).

Methods:

A baseline assessment of the participants enrolled in the Innovative Tools to Expand Youth-friendly HIV Self-Testing (I-TEST) RCT known locally as “4 Youth by Youth” was conducted. AYA for the RCT were recruited from 32 local government areas (LGAs) in 14 states embedded in four geopolitical zones in Nigeria. None of the participants had received the intervention at the time of completing this self-reported behavioral survey. We used analytic software SAS version 9.4 to compute data and described participants' characteristics, sexual behaviors factors, condomless sex, HIV testing, STI testing, knowledge of PrEP and PrEP use across the study sample. We conducted chi-square test, and the level of significance was set at ≤ 0.05 .

Findings:

A total of 1551 participants completed the baseline survey comprising of males (777, 50.1%) and females (774, 49.9%). The majority (77%) of the participants were student at enrollment. Very few of the participants had ever tested for syphilis 47 (3.1%), gonorrhoea 49 (3.2%), chlamydia 31 (2.0%), and hepatitis B virus 106 (6.9%). 678 (43.8%) of the participants reported to be sexually active at time of enrolment of which about 38% of them engaged in condomless sex. Paying for sex, alcohol use and drug use were significant sexual behaviors ($p < 0.0001$). Only 14 (1%) have ever used PrEP. 481 (31.4%) have ever tested for HIV and 104 (6.8%) have ever had HIV self-testing at baseline. 457 (38.63%) were eligible for PrEP and 726 (61.37%) were not eligible. PrEP use ($p < 0.0001$), HIV testing ($p < 0.0001$) and HIV self-testing ($p = 0.0308$) were significant factors which favored PrEP eligibility.

Interpretation:

HIV self-testing and STI uptake were low at baseline among the AYA enrolled into this study. Most AYA also do not receive recommended sexual health care services, including STI testing services. This underlines the need for interventions to increase uptake of HIV/STI prevention services among Nigerian AYA.

Source of Funding:

Eunice Kennedy Shriver Institute of Child Health and Human Development.

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 298

The United States Landscape of Obstetrics and Gynecology Focused Global Health Fellowship Training Programs.

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Background:

There is growing recognition that pursuing a career in global health demands advanced training. For obstetricians and gynecologists (OBGYNs) aspiring to impact care and training in low- and middle-income countries (LMICs), a global health fellowship can offer invaluable clinical or research-based training. Unlike accredited fellowships, every global health fellowship is structured differently. This review describes the options and key characteristics of global health fellowships for OBGYNs at universities based in the United States.

Methods:

A review of program websites identified fellowships based in the United States allowing for a focus in global health by OBGYNs, and enrolling fellow(s) in 2023-2024. Fellowships were evaluated on the following key characteristics: OBGYN specificity, duration, number of fellows, duration spent in LMICs, country(ies) of focus, educational focus, and opportunity to pursue a master's program.

Findings:

In the United States, there are ten fellowship programs providing training in global women's health. Eight programs require prior completion of a residency specific to OBGYN. All programs have a minimum duration of two years. The majority, seven programs, are focused programs and accept only one fellow every year or every other year. Regarding global experiences, seven programs require six to 12 months spent in their partner LMIC, with eight having Africa-based partners. There is a range of educational focuses, with five programs concentrated on clinical practice in an LMIC, and five concentrated on global research. Additionally, five of these programs offer a master's in public health or science. Despite program diversity, common objectives include experiential learning, tailored mentorship, building global networks, and developing skills in global health clinical work or research.

Interpretation:

There are ten fellowship programs offered at universities based in the United States for OBGYNs to acquire advanced global health-based practices, catering to a diverse range of interests and opportunities. Areas of development for new programs include expanding LMIC reach past Africa and developing policy-based curriculum. These ten programs serve as exemplary models for curriculum development, integration strategies and LMIC partnerships which other institutions can emulate to expand their global training initiatives. The training of more physicians with a global health focus can bolster health equity and global collaboration.

Source of Funding:

None

Abstract N°: 313

Early Hearing Detection and Intervention in Kenya (EHDI-K): A Qualitative Study to Identify Opportunities and Challenges to Improving Access

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Background:

Early childhood hearing loss can impede language, psychosocial, and neurocognitive development. The average age of identification of permanent pediatric hearing loss in Kenya is five years, yet it is known that early intervention in infancy is imperative to development. The purpose of this qualitative study is to understand drivers of lack of access along the early childhood hearing continuum of care to guide context-driven program design and policy in Kenya.

Methods:

We will gather data from approximately 60 in-depth interviews with caregivers and clinicians in Kisumu and Nairobi Counties from August to December 2023. We use stratified purposive sampling to identify caregivers of infants and children under age six accessing screening, diagnosis, or treatment services for hearing loss, as well as clinicians providing these services, in six public and private health facilities. Guided by Levesque's Conceptual Framework of Access to Health, we use thematic analysis to examine health care needs, perception of needs, desire for care, health care seeking, health care reaching, health care utilization, and health care consequences.

Findings:

Fifteen interviews have been completed to date. Data analysis revealed that misinformation, low levels of concern, and societal perceptions of hearing loss are major barriers to caregivers pursuing hearing testing for their young children. Caregivers whose children did obtain a diagnosis of hearing loss had varying perceptions of the magnitude of consequences of unaddressed hearing loss as well as a limited understanding of available treatments. Clinicians highlighted lack of quiet space, training, equipment, and a robust referral system as significant barriers to providing services. Among both caregivers and clinicians, the importance of lowering the cost of services across the continuum of care was a common theme.

Interpretation:

Preliminary results from this study identify various barriers as promising targets for programs and policies that seek to improve access to early childhood hearing care services in Kenya. To further contextualize these findings, future work will examine the perspectives of the general population on early childhood hearing loss.

Source of Funding:

University of Washington Population Health Initiative Tier 2 Pilot Research Grant

Abstract N°: 314

Bridging the Gap: Leveraging Partograph Utilization Insights to Facilitate the Smooth Implementation of the Labour Care Guide at Mbale Regional Referral and Teaching Hospital, Eastern, Uganda

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Background:

Maternal and newborn care has seen significant advancements through evidence-based guidelines, including the labour care guide introduced by the World Health Organization (WHO). However, the successful implementation of these guidelines relies on analysing the level of effective utilization of tools such as the partograph. In this study, we aim to assess the current level of partograph utilization at Mbale Regional Referral Hospital, Uganda, after one year of a QI project that was aimed at enhancing the correct use of the partograph and then identify the possible challenges in integrating the labour care guide into existing clinical practices.

Methods:

A retrospective study combining quantitative and qualitative approaches was conducted. We reviewed 1120 partographs from deliveries between April and December 2020, analyzing the completeness of recorded mothers' particulars and monitoring parameters. Key informant interviews were conducted with healthcare workers to explore factors influencing partograph utilization. And baseline finding that were taken a year ago before the implementation of a QI aimed at improving correct use of the partograph.

Findings:

For the baseline cohort, 97% of cases (n=194) had no partograph in the file, while only 3% (n=6) had a partograph. In the current cohort, 80% of cases (n=896) had a partograph in the file, and 20% (n=224) did not. While certain mothers' particulars were well-documented, critical information such as LNMP, EDD, and risk factors displayed higher rates of missing data. Monitoring rates decreased with subsequent times. Key informant interviews revealed challenges related to heavy workload, inadequate human resources, poor attitudes towards partograph utilization, knowledge gaps, and policy-related issues.

Interpretation:

The level of partograph utilization at Mbale Regional Referral Hospital remains suboptimal, hindering the successful integration to the labour care guide. Addressing the identified challenges is essential for improving maternal and newborn care practices.

To enhance partograph utilization and facilitate the smooth implementation of the labour care guide, we recommend increasing human resources, providing targeted training and education, improving hospital infrastructure, fostering positive attitudes among healthcare workers, and implementing continuous quality improvement programs.

By implementing these recommendations, healthcare administrators and policymakers can bridge the gap between research findings and practical implementation, leading to better health outcomes for expectant mothers and infants. Effective implementation of the labour care guide will play a critical role in reducing maternal and neonatal morbidity and mortality, ultimately advancing safe and effective labour management in Mbale and beyond.

Source of Funding:

SEED GLOBAL HEALTH

Abstract N°: 315

Asylum-Status as a Social Determinant of Health: Prevalence and Control of Chronic Diseases Among Clients at a New York City Asylum Clinic

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Background:

As of 2023, there are nearly 1.6 million asylum-seekers awaiting immigration hearings in the United States. As a group, little data exists about the health statuses of asylum-seekers in the US, including their rates of chronic diseases. The Libertas Center for Human Rights at Elmhurst Hospital in Queens provides comprehensive care to survivors of torture, 90% of whom are asylum-seekers at intake. Libertas has served 629 clients, most of whom receive care at Elmhurst Hospital. This study sought to establish prevalence rates of common chronic diseases among Libertas clients and perform a preliminary analysis of the hypothesis that asylum status correlates with effective management of these chronic diseases.

Methods:

We conducted a retrospective chart review to determine the prevalence of diabetes, hypertension and hyperlipidemia among Libertas clients 18 years and older who receive primary care in the New York City Health + Hospitals system. The study cohort comprised 56% and 44% of men and women, respectively, with an average age of 37 years. The calculated prevalence rates then were age-adjusted for comparison against the general US population prevalence as established by the 2022 National Health Interview Survey (NHIS). We additionally collected asylum-status data to assess correlation between asylum-status and adequate control of chronic diseases. The Institutional Review Board of the Icahn School of Medicine at Mount Sinai approved this study.

Findings:

Among the study group (n = 180), the age-adjusted prevalence rate with standard error reported in parentheses per 1,000 people is 319.62 (\pm 34.81) for diabetes, 418.14 (\pm 36.88) for hypertension and 420.67 (\pm 36.60) for hyperlipidemia. For all these conditions, prevalence rates were greater in the Libertas cohort than the general population, with statistical significance in diabetes ($p < 0.0001$) and hyperlipidemia ($p = 0.0041$) prevalence. Limitations in our data precluded an adequate regression analysis of asylum-status as a risk factor for chronic disease. However, a small subgroup case-series analysis of clients' hemoglobin A1Cs, blood pressure and LDL cholesterol levels suggest that being granted asylum may correlate with better control of chronic diseases.

Interpretation:

Libertas Center clients (both asylum-seekers or recent asylees) have a higher prevalence of diabetes, hypertension and hyperlipidemia than the general US population when age-adjusted. Being granted asylum may be associated with improved control of chronic diseases. Additional studies into asylum status as a social determinant of health are needed.

Source of Funding:

Icahn School of Medicine Global Health Summer Research Program

Multidisciplinary Stakeholder Engagement to Improve Safe Handling of Chemotherapeutic Drugs Among Healthcare Workers in Vietnam

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Background:

Effective use of personal protective equipment (PPE) by healthcare workers reduces exposures to hazardous drugs (HDs) that could lead to negative health effects. A quality improvement (QI) initiative was started to improve PPE use based on inputs from healthcare workers in hospitals in Vietnam that care for children with cancer. Stakeholder engagement is central to driving the behavioral change and achieving sustainable changes. The Agency for Healthcare Research and Quality (AHRQ) has described a five-step strategy for stakeholder engagement in its Implementation Guide of Children's Health Insurance Reauthorization Act (CHIPRA) Quality Demonstration. Though this approach has been adopted in multiple projects in the US, literature reporting experience in Southeast Asia is not available.

Methods:

An anonymous online survey was distributed through the Vietnam Pediatric Oncology Association (VPOA) e-mail listserv in August 2022. The survey assessed the current practice of safe handling of chemotherapy and identified gaps in knowledge of safe handling, awareness of institutional policies, and use of PPE. We then adopted a five-step approach from the AHRQ Implementation Guide to develop a multicenter Safe Handling Steering Committee (SHSC). We identified stakeholders from nursing, physician, and pharmacy departments in each candidate hospitals by contacting a non-profit organization that had closely worked with the VPOA. The debriefing meeting of the survey results was used to engage stakeholders.

Findings:

Four hospitals participating in this QI initiative formed a workgroup composed of hospital leaders, physicians, pharmacists, and nurses. Together, they formed the Steering Committee (5 physicians, 12 nurses, and 8 pharmacists) and engaged 192 healthcare workers to assess perception of PPE use and effectiveness of different strategies. The committee reached a consensus to develop a multimodal approach to improve safe handling with five essential elements: system change; HDs list; training and education of healthcare workers; monitoring of PPE compliances/feedback; and reminders in the workplace. Committee members developed SMART aims, performed root cause analysis to identify barriers to PPE compliances, and completed PICK chart to determine feasibility of the interventions. Workgroups grounded work in each hospital and conducted baseline evaluations of PPE availability and compliance rates. Healthcare workers in the United States were involved as external stakeholders and designed platforms to monitor PPE compliance through an electronic survey system.

Interpretation:

We have successfully implemented a multidisciplinary engagement team to improve safe handling of chemotherapy in Vietnam, using a five-step approach adapted from the AHRQ Implementation Guide. The work is underway to implement the initial round of interventions.

Source of Funding:

UCSF Global Cancer Program

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 322

Development of a Triage Phone Line for Home Blood Pressure Monitoring in Pregnancy: User-Centered Design in Ghana

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Background:

Preeclampsia is a leading cause of maternal morbidity and mortality. Home blood pressure (BP) monitoring may help detect preeclampsia early, however low-resource settings lack central call centers for patients to report elevated BPs. The objective of this study was to co-develop a locally-informed BP triage phone line for pregnant patients in Ghana.

Methods:

A three-phase user-centered design approach was carried out with stakeholders in Accra, Ghana. First, a focus group with 6 Obstetricians with expertise in preeclampsia focused on the medical content and logistics of a BP triage phone line. Second, a focus group with 8 preeclampsia survivors, purposively recruited through a patient advocacy organization, focused on the acceptability, preferences, and logistics of a BP triage phone line. Third, after consensus from Obstetricians and patients that midwives should staff the BP triage phone line, draft protocols and approach were shared with 13 midwives for final feedback and refinement. Focus groups were audio-recorded, transcribed, and thematically analyzed.

Findings:

Obstetrician focus group themes were (1) The need for evidence-based standardized protocols for phone line staff to follow, and (2) The importance of mechanisms to quickly respond to BP elevations. Obstetricians also developed and reached consensus on step-by-step protocols to respond to specific clinical scenarios. Branching logic flowcharts included five steps for the phone line provider to query and follow (presence of chronic hypertension; initial BP; repeat BP; preeclampsia symptoms; clinical advice ranging from continue routine monitoring to presenting to the hospital now). Patient focus group themes were: (1) The need for flexibility and patient-centeredness, including 24/7 availability, staff speaking multiple local languages, and cellphone and WhatsApp options; and (2) The importance of the phone line staff being kind communicators in addition to having medical expertise. Midwives deemed the phone line important and doable but raised potential challenges including midwife turnover and time limitations.

Interpretation:

OBGYNs, patients, and midwives agreed that a BP triage phone line was important and filled a needed gap. The developed BP triage phone line is staffed by midwives receiving video and in-person trainings, uses printed flowcharts to gather and respond to patient-reported clinical information, and is available 24/7.

Source of Funding:

Fogarty International Center, National Institutes of Health, Award K01 TW012166.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 325

The Value of Time: Evaluating the Impact of Three Years of the Global Action in Nursing Project on Select Patient Outcomes in Blantyre District, Malawi

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Background:

Globally, the majority of maternal and neonatal care is provided by nurses and midwives, yet providers often face staffing shortages, constrained supplies, and limited opportunities to advance their skills and careers. The University of California San Francisco Global Action in Nursing (GAIN) project expanded to Blantyre district, Malawi in 2018. The GAIN intervention combines intensive, short-course training with extended longitudinal bedside mentorship for practicing nurse-midwives at seven health facilities in the district

Methods:

In July 2022, data from the seven partnering health facilities and two control sites in Blantyre district were extracted from the Malawian District Health Information System 2 (DHIS2) database. After a robust data cleaning process, initial bivariate analyses compared the impact of the GAIN intervention overall and at six-month intervals on select maternal and neonatal outcomes. Subsequent nonlinear quantile mixed models explored the relationships while accounting for the impact of time and clustering at the facility level.

Findings:

Results fell into four categories: obstetric complications, emergency obstetric care, neonatal complications, and delivery-related variables. Missingness of data at GAIN facilities also decreased to nearly zero following the introduction of the intervention. The most significant findings were in obstetric and neonatal complications. Compared to control sites, GAIN facilities saw significant increases in reporting of specific obstetric and neonatal complications and yet no significant changes in referral rates or maternal or neonatal deaths.

Interpretation:

Despite the increased reporting of many complications, there were no corresponding increases in negative outcomes or referrals. Providers trained and mentored by GAIN improved their ability to identify and manage complications early at the health facility-level. This, in turn, reduces the burden on already overwhelmed tertiary hospitals. This study spotlights the impact bedside mentorship has on provider competence and patient outcomes, emphasizing the critical need for dedicated mentorship in conjunction with all clinical training activities.

Source of Funding:

Funding generously provided by the Wyss Medical Foundation.

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Background:

Breast cancer constitutes 31.8% of total cancer cases in Ghana, representing a significant healthcare problem. Most women require a mastectomy and there are few options available for prostheses. Silicon prostheses are available in the capital city of Accra but can cost up to \$500 USD. This is not feasible for many women in the eastern region of Ghana, where the average per-capita income is equivalent to \$683 USD annually. As such, many post-mastectomy patients have resorted to stuffing their bras with rocks, socks, and t-shirts in an attempt to achieve the appearance of fuller bras. Our multidisciplinary team convened to develop a cost-effective process for improving post-mastectomy cosmesis that can be implemented as an ongoing program at Eastern Regional Hospital in Koforidua, Ghana.

Methods:

Phase I: Penn State College of Medicine (PSCOM) students and faculty hosted a breast cancer survivor luncheon at the Eastern Regional Hospital (ERH) in Koforidua, Ghana. At the luncheon, breast cancer survivors completed a pre-survey expressing their attitudes toward external breast prostheses.

Phase II: A multidisciplinary team developed a cost-effective bra insert prototype for breast cancer survivors. Representatives from PSCOM returned to Ghana where post-mastectomy patients were invited to receive the bra insert prototypes and complete a post-trial satisfaction survey. The ERH surgeons participated in the event and retained the remaining supplies for future survivors.

Findings:

Pre-Trial Survey: Of the 34 women surveyed at the survivor luncheon, the consensus was that most women were self-conscious about their appearance post-surgery, and 88% believed that using the inserts would improve their confidence.

Post-Trial Survey: All 17 women surveyed preferred having the bra insert over not having the insert. However, some participants provided feedback. General themes for areas of improvement were lack of comfortability and inadequate weight distribution.

Interpretation:

The goal is to make the bras a sustainable prosthetic option for post-mastectomy women across the eastern region of Ghana, which ultimately can be implemented in other low-resource areas. Areas for improvement include refining bra insert mechanics to better optimize comfort and weight distribution.

Source of Funding:

Penn State College of Medicine Department of Surgery

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Background:

Next-Generation Sequencing (NGS) has proved to be a comprehensive approach for sequence-based identification of pathogenic microbes. Some specific mutations have previously been reported to be routinely missed out by the available rapid diagnostic panels used for drug susceptibility testing of Mycobacterium tuberculosis complex. In this study, we sought to demonstrate the power of applying NGS to not only determine genetic diversity but also detect the single nucleotide polymorphisms that are synonymous with antimicrobial drug resistance of Mycobacterium tuberculosis.

Methods:

This is an account of WGS results of 30 multi-drug resistant clinical isolates of M. tuberculosis. Lineages were called by mapping the sequencing reads against H37Rv as the reference genome with the genetic distance defined by the number of fixed SNPs (fSNPs). The number of SNPs detected in each sample enabled us perform lineage calls by assessing each sample with a mutant allele frequency $\geq 20\%$. The number of SNPs detected in each sample was then determined by assessing each sample with a mutant allele frequency $\geq 90\%$. We then assessed the SNPs against the regions of occurrence to confidently call for mutations.

Findings:

The 30 samples analyzed were genetically diverse, with all lineages (1-4) well represented. We detected 30,782 SNPs across all 30 samples, of which 8172 were unique. NGS revealed SNPs predictive for second line drug resistance to a second line drug, given mutations in the gyrB locus in 4/30 isolates when compared to the rapid diagnostic test kits. We also applied a novel data management tool; MutHub to store the analyzed data, with curation of the well annotated strains.

Interpretation:

Employing NGS using WGS identified SNPs that potentially confer drug resistance to second line drugs in the resistant isolates sampled. This shows the evident need for integrating NGS in the management of drug resistant forms of tuberculosis in all its forms.

Source of Funding:

East, Central and Southern Africa Health Community (ECSA-HC)

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Background:

Home visits in family medicine residency programs offer a holistic and personalized approach to health care, providing a range of services tailored to patients in their home environment. The profile of the patients varies according to the programs; most often they are infants, young children, elderly, individuals with chronic diseases, musculoskeletal disorders, and mental health problems. This study aims to describe demographic and clinical characteristics of patients seen during home visits organized by the Family Medicine Residency Program of Saint-Nicolas Hospital of Saint-Marc.

Methods:

A descriptive analysis of the longitudinal database of the home visit program was performed including patients visited from 2015 to 2022 by a team consisting of faculty, a psychologist, residents, and nurses of the Family Medicine Residency Program of Saint-Nicolas Hospital of Saint-Marc, Haiti. Demographic and clinical characteristics of the patients, and services received were analyzed with descriptive statistics (median, interquartile range [IQR], number and percentage) using Epi Info 7.2.

Findings:

During the study period, there were 139 patients who benefited from home visits. The number of new patients included in the program increased every year from 3 at the start of the program in 2015 to 42 in 2021, except in 2020 due to the COVID-19 pandemic. The main reason for being included in the home visit program was reduced mobility (57.5% of the patients), chronic crippling pain (15.1%), cancer palliative care (13.0%), age-related frailty (7.9%), and other (6.5%). All participants received clinical examination, tailored education, and medication; 13.7% received in addition other services such as wound care, physiotherapy, psychotherapy, laboratory exams. The median age of the patients was 74 years, IQR 66-83 years, 74.1% of them were female, 44.4% of them received between two and five home visits. Their most common pathologies were hypertension (53.2%), diabetes (27.3%), stroke sequelae (24.5%), arthritis (16.6%), cancer (11.5%), mental disorders (9.4%), and blindness (5.8%).

Interpretation:

Patients who received home visits were mostly elderly, with chronic diseases and having reduced mobility. The Family Medicine Residency Program has effectively achieved its goal of caring for patients for whom regular hospital visits may be too heavy a burden.

Source of Funding:

None

Abstract N°: 360

Factors associated with caregivers' willingness for their children to receive routine annual COVID-19 vaccination while attending postnatal clinics in Kawempe, Uganda

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Background:

Vaccinations are a key public health intervention estimated to prevent up to 25% of the eight million deaths and related disabilities in young children. However, COVID-19 vaccine coverage is low in Uganda compared to neighboring Sub-Saharan Africa countries. It is unclear whether routine annual COVID-19 vaccine boosters will be adopted, accepted, or effectively implemented in Uganda. This study evaluated the factors affecting the willingness of caregivers to get their children vaccinated against COVID-19 in a postnatal clinic in Kawempe, Uganda.

Methods:

A cross-sectional study of caregivers with children less than 59 months of age was conducted in the Child and Family Foundation postnatal clinic, an urban community in Kampala. The outcome variable was willingness to vaccinate their children against COVID-19. The Covariates included were informed by the World Health Organization Behavioral and Social Drivers framework domains, and included: i) thoughts and feelings (disease risk perception, confidence in vaccine safety, and benefits), ii) social processes (family and friend norms), and iii) practical issues (availability, affordability, and ease of access). Logistic regression analyses tested the behavioral and social factors associated with willingness to receive annual childhood COVID-19 vaccination. P-values<0.05 were considered statistically significant. Adjusted odds ratios (adj. OR) and 95% confidence intervals were reported after controlling for potential confounders.

Findings:

Among the 230 respondents, 51% were female caregivers aged 15 - 24 years, 31% had poorest household wealth index and 74% were unemployed. The odds of willingness to receive annual childhood COVID-19 vaccinations were 3.3 higher among caregivers with confidence in the vaccine's benefits against COVID-19 (OR=3.3, 95%CI 1.9-5.4), 5.3 higher among caregivers with supportive family and friend norms (OR=5.3, 95%CI 1.5-18.9), and 22.7 times higher among caregivers who intended to get adult COVID-19 vaccines (OR=22.7, 95%CI 3.4-149.5).

Interpretation:

Focused interventions to increase routine annual childhood COVID-19 vaccinations may address vaccination barriers and inform COVID-19 vaccination campaigns to improve rates of receipt of routine annual COVID-19 vaccinations in children in this study area.

Source of Funding:

Wm. Collins Kohler Family Foundation

Depressive symptom severity and behavioral impairment among school-going adolescents in central and Eastern Uganda

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Background:

Adolescence (ages 10 to 19 years) is a unique transitional phase of life between childhood and adulthood during which rapid physical, cognitive, and psychosocial growth occurs that may influence their decision-making behavior and social interactions. Globally, depressive symptoms are greater among adolescents when compared to other age groups which may affect socio-emotional and behavioral development including academic achievement. Our study objective was to determine the association between depression symptom severity and behavioral impairment among adolescents attending secondary schools in Eastern and Central Uganda

Methods:

This cross-sectional survey was conducted among 1,669 adolescents attending secondary schools in Eastern and Central Uganda. Our outcome variable was behavioral impairment defined as self-reported behavior that interferes with an individuals' ability to do schoolwork or get along with others (yes/no). Our key independent variable was depression symptoms assessed using the Child and Adolescent Symptom Inventory-5 (CASI-5), a behavior rating scale for symptoms of DSM-5 emotional and behavioral disorders. Covariates included age, sex, education, domestic violence (DV), orphanhood, history of mental illness and school characteristics [type (day, boarding or both), ownership (private or public), and location (rural or urban)]. Logistic regression models tested the independent association between depressive symptoms and behavioral impairment, after adjusting for potential confounders. Data were analyzed in Stata/MPv17.0 and p-values ≤ 0.05 were considered statistically significant.

Findings:

Participants' mean age was 15.32 years (SD 1.78), 58.5% were female, 47.4% had behavioral impairment, 2.82% had mild depression symptoms, and 86.8% witnessed domestic violence. Participants with mild depression symptoms had 10.6 times higher odds of behavioral impairment when compared to those with no or slight depression symptoms (adjusted odds ratio [AOR] 10.63, 95%CI 1.23–91.44, $p=0.031$) after controlling for potential confounders.

Interpretation:

Behavioral impairment prevalence is high among school-going adolescents in Eastern and Central Uganda. Our findings support calls to incorporate mental health programs in secondary schools to conduct targeted depression screening and detection for timely referral and treatment of affected school-going adolescents in these study settings of Uganda.

Source of Funding:

None

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Background:

Online volunteer experiences to increase the workforce capacity in underserved areas and promote health equity emerged before the COVID pandemic but accelerated after 2020. Organizations relying on in-person volunteering were forced to withdraw from on-site, face-to-face activities quickly during Covid while others shifted to online volunteering to sustain teaching activities. The purpose of this study was to explore the dynamics of online volunteering and provide visibility to a novel trend in training health professionals in resource-scarce countries. Specifically, this study aimed to describe the barriers and facilitators of e-volunteering, assess the actual and potential short-term outcomes of e-volunteering, and develop recommendations for facilitating e-volunteering opportunities.

Methods:

A comparative case study approach using qualitative data was used to explore online volunteering practices. Three individual cases from a non-profit US-based volunteer organization were used to seek unique and similar patterns among the cases. Cases included dentistry in Nepal, physical therapy in Rwanda and Ghana, and anesthesiology in Laos, Cambodia, and Bhutan. University and organizational approval were received prior to data collection. Thematic analysis was used with coding verified by the research team.

Findings:

A total of 18 volunteer faculty and project directors from the US and host countries representing the three cases were individually interviewed with data saturation achieved. Volunteer experience ranged from 3- 23 years with volunteers ranging in age from 33-74.

Three major themes emerged. In the first, *Creating Space*, online volunteering allows for a variety of teaching strategies to meet learning needs within synchronous and asynchronous formats with synchronous teaching and case studies preferred. Expanded learner opportunities are available online and more volunteers are available for teaching using an online format including the potential for interprofessional collaboration. Second, *The Future is Hybrid*, emphasizes the importance of relationship building during on-site volunteering combined with online volunteering. Participants envisioned this model as the future for volunteer organizations. Third, *Geographic Expansion*, addresses the potential for projects to grow within the country to include other universities and organizations as well as beyond national boundaries.

Interpretation:

Initial recommendations include the need for team building and mentorship between in-country directors and volunteers, development of a hybrid model of volunteering to synchronize didactic-focused volunteers with clinically focused volunteers and developing monitoring and evaluation processes for expanded projects in-country and across national borders.

Source of Funding:

None

Abstract N°: 379

Primary Health Care Needs in the Aftermath of Rohingya Camp Fire: How a Women-led Satellite Clinic Provided Necessary Care

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Background: On March 5, 2023 a massive fire broke out at the Rohingya refugee camp in Cox's Bazar, Bangladesh and destroyed close to 2,000 shelters that left an estimated 12,000 people homeless. Jago Nari Unnayan Sangstha (JNUS)—a women-led non-governmental organization in Cox's Bazar—responded to the humanitarian needs in the aftermath of the fire. The objectives for the project were to identify the primary health care needs of the affected population and to provide the necessary care.

Methods: After having several site visits and consultations with the Rohingya community leaders, the Camp in Charge and other key stakeholders, JNUS identified the primary health care needs of the affected Rohingya population. They set up a satellite clinic in July, 2023 at Camp 11 comprising all female staff—one doctor, one paramedic, one Rohingya and one Bangladeshi volunteer. The clinic provided services reflecting the identified needs and JNUS's previous experience of managing satellite clinics in the Rohingya camps. Rohingya volunteers and community leaders promoted the services through community outreach and identified the affected individuals in need.

Findings: Through the consultations a number of needs were identified: a limited access to clinical and psychosocial support, a shortage of medicine, a high burden of skin diseases, a lack of regular health check-up and nutritious food for pregnant women, and a lack of hygiene kits and sanitary napkins due to service interruptions. The satellite clinic provided the following services over six-week period to address these needs: a) provided 606 medical consultations to the victims of fire and stampede which included children, pregnant women, and persons with disability, b) distributed medicines to treat headache, fever, gastric, skin diseases, allergy, and asthma, c) supplied hygiene kits to 500 women and adolescent girls, and d) distributed nutritious supplementary food to 150 pregnant women. These services were in high demand among Rohingya women which is reflective of their overall unmet primary health care needs as well as their acceptance of a women-led flexible health care delivery model closer to their homes.

Interpretation:

Source of Funding: AmeriCares Foundation Inc.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 388

Formation and Development of Informal Settlements and Their Effects on Residents’ Wellbeing and Safety in Kigali, Rwanda

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Background:

According to Rwanda’s Kigali Masterplan 2050, around 60% of Kigali’s households live in informal settlements, in which residents live in self-constructed shelters in communities without basic infrastructure or legal title to the lands which they occupy. These settlements are often in vulnerable areas like steep slopes and wetlands, leading to various health and social issues. It is important to address these social determinants for residents’ wellbeing and safety. Many settlements are being removed to make space for modern infrastructure and planned urban development intended for former residents and in other cases, residents of other areas. Kigali neighborhoods like Busanza and Mpazi have experienced such changes in infrastructure. This research aims to assess how living in informal settlement affects residents’ health and how relocation to new apartments influences that impact. Additionally, it aims to foster a comprehensive understanding of the residents’ perspectives, hopes and concerns, which will contribute to more inclusive and successful urban development.

Methods:

Six focus group discussions were conducted with residents of Busanza and Mpazi. Discussions were categorized into groups comprising individuals residing in newly developed apartments and those still in informal settlements, each further divided into subsets of landlords and tenants. The discussions covered a range of topics related to the formation, development, and management of property in both settlements. Focus groups were recorded then later transcribed and translated. Qualitative data was analyzed in MAXQDA software and themes were identified.

Findings:

Focus groups were conducted in June 2023 with a range of 9 to 18 and a total of 85 participants that lasted an average of 2 hours. The themes highlighted sanitation, compensation, property size and amenities as top priorities. Mpazi residents remained in their community which caused minimal disruptions in their daily lives. They also felt fairly compensated for their previous properties and found their new apartments adequately sized. Conversely, Busanza residents expressed dissatisfaction due to inadequate compensation and smaller living spaces. Safety and sanitation were prominent concerns in the informal settlements of Mpazi, exacerbated by the challenging terrain of steep slopes.

Interpretation:

A common sentiment among residents was the desire for more involvement in property development policies. Disparities in amenities like water, electricity, and healthcare persisted in certain neighborhoods. The results emphasize the importance of involving affected residents to better understand their needs and preferences despite ongoing commendable efforts.

Source of Funding:

Dr. Elaine Kohler Summer Academy of Global Health Research

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 404

Building Health Literacy Education for Pandemic Preparedness among American Indian and Alaskan Native Populations in Arizona

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Background:

The COVID-19 pandemic has disproportionately impacted American Indian and Alaskan Native populations in Arizona, serving as a revealing lens through which existing health disparities and inequities can be viewed. Among the key determinants of these disparities is health literacy, which is pivotal in influencing health outcomes and community preparedness. The pandemic has exposed these inequities and made it evident that low levels of health literacy further compromise the emergency preparedness of these tribal communities. Inadequate health literacy hampers effective communication, comprehension of health guidelines, and community members' abilities to make well-informed decisions, exacerbating the pandemic's negative health and social outcomes in these vulnerable populations. Low levels of health literacy have been found to compromise the pandemic preparedness of these tribal communities, thereby exacerbating the negative outcomes of the pandemic.

Methods:

This session employs a conceptual approach to dissect the intricate relationship between health literacy, health disparities, and the challenges unique to the American Indian and Alaskan Native communities. Through an interactive presentation, we utilize real-world examples and data to scrutinize how limited health literacy affects understanding of public health guidelines, hampers access to accurate information, and impedes informed healthcare decisions.

Findings:

Our analysis reveals that low health literacy contributes to ineffective pandemic responses within tribal communities, leading to higher infection rates and detrimental health outcomes. We also identify systemic barriers that hinder advocacy in healthcare settings. To address these issues, the session shares actionable strategies and resources tailored for self-advocacy to overcome health disparities. Finally, we provide insights into long-term solutions, focusing on culturally sensitive health education programs, accessible resources, and community engagement initiatives to build health literacy.

Interpretation:

Strengthening health literacy among Arizona's American Indian and Alaskan Native populations is not merely a response to the current crisis but a long-term investment in preparing these communities for future pandemics. Advocating for health literacy empowers individuals and communities to make informed decisions, reduces health disparities, and fosters resilience.

Source of Funding:

None

Abstract N°: 409

Survival Challenges of Female Cancer Survivors in Mysore District, India: A Community Based Participatory Research Study

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Background:

Annually, 34,000 women survive cancer in South India, breast cancer being the commonest followed by cervical cancer. With improved survival, the long-term day-to-day challenges of cancer and its therapy are rising. We explored survivorship challenges and needs of urban and rural female cancer survivors in Mysore, India using photovoice, a qualitative community-based participatory research method that visually documents and communicates community resources and needs. Photovoice empowers participants by providing them opportunities to define their own health priorities.

Methods:

Between April-May 2023, a photovoice study was conducted among 23 female cancer survivors and caregivers in Mysore, India. Participants selected through purposive and snowball sampling consented to attend research-related meetings and engage in photo-taking and group discussions. Participants captured pictures of their day-to-day activities, challenges faced post-cancer treatment and measures taken to overcome them. We conducted 4 weekly interactive sessions over 2 months where emerging themes were elicited and findings were summarised and presented in a photo exhibition to stakeholders and policy-makers.

Findings:

Of 23 participants, 19 were cancer survivors and 4 were caregivers. Mean age of the participants was 53.7 years; mean time since cancer diagnosis was 6.35 years; mean age at diagnosis was 48.7 years; 56% had completed high school and 30% were from rural Mysore. Participants' photographs conveyed affordability of care as a key barrier to quality of life and four emerging themes identified were: fear of cancer recurrence, stigma, lack of social support and financial instability. Facilitating access to government health schemes was a high-priority need to de-stress financial burdens. Counselling on body-image issues and sexual life, disseminating cancer knowledge and addressing myths and stigma surrounding cancer were expressed needs. Short-listed photographs were exhibited in a gallery that was open to the community. Participants also supported developing a Call to Action asking community and policy decision-makers to commit to changing the existing social, economic, and political conditions affecting individuals with cancer.

Interpretation:

Survival challenges of female cancer survivors are related to uncertainty of their future and psychosocial distress from financial toxicity. Economic empowerment of these women and de-stigmatisation of cancer is an urgent need in Mysore, India

Source of Funding:

Fulbright Nehru Fellowship and American Association for Cancer Education

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Background:

Rheumatic heart disease (RHD) represents the largest burden of cardiovascular disease in low-and-middle-income countries (LMICs), including Rwanda. By the time these patients present for medical care, they often require surgical valve replacement with either a bioprosthetic valve (BPV) or mechanical heart valve (MHV). Due to their durability, MHVs are more commonly implanted in LMICs, however, evidence that pregnant women with BPVs have a decreased risk of valve thrombosis, bleeding, and fetal and maternal death has resulted in consideration of BPVs in women of child-bearing age. Data on maternal outcomes in postoperative RHD patients in LMICs is lacking, as nearly 90% of the pregnancies from the cited studies are within countries in North America and Europe. Here, we present the first data on maternal outcomes among Rwandan women with BPVs.

Methods:

Participants were identified using the Rwandan RHD surgical registry, which includes all postoperative cardiac patients since 2006. 130 of 168 eligible participants consented to the study. Eligibility criteria included female sex and surgery before or during childbearing years (ages 12-51). Trained data collectors administered a patient survey, which included questions regarding operative history, perioperative counseling, and questions about each pregnancy since surgery. Responses were de-identified and exported to STATA for analysis. Participants with MHVs and BPVs were analyzed separately, and all 18 consenting BPV patients were included in this report.

Findings:

On average, female patients with BPVs were 25.6 ± 8.4 years old at time of surgery (n=18). Most patients had a single valve operation, with a small number having two operated valves (13, 72% vs. 5, 28%). The most commonly operated valve was the mitral valve, followed by the aortic and tricuspid valves (14, 61% vs. 6, 26% vs. 3, 13%). Two thirds of patients with BPVs reported getting pregnant after surgery (12, n=18). The majority (83%) of participants reported that their pregnancies were intentional. Most pregnancies resulted in term deliveries (83%, n=18), with a minority resulting in spontaneous miscarriage (2, 11%) and one elective abortion (6%). One pregnancy was complicated by postpartum hemorrhage.

Interpretation:

A large percentage of women in our patient population with BPVs become pregnant after surgery, and the majority experience healthy pregnancies and deliveries. Additional analysis is needed to compare outcomes among women with MHVs and BPVs in our patient population.

Source of Funding:

Team Heart Inc., Stanford MCHRI, Stanford CVI

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 411

Reasons for patients with Non-urgent conditions attending the Emergency Department in Kenya

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Background:

Scant literature exists on the non-urgent use of emergency departments in Sub-Saharan Africa and its effects on the provision of effective emergency care services. With the surge in the prevalence of non-communicable diseases compounded by an already prevailing significant problem of communicable diseases and injuries in this setting, there has been a rising demand for emergency care services. This has led to ED overcrowding, increased healthcare costs, extended waiting periods and overstretched essential services. The main objective of this study was to determine why patients visit the ED for non-urgent care.

Methods:

A descriptive qualitative study was conducted at a tertiary university hospital ED in Nairobi, Kenya. Purposive sampling was used to select patients triaged as less urgent or non-urgent. In-depth interviews were conducted until thematic saturation was achieved. The interviews were audio recorded, transcribed verbatim and analyzed thematically

Findings:

Thematic saturation was reached after interviewing twenty-four patients. The obtained data was discussed under three main themes: (1) reasons why patients visited the ED for non-urgent care, (2) patients understanding of the roles of the ED, and (3) patients' perceptions about the urgency of their medical conditions. Several factors were identified as contributing to the non-urgent use of the ED including positive experiences during past visits, a perception of availability of better services and the closure of other departments after office- hours and on weekends. It was found that non-urgent ED visits occurred despite most patients having an understanding of the role of the ED as an appropriate location for the treatment of patients with life threatening conditions.

Interpretation:

This study highlighted several reasons why patients with non-urgent medical conditions seek care in the ED despite being able to correctly identify its purpose within the national emergency care framework. Regular patient education regarding which conditions warrant ED attendance and alternative sites of care for non-urgent conditions could potentially help reduce ED patient numbers.

Source of Funding:

Agakhan University hospital grant of Ksh 100,000

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Background:

Maternal, Child and Adolescent Health Lead Executive Office of the Ministry of Health conducted Integrated Measles Supplemental Immunization Activity (SIA) and Integrated COVID 19 vaccination campaigns in 2022/23. Measle vaccination, COVID-19 vaccination, HPV vaccination, identification and vaccination of zero dose children, identification and linkage of fistula and organ prolapse cases, identification and linkage of club foot children, identification and linkage of sick children, malnutrition screening, and adolescent and youth health information were the main health services integrated with the campaigns.

Methods:

Services were provided at fixed posts, temporary outreach posts and by a mobile team of experts. Implementation guide and training materials were developed beforehand. More than eighty trained experts from the Ministry of Health (MoH), all regional health bureaus, and agencies and partners of the MoH supporting the campaign cascaded the training for coordinators, team supervisors, vaccinators, and social mobilizers at all levels. Social behavior change communication (SBCC) materials were developed and distributed using SMS, social media, TV, and radio stations. Advocacy and sensitization meetings held with government leaders, media professionals, and religious and community leaders.

Findings:

Measles SIA campaign

Nationally, 14,579,787 (98.5%) of the target were vaccinated for measles and 109,984 Zero dose children reached. In addition, 15,177,932 were screened for malnutrition, 8,817,098 children were dewormed, 3,649 children with clubfoot identified and linked to health facilities. Women suspected of obstetric fistula and organ prolapse (1,324) were referred to health facilities and 338 of them were confirmed and received treatment.

Fourth round COVID 19 vaccination campaign

Nationally, 14,376,280 (80%) were vaccinated for COVID 19 and 2,585,636 girls vaccinated for HPV1 and HPV2. In addition, 54,998 Zero dose children reached, 7,966,903 children screened for malnutrition, 28,158 sick child cases were identified and referred to health facilities. Adolescent and youth health information was provided for 1,359,532 adolescents and youths.

Interpretation:

Albeit the limitations related to reaching every household, the integrated campaigns in showcased an efficient execution of delivering high impact health services, benefiting large population with less cost. Such integrated approaches will also help address inequities in accessing health care services, especially among vulnerable and most at-risk communities.

Source of Funding:

Ministry of Health, Ethiopia

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 416

Development of a Person-Informed Orientation Manual for Kenyan Medical Trainees Rotating in North America

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Background:

Bidirectionality in global health partnerships is essential for medical trainees at institutions in both high-income countries (HICs) and low and middle-income countries (LMICs) to ensure equitable education. While efforts to support and improve bidirectional education exchange is ongoing, there is limited literature, resources, and tools for preparing trainees from LMICs as they embark on navigating new healthcare systems and cultural norms. The objective of this study is to report on the development of a comprehensive orientation manual informed by perspectives of former trainees for Kenyan students and residents who will travel to North America for medical electives as part of our institution's bidirectional education exchange.

Methods:

This study was conducted within the Academic Model Providing Access to Healthcare (AMPATH), a partnership between Moi University School of Medicine in Eldoret, Kenya and a consortium of institutions in North America. A team of Kenyan and North American AMPATH educators facilitated two focus group discussions (FGDs) with Kenyans who had completed a medical elective at a North American school in the past five years. 15 trainees participated in the initial FGD and 11 trainees participated in the second FGD. The initial FGD informed the structure and contents of an orientation manual and discussion points were incorporated into an updated draft. The second FGD invited trainees back to refine the drafted guide for future trainees visiting a North American site.

Findings:

Based on the first FGD, electronic medical record (EMR) access and use was seen as a challenge, and a section about EMRs was added to the orientation manual. Former trainees noted clinical expectations including "pre-rounding", attending physician expectations from trainees, and hours spent in the hospital for clinical rotations and call would be helpful information to have. Other topics that the FGD thought would be useful were travel logistics, North American and site-specific culture, and safety information. During the second FGD, the group specifically recommended incorporating guidelines on airport safety, communication and payment methods, and cost differences. This revised orientation manual will be distributed starting in 2023.

Interpretation:

Written materials informed by participants in LMICs are valuable tools in improving the equity of bilateral global health exchanges. To assess the new manual, interviews will be conducted with trainees who complete a rotation before and after implementation of the guide to compare themes and challenges of navigating international electives.

Source of Funding:

None

Abstract N°: 427

“Don’t Trust the Beauty” What Social Media Analyses Can Tell Us About Ghanaian Women’s Concerns during Pregnancy

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Background:

Social media platforms (i.e. Facebook, Instagram) are used by over 2.5 billion people globally, for networking and community building, as well as for healthcare information seeking and decision-making. Most studies investigating the utilization of social media during pregnancy have focused on high-income countries, despite the surge in internet access and social media utilization globally. In this study, we analyzed how pregnant women in Ghana, West Africa, utilize Facebook to inform decision-making on their most salient pregnancy concerns.

Methods:

We used machine learning techniques (Web Scraping, and Latent Dirichlet Allocation) to mine and analyze posts from the MidWife Sally Pregnancy School Facebook group between April 29, 2023 and August 16, 2020 when the group was created. Even though analyses of social media and other publicly available data do not require IRB review, we followed the ethical guidelines set forth by the Association of Internet Researchers. Posts were extracted, cleaned, and analyzed using Gensim python library. Topics were generated based on their probabilities and relevance to the study goal.

Findings:

A total of 3328 posts were extracted and 3322 were analyzed after removing 6 empty posts.

Seven major topics with listed subtopics were identified:

Pregnant (693 posts): personal physiological changes, exercise during pregnancy, medication (e.g. anti-malarials, pain killers)

Delivery (367): emergency delivery, vaginal/Click here to enter text.caesarean birthing, breastmilk production, exercise during pregnancy

Pain (350): location of pain and pain relief modalities (e.g. exercise, medication, sleep)

Breastfeeding (248): delivery, emergency service, milk production

Water (174): cold water consumption, infant feeding (e.g. gripe water, constipation, formula)

Sleeping (165): discomfort, sleeping positions, exercise to induce sleep, sleep as a natural analgesic

Antenatal (124): fetal growth, progress, hospital selection.

Of note, content from “Pregnant”, “Delivery” and “Sleeping” included mentions of depression, while “Breastfeeding” highlighted cultural approaches to increasing milk production (kenkey, groundnut or palmnut).

Interpretation:

Social media analysis, previously employed in high income settings, can provide impactful, granular snapshots of pregnant people’s concerns in the African region, which could be used to inform social media interventions aimed at filling educational gaps in antenatal care for those without adequate healthcare access.

Source of Funding:

Funding for Dr. Anto-Ocrah was provided by NIH K01NS121199

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 430

A novel method of engaging women in rural Bangladesh to improve health awareness and outcomes

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Background:

Gender inequality in Bangladesh adversely impacts women's health by restricting their access to resources, technology, and decision-making autonomy. This study aimed to harness technological centers in three rural districts in Bangladesh to create a novel system of identifying and addressing gaps in healthcare awareness among women.

Methods:

Tech-hubs are centers founded by the SBK Foundation, a Bangladeshi non-profit, to promote technological equity among women and youth in marginalized communities. A needs-assessment was disseminated and survey responses identified key topics of interest to the participants. Focus groups were then conducted in the tech-hubs. All of these activities were conducted in Bengali, the native language of the participants.

Findings:

One hundred women participated and three key health topics were identified: mental health, safe pregnancy and labor, and cancer screening. Focus groups raised concerns regarding the lack of reliable information from qualified and trustworthy medical professionals and the prevalence of medical misinformation.

Interpretation:

Our study demonstrates how the novel use of technology in Bangladesh can bring together communities, conduct community-centered research, and disseminate information. The study results are now being used to create digital medical content that can be screened in the tech-hubs alongside live Q&A sessions with Bangladeshi health experts, with the ultimate goal of improving health awareness of health seeking behaviors among women in rural Bangladesh. Our study demonstrates how harnessing local talent and infrastructure can decolonize global health interventions and dismantle top-down approaches, empowering communities to identify problems and create solutions that are best suited to their conditions.

Source of Funding:

MedGlobal

Abstract N°: 432

Implementation of Male-Specific Motivational Interviewing in Malawi: An Assessment of Intervention Fidelity and Barriers to Scale-Up

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Background:

Treatment interruption (TI), defined as >28 days late for ART appointment, is one of the greatest challenges in controlling southern African HIV epidemics. Negative client-provider interactions remain a major reason for TI and barrier for return to care, especially for men. Motivational interviewing (MI) facilitates client-driven counseling and improves client-provider interactions by facilitating equitable, interactive counseling that helps clients understand and develop solutions for their unique needs. Fidelity of MI counseling in resource-constrained health systems is challenging.

Methods:

We developed a male-specific MI curriculum for Malawian male TI clients. Four psychosocial counselors (PCs, a high-level Malawian counseling cadre) received a 2.5-day curriculum training and job-aid to guide MI counseling approaches. They participated in monthly phone-based discussions with their manager about MI-based solutions to challenges faced. PCs implemented the MI curriculum with men ≥15 years who were actively experiencing TI. Clients were found at home (through tracing) or at the facility (for those who returned to care on their own). MI counseling sessions were recorded, transcribed, translated into English, and coded in Atlas.ti v9. MI quality was assessed using a modified version of the validated Motivational Interviewing Treatment Integrity tool. The tool has two measures: 1) counts of key MI behaviors throughout the session (questions, reflections, etc.); and 2) overarching scores (using a five-point scale) that characterize three MI dimensions for an entire counseling session (cultivating change talk, partnership, and empathy).

Findings:

44 MI sessions were recorded and analyzed between 4/1/22-8/1/22. 64% of counseling sessions focused on work and travel as the main barrier to sustained HIV treatment. 86% of sessions yielded client-driven, tailored solutions for overcoming barriers to care. PCs implemented multiple MI behaviors very well: asking questions, giving information, making simple reflections, and affirming the client (accentuating strengths or efforts). Few PCs used complex reflection, emphasized autonomy, or sought collaboration (shared power, acknowledging client expertise). For overarching MI dimensions, HCWs scored high in partnership (promoting client-driven discussions) and cultivating change talk (encouraging client-driven language and confidence for behavioral change) but scored sub-optimal in empathy (grasping client perspectives). Only 5 sessions had confrontational/negative PC attitudes.

Interpretation:

PCs implemented MI with fidelity and quality resulting in tailored, actionable plans for male re-engagement in HIV treatment in Malawi. Additional research is needed to understand if MI components like empathy and client autonomy significantly improve outcomes and how to promote MI implementation in limited-resource routine care settings like Malawi.

Source of Funding:

Bill & Melinda Gates Foundation (INV-001423), Global Health Program UCLA

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 434

A Bidirectional Global Neurology Residency Experience for Peru and US Neurology Residents

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Background:

Bidirectional international resident experiences between low-to-middle-income country (LMICs) and high-income countries (HICs) has been shown to improve resident education and lead to sustainable partnerships that may help foster trainee career development. Here we describe a bidirectional neurology residency observership between the neurology residents of the University of North Carolina at Chapel Hill (UNC) and Hospital Nacional Cayetano Heredia (HNCH) in Lima, Peru.

Methods:

The UNC-UPCH resident experience is a new four-week resident elective in global health in each institution's Department of Neurology. A neurology resident from either institution would spend four as an observer in the diagnosis and care of patients with neurological conditions, including neurological emergencies, neurological infections, and outpatient care of patients with neurological conditions. The rotating resident is expected to attend hospital rounds every morning with the neurology team at the host institution and attend all resident didactics, as well. Two to three afternoons per week, the resident spends time as an observer in the clinics of an attending neurologist in a sub-specialty that may be of interest to them (for HNCH residents visiting UNC) or in the general neurology outpatient clinics (for UNC residents visiting HNCH). The resident is expected to present during Grand Rounds and attending neurologists and residents of both institutions are invited. The resident is expected to develop a scholarly project during the rotation including research or teaching activities at the host institution.

Findings:

The purpose of this rotation is to: 1. develop a general understanding and gain hands-on experience of the practice of neurology in global health settings, including the challenges of diagnosis and treatment of neurological emergencies treatment and critical care management in a limited resource setting; 2. understand the epidemiology, presentation, approach to diagnosis and treatment of common neurological disorders in global health settings; 3. understand the cultural aspects and health systems relevant to the practice of neurology in global health settings; 4. improve the understanding of semiology of the diagnosis and treatment of neurological disorders in other settings, including resource-limited settings; 5. Understand the social, political and economic forces within countries and international relations that guide healthcare funding and delivery.

Interpretation:

Through bidirectional international resident experiences, residents can gain a better understanding of the practice of neurology and management of neurological conditions in a different practice setting. This can help gain a wider perspective on diagnostics and healthcare delivery in other settings that can be applied in the resident's home country.

Source of Funding:

None

Abstract N°: 455

EPIDEMIOLOGY, TREND AND CLINICOPATHOLOGICAL CHARACTERISTICS OF PROSTATE CANCER IN NORTHERN TANZANIA: ANALYSIS FROM A POPULATION BASED CANCER REGISTRY DATA OF 2015-2021

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Background:

Prostate cancer is a common disease in Tanzania and is the common cause of mortality among men. There is a limited data pertaining to prostate cancer in Tanzania and therefore, we do not have enough evidence to advise the authority on measures to combat it. The study aimed at assessing the prevalence, trend and clinicopathological characteristics of prostate cancer in northern Tanzania.

Methods:

This retrospective cross-sectional study utilised cancer registry data for the northern zone of Tanzania where all adult men diagnosed with cancer and recorded from 2015-2021 were identified. Men who were diagnosed with other cancer other than prostate cancer were excluded after determining the prevalence. Age, symptoms and prostate specific antigen (PSA) at presentation, Gleason score and metastatic statuses were the main variable included. Risk stratification was done as per American Society of Medical Oncology that comprised of low, intermediate and high risk. Analysis was done by STATA version 17.

Findings:

About 5164 adult men were registered in the Kilimanjaro cancer registry from 2015-2021, prostate cancer accounted for 1619(31.35%) with an increasing trend throughout the study period. The mean age at presentation was 73.9(±10.1), majority of study subjects were from Kilimanjaro region 1200(74.1%). Almost all subjects were symptomatic at presentation 710(99.4%) with lower urinary tract symptoms being the most common symptoms 548(76.8%). The median PSA at presentation was 109(36.2-263) ng/ml, majority 426(60.7%) had Gleason score of ≥8 and metastatic disease was prevalent in 178(24.9%). About 147(96.7%) of study subjects had high-risk disease and almost all of them had androgen deprivation therapy 440(94.6%).

Interpretation:

The burden of prostate cancer in northern Tanzania is high and majority of subjects are symptomatic at presentation. Almost all subjects have high-risk disease with androgen deprivation therapy being the common treatment offered. Prostate cancer screening needs to be emphasised among men in northern Tanzania for early diagnosis and treatment.

Source of Funding:

This work received support from PCF-Pfizer Global Health Equity Challenge Award (Pfizer No. 67641037) and American Society for Clinical Pathology/Coalition for Implementation Research in Global Oncology (ASCP/CIRGO).

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Background:

Mentorship is an essential component of research capacity building for young researchers in the health sciences. The mentorship environment in resource-limited settings is gradually improving. This article describes mentees' experiences in a mentorship program for junior academicians amid the COVID-19 pandemic in Tanzania.

Methods:

This is a survey study that examined the experiences of mentees who participated in a mentorship program developed as part of the Transforming Health Education in Tanzania (THET) project. The THET project was funded by the US National Institutes of Health (NIH) under a consortium of three partnering academic institutions in Tanzania and two collaborating US-based institutions. Senior faculty members of respective academic institutions were designated as mentors of junior faculty. Quarterly reports submitted by mentees for the first four years of the mentorship program from 2018 to 2022 were used as data sources.

Findings:

The mentorship program included a total of 12 mentees equally selected from each of the three health training institutions in Tanzania. The majority (7/12) of the mentees in the program were males. All mentees had a master's degree, and the majorities (8/12) were members of Schools/Faculties of Medicine. Most mentors (9/10) were from Tanzania's three partnering health training institutions. All mentors had an academic rank of senior lecturer or professor. Despite the onset of the COVID-19 pandemic, the regular weekly meetings between mentors and mentees were not affected. By the fourth year of the mentorship program, more than three-quarters of mentees had published research related to the mentorship program in a peer-reviewed journal, over half had enrolled in Ph.D. studies, and half had applied for and won competitive grant awards. Almost all mentees reported being satisfied with the mentorship program and their achievements.

Interpretation:

The mentorship program enhanced the skills and experiences of the mentees as evidenced by the quality of their research outputs and their dissemination of research findings. The mentorship program encouraged mentees to further their education and enhanced other skills such as grant writing. These results support the initiation of similar mentorship programs in other institutions to expand their capacity in biomedical, social, and clinical research, especially in resource-limited settings, such as Sub-Saharan Africa. Keywords Mentorship, Research, Mentees, Lesson learned, Tanzania

Source of Funding:

Fogarty International Centre of the National Institutes of Health, under award number R25 TW011227. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health

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Background:

Rivers State in Nigeria is densely populated with thriving fishing communities and had an HIV prevalence rate of 3.8% in 2019, twice the national average of 1.9%. Previous studies in other African countries indicate that fishing communities often are at high risk of HIV infection. However, there is limited research in Nigeria on the possible connections between HIV infection and fishing communities. Our team explored sociocultural and contextual factors driving HIV infections in three selected fishing communities in Rivers State, as well as obtaining local recommendations for HIV prevention strategies.

Methods:

Study communities were selected in consultation with the Rivers State Ministry of Health. A total of 112 participants participated in data collection. This included four in-depth interviews (IDIs) with state government staff, 12 IDIs with community leaders and 12 focus group discussions (FGDs) with community members (n=96). FGDs were stratified according to gender and age. Coding and analysis of transcripts were conducted using NVivo software (v14). A thematic analysis approach was used to identify emerging themes.

Findings:

Participants were generally knowledgeable about modes of HIV transmission and risk factors. Some participants observed that women may consensually exchange sexual favors for fish due to socioeconomic hardships. A few participants noted that sexual exchange could sometimes be coercive. Participants also noted that riverine areas were close to oil wells which attracted illegal bunkering activities and transactional sexual activities. Cultural practices such as “wife-sharing”, polygamy, female genital mutilation using unsterilized instruments, as well as use of traditional birth attendants were identified as predisposing factors to HIV infection. Other contributory factors in these fishing communities included lack of condoms, sharing of clippers at barbing salons, and cultism. Participants also identified potential HIV prevention strategies and responsible persons for implementing them.

Interpretation:

HIV infection was perceived as an important health problem in the three study communities. Participants identified specific sociocultural practices and socioeconomic factors contributing to HIV infection in fishing communities. Potential mitigation strategies suggested for the Rivers State government include increased HIV education with emphasis on prevention and improving socioeconomic well-being of communities, especially for women who rely on transactional sex in fishing community settings.

Source of Funding:

The study was funded by the Moses Sinkala Travel Scholarship.

Retention in Care Among People Living with HIV in Nigeria: A Systematic Review and Meta-Analysis

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Background:

As of 2021, Nigeria had an adult HIV prevalence of 1.3%, with an estimated 1.9 million people living with HIV (PLHIV), 1.7 million (90%) on antiretroviral therapy (ART), and 1.6 million (86%) having suppressed viral loads. However, it is not clear what proportion remains on treatment long enough to achieve and maintain viral suppression. This meta-analysis synthesizes evidence on the proportion of PLHIV retained in care while receiving ART in Nigeria.

Methods:

This meta-analysis followed the PRISMA 2020 guidelines. In September 2021, we conducted a search on PubMed, Embase, PsychINFO, CINAHL, Global Index Medicus, and Cochrane Library with no date restriction. Studies were included if they reported on retention in care among PLHIV in Nigeria on ART. The random-effects meta-analyses were used to combine all the studies that had complete retention data. The I² statistic was used to assess the heterogeneity of the studies. A sensitivity analysis was done by conducting a leave-one-out analysis. Data were analyzed using R.Studio v.4.2.0.

Findings:

The search yielded 966 unique articles, of which 52 met the inclusion criteria. For the meta-analysis, four experimental studies were split into their component arms. The pooled retention rate was 73% (95% CI = 71-75%; I² = 99.6%, p= 0.0001; n = 57). Retention ranged from 36.4% to 100%. Results from the sensitivity analysis after removing 14 influential papers showed a pooled effect size of 72% (95% CI = 70-74%). Sub-analysis showed the South-East region had the highest retention of 85% (95% CI = 80-90%), followed by South-West (76%; 95% CI = 65-84%), North-Central (75%; 95% CI = 70-79%), North-West (68%; 95% CI = 58-76%), and South-South (64%; 95% CI = 43-80%). There were no studies from the North-East region. Studies published between 2011-2015 had the highest retention of 74% (95% CI = 70-77%, n=26), followed by 2016-2021 (73%; 95% CI = 70-76%, n=27), and 2005-2010 (65%; 95% CI = 42-82%, n=4). In Nigeria, the pooled retention rate on ART is sub-optimal.

Interpretation:

To achieve the UNAIDS target of 95% viral load suppression among PLHIV, Nigeria will need to develop new models for retaining PLHIV on ART.

Source of Funding:

PEAK Ascent Award from Northeastern University, Boston, MA, USA.

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Program/Project Abstract

Abstract N°: 485

Detection, molecular epidemiology, and mapping of Anthrax outbreaks in Jordan

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Background: Although a very few studies provide some very useful information, they do not resolve two key questions: 1) do *B. anthracis* cells from farm animals that died of anthrax spread beyond the carcasses and 2) can farm animals have asymptomatic anthrax infections? Here, we address these fundamental research questions in farm animals in Jordan.

Methods:

Biotic, abiotic and soil samples were collected from carcasses and its vicinity. DNA and serums were extracted and shipped to ANL and Loyola for molecular and serological analysis. GIS coordinates were recorded to map the locations of suspected outbreaks. Soil samples were analyzed according to the GABRI method for presence of *B. anthracis*. PCR and qPCR of spore positive samples and canSNP analysis were performed. ELISA method were assessed for the presence of specific antibodies against anthrax Protective, Lethal and Edema Factors.

Findings:

Results indicated positive staining of *Bacillus anthracis* in blood but negative from nose, mouth, anus etc. qPCR results indicated that *B. anthracis* was associated with all anthrax outbreaks. Samples pertaining to carcass animals show that *B. anthracis* could be detected in at least one site from the carcass. Additionally, *B. anthracis* could rarely be found in the underlying soil of the carcass (soil samples away from the carcass did not show presence of *B. anthracis* like bacteria under microscopy). For asymptomatic animals, *B. anthracis* could also be detected in multiple sample specimens. *B. anthracis* was also detected on abiotic samples, fence posts as well as boots of farm workers. About 53 PCR-positive samples with higher concentrations of DNA were analyzed by canSNP. Unfortunately, canSNP data generated was generally uninformative. However, two enriched isolates resulting from DNA extraction of colonies formed on PLET agar were provided canSNP analysis sublineage to be C.USA.A1055.

Interpretation:

Our results suggest *B. anthracis* cells from farm animals that died of anthrax can spread beyond the carcass. Positive PCR results indicate the presence of *B. anthracis* in the blood of asymptomatic animals. Additionally, positive ELISA results on blood from asymptomatic animals indicate prior exposure to *B. anthracis*. Together these results suggest asymptomatic animals can be infected without displaying clinical signs of the infection. They likely resolve the infection as indicated by their seropositivity to *B. anthracis*. However, it is not clear if asymptomatic animals infected with *B. anthracis* can directly transmit the disease to uninfected animals.

Source of Funding:

Project funded by DTRA Grant/Award #: HDTRA11710050. We acknowledge DTRA financial support for the research.

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Background:

Cervical cancer (CC) is the fourth most common malignancy in women of reproductive age globally. The burden of this disease is highest in LMICs, especially among women living with HIV (WLHIV). In 2018, WHO launched a global strategy to accelerate CC elimination through rapid scale-up of prophylactic vaccination, cervical screening, and treatment of pre-cancers and cancers. This initiative is a key in raising a call for action to address the stark global disparities in CC burden.

Methods:

This Position Paper shows specific challenges and uncertainties on the way to CC elimination for WLHIV and highlights the scarcity of evidence for the effect of interventions in this population.

Findings:

We argue that reaching equity of outcomes for WLHIV will require substantial advances in approaches to HPV vaccination and improved understanding of the long-term effectiveness of HPV vaccines in settings with high HIV burden CC, just as HIV, is affected by social and structural factors such as poverty, stigma, and gender discrimination that place the elimination strategy at risk. Global efforts must, therefore, be galvanised to ensure WLHIV have optimised interventions, given their substantial risk of this preventable malignancy.

Interpretation:

HPV immunisation programmes must be expanded, and the use of evidence based HPV vaccine schedules that specifically address populations with a high burden of HIV is urgently required. An evidence-based clinical algorithm of care requires urgent attention for WLHIV who are positive for oncogenic HPV. Service integration models with antiretroviral treatment services might expand access to CC interventions for WLHIV. Addressing gender bias will be key to achieving the right to equitable inclusion of WLHIV in the cervical cancer elimination strategy.

Source of Funding:

N/A

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Background:

Suicidality and depression are common in people living with HIV (PLWH) in sub-Saharan Africa, but longitudinal data are lacking to determine the persistence of suicidality and depression. We sought to determine the prevalence and predictors of persistent suicidality and depression, and the sensitivity and specificity of the Patient Health Questionnaire-2 (PHQ-2) as a screening tool for depression.

Methods:

In a cohort study of PLWH and HIV-uninfected adults >18 years in Mwanza, Tanzania, the Patient Health Questionnaire (PHQ-9) was administered at two visits: enrollment and 3-24 months follow-up. Item 9 of the PHQ-9 assessed suicidality. Outcomes were persistent depression (PHQ-9≥10 enrollment and follow-up) and persistent suicidality. Multivariate logistic regressions, adjusted for age, sex, HIV status, and factors significant in univariate logistic regressions, were conducted to determine the strongest predictors of persistent depression and suicidality ($p<0.05$). Immune non-response was defined by $CD4^+<350$ cells/mm³ at follow-up for virologically suppressed PLWH. The sensitivity and specificity of the PHQ-2 were longitudinally assessed against the PHQ-9. This study was approved by the Research Ethics Committees of Weill Cornell Medicine and Tanzania National Health Research Ethics; written informed consent was obtained.

Findings:

Suicidality and depression were common at baseline but persisted in a minority of participants. Persistent suicidality was more common in PLWH (5.63%) compared to HIV-uninfected (2.40%; $p=0.014$). The prevalence of persistent depression was similar by HIV status. In multivariate analysis, lifetime alcohol use (aOR: 2.89 [95%CI: 1.18-7.05]) and lower weekly fruit intake (0.76 [0.63-0.91]) independently predicted persistent suicidality. Among PLWH, persistent suicidality was associated with younger age (0.45 [0.26-0.79]) and immune non-response (4.23 [1.31-13.71]), but not viral load suppression. Female sex (2.33 [1.18-4.58]), lifetime alcohol use (2.26 [1.24-4.15]), and lower fruit intake (0.87 [0.77-0.97]) independently predicted persistent depression. PHQ-2 was more sensitive among HIV-uninfected at enrollment (83.18%) and follow-up (88.46%) as compared to PLWH (76.44% versus 81.48%, respectively).

Interpretation:

Persistent suicidal ideations are common in PLWH, linked to alcohol use, poor diet, and immune non-response. Integrating mental health with HIV care is essential to improve long-term outcomes in PLWH. The lower sensitivity of the PHQ-2 in PLWH suggests full PHQ-9 may be needed to screen depression in this population.

Source of Funding:

This study was funded by NHLBI HL160332.

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Scientific Abstract

Abstract N°: 492

Associations between reported leishmaniasis incidence, conflict intensity, and environmental factors, 2005 - 2020

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Background:

Leishmaniasis, a vector-borne disease spread by *Phlebotomus* sandflies, causes significant morbidity globally. Cutaneous and mucocutaneous leishmaniasis (CL/ML) are two forms of the disease and are vulnerable to changes from environmental events and conflict. Factors such as poor living conditions, malnutrition, and widespread poverty and displacement are associated with higher leishmaniasis burdens. In this study, we aim to measure the associations between annual CL/ML incidence, conflict intensity, and environmental factors between 2005 and 2020 globally.

Methods:

We utilized annual reported cases of CL and ML from the WHO for 53 countries which had conflict intensity scores from the Bertelsmann Transformation Index. These biennial scores ranged from one to ten, with ten indicating widespread violent conflict or civil war. We transformed these into annual measurements and created severity quintiles ranging from Low (conflict intensity of 1-3) to Severe (7.5-10). Annual population counts were used to report annual incidence per 100,000. We extracted total precipitation, temperature (mean and range), and humidity (mean and range) from remote sensing tools, in addition to annual GDP and the estimated number of internally displaced individuals per country. These were used to fit a negative binomial generalized additive model with a random intercept for nation.

Findings:

Countries with severe conflict intensity had over double the risk of CL/ML incidence when compared to countries with low levels of conflict (2.42, 95% CI: 1.51-3.87, p=0.0002). No other conflict severities showed a significant association. There was a curvilinear association between mean temperature and CL/ML incidence. Lastly, displacement acted as an important mediator in the relationship between conflict intensity and CL/ML incidence.

Interpretation:

Severe conflict, which marks when conflict turns violent, is significantly associated with increased CL/ML incidence. This suggests that violence, and its ensuing destruction, may be driving this association. Such environments can be hospitable to the sandfly vector, and individuals' vulnerability to the disease is enhanced through increased malnutrition, poverty, and displacement. Understanding this relationship is crucial for enhancing public health preparedness and response, especially as conflicts globally become increasingly violent and protracted.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 495

Short and Long Term Impacts of Community & Global Health Programming During Medical School

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Background:

The Loyola Stritch School of Medicine’s Community and Global Health Honors (CGHH) Program was established in 2010 in response to a growing interest in global health (GH) among students. Participants attend lectures covering topics in global health, participate in local and/or international field experience, and complete GH-focused scholarly projects. Since GH education has expanded rapidly in the past few decades, there is limited data on short or long term impacts of programs like CGHH. This study aims to identify the most impactful aspects of the CGHH program and how the program has shaped graduates’ careers.

Methods:

151 individuals who were graduates of the CGHH program between 2011-2021 were contacted via email and asked to answer a survey on REDCAP. Survey questions centered on post graduate activities and perceptions and impacts of the program. Responses were pooled for qualitative analysis.

Findings:

Of the 151 contacted, 60 completed the survey as of this present analysis. The most common specialties among participants include Family medicine (10, 16.4%), Obstetrics and Gynecology (7, 11.5%), and Internal Medicine (6, 9.8%). Of the 29 participants who have completed residency/fellowship training, the vast majority endorse spending at least 50% of their time with medically underserved populations (26, 89.7%), such as ethnic or racial minorities (18, 62.1%), non-English speakers (12, 41.4%), patients with substance use disorders (11, 37.9%), homeless population (10, 34.5%), immigrants (8, 27.6%), incarcerated (6, 20.7%), and LGBTQ (5, 17.2%). After residency/fellowship training, several respondents have participated in Global Health (GH) focused work in international (8, 27.6%) or domestic settings (19, 65.5%), GH-related advocacy (12, 41.4%), or GH research (3, 10.3%). Participants shared that the most impactful components of the CGHH program for professional development were international field experiences (32, 53.3%) and longitudinal local community involvement (16, 26.7%).

Interpretation:

CGHH program graduates shared feedback about the most impactful aspects of the program, namely the international field experiences and local community involvement. CGHH graduates were most likely to be primary care physicians working with underserved populations.

Source of Funding:

None.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 497

The Neglected Issue of Visual Health among Refugees: A Multi-Regional Analysis and Recommendations for Action

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Background:

Refugee’s well-being often overlooks a critical aspect: visual health. Neglecting this issue poses significant obstacles to their safety, education and overall quality of life. Our study aims to uncover the root causes, impacts, and potential solutions for visual health problems among refugees, advocating for its integration into their care and resettlement efforts. We must act promptly to ensure refugees receive the necessary care and resources for a better future.

Methods:

We systematically reviewed refugee visual health literature, utilizing PubMed, Scopus, and Cochrane databases from 2010 to 2023. Keywords included “refugees,” “visual health,” “eye diseases,” “blindness,” and “low vision.” Studies explored prevalence, causes, impacts, and interventions across diverse settings. WE excluded articles not meeting inclusion criteria or providing sufficient data. Selected articles underwent full-text review, and data were extracted, including author, year, location, sample size, characteristics, designs, findings and limitations. We categorized findings into five themes: problem prevalence, quality of life impacts, care barriers, access facilitators, and interventions/recommendations for refugee visual health improvement.

Findings:

Data from refugee populations in diverse regions (Turkey, Kentucky, Malmo) show high rates of visual problems and preventable blindness. Literacy appears linked to seeking treatment for visual issues, as literate individuals are more likely to seek care. Barriers to treatment encompass personal, economic, and societal factors, alongside trauma, stress, pre-existing eye conditions, injuries, and poor nutrition. Understanding refugee experiences is vital for program design and interventions. Available interventions like vitamin A, eye exams and health education remain under-researched due to resource constraints and limited education, contributing to poor refugee visual health.

Interpretation:

The analysis has shown the significant obstacles individuals face when seeking treatment for their vision issues, including personal, economic and social reasons. Findings have shown connections between literacy levels, visual impairments and the pursuit of treatment for visual concerns. It has been highlighted the need for increased resources and education to address the deterioration in visual acuity among refugees. By addressing literacy levels, overcoming barriers to treatment and providing adequate education, it would provide a fundamental step in improving the visual health outcomes and overall well-being of refugees.

Source of Funding:

None

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Background:

Hepatic Inflammatory myofibroblastic tumor (HIMT) is an uncommon condition. Most published papers on HIMTs are single patient case reports without detailed reporting on characteristics, management, or outcomes. This systematic review aimed to assess the demography, clinical presentation, typical imaging features, histopathology, and treatment and treatment outcomes of patients presenting with HIMT.

Methods:

A systematic literature search was performed in MEDLINE (PubMed), EMBASE (Scopus), JSTOR, Cochrane CENTRAL (Cochrane Library), and the databases included in the Web of Science for studies published between 1940 and 2023 on HIMTs, including its reported synonyms.

Findings:

After screening 4553 publications, 22 articles including a total of 440 patients with confirmed HIMTs were eligible for inclusion. The average age was 53.4 years (range from 42.0 to 65.0 years) with a male: female ratio of 1.7:1. Abdominal pain or discomfort, fever, and loss of weight were the most common presenting symptoms. HIMTs were mostly managed with surgical resections and had a low mortality of 3.4%.

Interpretation:

Although this systematic review is purely descriptive, it provides a comprehensive review of common characteristics of HIMT and helps with further investigations on its obscure etiology. HIMT is a disease more often affecting middle-aged males. The lesions are typically solitary with low recurrence after treatment. The relative roles of surgical versus medical treatment remain unclear. Differences in clinical presentation, histopathology, and treatment of HIMTs compared to inflammatory myofibroblastic tumors (IMTs) at extrahepatic sites could challenge the current view of IMT as a single pathological entity.

Source of Funding:

This research did not receive any funding.

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Program/Project Abstract

Abstract N°: 503

Protocol for a randomized controlled trial on integrated malaria prevention in rural Wakiso district, Uganda

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Background:

Malaria is the leading cause of morbidity and mortality in Uganda especially among children under five years of age. Integrated malaria prevention, which advocates for the use of several methods at households holistically, is being explored to contribute to controlling the disease. A randomized controlled trial (RCT) on integrated malaria prevention will therefore be conducted in rural Uganda.

Methods:

This will be a clustered RCT on integrated malaria prevention at household level among malaria-endemic rural communities. The study will involve 12 villages (clusters – 6 intervention and 6 control), with 30 households per cluster hence a total of 360 households. Intervention households will receive support on using 4 methods (long-lasting insecticidal nets (LLINs); improved housing quality including screening all openings on houses such as windows, vents and open eaves; closing of doors on houses before 6.00pm; and removal of potential mosquito breeding sites around houses). Control households will receive support on only 1 method (LLINs). The primary outcome of the study will be prevalence of malaria. The secondary outcomes will be presence of mosquitoes in houses, and work / school days lost.

Findings:

The prevalence of malaria among children under 5 years of age in both the intervention and control groups will be measured using rapid diagnostic tests at baseline as well as every 3 months for a period of 24 months. A semi-structured questionnaire on the perceived impact of interventions, and barriers to implementation will be administered to the household heads in both the intervention and control households at baseline and every 6 months. An observational checklist will also be used to assess the environmental risk factors at households such presence of stagnant water, as well as condition of housing every 6 months in the intervention and control households during the study.

Interpretation:

The RCT will provide evidence on the contribution of integrated malaria prevention in preventing the occurrence of the disease. This evidence will be used to inform malaria policy, practice and programming in Uganda and other endemic countries.

Source of Funding:

EDCTP2 programme, supported by European Union (TMA2020CDF-3189) and Fondation Botnar

Abstract N°: 513

Point-of-Care Ultrasonography for Diagnosing Extra-Pulmonary Tuberculosis: A Systematic Review and Meta-Analysis

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Background:

Tuberculosis remains a leading cause of morbidity and mortality globally. Diagnosis predominantly relies on microbiologic evidence of infection. However, microbiologic testing requires laboratory infrastructure inaccessible in many resource-limited areas and is may be insufficient for identifying some manifestations of extra-pulmonary disease, with sensitivities as low as 50% for testing abdominal fluid. Point-of-care ultrasound facilitates visualization of extra-pulmonary manifestations, permitting laboratory-independent diagnosis. While numerous studies have evaluated its performance in that context, equipoise surrounding clinical efficacy remains.

Methods:

We conducted a systematic review of 5 online databases (Medline, EMBASE, Web of Science, Global Health, Global Index Medicus). We included studies reporting ultrasound findings among cases with and without extra-pulmonary tuberculosis, and a formal case definition (microbiologic, radiographic, and/or clinical criteria). A minimum of two authors independently screened and reviewed each article, and extracted the following data elements: country, study design, sample size, demographics, modality of ultrasound, skill of sonographer, reference testing for extra-pulmonary tuberculosis, and effect estimates (sensitivity, specificity, positive predictive value, negative predictive value). We then conducted a series of univariate meta-analyses using a random-effects model to calculate the pooled effect estimate and 95% confidence interval (CI) for each outcome of interest: sensitivity, specificity, positive predictive value, negative predictive value. We performed planned sub-group analyses, stratified by risk of bias and by human immunodeficiency virus infection status.

Findings:

Our search identified 279 articles, 6 of which were included in analyses (one randomized trial, 5 cohort studies). The analyses included 699 cases among 1,633 participants from 4 countries. The pooled sensitivity estimate was 0.72 (95% CI 0.57-0.88), which did not differ on the sub-group analyses. The pooled specificity estimate was 0.77 (95% CI 0.63-0.90), which was lower (0.65; 95% CI 0.54-0.77) among studies with low concern for bias compared to some or high concern for bias (0.89; 95% CI 0.73-1.00) (p -value 0.02). The pooled positive and negative predictive value estimates were 0.67 (95% CI 0.47-0.87) and 0.85 (95% CI 0.77-0.93), respectively.

Interpretation:

Point-of-care ultrasound showed modest test characteristics for diagnosing extra-pulmonary tuberculosis. Notably, those characteristics, particularly for abdominal manifestations, may constitute a notable improvement over some currently available diagnostics.

Source of Funding:

Supported by the Harvard Global Health Institute Burke Fellowship Program.

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 517

Improving Virtual Mentorship - The Global Health Research Collaborative Mentorship Toolkit

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Background:

The Wayne State University School of Medicine Global Health Research Collaborative (GHRC) was created to provide education and mentorship in global health research to under-served regions via an online platform. During each of two summer workshops, our unique platform provided synchronous interactions between mentees and their paired faculty mentors. Each mentor was tasked with guiding trainees toward a potentially publishable capstone project. Moving forward, we aim to improve the mentorship program by implementing a formalized mentorship toolkit that will optimally align mentors and mentees prior to each workshop.

Methods:

In 2022, mentees and mentors were paired based on the professed interests of the mentees and the known research competencies of the mentor. An outline was distributed on expectations of the relationship, as well as a rubric for the capstone project. During the workshop, mentors met weekly with their mentee and gave feedback on the progress of the project. Following the workshop, mentees were surveyed to assess their experience with the mentorship program.

Findings:

Of the 2022 cohort, 88% (21 of the 24 participants) responded to our survey. 29% (6) worked on writing/submitting a grant with their mentor, 29% (6) are actively working towards a publication and 71% (15) are conducting the clinical research proposed in their project. 60% (12) found their mentor to be accessible and 70% (15) stated that their mentor provided constructive and useful critiques of their work.

Interpretation:

Our survey results suggested a lower-than-expected participation rate of mentors and mentees in clinical research, grants, abstracts and manuscripts. This evidence motivated our mentorship committee to conduct a thorough review of the program, and has led to the creation of a formal GHRC Mentorship Toolkit. This toolkit aims to enhance the mentorship experience of the workshop by fostering a stronger relationship between mentors and mentees by aligning them on motivation, expectations, communication and cultural competency. By distributing this toolkit prior to the start of our 2024 summer workshop we hope to enhance the sustainability of our mentorship program and improve on our goal of providing virtual mentorship and growing research capacity especially in the global south.

Source of Funding:

Wayne State University School of Medicine, Pfizer Pharmaceuticals

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Background:

Refugee populations' life and health vulnerabilities are a pressing concern worldwide and in the US. Afghan refugees, facing forced displacement, war trauma, and traumatic 2021 evacuations, are particularly vulnerable due to added challenges faced during host country resettlement, heightening health risks. This qualitative study explored providers' perspectives on barriers and facilitators of resettlement services.

Methods:

We conducted in-depth interviews (IDIs) and focus group discussions (FGDs) with Key informants (KIs) both in-person and over Zoom exploring the barriers and facilitators in providing resettlement services. We also created a map pinpointing recent Afghan refugee residence areas and resettlement agencies in Sacramento, California. Convenient sampling was used to select 39 KIs, aged 18+, representing 16 governmental organizations and NGOs, of these, n= 11 participated in IDIs, n= 7 participated in FGDs, with 4 individuals in each group. Verbal consent was obtained, and data was collected using a semi-structured interview guide and Google Maps. Qualitative data were coded using Nvivo, analyzed via framework analysis, and visually represented using an alluvial chart. Using R software, we made a density map service, highlighting neighborhoods and agency sites serving Afghan refugees in the Sacramento area.

Findings:

Distinct barriers and facilitators emerged across various themes and subthemes. Communication barriers encompassed women's autonomy, interpreter availability, and information materials. Mental and sexual health service challenges included cultural gender roles, family stigma, awareness, and trust concerns. System and policy barriers ranged from high service costs to fragmented delivery, transportation, and navigation issues. Empowerment and advocacy facilitators included service linkage and awareness, while culturally sensitive services encompassed holistic approaches, outreach, trust-building, immediate responses, and culturally competent providers. Funding and volunteering also emerged as supportive factors. The social maps indicated that most Afghans live in 20 separate zip code areas, with a concentrated presence in the northeastern part of Sacramento. In contrast, resettlement agencies are primarily located in central areas. This aligns with our qualitative findings, indicating transportation challenges.

Interpretation:

Insights from providers within governmental agencies and resettlement partners offer a nuanced understanding of the complexities within various resettlement service domains. Participants with refugee backgrounds mitigates the limitation of lacking refugee voices in our study. These findings highlight barriers spanning policy, structural, individual, and cultural realms. Addressing health equity demands comprehending social determinants affecting refugee and their subgroups, particularly women. Collaborative efforts are essential to address urgent needs, necessitating research, and concerted actions to empower and support refugee communities.

Source of Funding:

"None"

Abstract N°: 526

Tackling Twin Epidemics Amidst a Pandemic: Evaluating the Impact of COVID-19 on Management of HIV and Opioid Use Disorder in Hanoi, Vietnam

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Background:

Intravenous drug use persists as a barrier to reducing the global burden of HIV morbidity and mortality. The present study aimed to assess the impact of COVID-19 pandemic-related restrictions on access and adherence to antiretroviral therapy (ART) and methadone maintenance treatment (MMT) for people living with HIV and opioid use disorder (OUD) in Hanoi, Vietnam.

Methods:

In this qualitative study, we interviewed a convenience sample of 18 patient participants who received treatment services for HIV and OUD and six clinic employees from two clinics in Hanoi, Vietnam between December 2022-April 2023. Data were collected using semi-structured, face-to-face interviews. Data were evaluated by grounded theory-based analysis using Dedoose online software.

Findings:

Facilitators of adherence to ART/MMT throughout the pandemic, primarily during regional lockdowns in 2020-2021, developed under two core concepts: reduced intravenous drug use and access to clinical services. Factors contributing to reduced drug use included inability to afford drugs due to unemployment, fear of police checkpoints, and obligation to reduce in-person contact while quarantined with family. Maintained access to clinical services was facilitated by home delivery of ART/MMT for patients restricted by quarantine and/or hospitalization, validation of methadone travel cards, and adapted ART protocol to provide multi-month dispensing for adherent patients. Barriers to ART/MMT adherence included fear of publicized HIV/OUD status due to medical documentation, fear of community judgment for daily travel during lockdowns, initial rejection of methadone cards, and difficulty affording insurance co-pay. Clinic staff members endorsed significant provider burnout due to frequent adaptations in clinical protocols designed to maintain access to services, such as extended clinic hours, added job duties to include preparation and travel for medication delivery, and periods of mandated quarantine at clinical sites.

Interpretation:

Collaboration between health officials, local authorities, and service providers was critical in maintaining access and facilitating adherence to ART/MMT for this population during the COVID-19 pandemic. While successful in gaining contextual insight into patient and provider experiences, this study was limited by lack of quantifiable evidence to support our findings. Examining the quantitative impact of these structural interventions is the next step in determining opportunities to improve HIV/OUD treatment and prevention moving forward.

Source of Funding:

NIH Fogarty International Center Grant #D43TW009340

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Program/Project Abstract

Abstract N°: 543

Building a resilient One Health Workforce in Infectious Disease Management for prevention, detection and response to Emerging and Re-merging Global threats.

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Background:

Uganda is experiencing numerous preventable zoonotic disease outbreaks, infectious in nature, associated with morbidity and mortality, that demand competent one health workforce to prevent, detect and respond to them.

Methods:

In 2016, through Africa One Health University (AFROHUN) Network, Makerere University developed curriculum in One Health Principles in Infectious Disease Management for pre-service cadres to prepare them address merging and re-emerging infectious diseases threats.

Findings:

One thousand (1000) pre-service cadres were equipped with One Health principles to timely detect, prevent, and control zoonotic diseases during outbreak scenarios. We contributed to the availability of a resilient workforce, promoted health and wellness through community engagements, research and interacting with professionals from industry, medicine, public health, agricultural sector, and policy.

Interpretation:

The diversity and complexity of today's environmental, socio-economic, and infectious disease dynamics/ threats require ready workforce to respond and practice right skills and competencies to achieve global health security.

Source of Funding:

This study was made possible by the generous support of the American people through the U.S. Agency for International Development (USAID) One Health Workforce-Next Generation (OHW-NG) Award 7200AA19CA00018. The contents and associated materials are the responsibility of the authors and do not necessarily reflect the views of USAID or the U.S. Government.

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 545

Africa's Interprofessional Education Student Exchange Initiative: A partnership between AFREhealth and FAIMER a division of Intealth

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Background:

With a significant gap in Interprofessional Education and Collaborative Practice (IPECP) in Africa, the African Forum for Research and Education in health (AFREhealth) has partnered with the Foundation for Advancement of International Medical Education and Research (FAIMER), a division of Intealth to address this gap by implementing an IPECP student exchange program from 2019 to date.

Methods:

The purpose of this program was to equip health professional students with IPECP skills during International Electives (IEs), with a virtual African regional mobility approach.

Thirteen institutions responded to a call to offer a six-week virtual IPECP-IEs placement using faculty-guided country case studies. The curriculum was evaluated by IPECP experts before accepting institutions to meet the desired outcomes. Institutions agreed to select 2 faculty and send and receive a cohort of 5 multidisciplinary undergraduate students. Student selection was based on their letter of interest, clinical years, and time commitment.

An online learning management support system, faculty, and the existing African regional institutional leadership and partnerships encourage the viability of this program.

Findings:

African regional institutional collaborations have been developed with an emphasis on IPECP. Over 181 students from 9 professional disciplines and 27 faculty have participated in this program. Preliminary findings show that all students gained IPECP skills while appreciating the intercultural similarities and differences in disease management at their host institution. The faculty-guided country-specific studies have been a useful tool to advance and exhibit a novel approach to IEs with virtual implementation.

Interpretation:

Unstable internet at times during the synchronous session remains a challenge.

The final program evaluation that includes bivariate and multivariate analysis has not yet been conducted. We anticipate completion by 2025. Virtual approach to IEs may be a viable option in future programs. The program provides institutions in Africa with a viable benchmarking platform to structure IEs as one of the approaches to advancing training in IPECP and global health training.

Source of Funding:

AFREhealth NIH Grant 5R25TW011217-04

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Background:

In recent years, e-cigarettes have emerged as a potential alternative to traditional cigarettes, but their public health implications remain a topic of ongoing debate. To regulate the use of e-cigarettes, taxation has been proposed as a policy tool. This systematic review aims to synthesize the available evidence on the impact of e-cigarette taxation on demand, sales, and consumer behavior, as well as any unintended consequences.

Methods:

This study is a systematic review that follows PRISMA guidelines and utilized 8 electronic databases, including grey literature sources, to identify relevant studies. Eligible studies included quantitative research that examined the impact of e-cigarette taxation policies on demand, sales, and consumer behavior, as well as tax pass-through rate and tax elasticity. Data synthesis involved a narrative summary of the findings from the included studies, stressing quantitative evidence of the tax pass-through rates and tax elasticity. Quality assessment was conducted using JBI Critical Appraisal Checklists.

Findings:

A total of 20 studies were included: 16 were quasi-experimental studies, 4 were cross-sectional studies. Taxes on electronic cigarettes to have a negative impact on consumer purchasing behavior. The own-tax elasticity and cross-tax elasticity of e-cigarettes vary depending on the use measure and can range from -0.63 to -0.08 and 0.041 to 0.12, respectively. Several studies showed the tax pass-through rates in high-income (1.29-1.67) were higher than low- and middle-income countries (0.14-0.88).

Interpretation:

This study reveals the intricate nature of e-cigarette taxation's influence on pricing, sales, and consumption, highlighting its susceptibility to a multitude of factors, including the specifics of the tax policy, local market dynamics, and consumer and manufacturer behavior. Consequently, it is crucial to acknowledge the potential unintended consequences stemming from e-cigarette taxation, such as the stimulation of black-market sales or the transition towards potentially harmful alternative sources of e-cigarette products. The effectiveness of e-cigarette taxes in reducing consumption can fluctuate significantly, especially in cases where tax disparities exist across regions, underscoring the importance of policies that target vulnerable groups, particularly youth and low-income populations.

Source of Funding:

This study was supported by grant from National Natural Science Foundation of China [72174010], Natural Science Foundation of Beijing Municipality [M22033]. The funders had no role in the design of the study and collection, analysis, and interpretation of data and in writing the manuscript.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 554

Financial Toxicity among Cancer Patients and Survivors: A Comparative Study of the United Kingdom & United States

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Background:

Research is sparse regarding the nature and extent of financial toxicity (FT) among cancer patients and survivors. The study aims to compare experiences of FT in and between the United Kingdom (UK, publicly funded health system) and United States (US, mixed health funding system) as well as among sociodemographic groups within countries.

Methods:

600 adults who have/had cancer and were residing in the UK (n=319) or US (n=281) completed an online cross-sectional survey (in February 2023) which used a validated measure of FT (the COmprehensive Score for financial Toxicity-COST). Descriptive statistics were used to describe the prevalence and distribution of FT. Ordered logistic regression models were used in multivariate analysis in which the outcome was severity of FT defined as 'no', 'mild', and 'moderate/severe' based on COST scores of ≥ 26 , 14-25, and 0-13, respectively.

Findings:

In the UK, 34% of cancer patients/survivors faced mild (21%) or moderate/severe FT (12%). The respective prevalence in US was 55% (31% and 24%, respectively) which were significantly higher than that of UK (crude OR=2.44, 95%CI: 1.73-3.42). Multivariate analysis for US showed that being 65+ years old (adjusted OR=0.19, 95%CI: 0.07-0.48), retired (aOR=0.26, 95%CI: 0.09-0.75), and having a higher household income (aOR ranged 0.03-0.19) were protective factors against more severe FT while being female (aOR=1.83, 95%CI: 1.01-3.32) was a risk factor. An identical pattern was not observed in the UK where age and sex did not have an effect. An additional risk factor observed in the UK was expecting to receive treatment for the rest of life (aOR=2.84, 95%CI: 1.04-7.77).

Interpretation:

FT was less prevalent and less severe in the UK compared to the US. Distinct patterns in the risk of FT exist between the US and UK. These differences are likely grounded in the differential protection afforded by healthcare funding models in the two countries. Severe FT in both the US and the UK however underscores the need to provide an additional level of protection to the most vulnerable groups than is currently offered in either country. The results could also be useful for other countries with similar health systems and of significant value to global policy makers, service planners and professionals.

Source of Funding:

Wellcome Trust [grant number 226921/Z/23/Z]; Queen's University Belfast

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Background:

Children diagnosed with Autism Spectrum Disorder (ASD) often exhibit symptoms of repetitive behaviors, hyperactivity, and sensory sensitivities. Notably, a high incidence of gastrointestinal (GI) problems has been observed in children with ASD which can further exacerbate their already complex symptoms. Given the prevalence of GI problems in children with ASD and the hypothesis that they may exacerbate ASD symptoms, investigating this relationship has become a matter of clinical significance.

Methods:

This is a systematic review assessing the current literature on children with ASD treated with targeted GI interventions and how these affect both GI and behavioral-related ASD symptoms. Secondary outcomes include the examination of changes in intestinal flora composition, inflammation markers, immune system function, and stool characteristics. Inclusion criteria are GI interventions of probiotics, prebiotics, exclusion diets, dietary supplements, and microbiota transplantation in 2-20 year olds diagnosed with autism.

Children had to be diagnosed with ASD using a diagnostic tool or criteria including the Diagnostic and Statistical Manual of Mental Disorders-5th Edition. Exclusion criteria are literature reviews or papers that analyzed children with other neurodevelopmental disorders. Ten studies were selected based on these criteria.

Findings:

The majority of the studies in this review found significant evidence that the interventions administered were well tolerated and resulted in improvements in GI symptoms and a reduction of ASD symptoms. This is further supported by secondary outcomes evaluating gut microbiota composition that found increases in gut bacteria associated with improved gut health, metabolism, decreased inflammation, stress, gas production, and decreases in gut bacteria associated with poor GI health.

Interpretation:

There is an indication that GI microbiota interventions can decrease the severity of symptoms and behaviors in children who have ASD. Many of the studies in this paper have a small sample size making the applicability of their results to the population of children with ASD limited. Future research in this area should undoubtedly focus on larger sample sizes with more consistent interventions to discern if there is a causal relationship and clinical applications in this population.

Source of Funding:

None

Understanding Self-Silencing in Latinas Experiencing Intimate Partner Violence

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Background:

Latinas experiencing intimate partner violence (IPV) face unique disparities including lower help-seeking rates and poorer mental and physical health outcomes compared to non-Latina counterparts. Self-silencing, a culturally influenced coping mechanism that individuals use when they do not feel empowered to use their voice, is strongly linked to negative mental and physical health consequences and limited self-care. However, there is a dearth of research about self-silencing among Latinas who experience IPV. Given the potentially compounding effect of self-silencing with other Social Determinants of Health in this group, this study sought to understand how self-silencing evolves among Latinas who experience IPV.

Methods:

This study used a grounded theory approach and was conducted in South Florida, USA. Theoretical and snowball sampling were used to recruit a sample of 25 self-identifying Latina cisgender women, aged 18-65, residing in Miami Dade or Broward Counties, with prior experience of IPV from a cisgender male partner in the last decade, and who spoke and read Spanish or English. Prior to data collection, IRB approval was acquired, and informed consent was obtained from all participants. Data were gathered through one-on-one interviews and analyzed using constant comparative method and Charmaz's levels of analysis. Rigor was ensured following Lincoln and Guba's approach. The primary outcome was the development of a theoretical model that explained how self-silencing evolves in Latinas who experienced IPV.

Findings:

The data revealed a grounded theory entitled *Bearing (Aguantando) with Intimate Partner Violence*. The theory explains how self-silencing emerges as the primary strategy employed by Latinas to bear with IPV while remaining in a relationship where IPV occurs. The theory is constructed of four categories (*The Origins of Silencing, Perpetuating Self-Silencing, Encountering Sustainers of Self-Silencing, Losing the Self*) with subcategories. The findings of this study lay the groundwork for understanding how Latinas cope with IPV by self-silencing, and how this may negatively impact Latinas' well-being. The study's rigorous grounded theory methodology and coherence with earlier findings are among its strengths. However, these findings may only relate to immigrant Latinas due to the lack of participants born in the U.S.

Interpretation:

This study can lay the groundwork to understand how self-silencing can affect Latinas seek help and improve their health in a global context. Further, it identifies different levels of interventions that can potentially be useful for researchers and healthcare providers to promote Latinas' help-seeking and well-being after experiencing IPV.

Source of Funding:

ANID - DOCTORADO BECAS CHILE/2020-72210097 and Sigma, Beta Tau Chapter Scholarly Award

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 561

Outward Facing Learning Management System as a Tool for Outreach: The RADIAL Outreach Experience

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Background:

Our department's learning management system (LMS), RADiology's Intelligent Adaptive Learning (RADIAL), contains 289 courses each with recorded lectures, reading materials and questions. To enhance global outreach, we created RADIAL Outreach, giving users outside the hospital access to selected high-yield resources. Here we describe the design, content and experience with this educational outreach tool launched in October 2022.

Methods:

The global education and outreach team drove the design and organization of the site, selecting content from the existing videos, creating new content, recruiting users and securing funds for sustainability. Implementing RADIAL Outreach as an add-on to our existing LMS costs \$700 (100 licenses at \$7 per user/year), which are covered by the global program budget. A 1-year renewable subscription with no cost to the end user was granted with priority to trainees. Subscriptions with password-protected individual login information were provided after completing a registration form that collected basic information (i.e., country, institution and training level) and explained the terms and conditions of use for content. Retrospective qualitative data was collected from users using REDcap to assess quality and experience with this tool from October 2022 to August 2023.

Findings:

Content was divided into 3 sections: (1) a clinical module (2) a research module and (3) an information module describing the program. A discussion board and a feedback form are also included. Recordings, questions and reading materials were uploaded from our existing resources or created as necessary. There are a total of 75 users from partner institutions across 9 countries. The gastrointestinal module was the most completed module (23%). For feedback, 15 completed surveys were received. All agree that RADIAL Outreach is a 'good' or 'very good' supplement to their respective training and that they will recommend it to other trainees.

Interpretation:

RADIAL Outreach is a tool to support global pediatric radiology education. Our global partners gain free access to high-quality, up-to-date learning resources with minimal financial burden to our department. It also provides a place for discussion and knowledge sharing for the global community beyond traditional teacher-learner roles.

Source of Funding:

None

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Program/Project Abstract

Abstract N°: 565

The institutional and policy determinants of multisectoral strategies to address zoonoses in LMICs

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Background:

Zoonoses – diseases transmitted between animals and people – disproportionately affect low- and middle-income countries (LMICs). The complex nature of zoonoses adds substantial barriers to implementing effective interventions and policies for reducing incidence and prevalence. A systems view is needed to understand the socio-historical-political context in which zoonoses arise. One Health (OH) provides a comprehensive framework of the human-environment-animal interconnection to address zoonotic diseases, fostering collaboration among stakeholders. Limited research has been done to understand the policy context of multisectoral collaboration strategies to control and prevent zoonotic diseases in LMICs. We evaluated the policy and institutional determinants of multisectoral collaborations, including the perspectives from the animal, health, and agriculture systems involved in preventing and controlling zoonoses at the regional and national level in Peru (June 2022- ongoing). We used the Ring Strategy Implementation Project - an evidence-based intervention to control cysticercosis - as a case study.

Methods:

Our goals were to understand policy actors' views of zoonoses prevention and shared responsibilities, to describe the policymaking process, including the priority-making process and using evidence-based information, and to identify the key policy actors involved in preventing and controlling zoonoses, as well as the intra- and inter-ministries connections of Peruvian health, animal, and agriculture systems. This was a case study using mixed-methods, including semi-structured interviews and network questionnaires among parties from relevant organizations interested in zoonoses. The sampling strategy was purposive, involving snowballing to recruit national and regional level policymakers and key informants integral to zoonoses programs in Peru. The research team worked closely with national leaders tasked to control and prevent zoonosis. Results will be shared with participants and the public.

Findings:

To date, we have collected 61 semi-structured interviews and network questionnaires (goal 80), including interested parties from the Ministry of Health, Ministry of Agriculture, Center for Disease and Control, Forest Service, and National and Global Research Institutions. We will present preliminary results at the conference.

Interpretation:

Results will inform OH multisectoral and scaling-up strategies to reduce the burden of zoonoses and will provide recommendations for applying health systems and policy frameworks in LMICs.

Source of Funding:

US NIH Fogarty International Center

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Background:

Globally, harmful substance use is among the leading causes of preventable deaths, and most of these behaviours are initiated between the ages of 10 to 24 years. The burden (mortality and morbidity) attributable to substance use among young people is enormous. As such, delaying the onset or reducing the rate of substance use among young people is a global health priority. School-based interventions are an important setting to access this age group, yet evidence is lacking on their design and implementation in Low-and-Middle Income Countries (LMICs). The aim of this review was to identify the core components and underpinning theories, models, and frameworks (TMFs) of school-based substance use prevention interventions in LMICs.

Methods:

MEDLINE, EMBASE, African Index Medicus, CINAHL, PsycINFO, Scopus, Africa Wide Information, Global Health, and reference lists were used to search for articles for inclusion. Two reviewers independently used Covidence to screen title and abstracts, as well as full texts. We selected randomized and non-randomized trials of school-based interventions in LMICs that aimed at delaying the onset or reducing the rate of substance use among young people. We analysed the data using a descriptive content analysis approach.

Findings:

A total of 58 articles were included in the review with the majority (62.1%) focused on tobacco use interventions. Twenty studies were conducted in East Asia and Pacific whereas only 6 studies were conducted in Africa. Most articles (63.8%) used diverse TMFs to inform their interventions using three approaches: knowledge based, skill-based, and a combination of knowledge and skill-based. Social learning theory was reported the most frequently (used in 6 studies), followed by the theory of planned behaviour (used in 5 studies). Six key components of effective substance use prevention interventions were identified: education, school environment, school policy, parental involvement, peer engagement and counselling.

Interpretation:

This review presents a range of TMFs and core components useful in designing school-based substance use prevention interventions. Design decisions should incorporate attention to risk factors as well as strategies to enhance protective factors against harmful substance use among young people in LMICs.

Source of Funding:

None

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 588

The Female Global Scholars Program: A Mixed-Methods Evaluation of a Novel Intervention to Promote the Retention and Advancement of Women in Global Health Research

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Background:

Women constitute the majority of the global healthcare workforce yet remain significantly underrepresented within global health leadership. The Female Global Scholars Program, a two-year training and peer-mentorship program, was established at Weill Cornell Medicine to address barriers that hinder the retention and advancement of early-stage female investigators conducting health research in low- and middle-income countries (LMICs). The Program is intended to empower women to address gendered challenges to career advancement, to increase academic productivity, and to develop leadership and mentorship skills. Between April 2018 and September 2021, two cohorts each consisting of 12 early-stage female investigators participated in the Program.

Methods:

The Program capitalizes on a network of senior women scientists in global health to provide virtual and in-person didactic and interactive training, opportunities for scientific presentations, collaborative grant-writing, and facilitated peer mentorship. Participants were selected through a competitive application process. Utilizing an anonymous, self-administered electronic survey and semi-structured in-depth interviews, we conducted a mixed-methods evaluation to determine the impact of the Program on participants' individual career advancement, research productivity, and academic self-efficacy.

Findings:

24 participants completed the survey; median age was 40 years [range 32-44] and 75% were from LMICs. 90% carried an MD, PhD, or other post-graduate degree and had been engaged in research for an average of seven years prior to joining the Program. Since joining the Program, participants achieved a combined total of eight awarded grants, five academic promotions, 12 oral scientific presentations and 35 first-author peer-reviewed publications. Qualitative analysis demonstrated: gaining confidence and building multi-disciplinary communities in a protected space for women; improved self-efficacy to address work-life balance and gendered obstacles; and real-world application of scientific skills developed in didactic sessions as major strengths of the Program. While the persistence of virtual workshops throughout the COVID-19 pandemic was deemed a strength of the Program, poor internet connectivity in some of the countries where participants lived limited participation. This novel, low-cost training and mentorship program successfully addresses critical barriers that limit women's advancement in global health research. We are pursuing opportunities to scale-up and promote accessibility of the initiative.

Interpretation:

Our findings suggest that facilitating peer mentorship, leadership and training opportunities in female-dedicated spaces may mitigate some of the challenges that lead to the attrition of women from academic global health and create a robust community of female investigators, addressing the dearth of women in global health leadership positions.

Source of Funding:

Funding from Jessica and Natan Bibliowicz and Weill Cornell Medicine.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 590

Creating linkages and cross-learning opportunities between CHWs from Virginia, USA and CHWs in Eastern Cape, South Africa.

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Background:

The US and South Africa both have history of disenfranchisement of their Black citizens. Both countries have also recently revitalized the Community Health Worker (CHW) workforce as a means of reaching their Black communities with better health access and improved health outcomes. We created a linkage between the Virginia Community Health Workers Association (VACHWA) and CHWs in Eastern Cape Province of South Africa.

Methods:

Two officials of VACHWA trained 12 young unemployed men and women from Lurwayizo on CHW skills such as measuring blood sugar and High Blood Pressure (HBP) and they were also trained on administering pregnancy tests and in hygiene, first aid and preventive care. Three months later a questionnaire was used to interview the trained CHWs. During their trip to South Africa the two Virginia CHWs also met with CHWs working in the East London, Eastern Cape Province, the recording of the meeting qualitatively evaluated.

Findings:

The CHWs trained found the training beneficial, and it helped them develop skills, experience, civic education and confidence to tackle other issues in the community. In the interaction between the Virginia and Eastern Cape CHWs, it was found that the issues similar between CHWs in the US and in South Africa, include both being passionate about helping their clients, issue of transportation for clients and safety issues for the CHWs. The safety issues in South Africa are handled by CHWs going to home visits in pairs. Health issues prevalent in the population in South Africa that the CHWs work with include HIV, HBP, alcoholism and depression. Non-payment of salaries and low salaries are issues CHWs in South Africa also mentioned and this was also mentioned by the newly trained CHWs who were working as volunteers.

Interpretation:

This is an example of a successful collaboration between a CHW association in a HIC and CHWs in a LMIC. This kind of collaboration across countries globally could lead to cross-learning opportunities for both and improved professional development of CHW workforce.

Source of Funding:

Reves Center for International Studies of College of William and Mary, Faculty Fellowship 2022.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 592

Decolonizing global health through the medical humanities: lessons learned from arts-based collaborative research on stigma and hope for the future with youth living with HIV in Tanzania

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Background:

There has been significant movement within academic global health to challenge its legacies of colonialism in recent years. Efforts to decolonize global health research have included scale-up of collaborative global health exchanges, increased attention to equitable funding and authorship distribution, and curriculum changes to traditional coursework. Nevertheless, pervasive colonial-era health deficit narratives continue to widely persist in Western academic medicine, which presume that institutions and communities in low- and middle-income countries (LMICs) are “incapable of solving their own problems” (Kwete et al., 2022). Could engagement in the Medical Humanities (Stewart and Swain, 2016)—an interdisciplinary field including literature, religion, philosophy, and art—be a pathway toward decolonizing global health?

Methods:

We draw on our previously published arts-based research on stigma and longing among youth living with perinatally-acquired HIV (YPHIV) in Moshi, Tanzania (Hosaka et al., 2023). Between May and August 2021, responding to a growing local and regional need to better understand and characterize HIV stigma, we conducted collaborative arts-based research with a group of motivated YPHIV. Each month involved alternating semi-structured interviews and “art days;” on these art days, participants came together to create individual artwork on sketchpads in response to prompts posed by co-facilitators.

Findings:

For the six YPHIV (five males; median 22.5 years) participants, artwork not only allowed for deeper exploration of embodied experiences of HIV-related stigma and trauma but also poignantly captured desires for better futures for themselves and the broader HIV community. Youth participants collectively shared that art days allowed them space to both process past experiences of stigma and reflect on hopes for the future. Art days offered a space for mutual learning, friendship, and sharing ideas.

Interpretation:

Our work with YPHIV in Tanzania illustrates how arts-based approaches can: (1) heighten perception of lived experiences of illness; (2) increase attention and affiliation to stories of resilience; and (3) foster partnership with participants (and communities) to tell stories meaningfully to them locally and enact change. Our work supports a broader argument that the Medical Humanities may hold promise in further decolonizing global health by countering health deficit narratives, encouraging cultural humility, and building solidarity.

Source of Funding:

Fogarty/NICHD D43 TW009337, Fogarty/NIMH K01 TW-009985, Duke CFAR P30A1064518.

Abstract N°: 596

Identifying Discrepancies Between Self-Reported and Device-Measured Physical Activity among Middle-Aged African-Origin Adults.

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Background:

Globally there has been a significant increase in the prevalence of noncommunicable diseases (NCDs), including obesity, hypertension, diabetes. It has been proposed that these increases are a result of declining global physical activity levels. Physical activity is traditionally captured using self-report physical activity questionnaires, which while easy to administer in large population-based samples, are subject to under-reporting. It is however, not known whether this error is the same across different cultures and populations, including Africa-origin populations. Leveraging the Modeling the Epidemiologic Transition study (METS) cohort participants compared self-reported and device-measured physical activity in 5 African-origin populations spanning the epidemiologic transition.

Methods:

Participants (n=1,829) from 5 countries of varying economic transition are enrolled in METS-Microbiome. The countries included Ghana, South Africa, Jamaica, the Seychelles, and the United States (US). All participants underwent a baseline health examine at the local research clinic's, during which anthropometric measurements and questionnaires, including the Global Physical Activity Questionnaire (GPAQ), were administered. Following the health examine, participants wore a triaxial accelerometer (Actical) which objectively measured daily PA for 6 full days. Data were downloaded and used to estimate daily sedentary, light, moderate and moderate-and-vigorous PA.

Findings:

The participants (n=1,829) were predominantly women (63.59%) with a mean age of 42.42 ± 8.13 yr. Overall, across all sites, self-reported moderate intensity PA was 32.76 ± 67.43 mins in women and 41.81 ± 72.98 mins in men. This was significantly greater than the accelerometer measured PA, which recorded at 34.24 ± 31.15 mins in men ($p=0.002$, CI: (3.7, 17.0) and 17.79 ± 17.89 mins in women ($p<0.001$, CI: (12.5, 21.2)). Comparing the different sites, accelerometer-measured PA was highest South Africa (34.21 ± 28.57 mins) and lowest in the US (14.56 ± 16.19 mins). Surprisingly, the US participants self-reported the greatest moderate intensity PA, (47.47 ± 81.25 mins), while South African participants self-reported the lowest PA volume (26.15 ± 45.47 mins). Finally, across the different sites, the discrepancy in self-reported PA was significantly different ($F=14.05$, $p<0.001$), such that participants from Jamaica had the lowest discrepancy between self-reported and measured PA, while US participants had the greatest discrepancy.

Interpretation:

Our study found differences comparing self-reported PA and objectively-measured PA. Notably, across all sites, self-reported PA was significantly higher than objectively-measured PA, and this differed by study location. Given that US participants had the lowest objectively measured PA, but greatest self-reported PA volume.

Source of Funding:

Funded by National Institutes of Health (NIH, R01-DK080763 and R01-DK111848).

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 597

Healthy Ageing in the Asia-Pacific, United States, and Mexico: Content Analysis of Student Proposals

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Background:

Between 2015-2030, the global population aged 60 years and over will increase by 56%, challenging health systems and societies. The United Nations Decade of Healthy Ageing (2021-2030) initiative calls for meaningful engagement of young people.

Methods:

The Association of Pacific Rim Universities Virtual Global Health Case Competition solicited video proposals from students in the Asia-Pacific, United States, and Mexico to address the challenge of improving care for older adults. Twenty-eight teams of students from 22 universities submitted proposals. Using content analysis, we assessed the proposals' focus and intervention strategies and how they reflected the Decade initiative's key action areas to 1) prevent ageism, 2) advocate for long-term care, 3) ensure age-friendly surroundings, and 4) provide integrated care.

Findings:

Most proposals (54%) focused solely on mental health, 25% focused on physical health, 14% included both elements, and 7% were non-specific. Depression and social isolation were the more common focuses, followed by physical health issues, including dementia and cardiovascular disease. Most (57%) included strategies targeting caregivers and family members, whereas 43% of teams (n=12) focused solely on older adults. Technology-driven solutions were included in 75% of proposals; other common strategies included education, training programs, and community spaces for older adults. Regarding the Decade's initiative, 73% of proposals incorporated integrated health care, ensuring age-friendly environments followed second (59%), addressing long-term care in 38%, while 31% addressed ageism through strategies such as community educational campaigns or intergenerational connections with youth. Further, about one-half acknowledged a bi-directional program benefit, such as mentorship by older adults or skills sharing with youth.

Interpretation:

A few proposals addressed ageism; most were seen as uni-directional without recognizing older adults' potential contributions to others. This stance highlights the need to combat age-based discrimination to ensure age-friendly, socially connected, supportive environments. Our analysis provided insight into youths' attitudes and ideas about how to provide care for an increasingly older global population creatively. Technology-based solutions may be effective but also pose challenges for older adults. More work is needed to identify effective strategies for supporting older adults and caregivers and promoting intergenerational solidarity for healthy ageing.

Source of Funding:

None

Abstract N°: 604

Effectiveness of a Novel School-based Diabetes Prevention Program: A Post-Implementation Analysis of Arogya World Healthy School Program, India 2015-2022

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Background:

Non-communicable diseases (NCDs) pose significant challenges worldwide, particularly in low- and middle-income countries (LMIC). In India, NCDs like diabetes mellitus are on an alarming rise, especially amongst its youth. The Arogya World's Healthy School Program (HSP), a two-year school-based initiative for 11-14-year-olds, targets diabetes prevention through health literacy and lifestyle modification. This study evaluates this intervention's effectiveness in enhancing diabetes knowledge, attitudes, and practice.

Methods:

Arogya World implemented HSP across 18 states and >7,500 schools, reaching nearly 450,000 students across rural and urban India. A sample of students was surveyed pre- and post- each year of intervention using Knowledge, Attitude, and Practice (KAP) questionnaires. This study presents a post-implementation quasi-experimental analysis of data from 2015-2022. Improvements in knowledge, dietary patterns, and physical activity levels were evaluated using descriptive statistics and mixed effects regression.

Findings:

The survey encompassed a sample of 6,616 students ages 11 to 15 years. Overall knowledge scores improved by 15.9% with gains in nutrition (14.6%), physical activity (13.1%), and diabetes awareness (24.5%) [$p < 0.01$]. With respect to behavior change, healthy food consumption improved by 7.4% and physical activity by 10.1% ($p < 0.01$).

Interpretation:

This implementation of a low-cost, scalable health education program utilizing a school-based, peer-led model incorporating student leadership was highly effective in enhancing knowledge and behavior change relevant to diabetes prevention. Such programs hold tremendous potential in curbing the NCD crisis globally.

Source of Funding:

This work was supported by Merck/MSD India, Rural India Supporting Trust, and the Stanford Center for Innovation in Global Health.

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Background:

Altered lipids occur in development of malignancies including cervical cancer. We aimed at determining the association between dyslipidaemias and Cervical Intraepithelial Neoplasia (CIN) among women at Mbarara Regional Referral Hospital cervical cancer clinic, South Western Uganda.

Methods:

This unmatched case control study, involved women with CIN (cases) and those negative for intraepithelial lesions (controls) between April and November 2022. Participants were recruited in a ratio of 1:1, after cytology and/or histology results and provision of written informed consent. We collected demographic data and drew venous blood. We measured lipid profile using Cobas 6000 Chemistry Analyzer. Dyslipidemia was defined as either total cholesterol of >240mg/dL, LDL >160 mg/dL, triglyceride >200 mg/dl or HDL <40 mg/dL. Data was analysed in STATA version 17, using proportions, chi-square and logistic regression at ≤ 0.05 significance level.

Findings:

Out of the 94 cases, 81 had CIN1, 12 had CIN2/3 while one had atypical squamous cells of undetermined significance (ASCUS). High triglycerides and high low density lipoprotein (LDL) had a prevalence of 13% and 3% among controls and cases respectively and this difference in distribution was statistically significant ($p=0.016$). Also reduced High Density Lipoprotein (HDL) was the most prevalent dyslipidemia among cases (41.5%, 39/94). High serum triglycerides was significantly associated with CIN (OR 0.395, 95% CI 0.084-1.851, $p=0.007$).

Interpretation:

We observed a significant difference in serum concentrations of triglycerides and low density lipoprotein among cases and controls. We also observed a significant association between triglyceride dyslipidaemia and CIN. Prospective cohort studies are recommended to further understand biological mechanisms between triglyceride dyslipidaemia and cervical lesions.

Source of Funding:

National Institutes of Health (NIH), grant number D43TW011632-01.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 617

Planetary Health for All: The Shared Goal of Education in One Health, Climate Change Medicine, Global Environmental Public Health, and Sustainability and Health

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Background:

Planetary health is a growing priority within higher education, but it lacks visibility in the United States because colleges and universities are teaching planetary health concepts using a variety of program names and curricular models. Our goal was to identify the diversity of institutions and disciplines that are currently offering planetary health education programs.

Methods:

We systematically searched the websites and 2023–2024 catalogs of more than 1000 schools, including all members of the American Association of Colleges and Universities, all doctoral institutions with high-research Carnegie classifications, and additional schools located with structured Internet searches. To ensure inclusion of innovative programs, all degrees, minors, concentrations, and other credit-bearing programs that examine the connections between human health and climate change, environmental health, ecology, or other environmental domains at the global level were included in our analysis.

Findings:

Only a few programs use the name “planetary health,” but we identified four frequently offered types of programs that incorporate planetary health concepts. (1) One Health programs at the graduate and undergraduate levels are offered by large universities with veterinary and/or agriculture schools that emphasize zoonotic diseases, antimicrobial resistance, food safety, and other issues at the intersection of human and animal health. (2) Climate Change and Health (or Climate Medicine) programs are available to graduate and professional students at large universities with medical and public health schools. (3) Global Environmental Public Health programs at the undergraduate and master’s levels focus on pollution and other exposures that are harmful to human populations. (4) Sustainability and Health programs teach undergraduates about food security, environmental justice, and other health issues that can be improved with ethical design and engineering.

Interpretation:

The various educational models that address the health-environment nexus each arose out of specific disciplines and professions with distinct funding sources. The increased frequency and scope of interconnected environmental crises with global reach that are occurring in the 21st century demands scaled-up investment in planetary health education. Highlighting the shared goal of these distinct academic models and opportunities for interprofessional collaboration may help make planetary health a more visible area of teaching, research, and practice.

Source of Funding:

None.

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Background:

Many common gynecologic conditions can be diagnosed and treated surgically. Gynecologic surgery can be performed vaginally, via laparotomy, or with laparoscopy. Benefits of laparoscopy include lower blood loss, infection rates, and post-operative pain. Challenges exist in building capacity for laparoscopy in low and middle-income countries like Ghana, including availability of equipment and trained providers. This study aims to describe trends over time of gynecologic laparoscopy in Ghana.

Methods:

This study was conducted at the Korle Bu Teaching Hospital, Ghana's largest tertiary care hospital. Case records for all laparoscopic surgeries for gynecologic indications from July 2000 (first case ever performed) to January 2023 were reviewed. Demographic, clinical, and surgical variables were extracted. Quantitative analysis was performed using Stata v16.0. Gynecologic experts reviewed the intraoperative findings and classified them as normal versus abnormal. Surgical indications and laparoscopic case type from the first 10 years were compared to the latter half of the study period using Fisher's exact test. IRB approval was granted in Ghana (KBTH-IRB/00003/2023)

Findings:

A total of 577 laparoscopic cases were reviewed. The average patient age was 32.6 (SD 5.9) and 73% never had a live birth. The most common surgical indications were primary infertility (34%) and secondary infertility (46%), followed by ectopic pregnancy (7%), primary amenorrhea (3%), pelvic pain (7%), adnexal mass (2%), and other (1%). Most laparoscopic cases were categorized as diagnostic (94%) while only 6% were operative. The vast majority (84%) of cases revealed a gynecologic or non-gynecologic abnormality. Laparoscopy for primary infertility, pelvic pain, and adnexal masses increased over time, whereas laparoscopy performed for ectopic pregnancy and primary amenorrhea decreased ($p < 0.001$). Operative laparoscopy significantly increased after 10 years ($p < 0.001$).

Interpretation:

Laparoscopic cases fluctuated by year and likely dependent on external influences such as functionality of equipment and presence of skilled providers. Diagnostic laparoscopy was more commonly performed, and intra-operative abnormalities were often identified. This highlights the need to build capacity in operative laparoscopy so gynecologic conditions can be both diagnosed and treated during the same surgery. Ultimately, operative laparoscopy can improve outcomes for common and dangerous gynecologic conditions, including ectopic pregnancy.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 620

Quality of Life Through Implementation of the CASP-12 Scale in Aging Populations of Rural Coto Brus, Costa Rica

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Background:

Costa Rica, a middle-income country, outcompetes even some high-income countries in life expectancy. Previous data has been drawn mainly from urban Costa Rican populations while limited documentation exists on the perceptions of aging within the rural population. It is fundamental to understand the health conditions and quality of life elderly individuals experience as the global geriatric population grows exponentially. This study focuses on the perceived overall quality of life using the CASP-12 scale in elderly Costa Ricans living in rural Costa Rica.

Methods:

This research was undertaken as a part of an international collaborative between U.S. and Costa Rican universities to engage in comparative aging research. A survey was administered to 63 participants aged 60 years or older living in Coto Brus, Puntarenas, Costa Rica. Quality of Life (QoL) was measured using the CASP-12 scale which measures QoL through four domains: control, autonomy, self-realization, and pleasure.

Findings:

Of the 63 study participants, 67% identified as female (42/63) and 33% male (21/63), with an overall mean age of 73.14 (range: 62-95, SD: 7.01). 47.6% of the sample size were married and 47.6% were retired and/or receiving pension. The average QoL score was 27.12 out of a total possible score of 36 with individual domain scores of 5.28 (Control), 5.97 (Autonomy), 8.28 (Self-realization), and 7.59 (Pleasure) out of 9 possible points.

The overall quality of life for the participants sampled in rural Coto Brus, Costa Rica was generally well. The participants scored particularly high in the Self-realization and Pleasure categories. 54 and 59 out of 63 (85.7% and 93.7%, respectively) participants responded "Often" to "I look forward to each day" and "I feel that my life has meaning." During interviews, many participants had a great outlook on their life overall despite challenges and economic hardships they are currently facing, or difficulties faced throughout prior years.

A similar survey from the SHARE study in a high-income European country reported an average CASP-12 QoL score of 33/48 (68.75%) compared to this study of rural Costa Rica as 27/36 (75%).

Interpretation:

Though Costa Rica is a middle-income country and resources in the rural setting may be limited, the geriatric population appears to be happy and aging well. Future studies are warranted to understand the root of this communities' healthy aging, to help assist healthy aging globally.

Source of Funding:

Alicia and YaYa Fellowship Program - University of Maryland School of Medicine

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 623

Sexual and Gender-Based Violence Training in Medical Education: A Review

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Background:

Sexual and Gender Based Violence (SGBV) is one of the most rampant human rights violations which disproportionately affects women and girls. It is estimated that one third of women will experience SGBV in their lifetime. Medical professionals are uniquely placed to care for abused women because they will often be their first line of help. However, doctors often miss opportunities to identify and manage cases of SGBV in the clinic even though this is an important first step for the prevention of further abuse with potential to save lives. This is likely because doctors lack sufficient SGBV training and thus feel uncomfortable, unskilled, and underprepared to address SGBV. There is little literature available describing SGBV instruction in undergraduate medicine. This review sought to fill that gap and evaluate the teaching methods used to deliver SGBV training to medical students as well as the potential impact of early exposure to SGBV education on medical students and the confounding influence of demographic characteristics.

Methods:

A systemic search through four databases resulted in 12 studies meeting the inclusion criteria and exclusion criteria, with each of them evaluating educational interventions used for SGBV education or analysing the status of SGBV education in a specific context. The studies were critically appraised and then summarised in a table.

Findings:

A thematic analysis of these studies indicated that teaching content included: definitions and epidemiology of SGBV, communication and clinical competencies in addressing SGBV, legal responsibilities and misconceptions about SGBV. Additionally, both didactic and interactive teaching methods were used but the latter showed a larger positive effect on the knowledge, skills, attitudes, and comfort of medical students in addressing SGBV. This effect was especially significant where educational interventions were delivered multiple times throughout medical school. The evidence suggested that gender and culture had a significant effect on students' perceptions of SGBV and on their educational needs.

Interpretation:

This review concluded that SGBV training increased the likelihood of medical students to screen for SGBV and appropriately manage cases in their future practice. These findings support existing literature and identify opportunities for knowledge gaps that can be explored in future research

Source of Funding:

No funds were required for the completion of this project.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 630

A Decolonized, Longitudinal, and Holistic Global Health Program

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Background:

While many US medical schools report offering global health (GH) opportunities, the curricula, mentorship, and implementation varies widely among programs. As the international community reckons with historical missteps and seeks to reimagine the field of GH, academic programs must adapt. Seeking to offer a longitudinal and robust training program, specifically aimed at decolonizing GH, Creighton University launched the Arrupe Global Scholars and Partnership Program (AGSPP) in 2022—an innovative 5-year MD-MPH scholarship program, thoughtfully and intentionally developed through a lens of equity, social justice and decolonization.

Methods:

This program accepts 12 students annually and provides longitudinal, in-depth mentorship and education. The 5-year curriculum explores themes including structural racism, history of global health, and geopolitics. Scholars participate in elective courses, monthly didactics sessions, mentorship meetings, annual retreats, five international site visits, as well as domestic volunteer opportunities. Equitable international partnerships were thoughtfully developed through mutually agreed upon goals. The relationship is meant to be bidirectional and largely driven by the needs of the international partner.

Findings:

The program currently has 12 M-1 and 12 M-2 students. As of 2023, four partner sites had been identified—PUCE (Ecuador), PUCMM (DR), UGHE (Rwanda), and UMU (Uganda), with plans to expand to a 5th site in 2024. Goals of the partnership are unique to each site, depending on their stated priorities and needs, including bidirectional faculty exchange, curriculum development, faculty educational opportunities, or salary support. After students attend an Introduction to Global Health Equity orientation in the Dominican Republic, students choose one international partner site to which they will return for a total of 4 trips to complete a MPH capstone by graduation. During these trips, students work in collaboration with local partners on projects designed together.

Interpretation:

The AGSPP seeks to promote the work of decolonization through cultivating equitable partnerships and educating culturally humble, and historically informed physicians. This holistic development of students, paired with a financial scholarship aspires to produce physicians who are intellectually and emotionally prepared for careers in this field, and have freedom to pursue a calling based on passion rather than debt burden.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 631

Multilevel Mentorship: Reflections on Strengthening the Mentor-Mentee Experience

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Background:

Mentorship within research is defined as a “professional, working alliance in which individuals work together over time to support the personal and professional growth, development, and success of the relational partners...” This bidirectional success requires a high level of commitment in the form of work and time from the mentor, and in the form of open-mindedness from the mentee. The knowledge to action framework of implementation science discusses the transfer of research into action, further elaborating that knowledge must be salient, credible, and legitimate, to be accepted and moved forward into said action. Literature encompasses this knowledge on mentorship, stating that the shifting paradigm of mentorship and moving beyond the one-on-one approach is particularly important “in contexts where relatively few mentors are available to meet the mentoring requirements of many mentees...” The objective of this study was to utilize principles of the knowledge to action framework by studying a multilevel mentorship experience to explore whether it was able to reduce the workload of a primary mentor while also providing a mentee with varying perspectives and the opportunity for bidirectional growth.

Methods:

During a one-year NIH funded Fogarty research year, a US-based mentee worked with a Peruvian-based primary mentor on a proposed qualitative study identifying barriers to care within the HPV-cervical cancer continuum for high-risk patients. A multilevel mentorship plan was implemented- the mentee working with multiple LMIC-based mentors at different levels, including project coordinators, nurses, and peer students. After the completion of the year, the primary mentor and mentee reflected on the experience and evaluated the success of contributions from this mentorship plan.

Findings:

A multilevel mentorship plan amongst a HIC mentee and multiple LMIC mentors provided the space for success throughout a one-year research fellowship, while lessening the workload of one primary mentor. It allowed the mentee to develop an understanding of global health systems from multiple different perspectives. It also provided the space for bidirectional advancement within all mentor-mentee relationships.

Interpretation:

A multilevel mentorship plan has the potential to create success within different settings and should be explored further within different contexts. Utilizing a community of practice mentality, exploring multilevel mentorship as a whole can provide a breadth of options for future mentors and mentees.

Source of Funding:

NIH Fogarty International Center #D43TW009340, Proyecto Precancer: NCI R01CA190366, U01CA190366

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 634

Exploring Local Variation in Educational Attainment across Low- and Middle-Income Countries

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Background:

This research examines educational attainment in Low- and Middle-Income Countries to uncover disparities in educational achievement at the subnational level. Educational attainment, a crucial social determinant, significantly impacts individuals' health outcomes. In alignment with global initiatives such as Sustainable Development Goal 4, which advocates inclusive and equitable education, this study aims to provide detailed insights. While national-level educational estimates are vital for monitoring progress toward these global goals, they might conceal local nuances. Therefore, this study employs a small area estimation approach to unveil disparities in educational attainment, guiding strategies for achieving equitable education at the subnational level.

Methods:

Our research employs a comprehensive data-driven strategy, integrating Bayesian geospatial analysis, advanced statistics, and small area estimation techniques. Drawing from diverse survey sources spanning 2000 to 2021, including Censuses and Demographic and Health Surveys, we aim to generate subnational educational attainment estimates, accompanied by their respective uncertainties. Across 102 countries, we calculate mean years of education for individuals aged 15 to 49, disaggregated by gender. This analysis is conducted at a 5x5 kilometer geographic resolution, encompassing primary and secondary administrative units, in pursuit of a detailed assessment of education disparities.

Findings:

On average, educational attainment in 2021 was 8.20 years for men and 7.50 years for women, indicating an increase of 1.45 years for men and 1.79 years for women between 2000 and 2021 across the 102 nations included in the study. This overall increase masks notable disparities within each country. The national average for female educational attainment in Nigeria in 2021 was 7.74 years but ranged from 1.22 years in Yusufari to 12.45 years in Asari-Toru. Although the recent national averages for male and female educational attainment are similar, closer examination reveals significant gender gaps in specific countries. In Yemen in 2021, the estimates show that women had 2.66 years of education, which was 5.41 years less than what men had, at 8.07 years. Additionally, we have identified 2,275 subnational areas for males and 3,990 areas for females, accounting for 8.64% and 15.15% of all the areas in our analysis, respectively, where educational attainment is below 6 years.

Interpretation:

Examining educational attainment at the local level is vital to identify disadvantaged populations. Education is a key social determinant of health, with low attainment affecting employment, income, mental health, and community cohesion. Addressing local-level disparities is essential for holistic well-being and targeted interventions aimed at uplifting communities and specific population groups.

Source of Funding:

Bill and Melinda Gates Foundation (66-8078)

A cross sectional study on the bidirectional interactions between leptospirosis and HIV infection among patients from Maputo Central Hospital, Mozambique

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Background:

Leptospirosis is a febrile, zoonotic and neglected disease highly prevalent in settings where HIV infection is also prevalent, being under-reported and diagnosed in endemic countries to malaria and Mozambique is in the list. This study aims to determine the baseline seroprevalence and species/strains of *Leptospira* in people living with HIV (PWH) and the relationship between selected HIV-related factors that might influence risk of coinfection with leptospirosis, such as degree of immunosuppression, as assessed by CD4 cell count, World Health Organization (WHO) HIV clinical stage and antiretroviral therapy (ART) intake.

Methods:

We conducted a descriptive cross-sectional analysis at the Maputo Central Hospital, in Maputo, Mozambique between March 2020 and October 2021, of 157 PWH aged 18 to 72 years. We collected sociodemographic, clinical data and 8 ml of blood for detection of *Leptospira* IgG, as measured by an ELISA commercial kit, for CD4 cell count and positive samples were submitted to molecular analysis of the genes LipL32 and 16S rRNA by nested PCR in the laboratory of Parasitology, Faculty of Medicine Eduardo Mondlane University in Maputo.

Findings:

The overall seroprevalence of *Leptospira* IgG was 40.1% (157/63) and the strains *Leptospira interrogans Copenhageni* and *Leptospira interrogans Canicola* were identified. The median CD4 cell count was 385 cells/ μ L (02 to 2297; SD \pm 378.47). Higher seroprevalence of *Leptospira* antibodies was found among participants with CD4 cell counts <250 cells/ μ L (54.8%), WHO AIDS stage IV (70.2%) and those on ART (93.6%), though there were no statistically significant differences between groups with and without *Leptospira* antibodies.

Interpretation:

Our study confirmed that *Leptospira* antibodies are highly prevalent in PWH in Maputo and the serovars identified are pathogenic and invasive being important in the maintenance of the bacteria in urban areas. We suggest that PWH in regions with a high seroprevalence of leptospirosis be screened for *Leptospira* antibodies and future studies to identify the implicated reservoirs.

Source of Funding:

NIH-FIC- D43TW010568 and R25TW011216

Abstract N°: 638

A mixed methods evaluation of the multi-level effects of the Family Health = Family Wealth Intervention on family planning determinants

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Background:

Family planning is a cost-effective strategy to reduce maternal and infant mortality, but couples in low-income settings are faced with multi-level barriers to uptake. Interventions are needed that can address relationship, community, and health system barriers.

Methods:

This study examined the theoretically grounded conceptual model of a multi-level intervention, Family Health = Family Wealth (FH=FW), by examining FH=FW's effect on intermediate outcomes among couples in rural Uganda. FH=FW is a multi-level, community-based intervention grounded in the social ecological model and the social psychological theory of transformative communication to reduce barriers to contraceptive use. A pilot quasi-experimental controlled trial was implemented in 2021, comparing two matched communities randomly allocated to receive FH=FW or a time-matched water, sanitation, and hygiene intervention (N=140, 35 couples per arm). Quantitative outcomes were collected through interviewer-administered questionnaires at baseline, 7-months, and 10-months follow-up. Focus group discussions (n=51) and semi-structured interviews (n=27) were conducted with subsets of FH=FW participants after data collection. Generalized estimated equations tested intervention effects on quantitative outcomes, and qualitative data were analyzed through thematic analysis – these data were mixed and are presented by level of the social ecological model.

Findings:

Improved individual-level family planning knowledge (Wald $\chi^2 = 35.20$, $p < 0.001$), attitudes (Wald $\chi^2 = 64.53$, $p < 0.001$), and intentions (Wald $\chi^2 = 48.26$, $p < 0.001$), and reduced inequitable gender attitudes (Wald $\chi^2 = 19.46$, $p < 0.001$), were observed in intervention vs. comparator, corroborated by the qualitative findings. Interpersonal-level changes included improved communication (Wald $\chi^2 = 78.81$, $p < 0.001$), shared-decision-making (Wald $\chi^2 = 13.40$, $p = 0.001$), and equitable relationship dynamics. At the community-level, FH=FW increased the perception of positive family planning norms (Wald $\chi^2 = 23.89$, $p < 0.001$), and the qualitative findings highlighted how FH=FW's transformative communication approach reshaped definitions of a successful family to better align with family planning.

Interpretation:

This mixed methods pilot evaluation supports FH=FW's theoretically-grounded conceptual model and ability to affect multi-level determinants of a high unmet need for family planning. The FH=FW approach may be appropriate for other settings where similar barriers affect family planning use.

Source of Funding:

NICHD, Award #: R21HD098523 (PIs: Sileo & Kiene)

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Background:

India bears a quarter of global tuberculosis (TB) cases, with women of reproductive age accounting for 26% of cases in India in 2019. Maternal TB poses significant maternal and perinatal risks. The Government of India's 2021 Collaborative Framework for Management of TB in Pregnant Women (PW) details interventions like mandatory symptom screening of all pregnant women to address maternal TB. This study aims to understand the gaps in screening and treatment of TB among PW receiving hospital-based antenatal care.

Methods:

The baseline Knowledge, Attitudes, and Practices (KAP) survey on healthcare workers (HCWs) and PW relating to maternal TB was conducted in June 2023 in the antenatal clinic (ANC) at Hamidia Hospital, a tertiary care facility in Bhopal, Madhya Pradesh, India in order to inform Quality Improvement (QI) interventions. Convenience sampling was conducted on 48 HCWs (doctors, nurses, field workers), and 87 PW were randomly selected from the ANC. The study was deemed IRB exempt. All participants provided written informed consent. Responses were collected via Google Forms and results were analyzed in Microsoft Excel using descriptive statistics.

Findings:

91.7% (44/48) of HCWs were unaware of the maternal TB screening guidelines. 16.7% (8/48) knew to refer patients presenting with 1 out of 4 symptoms in the TB symptom complex. 14.6% (7/48) routinely screen PW for TB during ANC contact. Though 92% (84/87) of PWs never received counseling regarding TB symptoms, 72.4% (63/87) desired TB education from HCWs and 96.6% (84/87) would be willing to take treatment upon diagnosis.

Interpretation:

Lack of knowledge on maternal TB screening guidelines among HCWs is a major impediment to screening and diagnosis among PW. Nevertheless, PW demonstrated a willingness for TB education and treatment. Results have guided the planning and implementation of a tailored QI process including HCW education, TB symptom seal utilization, and informational posters. An endline KAP survey and QI analysis is underway. Limitations include single site surveying; strengths include considering both HCW and PW perspectives as well as the ability of this KAP study to directly inform QI initiatives.

As this study was novel in understanding maternal TB screening gaps, successful and significant results from the interventions implemented and endline survey in increasing KAP of HCWs and PW can help inform future interventions in other ANCs nationwide, ultimately reducing the significant burden of maternal TB in India.

Source of Funding:

EGHI, Emory University, GMC, CETI.

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Background:

Solomon Islands is an island nation in the Western Pacific. Access to specialty care is limited and all local doctors receive their medical education abroad. Endoscopy services were first introduced in Solomon Islands in 2012. Currently, endoscopic services are centered at the National Referral Hospital (NRH), the only tertiary care center in the country. Little is known about the prevalence of gastrointestinal diseases such as *Helicobacter pylori* (*H. pylori*) infection. By analyzing data from the endoscopy clinic at NRH, this study aims to describe current trends in gastrointestinal disease to inform future research and clinical programming.

Methods:

Demographic and clinical data was abstracted from medical records for adults and children who underwent endoscopy and rapid urease *H. pylori* testing (RUT) at the NRH in Honiara, Solomon Islands. Descriptive statistics, univariate and multivariable logistic regression analysis that adjusted for age, gender, and province/origin, was conducted on the dataset to assess for associations with *H. pylori* positivity. Multivariable logistic regression was also used to assess for associations with findings of erosions, and ulcers. Statistical significance was defined as having a p value less than or equal to 0.05.

Findings:

Over a 4-year period (2019-2022) 761 patients underwent upper endoscopy and RUT at the NRH; 66.22% (N=504) were male and the mean age was 43.72 years (range, 5-89). 25.76% of patients (N=196) had a positive RUT. Dyspepsia (65.31%) and upper gastrointestinal bleeding (22.08%) were the most common reported symptoms. The most common endoscopic findings were erythema (71.62%), erosions (11.83%), and ulcers (11.70%). Duodenitis was diagnosed in 10.25% of patients. When controlling for age and sex, symptoms of upper gastrointestinal bleeding (UGIB) and vomiting were significantly associated with findings of erosions and ulcers. Dyspepsia was also significantly associated with finding ulcers on endoscopy. On univariate analysis, male sex, unemployed status, history of atrial fibrillation, and smoking were significantly associated with having a positive RUT. On multivariable logistic regression analysis, male sex, smoking, agricultural work, unemployment, and weight loss, were significantly associated with having a positive RUT. Among patients treated for *H. pylori* who underwent repeat endoscopy, 28.80% failed antibiotic treatment.

Interpretation:

This is the first study to analyze endoscopic data from Solomon Islands. The high prevalence of UGIB in this cohort is indicative of advanced gastrointestinal disease. Further efforts should be made to increase access to endoscopy beyond the NRH and to initiate community-based *H. pylori* screening and treatment.

Source of Funding:

None

Abstract N°: 656

"Nobody gave me any information": The Impact of the Hospital Experience on Family Members after Maternal Mortalities in Ghana

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Background:

Rates of maternal mortality are highest in low-resource settings. Family members are often involved in the critical periods surrounding a maternal death, including transportation to health centers and financial and emotional support during hospital admissions. The aftermath of a maternal death has devastating impacts on surviving family members, which is often overlooked and understudied. Our study aimed to explore the role and impact of the hospital experience on families surviving a maternal death in Ghana.

Methods:

This qualitative cross-sectional study was conducted at an urban tertiary hospital in Kumasi, Ghana. Maternal mortalities from June 2019 to December 2020 were identified using death certificates (n=101). Participants, defined as husbands or other heads of households in families affected by maternal mortality, were purposively recruited. An interview guide was developed using grounded theory. In-person semi-structured interviews were conducted in English or Twi to explore family impacts of maternal mortality, with a focus on hospital experiences. Interviews were audio recorded, translated, transcribed, coded with an iteratively-developed codebook, and thematically analyzed. Written informed consent was obtained. Ethical approval was granted (Ghana: KATH-IRB/AP/003/20; University of Michigan: HUM00175461).

Findings:

51 participants included 26 husbands of the deceased woman, 5 parents, 12 siblings, and 8 second-degree relatives. Interviews revealed an overall negative hospital experience for surviving family members. A lack of effective communication from healthcare providers and hospital personnel emerged as the predominant underlying root cause of poor hospital experiences. Three common themes emerged from ineffective communication. Family members: (1) perceived a delay in care and inattentiveness to the patient; (2) developed frustration because of limited knowledge on patient's tenuous clinical status or the cause of death and had difficulty understanding the events of the hospital course; and (3) ultimately left surviving family members unprepared for the maternal mortality event.

Interpretation:

Negative hospital experiences center around the lack of effective communication from healthcare personnel. This plays an integral role in the emotional trauma family members experience after a maternal death in Ghana. Strategies to improve communication with families are essential.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 658

Influences of Global Health Initiatives in Plastic and Reconstructive Surgical Residents

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Background:

For decades, the focus of global health has been on primary care. Recently, the need for surgical care in under resourced countries has been gaining recognition. This lack of access increases disparities within global health and negatively impacts patients with preventable and treatable surgical diseases. Surgical subspecialties that can be done safely with minimal need for capital investment or inpatient care have seen a rise in demand in underserved countries. Plastic surgery is ideally positioned to help fill this need, however there is a global shortage of trained plastic surgeons in under-resourced countries. Previous studies have shown that global health exposure during residency has a positive impact. However, this work has not focused on how global health participation could influence trainee's views and impact their potential future involvement. The purpose of this study is to then assess '*In Plastic and Reconstructive Surgical residents, how participation in global health initiatives can influence independent clinical practice and their perceptions on global health?*'

Methods:

A survey was administered through REDCap to 59 eligible current or previous Wake Forest School of Medicine Plastic and Reconstructive Surgical Residents. Data collected information relating to individual's surgical residency training and their extent of global health exposure.

Findings:

34 of the 59 questionnaires were returned (response rate, 58%). 33 out of 34 participants have had some kind of global health exposure with the majority being through mission trips, volunteering, and external rotations (81.8%, 33.3%, 15.2% respectively). Of the 33 participants with global health exposure, there was a 33.33% improvement in awareness of global surgical disease burden ($p = 0.00009 < 0.05$), 23.5% improvement in obligations to create global change ($p = 0.0002 < 0.05$), 26.3% improvement in comfortability with language and cultural barriers ($p = 0.0013 < 0.05$), and 20.9% improvement in doctor-patient relationships with patients of differing backgrounds ($p = 0.0019 < 0.05$) when comparing participant's views prior and after residency training. Overall, participants are inclined to continue with global health initiatives in the future as 75.8% see themselves participating in another global health experience and 90.9% believe participating in global health has an impact post-residency.

Interpretation:

Global health initiatives within surgical residency curriculums have had tremendous effects on the perceptions of global health amongst Plastic and Reconstructive surgical residents, which may improve physician shortage and global health needs in the future.

Source of Funding:

Department of Plastic and Reconstructive Surgery, Wake Forest School of Medicine.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 660

Exploring Gender Discrimination, Sexual Harassment and Workplace Inequality Faced by Female Doctors in Kenya and its Effect on Specialty Choices

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Background:

Gender discrimination, sexual harassment and inequality are some of the major barriers that women professionals have to bear with in the course of their careers. A study by Newman (2014) generated a gender report from the Kenya National HRIS data to explore the gender distribution within the medical cadre which showed that out of 593 general practitioners, only 40% were female and out of 725 specialists, only 20% were female showing horizontal gender segregation. The objective of this study was to explore the occurrence of gender discrimination, sexual harassment and workplace inequality faced by the female doctors in Kenya and its effect on their specialty choices.

Methods:

The study was descriptive and targeted Kenyan female doctors who had trained in Kenya and were currently working or had ever worked in Kenya. Data was collected through self-administered questionnaires using SurveyMonkey. Informed consent was sought before the commencement of the questionnaire. Approval to conduct this study was received from the Kenyatta National Hospital Ethics and Research Committee as well as the National Commission for Science, Technology and Innovation (NACOSTI) in Kenya. The collected data was analysed using SPSS and the results presented using descriptive statistics such as frequencies, means, percentages and standard deviations as well as inferential statistics.

Findings:

A total of 83 female doctors participated in the study. 69% reported experiencing difficulties in their career. 53% reported that the surgical specialties had the most incidences of gender discrimination and/or sexual harassment. Exposure to gender discrimination and sexual harassment affected the specialty career choice of 46% of the respondents. There was a significant association between sexual harassment and both undergraduate and postgraduate medical training ($p < 0.01$).

Interpretation:

Medical schools need to develop clear policies and systems to address sexual and gender-based violence and conduct trainings on awareness of sexual exploitation and abuse. Further studies to determine the prevalence of sexual and gender-based violence experienced by medical students and the associated factors are needed for targeted interventions.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 665

Examining Social Determinants of Health as Factors Contributing to Health Inequities in Cancer Screening and Treatment Among Underserved U.S. Women: A Scoping Review

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Background:

As disparities in breast cancer screening have been negatively impacted by social determinants of health (SDOH), there is a need to explore and understand which determinants act as significant predictors of low breast cancer screening and treatment behaviors. This scoping review aims to highlight key social determinants of health acting as predictors of breast cancer screening and treatment in U.S. women aged ≥ 40 years old, identify public and private databases with SDOH data at city, state, and national levels, and share lessons learned from U.S. based observational studies in addressing SDOH in underserved women influencing breast cancer screening behaviors.

Methods:

The Arksey and O'Malley (2005) York methodology was used as guidance for this review: (1) identifying research questions; (2) searching for relevant studies; (3) selecting studies relevant to the research questions; (4) charting the data; (5) collating, summarizing, and reporting results.

Findings:

The 72 included studies were published between 2013 and 2023. Among the various SDOH identified, those related to socioeconomic status (n=96) exhibited the highest frequency. The Health Care Access and Quality category was reported in the highest number of studies (n = 44; 61%), showing its statistical significance in relation to access to mammography. Insurance status was the most reported sub-categorical predictor of Health Care Access and Quality with n = 36 (50%) articles supporting this finding.

Interpretation:

Results may inform future evidence-based interventions aiming to address the underlying factors contributing to low screening and treatment adherence rates for breast cancer in the U.S. Interventions to improve breast cancer screening rates should integrate SDOH, particularly the healthcare access and quality category, which was shown to be the most reported SDOH for screening.

Source of Funding:

N/A

The Impact of Intimate Partner Violence on Depression and Anxiety in AGYW living with HIV in Western Kenya

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Background:

Intimate partner violence (IPV), poor mental health, and HIV are intertwined threats to the health of youth aged 15-24 globally. Among women who have experienced violence, 50-90% develop mental health conditions, and young women who have experienced more than one episode of violence are 50% more likely to become HIV-infected than those with no violent experiences. To reach global HIV prevention and treatment goals, data are needed on specific barriers to the wellbeing of AGYW living with HIV, so that interventions can be targeted effectively

Methods:

Cross-sectional data was collected at urban and rural health facilities in Kisumu County, Kenya from January-June 2022 from AGYW 15–24 years of age living with HIV. Surveys included questions on physical, emotional, and sexual IPV from the World Health Organization's Violence Against Women and Girls Survey, the 9-item Patient Health Questionnaire to assess for depression, and the 7-item Generalized Anxiety Disorder Questionnaire to assess for anxiety, as well as questions on common risk factors for poor mental health such as food insecurity and substance use. Multinomial logistic regression was used to assess associations between emotional, physical, and sexual IPV and poor mental health, controlling for other risk factors

Findings:

309 AGYW were recruited. AGYW experiencing sexual, physical, or emotional IPV showed significantly greater odds of moderate-to-severe depression when compared to those not experiencing IPV (Odds Ratio [OR]=2.72, 95% Confidence Interval [CI]=1.24-5.94, OR=2.44, 95% CI=1.07-5.60, and OR=3.07, 95% CI=1.34-7.03 respectively). Those experiencing physical IPV also had significantly higher odds of moderate-to-severe anxiety (OR=3.25, 95% CI=1.07-9.89) when compared to those not experiencing physical IPV. Emotional and sexual IPV were not significantly associated with moderate-to-severe anxiety.

Interpretation:

Understanding what experiences and risk factors are significantly associated with poor mental health among AGYW living with HIV allows us to identify potential targets for future interventions to improve their health and wellbeing.

Source of Funding:

This study was supported by a grant from the Center for Innovation in Global Health and Maternal and Child Health Research Institutes, both at Stanford University

Housing Insecurity and Mental Health Outcomes: Evidence from a Cross Sectional Study in Kenya's Informal Settlements

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Background:

Sub-Saharan Africa is estimated to make up 10% of the global burden of mental disorders. Within informal settlements in this region, housing insecurity, characterized by inadequate amenities, overcrowding and poor infrastructure, are present. Dimensions of poverty, excluding housing insecurity, have been examined and linked to worsened mental health outcomes. Thus, this study examines the effect of housing insecurity on mental health outcomes in Kenyan informal settlements.

Methods:

Data were drawn from the **Resource Insecurity and Well-being in Informal Settlements** study in Kenya (N=1010) and a multi-stage sampling technique was employed. Individuals aged 16 and above most knowledgeable about resource vulnerabilities at the household level were interviewed. Measures of depression and anxiety were assessed using the WHO-5 Wellbeing Index and the Generalized Anxiety Disorder scales, respectively. Following bivariate analysis of sample characteristics relative to depression and anxiety symptomatology, multivariate analysis using generalized linear models with a complementary log-log link function was used to assess the effect of housing insecurity on depression and anxiety symptomatology. Every participant provided either verbal or written consent. The study was approved by the Institutional Review Boards of the University of Texas at Arlington and the University of Notre Dame.

Findings:

Of the 1010 participants, 72.5% and 61.1% were determined to have depressive and anxiety symptomatology, respectively, and 48.6% had housing insecurity scores above the median ($M=7.65$; range:1-17). After adjusting for confounding variables at $p<0.05$, housing insecurity was significantly associated with depression (AOR=1.12; 95%CI=1.082-1.159) and anxiety (AOR=1.061;95%CI=1.028-1.096) symptomatology. Additional significant measures in the multivariate analysis included number of children<5, religion, district of residence, type of housing, building materials and housing satisfaction.

Interpretation:

Within Kenyan informal settlements, housing insecurity has deleterious mental health consequences, particularly leading to an increase depression and anxiety symptomatology. Context-specific programming related to improving mental health outcomes and housing insecurity should be developed, accounting for the built environment, district and religion of a population. Survivorship bias is a potential limitation since participants experiencing the worst mental health outcomes would not be captured by the survey, biasing our results toward the null. Despite this, our results highlight the urgency in addressing housing insecurity. Additionally, the multilevel multidimensional housing insecurity scale used to measure housing insecurity is a unique strength of this study.

Source of Funding:

Canada Research Chair in Global Health and Humanitarianism; Keough School of Global Affairs at the University of Notre Dame

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 682

Experiences of Gender Based Violence and Help Seeking Trends Among Women with Disabilities: An Analysis of the Demographic and Health Surveys

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Background:

Women with disabilities are more likely to experience violence than women without disabilities and there is a critical gap in research regarding this topic. This study uses Demographic and Health Survey (DHS) data to analyse the association between disability and experiences of GBV and help-seeking behaviour among women in Haiti, Pakistan, Timor Leste, and Uganda. These countries were chosen because they are representative of the regions where the DHS is conducted and include questions about GBV and disability.

Methods:

The data was analysed based on recommendations from the Washington Group using a disability severity indicator. Logistic regression was the primary method of analysis.

Findings:

Generally, we found women with disabilities had the same or greater odds of experiencing GBV and had the same or lower odds of help-seeking.

Interpretation:

Given women with disabilities are at least at equal risk of experiencing GBV, it is imperative that programs be developed that are accessible to all women regardless of functional limitations. Also, additional research is needed to determine if there are differences by disability type, if intersectionality is relevant, and to include more unmarried women.

Source of Funding:

None

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Background:

Solid waste management in Ghana is a significant health and environmental problem. Open dumping is common and contributes to infectious diseases and pollution. While problems are well documented, realistic solutions and attitudes towards refuse disposal in rural Ghana are unknown. The objective of this study was to understand current knowledge of and barriers to effective refuse disposal in Larteh, Ghana.

Methods:

A qualitative study was conducted in Larteh, a town of approximately 10,000, located north of the capital, Accra. The research was approved by the Michigan State University and the MountCrest University College Institutional Review Boards. Two focus groups were held with 20 community members and community leaders as translators. Focus groups included twelve women and eight men and were conducted in a mix of English and Twi. Questions related to the refuse disposal process, attitudes towards refuse, refuse disposal education received, satisfaction with current refuse disposal practices, and health issues related to refuse. In addition, dump sites were observed for 10 hours, and key informant interviews were conducted with two local environmental officers. Analysis was based in grounded theory, and emerging themes were identified and described based on the collected data.

Findings:

Qualitative data revealed the following themes: lack of access to commercial dumping sites, a communal desire for a clean environment, inconsistent community education on refuse disposal, and financial barriers to personal commercial collection bins. Discussions with environmental health officers revealed a lack of government support for a reliable waste management infrastructure.

Interpretation:

Findings indicate a need for coordination between community leaders and municipal authorities, and government investment in infrastructure. Further research may be necessary to identify interventions to improve refuse disposal. Opportunities to better track the spread of refuse related diseases within the community exist as well. Introduction of more communal dumping sites, charging fines for littering, providing recycling bins, and providing education to community members were community identified solutions. Study limitations included a potentially biased sample, due to convenience sampling, a limited study timeframe, and use of language interpreters to communicate findings.

Source of Funding:

None

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Background:

Dissemination and implementation science (D&I) can help bridge the gap between research and practice by addressing how to facilitate and maintain pre-existing evidence-based interventions (EBIs) in various contexts within different fields, including that of breast cancer screening and treatment. Yet, despite the availability of D&I frameworks and strategies, there is a lack of studies exploring knowledge transfer dissemination and implementation models, strategies, and frameworks in the setting of breast cancer care. There is a need for studies that create guidelines and roadmaps built on theoretical foundations of D&I research to scale up successful D&I of strategies, frameworks, and protocols proven to cater to the needs of all breast cancer patients when seeking screening and treatment services.

Methods:

The Arksey and O'Malley (2005) York methodology was used as guidance for this review: (1) identifying research questions; (2) searching for relevant studies; (3) selecting studies relevant to the research questions; (4) charting the data; (5) collating, summarizing, and reporting results.

Findings:

Most cited barriers (n = 46) sorted into the category of "Recruitment, Measurement, and Delivery Challenges." The predominant ERIC strategy, featured in a noteworthy 84% of studies, was "Tailor strategies" (#16), which belongs to the "Adapt and tailor to context: culture, language, data analysis, collection" domain.

Interpretation:

This study can guide researchers, physicians, and community workers in improving accessibility, affordability, and quality of breast cancer screening and adequate follow-up opportunities through D&I strategies and models improving the reach and sustainability of evidence-based programs in at-risk female populations.

Source of Funding:

N/A

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Background:

Despite the critical importance of health services, particularly in maternal and newborn care, Malawi's health sector remains chronically underfunded. This is evidenced by the scarcity of essential resources and emergency plans needed to support expectant mothers and their newborns routinely and during crises. In March 2023, the situation was exacerbated by Cyclone Freddy, which displaced over 600,000 residents and resulted in over 500 deaths and 500 people reported missing. The cyclone also destroyed vital public infrastructure like health facilities and major roads. Among those displaced were pregnant women, many of whom required urgent care, in a setting with even more limited resources. A team of health care providers voluntarily mobilized outreach clinics to provide essential obstetric care in displacement camps.

Methods:

A midwife used Facebook and WhatsApp over two days to engage colleagues interested in providing emergency perinatal care to cyclone victims. In addition, the organizing midwife collaborated with the International Confederation of Midwives, who provided financial support for clinical care through the Association of Malawian Midwives. The University of California San Francisco Global Action in Nursing project supported the initiative through personnel and transport. With this support, a team of 26 providers—three clinical officers, 20 nurse-midwives, and three data clerks—held five outreach clinics across five displacement camps over five weeks.

Findings:

The clinics reached 44 obstetric patients. Providers initiated antiretroviral treatment for HIV-positive pregnant mothers, treated for syphilis, and identified eclampsia and other pregnancy-related conditions. Using obstetric ultrasound, providers identified multiple high-risk cases. Among those cases were two twin pregnancies, two with anemia, and a woman at risk of hemorrhage due to a previous uterine scar. All five patients were referred and transported to the tertiary hospital for ongoing care.

Interpretation:

Advocacy is essential in mobilizing resources and support, especially during crises driven by climate change, like Cyclone Freddy. By effectively voicing needs and collaborating across communities, institutions, and professions, advocacy can facilitate timely interventions, optimize resources, and substantially enhance overall maternal and newborn health outcomes in challenging scenarios. Training and empowering midwives to be advocates is essential to the wellbeing of mothers, children, and their communities.

Source of Funding:

Funding generously provided by the Wyss Medical Foundation and the Association of Malawian Midwives.

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Background:

The Common Rule is a set of regulations in the United States governing ethical research involving human subjects. While it has been adopted by many federal agencies, its application to refugee health research is understudied. The purpose of this study was to identify gaps in the application of the Common Rule to the refugee population and propose potential solutions.

Methods:

A mixed-method analysis of the Common Rule (the 2018 amendment) was conducted focusing on the ethical applicability of this policy to refugee health research. This analysis was complemented by a comparative evaluation of the Common Rule with related international guidelines including the Ethical Guidelines for Good Research Practice by the Refugee Studies Centre at the University of Oxford, the International Ethical Guidelines for Health-related Research by the CIOMS/WHO, the Guidelines for Health-related Interventions in Humanitarian Crises by the Sphere Project, and the Guidance on Ethics and Equitable Access to HIV Treatment and Care by the UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance. The four ethical principles commonly used to guide research with human subjects were employed as a framework for gap identification and analysis.

Findings:

The study identified four primary gaps in the Common Rule's application to refugee health research, as follows:

- It does not explicitly address the ethical issues that arise from conducting research with refugees such as their diversity, cultural sensitivity, and potential for stigmatization.
- It does not provide clear guidance on how to apply its subparts that offer additional protections for specific populations (i.e. pregnant women, fetuses, etc.), to refugees who may fall into these categories.
- It does not account for the complex migration patterns and poor access to healthcare that often affect refugees' physical and mental health throughout all stages of their experience.
- It does not balance the need to protect refugees from harm with the need to include them in potentially beneficial research. Excluding refugees from research may violate the principle of justice but including them poses challenges to valid and voluntary informed consent.

Interpretation:

Source of Funding:

None

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Background:

Mistreatment during childbirth can negatively affect maternal and child outcomes and can impact women's willingness to engage in postpartum care, which is especially important for women living with HIV (WLHIV). This study aimed to understand HIV stigmatizing attitudes and self-efficacy in caring for WLHIV among labor and delivery (L&D) providers in Tanzania.

Methods:

This mixed-method study was conducted in six primary healthcare facilities in the Kilimanjaro region. Data included surveys with 60 L&D providers to assess attitudes and self-efficacy in managing childbirth for WLHIV, and focus group discussions (FGDs) with 36 L&D providers exploring their experiences caring for birthing WLHIV. Quantitative data were described using frequency tables, and qualitative data were analyzed thematically. Mixed methods results were presented across four domains: extra precautions, fear of HIV acquisition, attitudes toward WLHIV, and self-efficacy in providing care for WLHIV. Written consent was obtained from participants. Ethical approval was granted from the University of Utah, the Tanzania National Institute for Medical Research, and Kilimanjaro Medical University College.

Findings:

For extra precautions, most providers (97%) avoided contact with bodily fluids when caring for WLHIV, and 40% said they avoided touching WLHIV with their bare hands. Qualitative data revealed that providers used additional precautions when caring for WLHIV, most notably double gloves. For fear of HIV acquisition, providers expressed concerns about HIV transmission risk in procedures involving bodily fluids, including drawing blood (68%), wound dressing (65%), and assisting during childbirth (62%). In qualitative data, providers expressed discomfort taking care of WLHIV who were not "calm," because they feared exposure to bodily fluids. For attitudes, most providers had positive attitudes toward WLHIV, rejecting the idea of HIV as a punishment (98%), but 44% believed that WLHIV might not be careful about infecting others. Qualitative data suggested a distrust in WLHIV's full disclosure of their treatment adherence, which may put providers at risk. Self-efficacy in providing care for WLHIV was high during normal births (mean=84.2) but declined for obstetric emergencies like postpartum hemorrhage (mean=79.5). Qualitative data showed strong confidence in providing care for WLHIV during routine births but a need for additional support when complications occurred.

Interpretation:

The strengths of this study included a mixed-methods approach and diverse healthcare settings. Limitations included social desirability bias, especially in the context of FGDs. The study findings suggest that training for L&D providers is needed to improve respectful, non-stigmatizing, and evidence-based care for WLHIV during childbirth.

Source of Funding:

The United States National Institutes of Health (R21 TW012001, 2021-23)

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 704

Increasing access to education for medical professionals in LMICs through bidirectional learning opportunities: The Operation Smile Champions Program

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Background:

Globally, 5 billion people lack access to safe and affordable surgical care, specifically burdening LMICs where two-thirds of the world's population resides. Increasing access to surgery is complicated because it requires investment into an entire surgical workforce as well as the infrastructure and equipment that come at a high financial cost. The Champions Program pairs international volunteers with local experts to create bidirectional learning opportunities for trainees in Operation Smile (OS) program countries. Through educational surgical programs, didactic sessions, and virtual seminars, the local and international Champions accelerate the training of local medical professionals that can then increase the access to safe surgical care in their respective settings.

Methods:

Local and international Champions are selected by OS, an international surgical NGO providing cleft lip and palate care, through in-country staff and local stakeholders that best understand the needs of the healthcare environment. Local Champions are often long-standing OS volunteers with a background in education. International Champions share these credentials and aim to build long-term partnerships between their home institution and in-country institutions. Champions work with OS staff to design educational surgical programs with lower case volumes to increase training opportunities across all specialties (surgery, anesthesia, dentistry, nursing, pediatrics, biomedical technician, nutrition, speech language, psychosocial). Champions also create educational exchanges, virtual training sessions, and provide valuable feedback about key investment opportunities for OS.

Findings:

Since March 2022, the Champions Program has been iterated in eight countries with eleven more planned for calendar year 2024. 113 international Champions and 86 local Champions from 26 countries have worked together to train 253 local trainees across 13 specialties. In total, nine institutions from HICs have established partnerships with five LMIC institutions that have resulted in 12 educational programs and four exchanges. Six of the eight countries have established recurring educational opportunities during regular surgical programs. Importantly, there is continuity of volunteers and trainees during these programs.

Interpretation:

As dedicated in-country foundations and volunteers work to increase SAO density, we hope that all 34 OS countries can adopt the Champions model by 2025. The results of the Champions Program are a testament to the power of partnerships and long-term investments into the growth of healthcare teams in LMICs.

Source of Funding:

Operation Smile, Inc.

Abstract N°: 708

Change in Psychological Distress among Pregnant Persons Participating in a Group Antenatal Care Randomized Controlled Trial in Blantyre District, Malawi

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Background:

Interventions that prevent or manage distress during pregnancy are particularly needed in low- and middle-income countries (LMICs) where mental health resources are low but morbidity is high. Group healthcare is an innovative model of antenatal care (ANC) where trained facilitators provide care for 8-12 pregnant persons with similar due dates over 2-hour visits that include 80-90 minutes of interactive learning. Group ANC is associated with improved mental health in high-income countries, but this relationship is underexplored in LMICs. This study in Malawi is the first to examine the impact of group ANC on mental health in any LMIC.

Methods:

We completed an effectiveness-implementation trial at six health centers in Blantyre District, Malawi, comparing outcomes for those randomly assigned to group ANC (n=864) and individual ANC (n=866). Participants (n=1730) were pregnant persons over the age of 14 who were less than 24 weeks gestation at baseline. Pregnant women are legally adults in Malawi and provided written consent to participate. Ethics approval was granted by the University of Illinois Chicago and the Kamuzu University of Health Sciences. Demographics were recorded at baseline. Psychological distress, using the Self-Reporting Questionnaire (SRQ), was collected during baseline and late pregnancy. Multiple linear regression, adjusting for covariates, was used to assess the relationship between the type of ANC and change in psychological distress.

Findings:

On average, participants were 23.6 years (SD=5.5); 41.1% were primiparous, and 54.9% completed primary school. Individual (n=614) and group (n=672) ANC participants with SRQ scores at both time points were included in the analysis. Paired t-tests showed a significant decrease in SRQ score for both individual ANC (M= -0.36, 95% CI = -0.71, -0.01) and group ANC (M= -0.91, 95% CI = -1.27, -0.55). Multiple linear regression models revealed that those who participated in group ANC experienced a greater decrease in SRQ score compared to those in individual care ($b = -0.55$, p -value= 0.0304). Participants who were primiparous ($b = -0.77$, p -value= 0.0012) and who had higher levels of education ($b = -0.60$, p -value= 0.0003) also showed a more significant decrease in SRQ score than those who were multiparous and less educated.

Interpretation:

Group ANC can innovatively integrate mental health prevention and management strategies in LMICs. This evidence can be utilized to advocate for more widespread adoption of group ANC in Malawi and other LMICs as a way to address the mental health needs of pregnant persons and substantially improve ANC quality.

Source of Funding:

The NIH National Institute for Nursing Research: NIH R01 NR018115

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Background:

There is an overall shortage of dermatologists and dermatopathologists in Africa, particularly in regions with limited healthcare resources. Bagamoyo, located on the east coast of Tanzania, has no dermatology or dermatopathology services. To address this, a collaborative relationship utilizing teledermatologic consults has been established through a secure teledermatology platform (Africa.telederm.org) to assist clinicians at Bagamoyo District Hospital in obtaining expert opinions, diagnosis, and treatment plans. However, complex cases often require pathological services, which are often cost-prohibitive to patients. Biopsy services were implemented in June 2023 to address this gap. We hypothesize that optimizing a teledermatopathology biopsy process will lead to faster and more accurate diagnosis of skin conditions, improved health outcomes in patients, increased patient satisfaction, and increased clinician knowledge regarding skin conditions.

Methods:

In this pilot implementation study, patient cases from June 5 - July 27, 2023, were submitted to Africa.telederm.org for consultation and reviewed by board-certified dermatologists at the Medical College of Wisconsin (MCW). Institutional Review Board approval was obtained from both MCW and local Tanzania IRBs, and patients were consented to participate. For those patients who required a biopsy for clinical care (diagnosis and appropriate treatment), a biopsy was offered. Clinicians in Bagamoyo with biopsy training performed biopsies and samples were sent to Kilimanjaro Christian Medical Center (KCMC) pathologists. Board-certified dermatologists and dermatopathologists reviewed their report and biopsy images to support the diagnosis and treatment plan.

Findings:

A total of 171 patients were seen and uploaded for consults on the teledermatology platform and 12 were deemed eligible for a biopsy. To date, four of them have had biopsy procedures.

Interpretation:

In this setting, the need of dermatologists and pathologists is crucial in Bagamoyo for the patients and the clinicians. Establishing teledermatopathology is useful in decreasing costs for patients and establishing diagnosis. Establishing a structured pathway for these services is vital for sustainability. While our current sample size is limited, teledermatopathology and the biopsy process have the potential to provide faster and more accurate diagnosis on complex skin conditions.

Source of Funding:

St Joseph JES Fund; Dr. Elaine Kohler Summer Research Scholarship.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 711

Around the World in 6 WHO Regions: Creating and Delivering a 4 week Virtual International Elective

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Background:

Our novel educational initiative for nursing undergraduates has been developed to adapt to the challenges of the covid-19 pandemic and to address environmental concerns related to international travel This initiative is designed to virtually replicate the enriching experience of international electives aiming to nurture a global mindset encourage critical thinking and build cultural competency. By creating a sense of “being there”. we aspire to help students meet the traditional learning outcomes of in-person electives offering a perspective enriched with diverse approaches to Global health.

Methods:

In 2021 and 2022, we delivered a 4-week Virtual International Elective (VIE) for 109 students using existing global collaborations to enable virtual visits to nineteen countries across all 6 WHO regions. The initiative, hosted on Microsoft Teams, involved 150 practice hours split between 68h of live sessions and 82h of innovative asynchronous activities such as logging health-related data for each country a book club and learning by film. Students interacted with 18 stakeholders, including peers from different countries, and engaged deeply with global nursing challenges, research collaborations, and first-hand accounts from healthcare professionals and students. This structured yet immersive approach fostered deep learning and created a ‘sense of being there’ building upon current global health education methods.

Findings:

Anonymised evaluations were carried out using poll everywhere and Padlets. The feedback was overwhelmingly positive, with participants describing it as a “once-in-a-lifetime” experience, appreciating the home-based “travel” learning approach. Students highlighted the eye-opening exposure to different cultures and healthcare systems and noted it as a unique opportunity to interact globally, emphasizing its role in broadening perspectives on healthcare. Internal peer review and feedback from collaborating institutions attest to its phenomenal success in developing cultural competency, global insight, lasting impressions and ongoing lessons for life-long learning and patient care.

Interpretation:

This initiative successfully met its objectives, fostered equality, diversity and inclusion enabling participation from students who couldn’t afford in-person electives. It turned into a ground of empowerment where even the quieter students found confidence. Awarded the UK Student Nursing Times Teaching Innovation of the Year (2021), it signals a scalable innovation with significant positive repercussions in global health education and practice

Source of Funding:

NONE

ADDITIONAL PERMITTED 50 WORDS ON SCALE UP

The VIE initiative showcases the potential of virtual platforms in transforming health education globally, promoting inclusivity and diversity. Our results could inform and foster international collaborations to standardize virtual electives, offering students worldwide equitable access to diverse learning experiences

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 730

Lessons Learned from Diabetes Self-Management Education and Support (DSMES) Course Evaluation at the University of Port Harcourt Teaching Hospital, Nigeria

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Background:

Diabetes is a growing health concern in Nigeria, leading to a need for effective education and support programs. A Diabetes Self-Management Education and Support Program was implemented at the University of Port-Harcourt Teaching Hospital (UPTH) in Southern Nigeria. Phase 1(July – August 2022) involved training 10 healthcare professionals, including 6 nurses and 4 dietitians, as diabetes educators, followed by Phase 2 (June and July 2023), where these educators conducted patient education sessions. This study aims to assess the course's effectiveness and gather patient feedback for future improvements.

Methods:

The DMSSES curriculum, spanning four weeks involved the ten trained diabetes educators, conducting group and one-on-one sessions for the participants on various diabetes topics. Eligible participants, aged 18 or older, with type 2 diabetes and spoke English, were enrolled from the UPTH Endocrinology clinic. To evaluate the course's effectiveness and receive constructive feedback, de-identified course evaluation forms were distributed to all participants at the end. This study primarily examines patient experiences and satisfaction based on the responses of 83 patients.

Findings:

Course Evaluation Summary:

Organization and Structure: 69% found the course well-structured; 8% felt it was poorly structured.

Content: 70% found the content highly relevant to diabetes management; 84% praised its excellent quality and depth.

Delivery: 61% found explanations clear; 58% found teaching methods highly effective.

Materials: 52% found materials very helpful; 35% found them helpful; 83% deemed them comprehensive and well-designed.

Practical Application: 70% found the course practical and useful; 84% would likely apply the knowledge.

Length and Pace: 57% felt it was just right; 20% thought it was too long, and 12% found it too short.

Engagement and Interaction: 48% found engagement opportunities ample; 46% rated interaction as high.

Areas for Improvement: Participants requested more frequent blood pressure measurements, better glucometers with more test strips, provided medications, extended transportation stipends, adjusted course length and pace, expanded community outreach, prolonged program duration, and improved internet connectivity.

Interpretation:

While there were varying opinions on course length and pace, overall patient feedback underscores the course's value in diabetes management education. Notably effective aspects included content quality, practicality, and engagement opportunities. These insights highlight the importance of addressing equipment quality, medication access, financial support, program duration, and connectivity to enhance the overall effectiveness and outreach of the diabetes self-management education and support program at UPTH, Nigeria.

Source of Funding:

Office of Global Health Seed Funding at the Medical College of Wisconsin

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 731

Assessing nutrition equity by evaluating dietary deficiencies and excesses: a social determinants analysis

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Background:

Promoting nutrition equity empowers countries to ensure access to nutritious foods and guide well-informed choices based on evidence-based dietary requirements. Understanding the distribution of major dietary intakes informs both public and policymakers about insufficient or excessive consumptions. We used country-level mean dietary intake estimates from the 2018 Global Dietary Database to develop a method for estimating the proportion of the population with insufficient or excessive consumption of selected dietary factors in terms of social determinants focusing on nutrition equity at the population level.

Methods:

To determine the percent of population that does not meet or exceeds the recommended intakes, we constructed Gamma-distributions for selected dietary factors for 18 groups considering 3 age groups (1-14, 15-49, 50+ y.o.), sex, and urbanicity. Twelve dietary factors were assessed for deficient intakes (total protein, vitamin A, B9, B12, C, D, iodine, fiber, calcium, magnesium, iron, and zinc) and four factors were assessed for excessive intakes (sodium, added sugar, saturated fat, and total carbohydrates). For a preliminary analysis, we selected 20 representative countries (six high-income, six upper-middle-income, and eight lower-middle and low-income countries). The recommended thresholds were sourced from the European Food Safety Authority (France, Germany, Italy, and Poland), country-specific guidelines (China, Philippines), and the International Organization for Migration's recommendations (United States, Canada, Brazil, India, etc.).

Findings:

Our preliminary results indicate that Vitamin D, iodine, and fiber are the top three dietary factors most likely to result in deficiencies, affecting 98.5%, 86.6%, and 80.2% of the population in selected countries, respectively. Conversely, sodium, added sugar, and saturated fat are associated with excessive intakes, affecting 61.0%, 53.7%, and 53.4% of the population, respectively. Lower-middle and low-income countries bear a heavier burden of inadequate intakes compared to higher-income countries. The countries with the highest levels of deficiency and excess include Thailand, Pakistan, the Philippines, and India, affecting 60.3%, 60.2%, 58.9%, and 58.8% on average of their population. Females of reproductive-aged exhibit a higher likelihood of iron and zinc deficiency compared to other demographic groups, while older adults are more inclined to experience vitamin D deficiency. The expanded analysis focuses on observed and predicted trends in dietary intakes inequalities.

Interpretation:

Our study highlights the needs for tailored dietary intervention programs and policies to tackle both deficiency and excess in major dietary factors. The disparities between low- and high-income countries emphasizes the importance of global health equity and the role of comprehensive nutrition strategies in promoting population health and wellness worldwide.

Source of Funding:

Nestlé Research and Development

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Background:

Traumatic brain injury (TBI) is a leading serious and preventable cause of death or injury amongst children and adolescents worldwide. Low- and middle-income countries such as India are disproportionately affected due to rapid urbanization, population growth, and strained healthcare resources. This necessitates the availability of comprehensive data and information on brain injuries to guide healthcare standards and health policy. We set out to examine the available pediatric TBI literature from India to establish if true incidence and prevalence is known.

Methods:

Electronic databases PubMed and Google Scholar were searched for relevant studies. Search terms included combinations of the following keywords and Medical Subject Heading (MeSH) terms: “traumatic brain injury,” “TBI,” “head injury,” and “India.” Only English-language studies published between 2003-2023 and conducted in India with the residing Indian pediatric (≤ 18 years old) population were included. The inclusion criteria for study types were observational cohort, cross-sectional, and retrospective studies that focused on TBI. Systematic reviews, meta-analyses, editorials, letters to the editor, case studies or case reports were not included. Studies on surgical techniques, novel treatments, and single mechanisms of injury were also excluded. Data was compiled on patient population and setting, study type, demographics, severity of injury, and cause of injury.

Findings:

Nine articles were found to meet the inclusion/exclusion criteria. However, only incidence of new cases was reported in all the studies. No studies on prevalence were found. Six articles were set in neurosurgical centers while the remaining three studies were from trauma or emergency departments. Falls were the leading cause of injury in six studies and road traffic accidents in two. The remaining study did not report causes. Eight articles reported mild TBI as the most common severity level.

Interpretation:

The number of studies from India on pediatric TBI epidemiology is limited. Most consist of children admitted to neurosurgical units in cities, excluding rural India. Future studies focused on prevalence at the community level are needed to understand the true prevalence of pediatric TBI and improve preventive and therapeutic care.

Source of Funding:

None.

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Background:

Physician migration is a matter of great concern to international policymakers. Outside of medicine, return migration is a well-recognized phenomenon across countries and labor sectors. Within the health workforce literature there are important examples of return migration by physicians to their origin countries as Peru and South Africa. However, systematic estimates of return migration rates from the destination country perspective are not known.

Methods:

The United Kingdom General Medical Council (GMC) reached out to all physicians in 2020 who had a history of registration in the UK between 2005-2019 but were no longer licensed to determine their actual geographic location. We combined the weighted response data from that online survey with data from the UK Licensed Registry of Medical Professionals (LRMP) over the same period to determine overall return migration rates between 2005-2019. We also fit a linear elasticity regression model (e.g., log-transformed, with coefficients interpreted as the percentage change in y for every 1% change in x) to examine determinants of higher return rates to origin countries. Explanatory variables included the European Union status of physicians' origin countries, the average 2005-2019 GDP per capita and percentage of health expenditure attributed to domestic private spending in origin countries, and the average number of migrants from physicians' origin countries residing in the UK between 2005-2019.

Findings:

GMC survey data gathered 13,158 responses, with a 25.6% response rate. 27.5% of all foreign-trained physicians who were registered with the United Kingdom have returned to their home country from the United Kingdom over the study period. Data showed variable return migration rates across origin countries with country specific rates highest for Norway at 83.4%. Return migration rates were correlated with origin country GDP per capita, with a 0.52% (95% CI 0.25, 0.79) increase in return migration for every 1% increase in origin country GDP. Other covariates were not statistically significant.

Interpretation:

This is the first known systemic estimate of physician return migration rates from a high-income nation. Return migration rates are variable and likely driven by home income conditions correlated with origin country GDP.

Source of Funding:

None

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Scientific Abstract

Abstract N°: 744

Armed with Syringes: Martial Metaphors and the Militarization of COVID-19 Interventions

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Background:

In global health, the pervasive use of military metaphors has established a framework for viewing healthcare as a strategy against disease. This metaphorical lens has gained prominence in discussions of global pandemic management since the 1800s and has signified the political weaponization of disease and the diseased. Such physical manifestations and real-world implications of the military metaphor include the 19th Century cholera epidemics in Europe, tuberculosis epidemics in the late 19th and early 20th Centuries in South Africa, the 1980s HIV/AIDS crisis, the Ebola epidemics in West Africa from 2013 to 2016, and the ongoing COVID-19 pandemic. However, portraying the COVID-19 emergency as a war carries significant implications, legitimizing the control and subjugation of the afflicted through policies inspired by militaristic ideologies. This research seeks to explore how these military metaphors, which equate the military with public health, mold perceptions of COVID-19, fostering an acceptance of pandemic management as a battle.

Methods:

This study employs a mixed-methods approach, including focus groups, interviews, participant observation, and surveys conducted in Evanston, Skokie, and Des Plaines, Illinois, among English-speaking adult residents (≥18) from April 2021 to March 2022 (N=58). These methods were designed to elicit insights into the intersection of military metaphors and public health perceptions. Ethics approval was obtained and informed consent was obtained from all participants. Data analysis involved an inductive systematic coding system that categorized responses and highlighted the diverse applications of military metaphors and their influence on the narrative surrounding pandemic management.

Findings:

Analysis of the data uncovered four primary categories of military metaphors influencing perceptions of COVID-19 policies: 'Protection and Safety,' 'Collective Responsibility,' 'Compliance and Enforcement,' and 'Punishment.' These metaphors shaped how individuals perceived and responded to public health measures and have the ability to harbor anti-globalization and othering.

Interpretation:

This study underscores the pervasive influence of military metaphors in shaping public health perceptions, limiting imaginative approaches to public health crisis response. It highlights the need for a global health perspective that challenges the inherent militarization of healthcare, fostering more diverse and inclusive strategies for addressing pandemics on a global scale.

Source of Funding:

None.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 763

Primary Care Development: Creation and Implementation of Hypertension Templates for a Rural Burundian Hospital

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Background:

A medical NGO, Village Health Works, based in Burundi, set to open a new hospital in June 2023. It will include a chronic care clinic to provide primary care to the region, which is currently very limited. There were no formal protocols or documentation templates for chronic care and most clinicians had limited experience in chronic care management. A pilot round, using the diagnosis of hypertension, was used to implement documentation templates and gain feedback.

Methods:

NGO Physicians were surveyed on their outpatient hypertension management. Questions included how comfortable they felt managing hypertension, documentation quality, and documentation in continuity management, which were ranked on a scale from 1 to 10. There were also areas to comment. After this, a hypertension template, including history, review of systems, medications, physical exam, assessment, and plan were implemented in the outpatient department. Two weeks later the physicians were again surveyed on the topics listed above. The pre- and post- data was collected from responses and was analyzed using a T-score.

Findings:

The comfort, standardization, and improvement, based on physician opinion, of the documentation and management of hypertension was evaluated. There was statistically significant improvement of physician opinion on hypertension management, documentation, and standardization after implementation of the templates based on pre- and post-survey data.

Interpretation:

Based on physician opinion, after implementing hypertension templates the process was standardized, easier to manage, and felt that longitudinal care improved. The template also prompted evaluations, such as medication, lab work, complication evaluation, and follow up.

Source of Funding:

None

Perspectives on a Potential Electronic Clinical Decision Support Tool for Pediatric Diarrhea: A Qualitative Study of Informal Healthcare Providers in Bangladesh

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Background:

Diarrheal diseases are a major cause of morbidity and mortality in children worldwide and a significant contributor to antimicrobial resistance. In low-resource settings, decisions for the use of antibiotics and laboratory testing for acute diarrhea in children are primarily empiric in nature. This study aimed to explore the potential for an electronic clinical decision support tool (eCDST) to help informal healthcare providers in Bangladesh, who are crucial in providing healthcare services to the rural poor, effectively manage pediatric diarrhea.

Methods:

Informal healthcare providers (n=17) practicing in the Sitakunda subdistrict of Bangladesh participated in in-depth interviews conducted by a team of Bangladeshi anthropologists. A semi-structured interview guide included sections on their experiences with web-based clinical resources, opinions and feedback on an eCDST to manage pediatric diarrhea, and feedback on how an eCDST for pediatric diarrhea might be incorporated into their clinical practice. Interviews were audio-recorded, transcribed, and coded for themes related to 1) interest in an eCDST for pediatric diarrhea, 2) desired features of a tool, and 3) considerations for implementing the tool.

Findings:

Participants were all male, with an average of 18.2 years (range: 4-40 years) of clinical practice. Most participants had experience using web-based resources to inform clinical decision-making. There was broad interest in an eCDST for pediatric diarrhea, including antibiotic recommendations. Participants perceived an eCDST to be most helpful in cases of uncertainty and for providers with limited experience. Four themes emerged related to desired features: accessibility of technology, updated and locally relevant recommendations, inclusion of patient-specific characteristics, and locally appropriate terminology and language. For eCDST implementation, providers mentioned the importance of training and support as well as recommendations for an accompanying certification that would enhance their business reputation.

Interpretation:

Informal providers in Bangladesh see the potential utility of an eCDST to support the management of pediatric diarrhea. For an eCDST to be feasible, it needs to be accessible, grounded in the local context, and accompanied by adequate training and support. Future research should evaluate the tool's impact on appropriate antibiotic use and patient outcomes.

Source of Funding:

NIH Grant R21HD109819-02, PI Leung

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Background:

Prehospital care at the US-Mexico border presents unique challenges when patients arrive at a land port of entry, activate 911 and care is transferred from a Mexican-based prehospital team to an US-based prehospital team. Challenges to prehospital activation at the border along with differences in scope of practice between the two countries' prehospital providers can impact the continuity of patient care. Out-of-scope medications and interventions are often from differences in drug formularies, equipment availability and protocols. This systematic review aims to analyze the existing literature on prehospital protocols regarding out-of-scope medications and interventions for patients crossing the US-Mexico border.

Methods:

A comprehensive search was conducted in PubMed, MEDLINE and Google Scholar using keywords related to "US-Mexico prehospital care," "cross-border 911 calls," "challenges to prehospital border care," and "out-of-scope prehospital protocols." Inclusion criteria involved studies published between 2006 and 2022 examining epidemiology, protocols and challenges related to cross-border prehospital care by the 23 US counties bordering Mexico. A total of 9 studies met inclusion criteria and were included in the systematic review.

Findings:

The studies revealed variability in prehospital protocols and procedures as well as a rise in prehospital provider (PHP) contacts throughout the 48 US-Mexico border crossings. According to one study, over 6,000 PHP contacts were made at the San Diego - Tijuana border crossing between 2014-2017. Common challenges included communication barriers between US and Mexican providers, delays in patient care due to traffic at the crossings and protocol discrepancies. Some studies proposed interventions to address these challenges, including training and education for prehospital providers, development of standardized cross-border protocols and improved communication systems.

Interpretation:

This review highlights the limited data around prehospital transfer of care at the US-Mexico border and the need for standardized cross-border prehospital protocols and training, particularly for interventions outside the US paramedic scope of practice.

Source of Funding:

None

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Background:

Global aging presents considerable challenges to human health and healthcare systems due to increasing age-related dementias and cognitive impairment. Panama doesn't escape this reality, with 1 in 4 Panamanians expected to be over 65 years of age by 2050. Diagnosis currently relies on late-stage clinical symptoms, thus offering limited treatment options and efficacy. Recent studies have further linked infectious disease as a risk factor for neuroinflammation and neurodegenerative disorders. Here, we evaluate individual and multiple associations of seven pathogens that have been identified contributing to growing evidence of infectious etiology of cognitive decline; *Toxoplasma gondii*, *Trypanosoma cruzi*, *Herpes simplex virus type I*, *Cytomegalovirus*, *Helicobacter pylori*, *Chlamydomphila pneumoniae* and *Treponema pallidum* among Panamanians aged 60 years and older.

Methods:

A case-cohort study compared 165 participants with and without cognitive impairment from Panama Aging Research Initiative Health Disparities (PARI-HD) clinical cohort, recruited from Panama's largest public hospital. ELISA assessments were conducted for serum IgG/IgM antibodies to these microorganisms. Sociodemographic variables, clinical exams, cognitive-functional and psychiatric evaluations were analyzed for associations with individual/multiple pathogens. Covariates included age, sex, education. Continuous variables were analyzed using ANOVA testing. Categorical variables with multiple predictor variables were tested using logistic regression models. Associations were analyzed in STATA 18.

Findings:

The frequency of clinically diagnosed cases of cognitive impairment increased with more coinfection pathogens, while younger age ($p=0.038$) and education ($p=0.002$) were protective against neurodegeneration. Each additional clinical infection increased the likelihood of neurodegenerative disease diagnosis (OR=1.48 95% CI, $p=0.048$). Increased simultaneous coinfections exhibited a trend of modest decline in Mini-Mental State Examination scores ($p=0.071$). Most common simultaneous seroreactivity IgG antibody included *Toxoplasma*, *HSV*, *CMV*, *Helicobacter*, and *Chlamydomphila*. Among simultaneous coinfection patterns, the most frequent individual pathogen was *HSV*, followed by *Chlamydomphila*, *CMV*, *Toxoplasma*, and *Helicobacter*. *Chlamydomphila* presence in coinfections increased cognitive impairment diagnosis probability ($p=0.029$). Individual pathogen association and neurodegeneration diagnosis Odds Ratios were as follows: *HSV* (OR=2.50, 95% CI), *Chlamydomphila* (OR=2.4, 95% CI), *Treponema* (OR=1.6, 95% CI), *Toxoplasma* (OR=1.2, 95% CI), and *Helicobacter* (OR=1.2, 95% CI); $p>0.05$.

Interpretation:

Increased coinfections are linked with greater likelihood of clinically diagnosed cognitive impairment. Certain coinfection combinations were more frequent, suggesting interactions between specific pathogens and cognitive decline. These findings necessitate further study of multi-pathogen interactions in neurodegenerative diseases underlying mechanisms. Enhancing treatment efficacy through screening and awareness programs is crucial.

Source of Funding:

Metcalf, Rodriguez, Cornwell-Mann, Kiphart Family Foundations. UChicago CGH/Provost Award, INDICASAT-AIP/SNI/SENACYT/TRI.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 787

The insights of policymakers, service providers and end users on self-employment evidence-based frameworks for persons with disabilities in microenterprises

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Background:

Work is a determinant of health and remains an essential occupation for adults, including persons with disabilities, who comprise 15% of the world population. The unemployment crisis implies that vulnerable groups, such as persons with disabilities, will continue to compete for conventional work in the formal sector with persons living without disabilities. Self-employment in the informal sector or microenterprises is an alternative and feasible work option. According to the United Nations Programme, this sector creates two billion jobs worldwide. Professionals, such as occupational therapists, are not taking advantage of this opportunity as they do not have a guide to facilitate self-employment for persons with disabilities. Phase one (scoping review) findings of a three-phase PhD study indicated a gap in contextually relevant data. Phase two (the focus of this presentation) aims to engage key role players in an African (South African) context on this subject. Phase one and two findings will inform phase three, the actual evidence-based framework development.

Methods:

Phase two of this PhD is qualitative. Purposive sampling was used. Data is being collected in Africa from key role players, i.e., policymakers (government), service providers (academics, clinicians, and teachers at prevocational) and end users (persons with disabilities and organisations) until data saturation is reached. Focus groups and semi-structured interviews are conducted using piloted question guides compiled and guided by findings from phase one of this PhD. Thematic analysis is underway through NVIVO. The University of KwaZulu Natal (UKZN) ethics committee approved this study (BREC/0004655/2022).

Findings:

Phase one (scoping review) results suggest no data on evidence-based frameworks for persons with disabilities in developing countries such as South Africa. Provisional findings from phase two participants (policymakers, service providers and end users) suggest an ideal evidence-based framework that professionals can use with persons with disabilities. The framework has critical elements such as sustainability and contextual relevance with specifics from recruitment, assessment, starting and running a self-employment business in microenterprise and follow-ups. The goal is to contribute positively to the end user, their family and communities' well-being using work as the determinant of health.

Interpretation:

Refer to findings

Source of Funding:

Funding from the UKZN Capacity Development Grant Funding (UCDP) and the National Research Fund (NRF) Black Academics Advancement Programme (BAAP) was used for teaching relief and research running costs, such as paying the research assistants.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 789

Building Implementation Science Capacity for HIV Research and Program Implementation in West and Central Africa: the CAWISA Experience

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Background:

Implementation science (IS) aims to bridge gaps between evidence and practice. IS encompasses implementation research (IR), which systematically applies IS methods in optimizing the use of evidence-based intervention (EBIs); and implementation practice (IP), which is the application of EBIs from IR by personnel with context-specific knowledge and skills to improve the quality and effectiveness of health services.

West and Central Africa (WCA) trails the rest of Africa in meeting its health targets, thus increasing IS capacity and application in research and practice is a priority for this region. The Central and West Africa Implementation Science Alliance (CAWISA), a regional IS consortium currently focused on five countries—the Gambia, Ghana, Nigeria, Cameroon, and DR Congo, held two-day in-person IS workshops to introduce multidisciplinary participants to IR and IP.

Methods:

The nine-session curriculum included didactic content and practical sessions on principles of IS; theories, frameworks, and models; implementation strategies; stakeholder and community engagement; IS study design; dissemination; translating evidence into policy; and implementation practice in HIV programs. Four IS workshops were facilitated by CAWISA and her partners in the Gambia, Ghana, and Nigeria between November 2022 and June 2023. Participants provided pre-training profile information and post-training evaluations. Data were analyzed using simple proportions.

Findings:

CAWISA trained 104 participants: 32 (31%) in Gambia, 27 (26%) in Ghana, 45 (43%) in Nigeria; 50% (52/104) were female; 8% (8/104) were 18-24, 33% (34/104) were 25-34, 44% (46/104) were 35-44 and 16% (16/104) were ≥45 years old.

Twenty-one percent of participants had Bachelor's, 33% Master's, and 22% PhD degrees. Regarding primary scientific field, 31% of participants were in public health, 22% medicine, 16% social/behavioral sciences, and 22% (23/104) were non-academic professionals. The majority (84%) of participants had no prior IS training.

Highest-ranked sessions were Definitions and Core principles of IS; Theories, Frameworks and Models, the PICO (Patient-Intervention-Comparison-Outcome) practical sessions and developing IS research questions for an evidence-based intervention of interest. Lowest-ranked sessions were practical exercises on IS study design, Dissemination and Translation of Evidence into Policy, and Implementation Practice/Implementation Teams.

Interpretation:

CAWISA's two-day workshop introduced IS to HIV researchers and program implementers in WCA, most of whom had little to no prior IS knowledge. Issues with low-ranked sessions appear to reflect difficulties with concepts/material rather than usefulness of information. Future WCA workshop curriculum versions will present more participant-friendly content and practical sessions to improve understanding and application of the lowest ranked sessions.

Source of Funding:

NIH-FIC AHISA Small Awards; UMB Center for Global Engagement

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 794

Developing a Bidirectional Exchange and Virtual Education Platform in Sub-Saharan Africa: The University of Cincinnati Rwanda Initiative

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Background:

The prevalence of cardiovascular disease is rising in Sub-Saharan Africa (SSA). Cardiovascular disease is responsible for 11% of overall mortality and 38% of non-communicable mortality in the region. The University of Cincinnati (UC) Rwanda Initiative was founded in 2018 in response to the high prevalence of cardiovascular disease and the paucity of specialty-trained health care workers. In 2018, Rwanda's population of 9 million patients was cared for by only two cardiologists. The UC Rwanda Initiative sought to improve cardiovascular education of internal medicine trainees in Rwanda and support the development of the first cardiology fellowship in the country, with the goal to improve access to high quality cardiovascular care.

Methods:

The UC Rwanda Initiative is a formalized collaboration between the University of Cincinnati College of Medicine, the Rwanda Ministry of Health, and the University of Rwanda, and includes a comprehensive virtual educational platform and a bidirectional exchange of faculty and trainees. The curriculum covers all aspects of cardiovascular medicine presented virtually across four teaching hospitals in Rwanda and employs educational techniques including mentor interactions, flipped classroom, live polling, quizzes with feedback, summative learning points, and case-based discussion. The initiative's bidirectional exchange allows for exposure to techniques and best practices in cardiovascular medicine not otherwise available in Rwanda, including heart failure, electrophysiology, and imaging.

Findings:

The virtual lecture series expanded over four years to an annual series of 35 lectures taught by over 30 international experts from institutions around the world. Knowledge assessments before and after lectures consistently demonstrate improvement in cardiovascular knowledge and evidence of knowledge retention from year to year. Quality improvement surveys consistently show high satisfaction among residents. The University of Rwanda Cardiovascular Medicine Fellowship launched in 2022 modeling the curriculum outlined by the American Council of Graduate Medical Education and the American College of Cardiology Core Cardiology Training Symposium requirements. The fellowship expanded in 2023 to recruit two trainees each academic year, all of whom are scheduled for international rotations in the 2023-2024 academic year.

Interpretation:

The UC Rwanda Initiative successfully engages trainees in Internal Medicine and Cardiology utilizing a comprehensive virtual didactic series and a bidirectional exchange of trainees and faculty for in-person education covering the spectrum of cardiovascular medicine. The UC Rwanda Initiative is building the foundation for sustainable, formal training in cardiovascular disease for Rwandan physicians, and successfully improves access to cardiovascular care in SSA.

Source of Funding:

- University of Cincinnati Foundation
- Rwanda Ministry of Health
- Fulbright Scholarship

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Background:

Restful sleep is vital for overall health and quality of life, especially among older individuals. However, climate change is projected to increase ambient temperatures worldwide, introducing challenges in creating sleeping environments that are conducive to restful sleep, particularly in low- and middle-income countries. Few studies have examined the association between increased ambient temperature and sleep quality in older adults, with a dearth of studies from sub-Saharan Africa. This study bridges this gap by providing evidence for this association from a nationally representative survey from Ghana linked to satellite telemetry.

Methods:

We analysed data from Wave 2 of the World Health Organization's Study on Global Ageing and Adult Health in Ghana, combined with satellite telemetry drawn from the European Commission's Emissions Database for Global Atmospheric Research. Our study sample consists of 3,344 adults aged 50+. Logistic regression models were estimated to study the association between mean ambient temperature by region measured by satellite readings and self-reported non-restorative sleep. Gender and geographical disparities were examined through stratified models.

Findings:

Of the 3,334 adults, 35.09% of participants reported non-restorative sleep. The mean ambient temperature was 26.96 (range: 25.61-28.70). Following bivariate analysis, increased ambient temperature was associated with higher odds (AOR=1.39; 95%CI: 1.14-1.71; p=0.002) of non-restorative sleep. Higher odds of having non-restful sleep were found among both males (AOR=1.47; 95%CI: 1.13-1.92; p=0.004) and females (AOR=1.34; 95%CI: 1.07-1.67; p=0.01). While rural residents had higher odds (AOR=1.52; 95%CI: 1.15-2.01; p=0.003) of non-restful sleep, no significant differences were found among urban residents.

Interpretation:

Our results support the association between increasing ambient temperature and poor sleep quality, especially for men and rural residents. While the cross-sectional nature of our study limit inferring causality from our findings, the validity of our findings is supported by the (1) consistency of our findings with studies from other contexts, and (2) linkage between a nationally representative cohort study with satellite telemetry. Our findings highlight a need for more effective cooling techniques in rural residences to support the creation of sleeping environments that are conducive for restful sleep.

Source of Funding:

This research was undertaken, in part, thanks to funding from the Canada Research Chairs Program in support of Dr. Godfred Boateng, Canada Research Chair in Global Health and Humanitarianism.

Abstract N°: 798

Cooking Fuel and Chronic Respiratory Disease in Aging Adults in Ghana and Mexico: A Cross-sectional Analysis.

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Background:

The combustion of solid fuels (e.g., wood, coal, and charcoal) for cooking is widespread in low- and middle-income countries, with deleterious consequences for older adults. Exposure to airborne particles from these fuels have been shown to increase the risk of morbidity and premature mortality. However, most studies on this phenomenon have focused on infants and children, with limited studies among older adults. Therefore, this study aims to examine the effect of solid cooking fuel use on the likelihood of having a chronic respiratory disease among older adults in Ghana and Mexico.

Methods:

We analyzed data from Wave 2 of the World Health Organization's Study on Global Ageing and Adult Health. Our study sample consists of 7,253 adults aged 50+ from Mexico and Ghana. The exposure was primary cooking fuel used by the household, and outcome was chronic respiratory disease (measured by whether participant reported having either (1) a medical diagnosis for chronic obstructive pulmonary disorder, chronic bronchitis, or emphysema, or (2) symptoms suggesting chronic lung infection). The relationship between exposure and outcome was examined through logistic regression models.

Findings:

The prevalence of chronic respiratory disease was 17.54% and 6.55% in Mexico and Ghana, respectively. Adjusting for theoretically relevant covariates, solid fuel use was associated with 1.72 higher odds of chronic respiratory disease (95%CI: 1.07-2.79; p=0.026). Regional disparities were found, with individuals in Mexico and Ghana respectively having 1.70 (95%CI:1.01-2.89; p=0.049) and 3.40 (95%CI:1.50-7.72; p=0.004) higher adjusted odds for chronic respiratory disease.

Interpretation:

Our results support past findings that the use of solid fuels is associated with increased chronic respiratory disease risk. This effect appears most pronounced among Ghanaian residents. While the cross-sectional nature of our study limit inferring causality from our findings, the validity of our study is supported by: (1) the consistency of our findings with studies from other contexts, and (2) the use of data from a nationally representative cohort study. Our findings indicate an urgent need for supporting the transition to cleaner cooking fuels (such as, gas or electricity) in regions with prevalent use of solid fuels in cooking, especially among households with older individuals.

Source of Funding:

This research was undertaken, in part, thanks to funding from the Canada Research Chairs Program in Support of Dr. Godfred Boateng, Canada Research Chair in Global Health and Humanitarianism.

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Background:

Methods:

Findings:

Interpretation:

Source of Funding:

Background: Breast cancer is one of the leading causes of death among women in low- and middle-income countries mostly because of late diagnosis and treatment. In Ghana, there is limited data on why women delay in receiving treatment for breast cancer. The aim of the study was to determine factors that are associated with patients' delay in accessing breast cancer care.

Methods: A Cross Sectional Study was conducted among women diagnosed with breast cancer who receive treatments at the Greater Accra Regional Hospital. A convenient sampling method was used to enroll 112 patients with breast cancer. Data was collected on sociodemographic, clinical and behavioral variables. Patients delay was defined as the time a patient first became aware of symptoms until the first medical consultation. A delay of less than 3months was considered short delay and delay of more than 3months was considered as long delay. A logistic regression was used to predict factors which influence delay in accessing breast cancer care among the participants. Adjusted odds ratios (AOR) with 99% confidence intervals were used. $P < 0.01$ was considered statistically significant.

Findings: Overall, 58.0% of the patients had long delay in seeking care breast cancer care. The most common complaints that made participants seek care were severe breast pain (51.8%). Participants with higher educational levels (AOR=0.09, 95% CI: 0.02-0.38), $p=0.001$), earning higher salary (AOR=0.24, 95% CI: 1.07-0.82, $p=0.002$), living in urban residences (AOR=0.05, 95% CI: 0.01-0.18, $p=0.0001$) and those with family history of breast cancer (AOR=0.20, 95% CI: 0.005-0.71, $p=0.019$) were less likely to delay in accessing breast cancer care. Those who visited the hospital as their first facility they visited were less likely to delay in accessing breast cancer care (AOR=0.07, 95% CI: 0.01-0.29, $p=0.0001$).

Interpretation: Most women delayed in seeking breast cancer care. Most patients visited facilities because of severe breast pain. Factors associated with patients' delay in accessing breast cancer care include education, income, place of residence, family history of breast cancer and place of initial visit.

Source of funding: None

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 808

Launching the AMPATH/MAPAS Mexico Bilateral Innovation Award (AMBIA): lessons learned in launching seed funding to support collaborative and reciprocal academic global health projects

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Background:

Historically the priorities and research agenda of academic global health collaborations have disproportionately been defined by partners in the Global North. With the decolonization movement, many universities are re-evaluating their strategies in global health engagement. There is also growing recognition that there is much to learn from the experience in the global South that might improve health outcomes and reduce disparities in the Global North. In 2021, the medical schools of Benémerita Universidad Autónoma de Puebla (BUAP) and the University of Texas at Austin (UT) launched the collaboration AMPATH/MAPAS México (Academic Model Providing Access to Healthcare or Modelo Académico Proveer Acceso a Salud).

Methods:

In order to foster collaborative teams involved in implementing community-based research, education and healthcare delivery initiatives the AMPATH/MAPAS leadership team launched AMBIA (AMPATH/MAPAS México Bilateral Innovation Award). The award was structured to support equity and reciprocity including:

- 1) A requirement for co-Principal Investigators from BUAP and UT
 - 2) An application scoring rubric that intentionally emphasizes: alignment with AMPATH'S overall mission, plans for collaboration, and some of the traditional metrics used in large federal grants to help prepare project teams for external funding in the future
 - 3) An award selection committee that had equal number of voting members from each institution
- Complementary to launching the AMBIA funding, we also launched collaborative working groups in key health priority areas. We also developed a clear research protocol which addresses important considerations such as ethics approval and co-authorship.

Findings:

Since the launch of AMBIA, we have had 2 funding cycles with a total of 7 proposal received and currently 5 projects awarded and at various stages of implementation. The current projects have diverse areas of focus: palliative care, diabetes, mental health, health professions education and building population health evaluation and data management infrastructure. The projects also employ various designs from community-based participatory research, education curriculum design and innovation, to accessing and analyzing existing public health data. Two of the funded projects have complementary research in both Puebla and Texas with the co-PIs intentionally using this binational design to enrich and inform interventions on both sides of the border.

Interpretation:

For early academic partnerships, intentionally building in seed funding can help facilitate the formation of collaborative faculty teams and launch implementation. Institutional leadership counterpart relationships, careful design of the application requirements and the selection committee can help to ensure more equity and reciprocity in these academic collaborations.

Source of Funding:

Eli Lilly & Company supported launching AMPATH/MAPAS México.

Evaluating the Influence of Food Insecurity on Diabetes Management in Villa Verde, a Rural Community in the Dominican Republic

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Background:

Our institution, in collaboration with local community leaders, established a general medicine clinic in Villa Verde, Dominican Republic. Despite dietary education and antihyperglycemic medication, hemoglobin A1c of nearly half of our diabetic patients remain above goal levels. Our study sought to understand patients' perceptions about barriers to effective diabetes management to guide future interventions.

Methods:

This descriptive study was conducted in Villa Verde from November 2021 to April 2023 after Institutional Review Board and local governing body approval. Diabetic adults from our clinic were recruited by community ambassadors as recommended by our community advisory board to foster trust and communication. Written consent was obtained prior to participation. All materials were provided in Spanish. Anonymous survey data were entered into RedCap.

Findings:

Of 192 patients diagnosed with diabetes at our clinic, 131 (68.2%) were surveyed. Median age was 53 years (interquartile range [IQR]: 40-67) and 75.6% (n=99) were female. Among respondents, 87.8% (n=115) reported being unable to adhere to a diabetic diet within the last three months due to limited resources. Approximately half believed their diabetes was well-controlled (n=68, 51.9%). Most reported taking their diabetes medication daily (n=112, 85.5%). However, 55.0% (n=72) reported missing at least one dose due to lack of food. Over half of participants reported prioritizing obtaining food over medication at least once (n=76, 58.0%). Most felt knowledgeable about a diabetic diet (n=116, 88.5%). When prompted for examples of foods to avoid, respondents most commonly cited starches such as rice (n=64, 48.9%) and yuca (n=37, 28.2%). While 83.2% (n=109) reported knowing where to buy healthier foods near their household, only 45.0% (n=59) believed these options were accessible.

Although providing medication and dietary education to diabetic patients resulted in improved diabetic diet knowledge, inconsistent medication usage and limited food access may hinder optimal diabetic management. Future interventions to facilitate access to diabetic-friendly foods are needed to optimize treatment. Although we surveyed over half of the clinic population, a larger sample size may support more complex analysis.

Interpretation:

When providing diabetes care in a low-resource setting, understanding food accessibility is vital. Concurrent with medical management, food access should be evaluated through discussion with patients and the community at large. Working with local food suppliers to increase access and affordability of diabetic-friendly foods could sustainably address these gaps.

Source of Funding:

Office of Global Health at Rush University Medical Center

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 810

Western Africa: A Look to Surgical Access and Barriers to Training

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Background:

Healthcare access is plagued by training options, lack of preventative care, and other social determinants of health. Healthcare access is a topic of discussion in both developing nations and more industrialized societies. However, developing nations face unique challenges compared to their industrialized counterparts. Surgical access is just one crucial piece that is missing from multiple nations around the globe. Western Africa is a highlight of both lack of healthcare and surgical access.

Methods:

This project looked at the current published data points around Western African surgical access from the World Bank and Joshua Project. Following a review of the data points was an in-depth literature review to identify barriers to access to surgical care ultimately highlighting surgical training.

Findings:

Main data points focused on the Surgical Specialty Workforce which includes Surgery, Anesthesia, and Obstetricians (SAO). Many countries within Western Africa fall below a 1:100,000 ratio in relation to SAO access to the whole population. Notably many of those within the available workforce are localized to major cities leaving many rural clinics without proper personnel to run necessary and life-saving procedures.

During the literature review, it should be noted that there is a vast array of research on surgical training, however, these lack specifics to Western Africa. There have been many programs working toward minimizing the burden of diminished access to training options within the region including the West Africa College of Surgeons, PAACS, and others. Many of the programs available are focused in one or two nations. Leaving those not within these nations to travel and uproot their lives to participate in training. It is important to note that examining cultural aspects of trainee's lives can highlight vital phenomena that are not considered in the current structure of available programs.

Interpretation:

Looking at the region, the work is being done, surgeons are being trained, and a difference is being made. However, with the data and the current structures of training programs there is an extensive amount of growth to be done. There are clear barriers to training ranging from location limitations to trainee's cultural, familial, and spiritual health. It is important to target sustainable programs focusing on these aspects as there is continued development in the region. This can be better understood with further research, discussion, and promotion around this topic which is often forgotten. This includes promoting and uplifting surgical trainees within the region in their efforts for research publication and resource access.

Source of Funding:

None.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 817

Population-based Ascertainment of Social-ecological Circumstances of Dominican Republic's Deaf Community

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Background:

Deaf sociomedical needs are rarely known to policy-makers lacking population-based information. Assuring the rights and support necessary for deaf people to thrive requires national policies centered around deaf circumstances. We implemented the first national-level population-based ascertainment of deaf people. The Dominican Republic (DR) has an active deaf-led advocacy organization that drove the need for this population-based data.

Methods:

A three-stage sampling process ensured national representation. "Door-to-door" enumeration strategies led by deaf Dominican Sign Language (DSL) users screened sampled households for deaf residents. This analysis includes people who self-identified "deaf", "deafblind", and "deaf with disabilities." Local partners determined deaf follow-up questions (language use, education, employment, and health insurance). SPSS's Complex Samples module generated weighted national estimates accounting for the three-stage design.

Findings:

In the DR, 0.2% (95% CI: 0.1% - 0.4%) identify as deaf, with most (81%) residing in urban areas. Overall, 28.6% of deaf people use sign language (all of whom learned sign after age seven), 30.7% use Spanish, and 39.6% use "gestures" to communicate. Among deaf people age 18+, 77.5% did not complete secondary education and 48.9% had no job. Additionally, 51.3% of deaf people had no health insurance.

Interpretation:

Deaf Dominicans face considerable barriers to education and employment. Almost 40% of deaf Dominicans use "gestures" to communicate, rather than a natural signed and/or spoken language. As such, deaf Dominicans are at high risk for the negative health and social outcomes associated with language deprivation. Addressing this risk requires urgent attention to early and sustained language acquisition strategies.

Source of Funding:

United States Agency for International Development (USAID)

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 818

Assessing Knowledge of Global Healthcare Systems in Medical Education

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Background:

Methods:

Findings:

Interpretation:

Source of Funding:

Background: Within medical education curricula, there is currently a lack of content about not only the US healthcare system, but also healthcare systems globally. Subsequently, medical students who lack proficient knowledge regarding these systems may have reduced awareness and therefore utility when practicing as future physicians. The objective of this project is to determine whether there is a gap in knowledge regarding global healthcare systems and if voluntary, peer-led lectures can increase this knowledge. **Methods:** The Global Health Scholarly Concentration of Wayne State University School of Medicine, in collaboration with the World Health Student Organization, hosted a series of lectures on different health models around the world and highlighted experts in the field of Global Health. The series consisted of five lectures total, with topics covering different healthcare systems globally along with the US healthcare system. The curriculum taught was modeled from CUGH Global Toolkit Competency Number 2, Globalization of Healthcare. Surveys via Qualtrics will be utilized to collect anonymous responses from participants, consisting of active medical students with one to two years of training enrolled at the medical school. Surveys will also be obtained from student cohorts who did not attend the lectures. Correct survey responses for each question will be compared between students who did and did not attend the lectures, utilizing a t-test for statistical significance. We will also obtain qualitative data utilizing Likert scale questions.

Findings: We are adding a new class of medical students to the data pool to increase sample size, so the data collection is still in process. We will send out a new set of surveys October 1, 2023, and have the complete dataset collected by November 1, 2023. The analysis will be done by December 1, 2023.

Interpretation: This project helps us gain a better understanding of medical student knowledge regarding global healthcare systems and whether voluntary, peer-led lectures have the ability to amplify this knowledge. If compelling, results could support a yearly lecture offering and serve as a model for other institutions to integrate into their curricula.

Source of Funding: None

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Background:

Brucellosis is an important neglected bacterial disease that affects humans and animals leading to significant livestock production losses and negative public health impact. Brucellosis is among the top priority zoonotic diseases in Kenya and is endemic in most pastoral communities. However, its data is scarce in Kenya, Mandera County in particular. The CORE Group Partners Project (CGPP) aimed to determine seroprevalence of brucellosis in Mandera County.

Methods:

CGPP conducted a cross-sectional survey where structured questionnaires were administered to pastoralists to assess risk factors associated with brucellosis transmission in humans. A total of 277 sera were collected from sheep and goats randomly selected using a multi-stage sampling technique. Rose Bengal Plate Test (RBPT) was employed to screen sera for the presence of brucella antibody.

Findings:

The overall seropositivity of brucellosis at individual animal level was 22%. Seventy-three respondents were interviewed, forty-six (63%) of the respondents had heard of brucellosis and 35 (47.6%) mentioned abortion as clinical signs of brucellosis in animals. When asked questions to assess brucellosis risk factors, thirty-six (49.3%) said they would take no action if they had aborting animals in their herd, 80.8% consumed raw milk in the past, and of the 51 (69.9%) who assisted animals during the birthing process, none used gloves.

Interpretation:

The survey showed that some of the socio-cultural practices such as consumption of raw milk, and animal handling practices make residents of Mandera County at greater risk of infection with brucellosis. Positive results show brucellosis is prevalent in sheep and goats in Mandera County. This consequently displays the need for planning and implementation of joint programs by One Health stakeholders in prevention and control of the disease as well as raising public health awareness through risk communication and community engagement.

Source of Funding:

Core Group Partners Project

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 822

Agency and Decision-Making Among Pregnant Women Seeking Antenatal Care at a Tertiary Hospital in Ghana

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Background:

Understanding the factors influencing health-seeking behavior during antenatal care is crucial to guiding the efforts to achieve optimal maternal and child health in LMICs. This study aimed to assess self-reported levels of autonomy and examine the factors that influence agency, autonomy, and decision-making among pregnant Ghanaian women.

Methods:

This mixed methods study took place at Korle-Bu Teaching Hospital (ethical approval: KBTH-IRB-00098/2021), in Accra, Ghana in July 2023. Participants meeting inclusion criteria (adult pregnant patient, at least 28 weeks gestation, attended antenatal clinic at least three times) were recruited through convenience sampling. Written informed consent was obtained. Semi-structured interviews were conducted, using an interview guide focused on antenatal experiences, agency, and decision-making. The Mothers Autonomy in Decision-Making (MADM) scale was administered. Descriptive statistics were performed on demographics and MADM responses. Interviews were translated, transcribed, encoded for interpretation, and thematically analyzed.

Findings:

Among 20 participants (number determined by thematic saturation), mean age was 28.7 years (SD 5.2), most (n=12, 60%) completed high school education, and 7 spoke Twi and 13 spoke English. Mean MADM score was 29.9 out of 42 (SD 8.93, range 8 to 42), corresponding to moderate autonomy. Participants commented on decisions made during their pregnancy, including medicine usage and desired mode of delivery, and the process of negotiating these decisions with their providers and support system. Thematic analysis demonstrated that all participants desired involvement in their antenatal care. Most wanted more counseling during antenatal care so they could have more knowledge and be more informed and involved in their antenatal decisions. A minority wanted their doctors to make decisions for them. Support and sometimes permission from family members, especially male partners, was often needed for decisions, like timing and mode of delivery. When making decisions, pregnant women are navigating complex influences from family, community, religion, traditional medicine, and healthcare providers.

Interpretation:

Agency and autonomy are highly desired and, on average, moderately experienced, and play important roles in effective shared decision-making. These findings emphasize the importance of patient-centered shared decision-making training among health professionals caring for pregnant women in Ghana.

Source of Funding:

Fogarty International Center K01 TW012166

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 825

Exploring Two Sides of Migrant Health: the Impact of a Global Virtual Exchange Course for Medical Students

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Background:

Health providers must be equipped to identify, understand, and address the unique health inequity challenges faced by migrant populations. Usually, classes on immigrant health are offered within a single institution with a limited national and cultural lens. To provide a more comprehensive perspective, our course involved medical students from Dell Medical School (DMS) and Benemérita Universidad Autónoma de Puebla (BUAP).

Methods:

We used the Collaborative Online Learning (COIL) model that links classrooms in different countries/cultural settings to create an equitable team-taught learning environment co-taught by faculty from BUAP and DMS. Our learning objectives were to: examine and critique existing migration and health policies, describe how migrant patients access health services in both countries, identify and manage migrant patients' distinct health concerns, and collaborate with international peers to address challenges migrants face in the United States and Mexico. Students were assigned to a small group with a balance of BUAP and DMS students. To evaluate the course, pre- and post-course surveys were administered and two focus groups were conducted in Spanish and English respectively.

Findings:

There were 12 DMS students and 13 BUAP students who participated in the course, 72% identified as female with a median age of 25 years. In the post-course survey (response rate 72%), 90% of the students said the course met their learning expectations, 100% reported higher confidence in their ability to navigate policy-related to migrant health and 80% reported higher confidence in their ability to provide clinical care for migrant patients. In the focus groups (5 DMS and 3 BUAP students participated), students shared that learning directly from global peers was a highlight of the course; particularly by enriching their understanding of different healthcare system. They anticipate applying that knowledge to care for patients. Students also highlighted the multisectoral perspectives that were incorporated in the course, including immigration law. The opportunity to interact in small groups with international peers gave students a greater appreciation for the importance of language proficiency as well as an opportunity to practice a foreign language.

Interpretation:

The application of the COIL model to a migrant health course offers a unique opportunity for students to engage with peers across borders, fostering the exchange of ideas, experiences, and collaborative exploration of challenges that may lead to a more nuanced understanding of this complex area and more intercultural competency.

Source of Funding:

Texas Global at the University of Texas at Austin

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Background:

Rabies, a zoonotic viral disease with case fatality of 100% and annual deaths of 59000, is mostly found in low- and middle-income countries. One health approach is the recommended strategy to eliminate rabies. It includes post-exposure prophylaxis (PEP), mass dog vaccination, and awareness creation. There is paucity of empirical studies on the implementation of all three strategies of one health approach by key implementors and the simultaneous analysis of existing data from human and animal health sectors. The existing literature gap and the death of an 8-year-old boy from rabies in Ga-East municipal of Ghana in 2021 are the backdrop for this study.

Methods:

The study was conducted in Ga-East, one of Ghana's municipals with a mix of urban and rural habitats where most residents are low-income earners. As part of academic requirement, approvals from Ghana College of Physicians and Surgeons and the Health Directorate of Ga-East municipal were used to access the health facilities' records and the participants. Informed consent was sought before participants were recruited. A mixed method approach and cross-sectional study design were used. Data, from seven study sites, were obtained from DHIMS II, manual records, and interviews of 11 purposively sampled key informants (four pharmacists, five clinical coordinators and two veterinary officers) using semi-structured questionnaires. Quantitative data was analyzed using Microsoft Excel and manual thematic analysis was used to analyze qualitative data.

Findings:

The incidence of dog bites was 403 per 100000 people between 2018 and 2022. 14.28% of dog-bitten patients received PEP. A full course of PEP costs between 700 (\$61.86) and 900 (\$79.54) cedis. 60% of clinicians were unaware of wound categorization, 100% did not involve veterinary officers in managing dog bites and 80% had never been trained on dog bites in the last 5 years. Dog vaccination costs 50 (\$4.42) cedis yet, coverage was estimated to be 12.88%. There was no surveillance for rabies at the veterinary unit. 119648 health promotional activities were conducted over the study period, but none included rabies. There was no collaboration between human and animal health sectors towards the elimination of rabies.

Interpretation:

Source of Funding:

None

Association Between Intimate Partner Violence and Mental Health Among Women in Kenya: A Population-Based Study

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Background:

Intimate partner violence (IPV) is the most common form of violence against women and has been linked to several adverse health outcomes, including mental health. However, much of the existing evidence originates from high-income countries, leaving a notable gap in population-based studies within low- and middle-income countries. This study aimed to fill this knowledge gap by examining the association between intimate partner violence and depression and anxiety among women in Kenya.

Methods:

We performed a cross-sectional analysis of secondary data from the 2022 Kenya Demographic and Health Survey. The analytic sample included 3597 women aged 15–49 years. The primary outcomes of interest were whether a doctor or other healthcare worker has ever told participants that they have depression and anxiety. Exposure to IPV was determined by self-reported experience of physical, emotional, sexual, and economic violence perpetrated by intimate partners. Survey-weighted descriptive and multivariable logistic regression analyses were performed.

Findings:

About 3.2% and 2.1% of women reported having been told by a doctor or other healthcare worker that they have depression and anxiety, respectively. In the multivariable model, compared to those who did not experience IPV, the odds of having depression were higher among women who experienced physical violence, adjusted odds ratio (95% confidence interval) 2.81 (1.68-4.72), sexual violence 3.85 (2.18-6.80), emotional violence 3.64 (2.31-5.74), and economic violence 2.46 (1.25-4.78). Similarly, compared to those who did not experience IPV, the odds of having anxiety were higher among women who experienced physical violence 4.60 (2.50-8.46), sexual violence 3.23 (1.47-7.09), emotional violence 4.09 (2.31-7.26), and economic violence 3.82 (1.60-9.11).

Interpretation:

In a large representative sample of Kenyan women, exposure to any form of IPV is positively associated with depression and anxiety, independent of potential confounders. These findings underscore the importance of preventing IPV as a crucial step in improving women's mental health.

Source of Funding:

None

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Background:

Postoperative surgical care in Syria is severely limited due to protracted conflict, economic insecurity, and poor health infrastructure. This is especially true in northwest Syria (NWS), which has experienced widespread conflict. To better understand the state of postoperative care and complications in NWS, we aim to characterize healthcare workers' attitudes towards postoperative care and quantify complications in surgical patients.

Methods:

We conducted two surveys for this study. The first was distributed to healthcare workers in hospitals in NWS and assessed attitudes towards documentation, postoperative care, and potential barriers towards improving care. The second survey collected data from surgical patients at 12 hospitals on surgery type, complications, and barriers to follow-up. This survey was administered by phone in Arabic with patients or family members familiar with the patients' healthcare. Multivariate regression was used to assess odds of complication by surgery type.

Findings:

466 healthcare workers completed the first survey, the majority of whom were doctors (38.8%) and nurses (37.1%). 59% deemed postoperative care important or important but not a priority, and 29% viewed it as unimportant with no significant difference between professions ($p=0.429$). Respondents listed many reasons for postoperative complications, the most prominent being: poor patient compliance (21%), lack of routine follow-up appointments (14%), nonsterile operating room instruments (14%), and poor hospital cleanliness (13%).

Of the 261 patients who completed the second survey, reported complications included fever (26.8%), total parenteral nutrition (22.2%), wound infections (19.5%), nausea/vomiting (16.5%), and additional surgery (13.8%). Four had died. Over half of respondents (57.5%) reported some barrier to follow-up, with transportation (36.0%), financial barriers (31.8%), appointment availability (20.7%), and distance to facilities (19.9%) being the most common. Patients who had undergone orthopedic or trauma surgeries had increased odds of experiencing complications. Trauma patients had 11.04 higher odds (95% CI: 3.83 – 34.10) of receiving a blood transfusion and 10.65 higher odds (95% CI: 3.71 – 33.54) of wound infection following surgery. Orthopedic patients were 3.23 times more likely (95% CI: 1.23-8.66) to require a blood transfusion.

Interpretation:

The combined approach of assessing healthcare workers' attitudes towards postoperative care and characterizing postoperative complications in the region provides a unique opportunity to deliver recommendations tailored to the specific healthcare system in NWS. Future efforts to reduce barriers may improve patient outcomes while addressing their perceived lack of compliance.

Source of Funding:

Union of Medical Relief and Cares Organization – Canada

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Background:

Essential medical devices play an important role in the delivery of quality health services. The World Health Organization (WHO) estimates that up to 80% of medical devices in low- and middle-income countries (LMICs) are partially or completely non-functional due to a variety of factors. There are multiple obstacles to the successful donation and distribution of medical devices. This review merges information on the abundance of medical devices, local demand, and their successful or unsuccessful implementation in East Africa. Regulatory and financial obstacles to the region are accounted for.

Methods:

Drawing from a thorough search of literature published in English across databases such as PubMed, Embase and Coherence Library, the review utilizes key search terms: (East Africa) AND ((medical equipment) OR (medical devices) OR (medical utilities) OR (medical instruments)) AND (donation). Additionally, we explored relevant organizational websites and grey literature to gather information on medical device regulations and oversight in East African countries. Legal aspects were analyzed at the international level of the United States and East Africa as well as at the level of logistical supply. Finally, a personal perspective of the co-authors was provided based on their empirical attempts to deliver medical equipment to East African countries.

Findings:

The imperative of actively involving intended beneficiaries in the process are underlined, emphasizing the importance of diligent planning and execution. Globally, taxation rules, tariff strategies, distribution and upkeep expenses, guideline variations, and acceptance standards collectively pose significant challenges to medical device delivery to LMICs, beyond the cost of the donated device itself. Distribution chains and procurement practices should be adjusted when distributing from high income countries to LMICs to improve affordability and make medical devices more accessible for LMICs. Further, guidelines at the WHO level collaboratively allow for successful distribution of medical supplies to East Africa.

Interpretation:

The mechanism for medical device donation to LMICs can be improved by addressing barriers to their delivery and usage. Consideration of end hospital needs are paramount, along with streamlining of international legal and regulatory frameworks.

Source of Funding:

none

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Background:

Trauma is a major cause of Tanzanian morbidity and mortality and the practice of emergency care in Tanzania is a rapidly evolving field since the establishment of an emergency medicine (EM) residency in 2010. Bugando Medical Center (BMC) is a 950-bed teaching and consultant hospital in Mwanza, Tanzania with an Emergency Medicine Department (EMD) led by an EM trained physician since 2017. As care in the EMD evolves, understanding trauma patients seen and care received is critical to quality improvement. Prior to this study, BMC has not implemented a standard process of collecting data from trauma patients to understand trauma care.

Methods:

Study recruitment of trauma patients presenting to the EMD occurred March-August 2023. Two research assistants (RAs) performed the recruitment, consent, and data collection of trauma care using the standard WHO Trauma Form. Data was entered into RedCAP for aggregation and exported to SPSS for analysis. The data collection was overseen by the head of the EMD (SS) with analysis performed by study authors. This study was approved by NIMR Ethics Board and the Northwestern University IRB.

Findings:

6423 patients were seen in the resuscitation area of the EMD during this study interval. 760 patients were categorized as trauma and 469 were included in the study. Most trauma patients were male, with a median age of 29 (IQR 19-41), and arrived by ambulance (80%), with a median arrival time of 16:49 having been seen at prior facilities (82%). The most common injuries were musculoskeletal (55%), skin (50%), HEENT (40%), and neuro (20%) from road traffic accidents (57.5%) and X-rays (63.5%) and head CTs (34.9%) were the most common imaging modalities, with 95.6% of patients dispositioned to the wards.

Interpretation:

This study is descriptive, and results will be used to drive further research into care quality and outcomes. Based on information collected, the EMD can scale up staff at its busiest times, emphasize provider training on specific injury types and incorporate referral centers into future interventions. This study is limited by the data collected in the Trauma Form and data was not collected on surgical interventions or outcomes following admission.

Source of Funding:

This work was supported by the Robert J. Havey Institute for Global Health's catalyzer fund at Northwestern University, Feinberg School of Medicine

Abstract N°: 874

Attitudes, barriers, and facilitators towards Pre-Exposure Prophylaxis (PrEP) for Human Immunodeficiency Virus Infection Prevention among Indian female sex workers who are pregnant or breastfeeding

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Background:

While Pre-Exposure Prophylaxis for HIV prevention (PrEP) uptake is steadily increasing across the globe, access to PrEP for key populations is limited. PrEP implementation could have a significant impact on HIV incidence among them. Previous demonstration projects in India have shown high rates of acceptability, uptake, and adherence among female sex workers (FSW). However, pregnant and breastfeeding FSW were excluded from these demonstration projects due to lack of federal guidelines in India. As of 2017, the World Health Organization recommends PrEP for all pregnant and breastfeeding women at high risk for HIV. India's own technical guidelines now state that PrEP can be initiated or continued during this period. In spite of these changes, there is scarce information on PrEP acceptability among pregnant and breastfeeding women in India. We characterized the acceptability of PrEP among pregnant or breastfeeding FSW in India through a community listening exercise.

Methods:

From July to September 2023, we conducted a quantitative interview-assisted survey among 51 FSW who were currently pregnant (N=19) or breastfeeding (N=32) in West Bengal and Karnataka, India. We asked questions regarding knowledge and attitudes towards HIV infection and PrEP, as well as questions related to potential barriers and facilitators to using PrEP.

Findings:

Among participants, 75% stated they would be willing to use PrEP during their pregnancy or breastfeeding period, and 73% would prefer a shot every two months over the daily oral pill. However, 71% of respondents said they wanted more information about potential side effects of PrEP on their baby. Regarding their concern about HIV infection, 61% of participants strongly or somewhat agreed that they were worried about HIV. While many participants found PrEP to be acceptable, 48% of respondents with a regular partner felt that their partner would not let them take PrEP while pregnant or breastfeeding. In addition, 86% of participants said it would be difficult for them to pay for PrEP during this period.

Interpretation:

The majority of participants considered PrEP to be acceptable to use while pregnant and breastfeeding. Newer long-acting PrEP options were preferable. However cost and partner perceptions of PrEP use may be barriers to PrEP uptake among this population. Further implementation studies are needed.

Source of Funding:

University of Southern California Departmental Funds

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 875

Economic Empowerment Intervention Mitigating Emotional Violence among Women engaged in Sex Work: A Cluster Randomized Control Trial in Southern Uganda

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Background:

Women engaged in sex work (WESW) are at heightened risk of experiencing intimate partner violence (IPV) compared to women in the general population. Economic vulnerabilities exacerbate the risks of IPV among WESW, necessitating structural interventions targeting poverty. This study examines the impact of an economic empowerment intervention on intimate partner violence among WESW in southern Uganda.

Methods:

We used data from 542 WESW in Southern Uganda recruited from 19 HIV hotspots between June 2019 and March 2020. Eligible participants were at least 18 years old, engaged in transactional sex—defined as vaginal or anal sexual intercourse in exchange for money, alcohol, or other goods—in the preceding 30 days, and reported at least one episode of unprotected sexual intercourse in the past 30 days with a paying, casual, or regular sexual partner (spouse, main partner). The combination intervention comprised four HIV risk-reduction sessions, six financial literacy sessions and an individual matched savings account (where participants' savings were matched at a ratio of 1:1). We analyzed data collected at baseline, 6, and 12 months of follow up. To examine the impact of the intervention on IPV, separate mixed-effects logistic regression models were run for each type of IPV (physical, emotional, and sexual) as experienced by participants in the last 90 days.

Findings:

Participants' mean age was 31.4 years. The intervention was efficacious in reducing emotional and physical IPV as evidenced by a statistically significant intervention main effect for emotional IPV, $\chi^2(1) = 5.96$, $p=0.015$, and a significant intervention-by-time interaction effect for physical IPV, $\chi^2(2) = 13.19$, $p<0.001$. To qualify the intervention impact on physical IPV, pairwise comparisons showed that participants who received the intervention had significantly lower levels of physical IPV compared to those in the control group at six months (contrasts = -0.12 (95% CI: -0.22, -0.02), $p=0.011$). The intervention, time, and intervention-by-time main effects for sexual IPV were not statistically significant.

Interpretation:

Our findings suggest economic empowerment interventions as viable strategies for reducing emotional IPV among WESW. It is however essential to understand the role of such interventions in addressing other forms of IPV among this population given their high risk to violence that further aggravates their risk of acquiring HIV and STIs.

Source of Funding:

National Institute of Mental Health (NIMH), award R01MH116768.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 877

Enhancing Adherence to Antiretroviral Therapy among Adolescents Living with HIV through Group-Based Therapeutic Approaches in Uganda. Findings from a Pilot Cluster-Randomized Controlled Trial

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Background:

We examine the preliminary impact of group-cognitive behavioral therapy (G-CBT) versus a family-strengthening intervention delivered via multiple family group (MFG) in improving ART adherence among adolescents living with HIV (ALHIV) in Uganda.

Methods:

We analyzed data from a pilot cluster-randomized trial (2020 to 2022) conducted in nine (9) clinics in Uganda among 89 participants, who were eligible out of the 147 ALHIV screened. Participants were eligible if they were aged 10–14 years, HIV positive, taking ART, and living with a family. Adolescents were randomized, at the clinic level, to receive the usual care (n=29), MFG (n=34), or G-CBT (n=26). The interventions were delivered over three months. Overall, the mean percentage attendance for the ten G-CBT and MFG sessions was 87.7% and 90.2% respectively. Three ALHIV were lost to follow-up, while one child died. Adherence was assessed using pharmacy records collected at baseline and four additional pharmacy visits. We used mixed-effects logistic regression analysis to examine the effect of the interventions on ART adherence.

Findings:

We found significantly higher adherence in intervention groups than in control, $\chi^2(2) = 7.76$, $p=0.021$. Specifically, mean differences (MD) from the comparisons showed that compared to usual care, the MFG group had significantly higher adherence at visit three MD= [1.509 (95% CI: 0.017 – 3.001), $p=0.047$] and at visit 5 [Mean difference = 1.269 (95% CI: 0.350 – 2.187), $p=0.007$]. Also, at visit 4, participants in the G-CBT group had higher adherence than those in the control group [MD = 0.990 (95% CI: 0.277 – 1.704), $p=0.007$]. The Intervention-time interaction effect was also statistically significant $\chi^2(6)= 27.65$, $p<0.001$.

Interpretation:

Our study showed preliminary evidence that G-CBT and MFG might have contributed to improved ART adherence among ALHIV. Moreover, G-CBT is a low-cost alternative to expensive individual therapy, especially in low-resource settings. The results warrant the need for more extensive studies to better understand the role of these interventions in the routine care of ALHIV.

Source of Funding:

National Institute of Mental Health (#R21MH121141, 2020-2022).

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Background:

Trauma constitutes a pressing global health crisis. Unlike well-structured trauma care systems and comprehensive data acquisition in high-resource countries, resource-limited nations face disproportionately high injury-related mortalities due to inadequate trauma care infrastructure and data deficiency. Tanzania exemplifies this challenge with significant preventable injury burdens and a lack of matured trauma data acquisition systems. To address this gap, we developed a novel Amber database, a user-friendly trauma registry, real-time web-based application. This study aimed to demonstrate the Amber database's feasibility as a potential solution to enhance Tanzania's injury surveillance systems.

Methods:

The Amber database was implemented at Tanzania's Muhimbili Orthopedic Institute (MOI). Trained staff prospectively registered trauma victims directly into the digital Amber application at MOI's emergency department (ED) daily, from July 13 to September 15, 2023. The primary outcome measure was the patient's disposition at the ED (mortality, admission, operation, transfer, and discharge), injury severity measured by the Kampala Trauma Score (KTS), and the mode of arrival. Amber's automated descriptive statistics were presented in Microsoft Excel sheets for analysis. Injury trends were presented using means, standard deviations (SD), interquartile ranges (IQR), and proportions. Multivariable logistic regression analyzed factors like delay in reaching facilities, mode of transport, and ED outcome. Semi-structured interviews were conducted with local stakeholders to identify challenges, improvement areas, and potential solutions. McGill University and the MOI's Ethics Board granted ethics approval

Findings:

During the study period, 1100 trauma patients were collected. Road traffic collisions accounted for 61% of cases, resulting in fractures (57.33%) and head injuries (29.32%), requiring Admission. Most injuries occurred in Dar es Salaam, primarily among adults with a mean age of 32 (SD, 20.15), and a male predominance (76.75%). The study revealed that over 38.34% of patients had moderate to severe injuries (KTS \leq 8). Ambulances transported 85% of patients to the hospital, but the average time from injury to hospital arrival was 3,874 minutes (IQR, 1440-275,040). Over 59.16% received timely care upon hospital arrival, highlighting clinical care proficiency. Interviewed stakeholders praised the Amber database's simplicity and capabilities in identifying care gaps while enhancing data completeness as the system automatically rejects incomplete entries.

Interpretation:

Amber's feasibility was demonstrated. Following its introduction, Amber became routine MOI's medical recording system. This success prompted Tanzania's Health Ministry to expand Amber nationwide. The initiative's evidence surfaced as MOI's Administrators embraced Amber and initiated nationwide expansion. This innovation promotes targeted injury prevention, education, quality improvement, and healthcare policies.

Source of Funding:

McGill University provided travel support.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 882

COVID/COPE Study: An Interdisciplinary Empirical Approach to Understanding Unequal Economic and Health Consequences of COVID-19 Measures among Pregnant Women in Uganda

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Background:

The consequences of Covid-19 related restrictive measures across countries are not very well understood in Africa compared to other countries. To assess the impact of COVID-19 outbreak on the experiences of pregnant women and their health outcomes, the COVID generation (COVGEN) research alliance developed tools and instruments across multiple institutions. The objective of this study is to implement the COVGEN survey among pregnant women in Uganda. and compare to non-pregnant women.

Methods:

This cross-sectional study was conducted at 8 Health Center III facilities in rural Uganda that partner with Imaging the World Africa, an organization that provides modern imaging technology, innovation, education and capacity strengthening to rural communities. The primary outcome is the change in the probability of getting an ultrasound. Secondary outcomes include access to mental health, healthcare resources and social support. We used logit regression to estimate the probability of getting an ultrasound before and during Covid. We compared pregnant and not-pregnant populations who did (treatment) and did not (control) get an ultrasound before and during the Covid-19 pandemic. We controlled for demographics, and a series of behavioral variables. For the cohort during covid, we also included perceptions of the effects of covid and its related policies, following the health belief model.

Findings:

The total sample was 665 women in Uganda across all sites. About 179 women said that the pandemic lead to financial and employment distress. Additionally, 507 of the women agreed on the importance of accessing mental health through their primary provider. Preliminary findings of the regression analysis suggest a pandemic effect on the probability of getting an ultrasound, moderated by perceptions women have about risk related to getting care. In our ongoing analysis we are further exploring the causal effect of the Covid-related measures and the probability of getting an ultrasound and the related clinical outcomes.

Interpretation:

Understanding and comparing the effects of Covid-19 measures on pregnant and non-pregnant women is vital in guiding and planning future pandemic measures so that vulnerable groups are not disproportionately affected by proposed measures in future global health emergencies.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 883

Community health worker’s perspectives on challenges and supportive strategies of improving their practice in the Eastern Cape: a qualitative study

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Background:

Community health workers face several problems in their line of work. Despite the importance of community health workers as an adjunct health workforce providing crucial healthcare services to the rural, marginalized, and underserved populations, their challenges remains understudied in certain geographical contexts. Consequently, this study explores the experiences and opinions of community health workers on the challenges and support systems for their effective delivery of healthcare support services in the Buffalo Municipality City, Eastern Cape Province of South Africa.

Methods:

In-depth individual, semi-structured interviews (n=10) as well as focus groups interviews (n=13) were conducted with 23 community health workers, using an audio recorder with their permission to record the interviews. Content and thematic data analysis was applied.

Findings:

The challenges identified by CHWs as impeding their ability to provide efficient and effective healthcare services to the community revolved around frustrations related to the clients' non-compliance with health advice, particularly those on long-term use of medications, a lack of human and material resources, poor and unfair enumeration for their services, and an inability to earn trust from clients and the community. To assist them serve the community better and improve the community health programme, the CHWs made several suggestions: provision of transportation, constant training workshops to enhance and maintain their skills and knowledge, support to improve communication with clients, provision of work identifiers to earn community's recognition, respect, and trust, and improvement in human and material resources to mitigate the overwhelming workload. In addition, they emphasised the need to address job insecurity by offering them with permanent, salaried positions, as well as the safety concerns posed by violent crimes in the communities they served.

Interpretation:

Our findings highlighted the barriers of CHWs in Black, rural, and resource-constrained communities in the Eastern Cape, which serves as a guide for the government, policymakers, and other stakeholders involved in community health programmes to consider and address. From the standpoint of public health, a positive action to strengthen the CHW programme will impart dual benefits. First, the CHWs will be incentivized to provide better, more efficient, and more effective service. Second, it may facilitate the cardinal objective of universal health coverage and population health objectives, thereby reducing health inequality and burden in rural and underserved communities in South Africa

Source of Funding:

The study was funded by Reves Center for International Studies of College of William and Mary, Faculty Fellowship 2022.

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 885

Identifying Barriers and Facilitators to School-based Delivery of an Evidence-based Mental Health Intervention in Sierra Leone

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Background:

While many promising evidence-based interventions have been developed, programs are not often implemented to ensure that they align with locally identified needs and resources, particularly in low- and middle-income countries (LMICs). Given the viability of schools as delivery settings for evidence-based mental health interventions in LMICs and their potential to increase accessibility of services, there is a strong case to better understand contextual factors that might support or hinder school-based delivery of interventions. This study conducted an initial needs assessment with key stakeholders in Sierra Leone to investigate potential barriers and facilitators to teacher delivery of an evidence-based mental health intervention- the Youth Readiness Intervention (YRI)- within Sierra Leone's secondary schools.

Methods:

We recruited Ministry of Education Officials (N=2), teachers (N=15) and principals (N=15) from secondary schools in Sierra Leone's Western region to participate in qualitative interviews exploring barriers and facilitators to YRI delivery by teachers within schools. Qualitative data was analyzed using a rapid qualitative analysis approach for implementation science to quickly derive insights from qualitative data. Three qualitative team members summarized transcripts based on domains aligned with the structured research questions, organized them into a matrix, scanned across the matrix to identify key themes, and discussed themes to arrive at consensus. Clinical Trials Registration: NCT05737667.

Findings:

Respondents indicated that schools need a program like the YRI to improve interpersonal relationships and coping skills among youth. Several barriers to implementation were identified: buy-in and motivation from teachers and students, finding time during the day for implementation, and daily hardships faced by youth (i.e., hunger, unstable homes). Facilitators to implementation included providing incentives to teachers, engaging parents, teachers, and students with transparent communication, and recruiting facilitators who are eager to learn.

Interpretation:

Involving key stakeholders in an initial needs assessment provided insight into potential barriers and facilitators to YRI implementation, which the team can address prior to implementation. Findings suggest that engaging students and teachers to increase buy-in and maintain motivation and embedding the YRI within the curriculum could help promote the sustainability of the YRI within Sierra Leone's schools.

Source of Funding:

National Institute of Mental Health R01MH130320.

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Background:

Despite the progress of the health sector development program in Ethiopia for the last two decades prior to the war, the health system of the country is affected by the current conflict. The war in Tigray, Northern Ethiopia has disrupted the health care system of the region. However, its association on health services disruption for chronic diseases has not been well-documented. Therefore, this study aimed to assess the association of the war on the utilization of health services for patients with chronic diseases.

Methods:

Of 135 primary health care facilities, a registry-based descriptive cross-sectional study was conducted on 44 rural and semi-urban facilities of Tigray. We extracted data on health services utilization of patients with tuberculosis, HIV, diabetes mellitus, hypertension, and psychiatric disorders in the prewar period (From September 1st, to October 31st, 2020) and during the first phase of the war period (From November 4th, 2020 to June 30th, 2021). We used descriptive statistics for data analysis, while proportions and graphs to present the findings. Records on the number of follow-up, laboratory tests and patients on treatment of the aforementioned chronic diseases were counted during the prewar and war periods.

Findings:

Of 4,645 record of chronic diseases patients on treatment during the prewar period, 998 (21%) records indicated had treatment during the war period. Compared to the prewar period, 59 of 180 (33%, 95%CI: 26%-40%) for tuberculosis, 522 of 2,211 (24%, 95% CI: 22%-26%) for HIV, 228 of 1,195 (19%, 95% CI: 17%-21%) for hypertension, 123 of 632 (20%, 95% CI: 16%-22%) for psychiatric disorders, and 66 of 427 (15%, 95% CI: 12%-18%) for type 2 diabetes mellitus patient records revealed continued treatment during the war period. Of 174 records of Type1 DM patients in prewar, at 2-3 months into the war the numbers dropped to 10 with 94% decline compared to the prewar observations. The record of 25 Tuberculosis, 398 HIV, 260 DM, 515 hypertension, and 230 psychiatric disorder patients received treatment prewar in one of the primary hospitals was reduced to 2, 0, 5, 6 and 0 respectively during the war period.

Interpretation:

The war in Tigray has resulted in a dramatic disruption of the care of patients with chronic diseases, likely leading to increased morbidity and mortality from those conditions. These facts call for urgent policy action to ensure the restoration of those services, and save the lives of thousands of patients before they develop devastating complications and death.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 890

Lessons Learned: Reflective Practices on Short-term Experiences in Global Health

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Background:

Students participating in short-term experiences in global health (STEGHs) face challenges and emotional stressors that hinder learning and limit the richness of immersion experiences. Cultural differences, language barriers, socioeconomic conditions, physical demands of travel, and team dynamics may impede expected outcomes of the experience. Reflective practice is one tool that can assist in overcoming challenges and stressors of healthcare-related student learning experiences (Contreras et al., 2020), such as STEGHs.

Methods:

This quality improvement (QI) project addresses challenges encountered during implementation of the reflection guide, which consists of eleven structured exercises. The guide is intended to promote development of global mindedness, reinforcing global health competencies and global citizenship while meeting interprofessional, curricular, and programmatic objectives. Exercises are completed throughout the STEGH.

Findings:

Data collected through student assessments, informal focus groups, and feedback of STEGH leaders revealed three key challenges:

- Faculty and student buy-in
- Effective utilization
- Structure of the guide

Data revealed the exercises were helpful and encouraged meaningful reflection.

The identified key challenges hindered effective use of the reflection guide for some users. There is a barrier to implementation when STEGH leaders and participants are unwilling to use the tool. Students stated the guide was time consuming in an already busy environment. In addition, it was difficult to determine how to use the guide during a busy experience. Students and faculty perceived the guide to be overwhelming due to its length.

Interpretation:

Possible solutions include using questions during facilitated debriefing, educating leaders to use selected exercises and not the entire guide, and converting the guide to a mobile application. More experiences and continued student feedback will help with future changes in how the guide is used.

Source of Funding:

THECB grant – development of online version of guide

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Background:

Sickle cell disease (SCD) is a genetic blood disorder causing anemia, jaundice, and acute pain crises. While sickle cell trait may protect against malaria, SCD leads to significant morbidity and mortality. SCD prevalence among the Tharu people in Nepal's malaria-endemic region is estimated at 15%. The Nepalese government subsidizes SCD management for diagnosed individuals. However, rural Tharu communities in Dang face limited diagnostic access and often miss out on subsidies. To address this gap, we partnered with Creating Possibilities (CP) Nepal, a non-profit in Dang, to conduct a mass SCD screening and education camp in 2015. Our purpose is to report the progress made over nine years in enhancing SCD screening, diagnosis, and education.

Methods:

We organized annual mass screening camps in Dang's health posts targeting various Tharu communities from 2015 to 2023. Screening employed a cost-effective blood agglutination test. Positive cases received confirmatory testing via hemoglobin electrophoresis or high-performance liquid chromatography (HPLC) at the regional hospital. We also conducted needs assessments through surveys, focus groups, and expert interviews to develop culturally relevant SCD education modules and optimize delivery through community consultation.

Findings:

Out of 5289 individuals screened, 9.5% (n=501) tested positive for sickle cell. Among those completing follow-up diagnostic testing (n=320), 5.9% were confirmed with SCD, 80.9% with sickle cell trait, and 13.1% were false positives. The assessment highlighted the need for culturally relevant health and SCD education, with a focus on mother's groups as primary healthcare access points in Tharu communities. Currently, we deliver education through training programs for community health workers, sessions with mother's groups, and forum theatre presentations to families. The assessment also identified transportation and financial support as significant barriers to SCD treatment.

Interpretation:

Our report found a higher prevalence of sickle cell trait but lower rates of sickle cell disease (SCD) than expected. Sickle cell trait, though usually harmless, can be deadly when combined with conditions like thalassemia, not fully assessed in our study. To improve SCD care, we plan to work with local partners to set up an HPLC facility for comprehensive blood disorder screening and early intervention in Tharu communities.

Source of Funding:

Funded by UBC Naiman-Vickars Endowment Fund, and Walter Gage Fund.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 901

Adaptation and utilization of World Health Organization’s OpenWHO.org learning - Case studies by platform learners

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Background:

The learning response on OpenWHO.org during the COVID-19 pandemic and other health emergency events has demonstrated the global need for accessible evidence-informed information for health workers and the general public. The World Health Organization’s online learning platform, which was first launched in 2017, showed a significant increase in enrollments during COVID-19 pandemic. Learners from around the globe were able to access the courses in multiple languages and share their learning with their communities. Learners distributed the learning content using different technologies to overcome obstacles such as poor internet connection, and language or cultural barriers, especially in low- and middle-income countries.

Methods:

In February 2023, OpenWHO.org team issued the Call for Abstracts to seek to understand how the learning platform has been used in local, national or regional contexts, or how learning content has been adapted for use outside the platform. OpenWHO reviewed 420 submissions from across the world and 40 finalists were selected to present posters. Feedback and review from these learners captured qualitative, adaptive and extended use of the learning resources in other settings.

Findings:

Review of the submitted posters showed that the learning content was used and adapted in a variety of categories. In addition to professional training, the courses were used for accredited learning programmes, academic course components for degree students, emergency management, capacity building, and controlling infectious diseases. The WHO’s online learning platform made critical health knowledge accessible to health workers and citizens during the COVID-19 pandemic through rapid development and design principles that ensured evidence-based health information reaches communities and health workers. As access to online learning continues to be a challenge in many countries, we found that a MOOC format and accessibility guidelines can increase information dissemination and reach to a global audience. OpenWHO learners, the health workers, have connected with a larger audience to extend the learning to larger audiences outside the platform itself. This is a critical knowledge multiplier effect witnessed in the open online learning environment.

Interpretation:

OpenWHO courses use for different purposes and adapting content to local and contextual needs suggest that trustworthy, adaptable, and learner-centric content should be accessible in health emergencies. It is pivotal to promote equitable access to critical health information during times of crisis creating evidence-informed content in multiple formats and means of presentations.

Source of Funding:

NONE

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 903

Preliminary Impact of Group-Based Interventions on Stigma, Mental Health and Treatment Adherence Among Adolescents Living with HIV: The Suubi4Stigma Pilot Randomized Clinical Trial in Uganda

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Background:

This study examined the preliminary impact of group cognitive behavioral therapy and group-based multiple family strengthening interventions to address HIV stigma and improve the mental health functioning of adolescents living with HIV in Uganda.

Methods:

We analyzed data from the Suubi4Stigma study (2020-2022), a two-year pilot randomized clinical trial for adolescents living with HIV (10-14 years) and their caregivers. Adolescents were randomized, at the clinic level, to receive the usual care (n=29), MFG (n=34), or G-CBT (n=26). We fitted separate three-level mixed-effects linear regression models to test the effect of the interventions on adolescent outcomes at 3- and 6-months post-intervention initiation.

Findings:

We found significant mean differences (MD) in the internalized stigma scores between MFG and usual care at 3 months of follow-up, MD = -0.008 (-0.015, -0.001), p=0.025. In other words, adolescents who participated in the MFG intervention reported significantly lower internalized stigma at three months. Similarly, there was a statistically significant mean difference in anticipated stigma between the G-CBT group and usual care at six months, MD = -0.039 (-0.072, -0.006), p=0.013, indicating that participants in the G-CBT group reported less anticipated stigma at 6 months. In addition, over time, we observed a significant decline in internalized stigma, anticipated stigma, as well as all measures of mental health functioning.

Interpretation:

Outcome trends from this pilot study provide compelling evidence to support testing the efficacy of these group-based interventions in a larger trial.

Source of Funding:

National Institute of Mental Health (#R21MH121141, 2020-2022).

Adverse Childhood Experiences and Cardiovascular Consequences in Youth Living with HIV in Uganda

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Background:

Adverse childhood experiences (ACEs), such as abuse, neglect, and household dysfunction (HHDYS), are associated with increased risk of cardiovascular disease (CVD). Only limited data exist on the effect of ACEs on CVD and inflammation in adolescents, including those with HIV. We studied the prevalence of ACEs in youth with perinatally acquired HIV (YPHIV) and youth without HIV living in urban Uganda and their association with cardiovascular disease markers.

Methods:

A prospective longitudinal study was conducted in Kampala, Uganda in youths with and without HIV. Carotid artery intima-media thickness (IMT), pulse wave velocity (PWV), plasma and cellular markers of systemic inflammation and immune activation were measured at baseline and 96 weeks. The Adverse Childhood Experiences-International Questionnaire (ACEs), Patient Health Depression Questionnaire-9 (PHQ-9) and socioeconomic questions (e.g., food insecurity, access to electricity) were completed at 96 weeks. All participants were between 10-18 years of age. YPHIV were on ART with HIV-1 RNA level ≤ 400 copies/ml. ACEs sub-scores of abuse, neglect, and HHDYS were calculated. Mixed linear regression analyses were performed to identify the association between ACEs and CVD markers.

Findings:

Total of 100 participants (49 YPHIV and 51 HIV- youth) were enrolled. At baseline, median age was 12 years (IQR: 11-14), 52% were female. YPHIV were more likely to have a history of abuse, and higher ACE total scores ($p=0.015$). ACEs (total score and abuse) correlated with HIV status ($r=0.004$, $p<0.01$), CD4+ and CD8+ T cells expressing HLA-DR and/or CD38 ($r=0.199-0.286$, $p\leq 0.044$) and PWV at 96 weeks ($r=0.209$, $p=0.041$). In a model adjusted by HIV status, age, gender, physical activity (met-kcal/hour), PHQ-9 score, monocytes, and activated CD8 T cells, total ACE score ($\beta=0.05$) remained associated with an increasing PWV over 96 weeks. This study shows the role of early stress on the risk of CVD in youth in this setting, independent of known CVD risk factors. There is a need for further bolstered social support for YPHIV in urban sub-Saharan Africa as they were more likely to experience ACEs. YPHIV, as well as other youth with ACEs, ought to have access to early behavioral and medical interventions to promote cardiovascular health.

Interpretation:

Findings suggest that ACEs may contribute to CVD risk in YPHIV in Uganda, even after adjusting for factors known to influence cardiovascular health. Early life stress may play an important role; research is warranted to determine the impact of emotional events on physical outcomes and how to mitigate long-term consequences.

Source of Funding:

None.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 911

A Two-Pronged Approach to Understanding Reciprocity and Mental Health Relationship in Developing Countries: Evidence from Young Informal Construction Workers in Nigeria.

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Background:

Mental health problems disproportionately affect young people in developing countries. However, there is limited research on help-seeking behaviours and the social support systems that improve mental wellbeing among vulnerable youth populations. This mixed-methods study aimed to examine the relationship between social support reciprocity and mental health among young informal construction workers in Nigeria, a population at high-risk for occupational and socioeconomic stressors.

Methods:

This study utilized a mixed-method design, incorporating both quantitative and qualitative methods. First, a cross-sectional survey was conducted, involving 686 informal workers. The survey aimed to measure reciprocity, mental health-related quality of life, and relevant covariates. To assess mental health, the Short Form 12-item (version 2) Health-related Quality of Life (HRQoL) survey instrument was employed. Reciprocity was evaluated using the social support reciprocity scale. Following the quantitative phase, in-depth interviews were conducted with a subset of participants. A total of 32 individuals took part in the interviews, which employed a semi-structured interview guide. This qualitative approach allowed for a deeper exploration of the research topic and provided valuable insights into the experiences and perspectives of the participants.

Findings:

The quantitative analyses showed that 25% of the participants reported poor mental health. Reciprocity positively predicted mental health after controlling for covariates ($R^2 = .280$, $p < .001$). The qualitative findings revealed that the influence of reciprocity on mental health is a two-pronged approach. The findings showed that reciprocity impacted mental health directly through person-to-person interaction as well as indirectly through associations such as trade unions and religious groups. Indirect exchanges through groups helped address limitations of direct support due to limited resources.

Interpretation:

This study fills important gaps in understanding how social relationships impact mental health in developing country contexts. The findings emphasize the role of collective action and community-based support systems in promoting mental wellbeing among vulnerable populations. Insights can inform culturally relevant, systems-level mental health interventions.

Source of Funding:

School of Graduate Studies, Lingnan University with funding reference (RCF-019/2021).

Contribution of Traffic-related PM2.5 to Lung Cancer in 31 Chinese Major Cities: A Geographic Analysis

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Background:

Lung cancer is the most common cancer, with significant geographical disparities, in China. The rapid growth of the on-road vehicles in past decades in China has significantly increased the PM2.5 pollution, which is a key carcinogen of lung cancer. However, little is known about the contribution of the traffic PM 2.5 to the lung cancer disparities across different regions in China. This study aims to examine the proportion of lung cancer mortality attributable to traffic PM2.5 emissions across the different regions in China.

Methods:

PM2.5 concentration data and other variables that could lead to the change in PM2.5 concentration (e.g., industry dust emission, green area, etc.) from 31 major cities in China were retrieved from China's statistical annual reports 2014-2017. Random effects regression model was established to calculate the traffic-related PM2.5 in each major city. Exposure-response models were established to estimate the national- and city-level population attributable fractions (PAF) of traffic-related PM2.5 for lung cancer.

Findings:

The population-weighted average PAF of the 31 cities was 5.74% (95%CI: 5.04-6.45). Cities with the top five PAF values are Shanghai, Guangzhou, Zhengzhou, Chengdu, Nanjing. Cities with the lowest five PAF values are Lhasa, Harbin, Hohhot, Urumqi and Chongqing. Among all cities, Shanghai had the highest PAF of traffic PM2.5 for lung cancer at 12.97% (95%CI: 7.02%-18.78%) and Lhasa had the lowest PAF at 0.24% (95%CI: 0.14%-0.35%).

Interpretation:

Traffic-related PM2.5 emission accounted for a significant proportion of lung cancer burden in China. There was a significant variation of the PAF of traffic-related PM2.5 for lung cancer across the major cities in China, where the PAF values were generally lower in the western and northern regions and higher in the eastern and southern regions of China. The findings from this study demonstrated that geographically-tailored strategies aiming at reducing PM2.5 from vehicle emissions could be helpful to reduce the lung cancer burden and its related disparities in China.

Source of Funding:

None.

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Background:

The World Health Organization (WHO) recommended seasonal influenza vaccines (SIVs) for children between 6 months and 5 years of age. Despite the availability and multitude of benefits of SIVs, there is still a significant level of vaccine refusal and hesitancy among parents. This study aimed to estimate the pooled proportion of parental willingness and actual uptake of seasonal influenza vaccination.

Methods:

We searched PubMed Central, PubMed Medline, Scopus, Web of Science, Ovid, ProQuest, Cochrane Library, and Google Scholar according to PRISMA guidelines. We included all empirical research discussing parental willingness and actual uptake of seasonal influenza vaccination without time or language limitations. Study risk of bias was assessed using the Newcastle-Ottawa Scale quality assessment tool. We pooled data using random-effects meta-analysis.

Findings:

Out of 4597 screened studies, 76 studies from 26 countries across 6 WHO regions were included and eligible for Meta-analysis. Using the random-effects model, the pooled proportion of overall parental uptake of influenza vaccination reported in 65 studies among 94028 subjects was 42% (95%CI, 38 to 46). The pooled proportion of overall parental willingness to uptake influenza vaccination reported in 39 studies among 42265 subjects was 59% (95%CI, 51 to 66). Among parents of healthy children, the pooled proportion of overall uptake of influenza vaccination reported in 15 studies, was 32% (95%CI, 19 to 48) while the pooled proportion of overall parental uptake of influenza vaccination among parents of children with chronic diseases reported in 19 studies was 39% (95%CI, 31 to 47).

Interpretation:

There is still a high rate of influenza vaccine hesitancy among parents of both healthy and diseased children. Intensive vaccination campaigns and targeted programs remain essential in raising parental awareness about the crucial role of vaccinating children against the seasonal influenza virus to establish a high level of parental vaccine acceptance for proper control of the seasonal global burden of the disease.

Source of Funding:

None

The Engagement and Challenges of Civil Society Organizations in Multisectoral Cancer Prevention and Control Programs: A Systematic Review

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Background:

Cancer poses significant disease burden to the global population, with an estimation of 18.1 million cancer cases and accounting for nearly 10 million deaths in 2020. Collaboration and engagement of all stakeholders, both government and non-government agencies, is essential for success in combating the cancer crisis. Although WHO and many countries have encouraged the engagement of civil society organizations (CSOs) in addressing cancer issues, CSOs' engagement in multi-sector collaborations in cancer prevention and control is still rare. This systematic review aims to describe the engagement of and challenges faced by CSOs in multisectoral cancer prevention and treatment interventions.

Methods:

Eligible studies published in English or Chinese were searched on six databases (PudMed, Embase, Ovid, Web of Science, CNKI, and Wanfang) up to Dec 8, 2022. Key information like the characteristics of the CSO-engaged multisector collaborations and the challenges faced by the CSOs was summarized.

Findings:

Twenty-five articles were included in this review. NGOs/NPOs and community-based health institutions were the two most common types of CSOs that engaged in multisectoral cancer collaboration. The roles of CSOs in the collaborations included providing services (80%), collecting/sharing information (72%), providing/training health workforce (52%), demonstrating leadership (52%), providing financial support (44%), and providing medicines and technologies (36%). The most common collaborators of CSOs were government agencies (48%), followed by research institutions (40%), other CSOs (28%), hospitals (24%), and business/industry entities (12%). Cervical, lung, and gastrointestinal cancers were the most common cancer types that were covered in the CSO-engaged multisectoral intervention programs. The major challenges faced by CSOs were trust crisis and sustainability issues, including specific problems like lack of collaboration and implementation standards, lack of social and financial support, disadvantaged infrastructure, unclear accountability between different sectors, inadequate staff training, lack of program advocacy and promotion. Subgroup analysis showed that service-oriented cancer cooperation projects often faced administrative procedural challenges, such as the lack of efficient and unified guidelines, while research-oriented cancer cooperation projects were prone to practical challenges, such as occasional studies do not meet their overall goals.

Interpretation:

the engagement of CSOs in multisectoral collaboration for cancer prevention and treatment is still limited, with significant challenges in trustiness building and collaboration sustainability. Effective strategies to tackle these challenges are needed to facilitate the engagement of CSOs in multisector collaboration and improve the accessibility and quality of cancer services.

Source of Funding:

None.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 933

Determinants of modern contraceptive use among postpartum mothers in Lira city, Northern Uganda-A cross-sectional study design

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Background:

Short Births to Pregnancy intervals have been associated with maternal mortality and morbidity as they increase the risk for pregnancy-related complications. Modern contraceptive use during the postpartum period has proved to be effective in reducing maternal morbidity and mortality by prolonging the birth-to-pregnancy interval and preventing unplanned and unwanted pregnancies. However little is known about the prevalence of use as well as the factors influencing the use of these modern contraceptives in Lira City, Northern Uganda.

Methods:

In this facility-based cross-sectional study, 391 randomly selected postpartum women receiving care at Ober and Barapwo Health Centre III were interviewed using semi-structured questionnaires. Univariable, bivariable and multivariable logistics regression analyses were conducted using SPSS version 23

Findings:

Nearly half (49.4%) of postpartum women were using modern contraceptive. Injectable contraceptives were the preferred method (61.1%). For those who did not use any method, 70% of them expressed unmet need. The use of modern contraception was significantly influenced by partner acceptance, average household income >500,000, resumption of menses, early and late postpartum, resumption of sex, prior use of contraception, and having had health education and counseling on family planning by a health worker

Interpretation:

These findings show that in this area, the national target of 50% utilisation by 2025 is nearly met. However, there is still an evidently high unmet need which requires robust input from stake holders to provide access of modern contraceptives methods to all women who need them.

Source of Funding:

None

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Background: Depression is a major cause of morbidity and mortality in low- and middle-income countries. In Ghana, mental health services are disproportionately concentrated in urban southern regions, leaving the rural north at a disadvantage. In rural settings, Community-based Health Planning and Services (CHPS) compounds play a crucial role rendering home-based primary care, but do not treat depression directly. This exploratory study aimed to identify common themes regarding facilitators and addressable barriers to depression screening at the primary health care level.

Methods: In January and February 2021, we conducted 34 semi-structured interviews with providers and eight community member focus groups. The interviews were conducted by graduate-level staff fluent in one of the local languages and with at least one year experience conducting qualitative interviews. The interviews were then transcribed and systematically coded on Dedoose. We generated themes related to the study aim using the grounded theory approach.

Findings: We identified barriers to early depression detection, including: 1) stigmatized perception of depression, 2) mistrust in healthcare system capability, and 3) underutilization of existing infrastructure. Misconceptions derived from cultural beliefs often result in individuals refraining from seeking assistance, especially when their families are unsupportive. Concerns regarding confidentiality, cost of care, and public awareness of staff and medication shortages also serve as deterrents. Furthermore, a significant number of Community Health Officers (CHOs) express a sense of being ill-equipped to address cases of depression.

The facilitators include: 1) accessibility of CHPS compounds and services and 2) CHOs' willingness to broaden their responsibilities. Community Health Volunteers play a vital role in door-to-door screenings, with CHPS compounds conveniently located near most communities. Community durbars are further used as public health education tools. Additionally, CHOs express a desire for formal training in recognizing depression signs and symptoms.

Interpretation: CHPS providers are willing and able to treat depression and community members accept this approach despite some skepticism. CHOs also express a willingness to improve mental health detection and linkage to care. A separate pilot study will assess the feasibility and acceptability of nurse and volunteer screening.

Source of Funding: Mount Sinai; Resolve, Inc.; Teva Pharmaceutical Industries; NIH

The Responsibility and Practice of Family and State Care from the Perspective of Older People in Rural Areas: An Ethnographic Study from China

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Background:

The global older population is projected to reach 2.1 billion by 2050, with approximately 30% living in rural areas of low- and middle-income countries (LMICs). However, the care system for older people in rural LMICs is often weak. Many studies have described older people in rural areas as powerless, passive, and more self-reliant in seeking care than their urban counterparts. Nevertheless, with the development of market economies in recent decades, it is unclear whether older people in rural LMICs still hold these beliefs and practices today. This study aimed to understand the beliefs about family and government responsibilities in caregiving among older people living in rural China and how these beliefs shape their care practices.

Methods:

We conducted a four-month ethnographic study in Yitang Rural Community, Gaomi City, Shandong, China. From February to May 2023, two researchers acted as assistants to local village doctors to collect qualitative data through participant observation, interviews, field notes, and document collection. Inspired by Foucault's theory of biopower, we used abductive approaches to analyze qualitative data in NVivo. This study obtained ethical approval from McGill University and Peking University.

Findings:

Despite the state's attempts to shift responsibility for care from the state to the individual, and the discriminatory discourse against peasants, the older villagers construct narratives of suffering that allow them to make sense of their systemic marginalization and the state's hypocrisy. Such beliefs have fueled demands for better care services and a naïve but righteous notion of citizenship among older people. However, instead of actively seeking public resources for health care, most rural older people continued to rely on reciprocal negotiation of care resources within their families. The chaos during the COVID-19 pandemic further reinforced the perception that the government is unreliable in providing care. As a result, the family becomes the only source of security, intensifying older people's dependence on family care.

Interpretation:

By providing a comprehensive understanding of the older people's care dilemma in rural China, our findings offer valuable insights into the ongoing crisis of care for older people in rural LMICs by rethinking the roles of family and state. Policymakers should implement more proactive family policies to alleviate the challenges faced by older people in rural LMICs. The main limitation of this study is the relatively short duration of fieldwork, which may have affected the adequacy of data collection and explanations.

Source of Funding:

Fonds de recherche du Québec, China Scholarship Council, McGill Global Health Scholar

Abstract N°: 940

Perceptions of Prevalence, Impact, and Management of Post-Acute Sequelae of SARS-CoV-2 Infection Among Healthcare Workers in Kweneng District, Botswana: Results of a Qualitative Study

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Background:

There is increasing evidence globally of persistent symptoms months after initial COVID-19 infection, termed “post-acute sequelae of SARS-CoV-2 infection” (PASC). Botswana has recorded over 330,000 COVID-19 infections since March of 2020, but there are no published data on the prevalence and impact of PASC in the country. Studies conducted in nearby countries have reported PASC rates of 30-50%, suggesting that the prevalence of PASC is likely to be high in Botswana as well. This study aims to describe the perceived prevalence of PASC among healthcare workers; characterization of common PASC symptoms; impact of PASC on patients’ lives; and current diagnostic and treatment strategies, as reported by public sector healthcare workers and district-level leadership in Kweneng District, Botswana.

Methods:

Key informant interviews (KIIs) were conducted with seven Kweneng District-level healthcare workers using a semi-structured guide from March to September 2023. Participants were selected with input from district hospital leadership as an opportunistic sample. Informed consent was obtained prior to interviews. KIIs were conducted until thematic saturation was achieved. Thematic analysis was completed using classic content analysis. Emergent themes were analyzed according to the WHO Building Blocks Framework, with novel themes added by investigators.

Findings:

KIIs observations on COVID-19 management in Kweneng fell broadly into ≥ 1 of the following categories: service delivery, workforce, information systems, access to essential supplies, and leadership roles. Novel emergent themes included challenges related directly to the novelty of PASC—e.g. lack of clear case definition and management algorithms—and the difficulty of estimating the burden of disease attributable to PASC. While KIIs demonstrated high familiarity with strategies for managing acute COVID-19 at hospital- and district-level, several expressed ambivalence about the importance of PASC. This was repeatedly linked to lack of data capture regarding the burden of PASC, in part related to the closure of district COVID-19 isolation facilities in late 2022. Anecdotally, respondents reported seeing patients seeking care for possible PASC for employment-related documentation, but no official statistics were available. Most participants did not differentiate between acute vs. “long” COVID (PASC) diagnosis and management, instead focusing on identification and management of acute infections.

Interpretation:

Kweneng District healthcare leadership reported no data collection or official guidelines for PASC management. There was lack of consensus regarding the significance of PASC, defining and diagnosing PASC, and managing symptoms. Based on these findings we advocate for clear case definitions and clinical algorithms at the national level for practitioner use.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 943

Disaster Experiences and Training Needs of Emergency Medicine Physicians in Tanzania, a Needs Assessment

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Background:

Disaster medicine is a sub-specialty of Emergency Medicine (EM), and in some parts of the world is included as a core topic in EM resident education. Little is known about the incidence and variety of disasters in Tanzania. There is minimal literature on disaster training of EM physicians outside the United States, and there is no published literature on disaster education for EM residents in East Africa including Tanzania. This study explored the disaster experiences and training of EM physicians in Tanzania and identified priorities for resident education in disaster medicine.

Methods:

EM faculty from Muhimbili National Hospital were invited to participate in semi-structured interviews. Interview prompts addressed duration of EM experience, disaster education, experiences in disaster response, faculty impressions of EM trainees' learning needs, and the roles EM physicians are expected to fill in disasters. Results were shared with residency leadership and used to develop a disaster training program.

Findings:

In total 10 interviews were performed between February and March 2023. The topics that were deemed most important for residents to receive training on included disaster triage, hospital disaster management, trauma mass casualty incidents, and scene management. EM faculty experienced on average 1 disaster for every 3 years working in the Emergency Department. The most common types of disasters recalled include traffic accidents, explosions, and building collapse. Residents were anticipated to be leaders in disaster planning and response through becoming incident commanders, policymakers for their department, hospital or government, and some will likely be responsible for implementing training and drills to assess and improve disaster preparedness in their workplaces.

Interpretation:

Disasters are relatively common in Tanzania with the majority of EM faculty having responded to multiple disasters. Residents need additional training to prepare them as some will be responsible as attending physicians for developing disaster plans, and preparing their staff and their hospitals to better respond when disaster strikes.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 945

Evaluation of Ambulance Service Coverage of Complicated Obstetric Cases in Northern Togo

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Background:

Maternal mortality rates remain high in most of sub-Saharan Africa due to limited access to emergency obstetric care. Integrate Health has partnered with the Togolese Ministry of Health to improve maternal and child health care through a community engagement approach that includes ambulance services for urgent transport for obstetrical complications. This study evaluates the impact of the ambulance service on coverage of complicated obstetric cases.

Methods:

Pregnant or postpartum women in the Kara region of northern Togo were eligible for transport by the ambulance service in 4 districts in Northern Togo. For each patient transported, data was collected by the ambulance driver in a logbook. Measures collected include the date of transport, destination, patient information (e.g., name, age, sex), kilometers traveled, and reason for transport. Complicated obstetric cases included maternal hemorrhage, complicated birth, and signs of danger. Estimated coverage of major obstetric complications was calculated using the assumption that 15% of pregnant women will have a complication (WHO, 2009). Population estimates per fiscal year (FY) and birth rate (3.7%) in Togo were extracted from District Health Information Software 2 (DHIS 2).

Findings:

Between July 2020 and June 2023, there were 2,926 maternal patients transported by the ambulance service. The most common reasons for transport included birth (25.1%) followed by signs of danger (15.2%), complicated birth (14.7%), and hemorrhage (6.8%). There were 1,030 complicated obstetric cases reported over the study period. Of those with complications, 107 (10.4%) patients were transported from the community to the village health center while 923 (89.6%) were transported from the village health center to the regional hospital. Estimated coverage of obstetric complications increased over time and as the program expanded from 18% in FY 2020 to 35.7% in FY 2021 and 66.5% in FY 2022.

Interpretation:

Integrate Health's ambulance service transported more than half of women with expected obstetric complications after three years of implementation in Togo. This shows that emergency transport systems can improve maternal access to care, although further research is needed to understand the impact on maternal mortality.

Source of Funding:

None

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Background:

Stroke is a major global health concern and a leading cause of mortality and disability worldwide. The World Stroke Organization (WSO) has developed standardized guidelines for the evaluation and management of stroke patients, including documentation of critical stroke evaluation metrics. However, in many low-resource healthcare settings, the implementation of these protocols may be inadequate or non-existent. Stroke data collection is vital for evidence-based care planning and resource allocation.

Methods:

A retrospective chart review was performed of patients admitted to AKMC-G who received CT head imaging between January 2023 - June 2023. Inclusion criteria comprised of patients who received head CTs for neurovascular concerns. Paper charts were utilized for data retrieval. Data variables of interest included clinical characteristics, interventions, and clinical outcomes. Data analysis was performed using Microsoft Excel, version 16.76.

Findings:

Among the 233 patients who received a CT scan for neurovascular concerns, 10 were found to have acute or subacute infarcts. Of these 10 patients, incomplete documentation was noted in several domains. Nine of these 10 patients had documented last known well times, and 3 were eligible candidates for TPA. All 10 patients had documented histories of hypertension, but at least 3 were documented to be noncompliant with antihypertensive medications. Three patients had documented histories of diabetes, and 2 had documented histories of atrial fibrillation. Four patients had documented prior home medications, it is not clear if the remaining patients did not have home medications or if they were not documented. None of the 10 patients had a documented history of prior stroke. Two of the 10 patients experienced aspiration events during their hospital stay. While all patients had some form of physical examination, comprehensive neurologic assessments or stroke evaluations were not documented on any of the ten confirmed stroke patients.

Interpretation:

Standardization of documentation is a prerequisite for optimal data collection and QI for stroke. Chart review demonstrated that while many stroke metrics are documented, not all are consistently captured. In response to these findings, a comprehensive stroke evaluation template was developed for AKMC-G to help obtain a clearer understanding of stroke epidemiology which will guide further projects.

Source of Funding:

UCLA Resident Travel Grant

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 949

Building Capacity for Mental Health Treatment of SGBV Survivors in Eastern DRC Using Integrative Behavioral Health and Empowerment of Women

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Background:

The province of South Kivu in the eastern Democratic Republic of Congo (DRC) has been the site of conflict for over 20 years, with the associated sexual and gender based violence (SGBV) resulting in it being called “the rape capital of the world.” With over 40% of women suffering from PTSD and depression, and >16% attempting suicide, there are no public health psychiatrists to serve a population of 6 million. We are a multidisciplinary team of global health professionals planning to build capacity for mental health services for SGBV survivors in South Kivu by : 1) training PCPs in mental health screening and treatment, 2) leveraging narrative exposure therapy (NET) for CHWs and SGBV survivors creating solidarity workshops; 3) creating an open source EMR with a telehealth platform and patient portal to provide psychiatric consultation for patients with serious mental illness (SMI).

Methods:

The goals of empowering women through training of community health workers (CHWs), mainly survivors themselves, to lead solidarity groups using a proven therapeutic technique, and improving access to mental health treatment for SGBV survivors was based on the results of focus groups conducted in the region in 2019, (Thulin et. al. 2020).

We will recruit 400 hundred female participants from 2 medical sites - rural Nundu and urban Bukavu, with 200 being assigned to the treatment group and 200 assigned to the control group. All will undergo screening for depression and PTSD using their PHQ-9 and RHS-15 scores, respectively. Patients identified with SMI will be referred to specialized mental healthcare providers for a telemedicine consultation with recommendations conveyed to referring PCPs via EMR.

Data collected will include KAB pre and post PCP training and CHW training as well as Pre and Post PHQ-9 and RHS-15 of patients and participants in solidarity groups. Telemedicine satisfaction surveys and measures of patient adherence to medication and follow up will also be conducted.

In addition to the enduring knowledge and skills acquired by the participating PCPs and CHWs, we anticipate expanding use of telemedicine to local providers providing consultation.

Findings:

14 PCP training sessions conducted, 15 participants, 10 post session surveys completed.

Interpretation:

Interpretation: Participation has been limited due to lack of funding for transportation, publicity, protected time as well as technology gaps. With grants we can hire staff to coordinate telemedicine referrals, gather outcome measures, monitor adherence, and pay for NET training costs.

Source of Funding:

none

Abstract N°: 955

Examining Menstrual Health and Hygiene Educational Initiatives for American Middle and High School Female Students: A Scoping Review

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Background:

A component of period poverty in the United States can be contributed to the neglect of menstruation and menstrual health and hygiene in schools. To help identify and rectify the gaps in the American education system surrounding menstruation, there needs to be more research conducted regarding menstrual health and hygiene curricula and initiatives for school-aged adolescents in U.S. schools. Thus, this paper presents a scoping review of the current menstrual health and hygiene curricula and initiatives in American middle and high schools.

Methods:

The five-stage framework delineated by Arksey and O'Malley (2005) was used: (1) identifying the research questions; (2) examining the relevant studies; (3) study selection; (4) data charting; and (5) collating, summarizing, and reporting the results (Arksey & O'Malley, 2005).

Findings:

A final count of six studies were retained for analysis. Female students reported using at least one of the school's resources to obtain period products, and one-third of the participants reported missing school due to a lack of period products. Furthermore, nearly half of the students needed period products at least once in the past school year but did not have money to buy them. There is also a need for school nurses to be cognizant of how MHM affects their students' attendance at school and what measures they can take to help reduce menstruation-related absenteeism. Menstruating girls reported embarrassment and a need for secrecy when accessing school bathrooms, but the social and physical environments of school bathrooms, including poor design and maintenance, heighten girls' discomfort while menstruating. Additionally, several school policies restrict students' bathroom access, making it more difficult for menstruating students to manage their periods, especially those experiencing heavy and unpredictable bleeding. Finally, although a majority of adolescent girls had some basic knowledge of menstrual periods prior to menarche, the extent and depth of their understanding of menstruation was limited.

Interpretation:

Partnership with policymakers and women's health advocates in public health and legislation is needed to create a more comprehensive menstrual health curriculum in schools and offer resources for patients struggling to afford menstrual products.

Source of Funding:

None

The Economics and Inequities of Open Access Publishing

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Background:

Academic publishing can be broadly categorized into two models: subscription based and open access (OA). The subscription model restricts access, relying on individual or institutional subscription fees to fund publishing costs and make profits. In contrast, OA publications are freely available which shifts the cost of publishing to authors and research funders. While increased access to and dissemination of research to all offers advantages, much debate about the sustainability of the OA model exists. Broad variations in single article processing charges (APCs) and rising costs for funders, researchers, and academic institutions has led to growing concerns. These discussions often emphasize financial challenges of the Global North, potentially overlooking the even greater barriers faced by stakeholders in the Global South. This project sought to explore the economics of OA publishing, funder OA policies, and possible ways in which to enable greater OA publishing for all.

Methods:

A literature review to better understand variations of OA publishing was conducted between October 2022 and January 2023. OA spending data from two independent research funders were reviewed and analyzed. Finally, interviews with 14 experts were completed to better understand the overall landscape and economics of OA publishing.

Findings:

OA publishing and pricing have grown substantially over the past decade and can vary broadly by stakeholder, journal, and discipline. APCs increased 1-36% at low-impact and 86-135% at high-impact journals between 2011-2021, exceeding the 10-year global inflation average of 2.6%. Funder policies vary both by requirement to publish OA and degree of financial support for authors. Barriers to publish OA are greater for more junior researchers and those based in lower resource settings. The complexity of the OA publishing landscape, varying eligibility criteria, and lack of awareness contributes to low uptake of available APC waivers. Without attention to equity, it is possible that fee-based OA publishing will exacerbate existing inequities in the scientific community resulting in narrower authorship among other impacts.

Interpretation:

In the absence of widespread change in the OA publishing industry or university promotion and tenure criteria, we suggest the introduction of a "journal equity factor". This novel metric could provide a measure of editorial board diversity, consider journal support for Global South and early-career researchers, and other criteria.

Source of Funding:

Support received from the Bill & Melinda Gates Foundation.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 958

Equitable Partnerships in Global Health Education: Host Perceptions of an Undergraduate Research Semester Abroad

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Background:

Since the inception of Georgetown University's BSc in Global Health in the early 2000s, more than 300 students have participated in a 14-week Practical Experience Abroad (PEA) program, mostly in low-and middle-income countries (LMICs). The positive impact of the PEA on students' lives and careers has previously been documented. This study was designed to a) understand the PEA program from the perspective of the students' preceptors in the host countries, and b) to elicit their recommendations. The findings contribute to the ongoing debate about whether and how short-term learning opportunities for undergraduates should be provided in LMICs.

Methods:

The research team conducted 18 semi-structured, in-depth interviews with key informants from host organizations. The research design, data collection and analysis, was developed using an analytical framework based on recommendations made by previous studies. The interviews were conducted via Zoom, audio-recorded, transcribed, coded in Dedoose software, and analyzed for emerging patterns and themes.

Findings:

Overall being a mentor is seen as personally rewarding and most preceptors emphasize their intrinsic motivation to pass on their knowledge to the next generation and value the opportunity for mutual cultural learning. Preceptors report that the students are normally well prepared and hardworking, often contributing to the work of the host organization using their data analysis, English language, and organization skills. Opportunities for strengthening the partnerships were also identified, including strengthening communication, trust, and cultural preparedness, and managing student expectations. Other opportunities to build a closer institutional working relationship were recommended including collaborating on research projects and faculty exchanges.

Interpretation:

Listening to the preceptors' perspectives is critical if the concerns about PEA programs perpetuating power imbalances and a colonial mindset in global health education and practice are to be addressed. This study summarizes recommendations from preceptors at host organizations that should be used to inform the design in PEA programs in global health education.

Source of Funding:

None.

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Background:

Currently 1.7 billion children lack access to surgery worldwide. In Africa, where the population is comprised of approximately 50% children, the surgical disease burden is great. In addition girls, whose care is often affected by barriers steeped in gender inequity, may be at a higher risk of poor surgical outcomes. As a result, this study explored the impact of gender on pediatric surgical care in Africa.

Methods:

Since gender is seldom captured in global studies and registries, physiologically unjustified sex-based differences in access to care and clinical outcomes for multiple pediatric surgical conditions were explored via systematic review of African pediatric surgical cohort studies, using multiple databases (inception through March 2023). Eligible studies were screened using Rayyan, followed by sex ratio calculations, a random effects meta-analysis, and risk of bias assessment.

Findings:

Of the 12281 records retrieved, 54 were included in the final review. Most studies were retrospective (57.4%), single-site (94.4%), from Egypt, Nigeria, Ghana, or Ethiopia (55.6%), focused on pediatric surgical gastrointestinal diseases (63.0%), published in 2010 or sooner (85.1%), with a study duration of 5 years or less (68.5%), and a cohort of less than 200 children (57.4%). Sixty percent of the papers reported the surgical outcome of mortality, while 38.9% studies reported other complications. The meta-analysis yielded odds ratios that suggested surgery was performed 3.6 times more often on males than females (95% CI: 2.6, 4.9); and female mortality was 1.6 times greater than male mortality (95% CI: 1.3, 2.0).

Interpretation:

African girls appear to face gender inequities in access to pediatric surgical care. These findings will be validated and explored further through a mixed-methods study in Africa.

Source of Funding:

None

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 976

NAUNEHAL; Integrated immunization and Maternal, Neonatal and Child Health & Nutrition Interventions in Conflict-Affected Areas of Pakistan: A Quasi-experimental Study

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Background:

Pakistan has struggled with suboptimal maternal and under-five health and nutrition indicators. While access to care and care-seeking behaviours are an issue, rising insecurity, and conflict have impeded delivery of health interventions, especially in the provinces of Balochistan and Khyber Pakhtunkhwa (KP).

Methods:

Naunehal (ClinicalTrials.gov ID NCT05135637), an implementation research project, tested interventions to improve coverage of maternal, and child health care and nutrition services including childhood immunization particularly in insecure areas. This quasi-experimental pre-post study was implemented in three union councils (UCs), Kharotabad (Balochistan), Bhana Mari (KP), and Bakhmal Ahmedzai (KP) between March 2021- February 2022. For each intervention UC, a separate, control UC of comparable size, population, and coverage indicators was identified, with propensity score matching, where only routine care was available. Ethics approval was obtained from SickKids Research Ethics Board and National Bioethics Committee based in Pakistan. *Naunehal* aimed to improve health service delivery and access for women of reproductive age and children under-five through four intervention strategies; community mobilization, mobile health teams offering health and immunization services, and engagement of private health care providers to increase immunization coverage. Baseline, midline, endline, and close-out (one-year post-endline) surveys were conducted using the 30x7 techniques in the intervention and control UCs. Each survey covered approximately 450, randomly selected, consenting households per UC, with at least one child under-five. Data collected from caregivers, after verbal consent, focused on household characteristics, immunization coverage, care-seeking, nutrition behaviours, and hygiene practices. Overall and UC-specific coverage was calculated for all surveys and mean and percentage point difference in coverage were estimated using a mixed effects linear regression model and effect estimates reported with 95% confidence interval. Estimates were adjusted for survey design and sampling weights by treating each UC as strata and clusters as primary sampling units.

Findings:

At endline, coverage of OPV 3 (percentage difference: 28.3% (18.7% - 37.8%), p-value: <0.0001) and proportion of fully immunized children (percentage difference: 19.0% (10.4% - 27.7%), p-value: <0.0001) were significantly increased in intervention UCs, as compared to baseline. The intervention was also successful in increasing access and closing equity gaps for care during pregnancy and childhood immunization.

Interpretation:

The results indicate that reaching insecure populations through a low-cost strategy of community mobilization and mobile outreach services can reduce gaps in childhood immunizations and health services. As security considerations impact health and immunization systems in such contexts, this is a promising strategy that can be potentially scaled up.

Source of Funding:

Bill and Melinda Gates Foundation

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 985

Sexual Orientation, Intimate Relationship Status, and HPV Vaccine Uptake among Chinese College students: A Gender Difference

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Background:

Human papillomavirus (HPV) is the most common viral infection of the reproductive tract and causes about 90% of cervical cancer in women, and increasingly evident to be associated with cancers of the head, neck, oropharynx and anogenital area in both men and women. HPV vaccination among young adults could effectively prevent the HPV infection among populations. Previous studies have examined factors that related to the HPV vaccine uptake; however, there is still a lack of understanding how individuals' sexual orientation and intimate relationship status relate to HPV vaccination uptake among young adults. This study aims to explore the association between sexual orientation, intimate relationship status and HPV vaccination uptake among Chinese college students and use the findings from China as an indication of the needs of developing population-tailored interventions to promote HPV vaccine uptake in LMICs.

Methods:

Eligible Chinese college students (aged ≥ 18 years old) were recruited through Wenjuanxing = (www.wjx.com) to participate in an anonymous, online survey. Descriptive analysis was conducted using R to describe the HPV vaccine uptake and willingness. Multivariate regression models was conducted to examine the relation between sexual orientation, intimate relationship status and HPV vaccine uptake. Subgroup analysis stratified by demographics were also conducted.

Findings:

Among the 2,462 college students participants (1,153 males and 1,309 females), 67.5% expressed the willingness to be vaccinated, but only 12.1% of participants had received HPV vaccine. Notably, females from the Eastern regions exhibited a higher tendency to receive the HPV vaccine, compared to females from central and western regions ($p < 0.001$). Multivariable regression analysis, while controlling for demographics, showed that sexual orientation, being sexually active, and having condom use agreements with partners were significantly related to HPV vaccine uptake. Furthermore, subgroup analysis by gender revealed that sexual orientation, being sexually active, and partner's recommendation for uptake were significant predictors of females' vaccine uptake, while males' vaccine uptake was not significantly affected by their sexual orientation or intimate relationship status.

Interpretation:

While the HPV vaccine uptake remains low, there is a notable willingness to be vaccinated among the young adults in China. The findings emphasize the critical need to intensify HPV vaccination coverage efforts in China, particularly targeting young males, and in the central and western regions of China.

Source of Funding:

None.

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Background:

Currently, the majority of vaccine services in China are provided through primary healthcare facilities. However, the accessibility of vaccination services can be significantly improved by establishing hospital-based vaccine clinics. This study aimed to identify the attitudes regarding the establishment of hospital-based vaccine clinics, as perceived by healthcare workers.

Methods:

The study was conducted from April to September 2023 with employees from hospital healthcare workers in 5 cities across China, covering regions with varying income levels. The study used a convergent mixed methods design comprising two activities: the semi-structured interviews conducted in hospital administrators, and a questionnaire survey administered to clinicians. Potential influencing factors identified in the semi-structured interview were set as options for quantitative questionnaires. Data about participants' characteristics and their attitudes on the establishment of hospital-based vaccine clinics were collected.

Findings:

Overall, 7 administrators were interviewed, and 147 clinicians completed the survey. 81% (N=119) of clinicians agreed that it was part of their responsibilities to remind patients to prevent disease by vaccination, and 71% of them (N=104) did in their clinical routine. 84.4% (N=124) of the clinicians were willing to provide vaccination prescriptions if the hospital-based vaccine clinics were, and they were more willing to provide it if they believed in the safety of vaccines (82% vs. 17.8%, $P = 0.05$), and had a deep understanding of vaccines (71% vs. 28.9%, $P < 0.005$). In practical terms, more than 55% (N=81) of clinicians were vaccinated in hospitals during the 2022-2023 influenza season. Besides, 3 administrations and 39 clinicians agreed that the digitalization of the current vaccination or hospital system needs to be further improved to achieve effective information management.

Interpretation:

As an effective bridge to the patients, clinicians play a crucial role in the promotion of vaccines. This study indicated that clinicians generally supported the establishment of hospital-based vaccine clinics. Further studies are needed to optimize the effectiveness of outpatient clinics.

Source of Funding:

China National Health Association (project number: [2022]287)

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1012

Educating & Empowering: Evaluating Peer Education and Community Engagement Models for Delivering Health Information to Youth in Kampala, Uganda

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Background:

Developing a strong health literacy foundation in adolescents can be instrumental in positive decision-making. However, access to comprehensive health education for youth can be a challenge, particularly in communities where sexual, reproductive, and mental health may have associated stigma. Barriers limit information delivery, leaving youth to obtain knowledge from unverified sources. Established credible community-based organizations can serve a key role in organizing peer educational programs. Peer education models have been increasingly utilized domestically and internationally, reaching adolescents in ways that traditional education models may not.

This project was completed in collaboration with the Ivy Haywood Education Initiative (IHEI-Uganda), a not-for-profit organization providing educational sponsorship and support for economically disadvantaged students in Uganda.

We aim to address gaps in adolescent health literacy through a collaborative peer educator model, evaluating program efficacy and participant comfort in discussing stigmatized health education topics.

Methods:

Thirty-five students ages 14-25 years participated in the program in May 2023; majority were secondary school students in Kampala, Uganda.

Eight peer leaders (four female, four male) were selected based on leadership potential, engagement with peers, reliability, and age. Peer leaders completed a half-day training in preparation. Curriculum content was adapted from *Teaching Health Out Loud*, a health education curriculum previously piloted and evaluated in Kenya and Tanzania.

The program consisted of a 3-day workshop delivered in three parts: 1) puberty and relationships; 2) sex, contraception, and gender-based violence; and 3) mental health and wellness.

The effectiveness of the workshop’s model and curriculum was evaluated using a mixed methods approach: interviews, focus groups, and 5-point Likert scale pre-post surveys.

Findings:

Baseline differences between sexes were only observed regarding comfort in discussing mental health, with males having a higher score compared to females ($p=0.032$). Significant increases from pre-to post-survey were observed in participants’ comfort discussing puberty & reproduction ($p=0.004$), sex ($p=0.0031$), and mental health ($p=0.0094$). These results were reflected in the thematic analysis of the focus group discussions where improvements in knowledge, comfort, confidence, and community building were noted as workshop benefits. Limitations included language barriers, as well as comfort, preparedness and biases of peer leaders.

Interpretation:

Trusted community-based partnerships and peer leader engagement enable creative approaches to health education, especially regarding sensitive and stigmatized topics, increasing impact while empowering youth leaders. Current transitions in Uganda’s school curriculum present opportunities for the implementation of similar interventions to improve health education programs and develop health literacy among youth.

Source of Funding:

UW-Madison SMPH’s Shapiro Summer Research Program and Department of Pediatrics.

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Background:

The incidence of colorectal cancer in sub-Saharan (SSA) is rising, potentially due to improving cancer registration or increasing westernization of diets and lifestyle. Rwanda is a sub-Saharan African country with few studies on colorectal cancer (CRC). The Rwanda National Cancer Control Plan (2020-2024) specified improving early detection of CRC as a part of the national strategy to reduce cancer-related morbidity and mortality. There are currently no CRC screening guidelines in Rwanda.

Methods:

We present preliminary data for the clinical characteristics, pathology, treatments received, and survival outcomes of patients diagnosed with colorectal cancer at King Faisal Hospital between January 2019 and May 2023. King Faisal Hospital (KFH) is an urban tertiary hospital in Rwanda that provides chemotherapy, radiotherapy, and surgery to cancer patients. The data was extracted from electronic medical records, imaging, and histopathology reports from the patient's time of diagnosis.

Findings:

74 patients diagnosed with CRC with complete information, were identified in the KFH oncology records. The mean age at diagnosis was 54.6 years, with ages ranging between 22 and 81.24 (32.4%) patients were less than 50 years old at diagnosis. 29 (39.2%) were female. 58.1% of the tumors were left-sided, with the rectum (36.5%) being the most common tumor location. The majority of patients presented with Stage III (41.9%) or IV (35.1%) disease. Adenocarcinoma was the most common histological type (98.6%) including adenocarcinoma not otherwise specified (86.5%), mucinous adenocarcinoma (10.8%), signet ring cell carcinoma (1.4%), and followed by squamous cell carcinoma (1.4%). 19 (25.7%) patients received only chemotherapy, 43 (58.1%) patients received neo-adjuvant or adjuvant chemotherapy, 9 (12.2%) of patients received both neo-adjuvant and adjuvant chemotherapy, 49 patients (66.2%) underwent surgery, and 17 (23%) patients also received radiation.

Interpretation:

Colorectal cancer patients tended to present at an advanced stage and required complex treatment regimens at KFH. Further research is needed to characterize colorectal cancer incidence and presentation at a national level in Rwanda. Developing screening guidelines and public health programs could improve patient outcomes.

Source of Funding:

None.

Abstract N°: 1016

Acceptability and feasibility of Healthy Men Healthy Communities program: male-led men's health promotion and gender-based violence prevention program for South Sudanese refugee men in Uganda

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Background:

Men living in refugee settings are often exposed to violence, poverty, and social instability. Living through these challenges impacts men's physical and mental health and increases their risk of perpetrating sexual and gender-based violence. The *Healthy Men Healthy Communities* program was developed as a male-led, health promotion program to address men's physical and mental health and the role men play in creating healthy relationships and families. The purpose of this pilot study is to assess the feasibility and acceptability of the program among South Sudanese men in Ugandan refugee settlements.

Methods:

Three men from the settlements were trained to facilitate the *Healthy Men Healthy Communities* program. The program was implemented among six groups consisting of 12 men in each group. Pre/post knowledge assessment survey and focus group discussion were collected among the facilitators and participants from one of the randomly selected groups.

Findings:

The program was found to be acceptable to the facilitators and the participants. Program content presented through the small groups setting facilitated open conversation on controversial topics such as birth spacing and healthy partner communication. Participants experienced increases in knowledge and confidence in practicing program content such as stress-reduction techniques and healthy communication strategies. Facilitators further suggested culturally appropriate ways to present physical activities as a stress reduction technique and the importance of spacing out births. Participants recommended additional topics such as reproductive health, sexually transmitted infections, and family planning to be included in future programs.

Interpretation:

Men's well-being, encompassing both mental and physical health, is intricately linked to the health of women, children, and the broader community. The *Healthy Men Healthy Communities* program has potential to empower South Sudanese refugee men to promote their health as well as the health of their families. Expansion of the content to include topics suggested by participants and implementation of the program with more groups across a variety of settings are needed to further evaluate the effectiveness of *Healthy Men Healthy Communities*. University of

Source of Funding:

Michigan International Institute Student Fellowships (IISF)

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1029

Context Matters: A Strategic Planning Framework for Primary Health Care Systems Strengthening

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Background:

Primary health care (PHC) has long been a cornerstone of health systems strengthening through the community-level, cost-effective delivery of essential health services. Yet PHC delivery systems remain fragmented and underfinanced in many countries, particularly low and middle-income countries (LMICs). Calls to strengthen PHC systems in LMICs have gained greater urgency due to both the COVID-19 pandemic and the soaring prevalence of noncommunicable diseases (NCDs). An estimated 86% of NCD-related premature deaths globally occur in LMICs, and COVID-19 demonstrated the bi-directional association between communicable and noncommunicable diseases while disrupting the delivery of routine care. Strengthening PHC systems provides a critical foundation for LMICs to expand access to quality essential health services and ensure continuity of care, thereby improving population health and global health security. The U.S. Centers for Disease Control and Prevention has developed a strategic planning framework to provide LMICs with a practical guide to determine the best approaches for PHC systems strengthening given a country's specific context and priorities.

Methods:

The strategic planning framework is intended for use by government decision-makers, healthcare providers, and other stakeholders to support multidisciplinary engagement, coordination, and planning. It consists of five sequential components:

1. **Readiness Assessment:** *Assess existing PHC system capacity, motivation, and capacity for PHC systems strengthening.*
2. **Strategic Planning:** *Develop a strategic plan informed by the results of the readiness assessment that outlines objectives and aligns with priorities.*
3. **Operational Action Plan:** *Develop an action plan outlining evidence-based policies and practices to operationalize the strategic plan and achieve objectives.*
4. **Implementation:** *Specify the process for implementing each component of the action plan, including the time frame, setting(s), budget, roles and responsibilities, and intended outcomes.*
5. **Evaluation:** *Identify indicators and data sources for each outcome to assess impact and progress towards achieving strategic objectives and support on-going program quality improvement.*

Findings:

NA

Interpretation:

Given the complexity of country health delivery systems and variation in population health priorities, there is no one-size-fits-all approach to PHC systems strengthening. By employing the CDC's strategic planning framework, countries can tailor their approaches to specific country capacity and needs and maximize the impact of PHC systems strengthening.

Source of Funding:

None

Assessing Rural Northern New England's COVID-19 Testing Landscape through Community Engagement

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Background:

The COVID-19 pandemic was an unprecedented challenge for public health systems to rapidly communicate prevention guidelines and distribute tests, particularly to people living in rural areas with limited healthcare capacity. The objective of this study is to understand the factors that contributed to COVID-19 testing disparities in underserved and vulnerable Northern New England rural populations to inform future public health interventions and improve rural community engagement. Interviews with Maine and Vermont state and local community-based health and social service organizations and focus groups with rural community members were conducted.

Methods:

Our qualitative study design included semi-structured interviews with Maine and Vermont state and local community-based health and social service organizations (N=40) and 18 focus groups with rural community members (N=87) to assess their COVID-19 experience and their motivating factors for, and facilitators and barriers to, getting tested.

Findings:

Rural residents' reasons for seeking COVID-19 tests were fear of severe illness and a desire to keep themselves and their older family and community members safe. After shut-down orders were lifted, people sought testing to return to work or school or in order to travel/visit family.

Barriers to COVID-19 testing included limited availability of test sites and medical personnel shortages prior to self-testing, long wait times for results, lack of or changing information over time about who should test, when and where/how to get tested and, if positive, isolation and quarantine requirements. Test costs and transportation costs or lost work or school days during quarantine period after a positive test were also barriers to testing. Expanding testing through pharmacies and later the availability of free home-testing helped increase access. Other barriers included difficulty using on-line scheduling systems, by those with limited internet literacy or service; and discomfort from posterior nasal swabs. COVID-19 fatigue, misinformation, and beliefs that early COVID-19 fears were overstated also contributed to less testing in some communities.

Both focus groups and key informants reported a strong sense of rural community response through a mixture of formal and informal trusted local structures promoting testing through multiple venues.

Interpretation:

Successful COVID-19 testing in rural and underserved communities involved a coordinated cross-sector effort involving multiple local trusted organizations, repeated messaging through local and social media, and the provision of free tests through community organizations.

Results will inform optimal approaches to resolving rural health disparities in future pandemics by leveraging partnerships to improve access to healthcare and social services and utilize effective rural communication strategies.

Source of Funding:

NIH

Abstract N°: 1033

Leveraging International Research Consortiums to Train and Mentor Early Career Investigators: The Design and Implementation of Two Support Programs in the Enterics for Global Health Study

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Background:

Enterics for Global Health (EFGH) is a research consortium study establishing the incidence and consequences of *Shigella* diarrhea in Bangladesh, Kenya, Malawi, Mali, Pakistan, Peru, and The Gambia. Early-career investigators (ECIs) from EFGH sites identified a need for seed funding, protected time and support for scientific writing, data analysis, and mentorship to further advance their research careers. In response, EFGH initiated a Rising Star program to support ECIs in becoming independent investigators and a 16-month Manuscript Writing Certificate Program (MWCP) on the research-to-publication process.

Methods:

The EFGH Rising Star and MWCP programs were designed collaboratively with input from the Global Center for Integrated Health of Women, Adolescents and Children (Global WACH) Rising Star program, an external advisory board of senior investigators from low-and middle-income countries, EFGH principal investigators, and grant funders. Applicants are selected through a competitive process with efforts to balance gender and site representation. In addition to grants of \$20,000-30,000 USD for data collection, Rising Stars have access to University of Washington (UW) library and data resources, networking, and a virtual symposium presentation. MWCP participants attend monthly didactic training on proposal and manuscript writing and have access to UW library and data resources. Participants in both programs receive one-on-one writing and data analysis support from local and consortium mentors.

Findings:

Out of nine Rising Star applicants (seven men and two women), three from Peru, Bangladesh, and Kenya were awarded (two men and one woman) in early 2023. Their projects are currently transitioning from data collection to analysis phases. Early feedback suggests that beyond seed funding, the dual local and UW mentorship and access to UW library and data resources were highly valuable. A second round of applications is underway. The MWCP received 19 applications (12 men and seven women) and launched with 11 participants (eight men and three women) representing all seven countries. Participants will be matched to mentors and begin proposal development by late 2023. Participants in both programs plan to submit first-authored manuscripts by early 2025.

Interpretation:

Strong collaboration among EFGH partner institutions, the funder, and the coordinating institution enabled the design and implementation of two career development opportunities within the EFGH consortium. This model provides a template for future consortiums aiming to enhance equity within their partnerships. Despite striving for gender equity, it was challenging for both programs to enroll female ECIs and further understanding of the barriers they face is needed.

Source of Funding:

Bill and Melinda Gates Foundation INV-031791, INV-045988, and INV-062665.

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Background: Strong, equitable health systems require high quality, timely data from everywhere to rapidly identify problems and facilitate public health decision-making. Disparities in access to electricity and internet cause vastly incomplete and inequitable electronic data capture across sub-Saharan Africa. The least resourced sites are often those left behind.

Malawi initiated the roll-out of a new 3-test HIV diagnostic algorithm in November, 2022 and wanted to have near real-time client-level data across thousands of facility and community access points, without primary electronic data collection. This is made possible by using ScanForm, a technology that digitizes and auto-summarizes handwritten data from paper in near real-time by applying high-accuracy, locale-specific artificial intelligence to photos captured through the ScanForm smartphone app.

Methods: The Directorate of HIV, STI and Viral Hepatitis (DHA) of the Malawi MOH selected ScanForm to meet priorities for the HIV Testing Services (HTS) program and help monitor the equitable and high quality implementation of the new integrated testing guidelines for HIV, Syphilis and Hepatitis B.

Findings: By September 30, 2023, ScanForm had been deployed to 468 out of 875 facilities, capturing over 1.98 million HTS and self test encounters from 73% of all access points nationwide. Scale-up continues. Timeliness of data, defined as submission before the 5th of the next month, ranged between 93.7% to 97.9%.

Data demonstrate that the new testing algorithm was correctly implemented 99.96% of the time, 226 clients avoided misdiagnosis of HIV, and 267 avoided retesting. All analytics are accessible through the smartphone application on-site and a web-based data portal off-site, including errors compiled into daily data quality reports. Reports and analyses are automatically and perfectly generated regardless of data volume, reducing provider time spent on data-related tasks by over 25%. Summaries are pushed directly into DHIS2 for all activated sites.

Interpretation: ScanForm provides timely and accurate digitization of data, can be rapidly and equitably brought to scale regardless of site infrastructure, and reduces time spent by clinical staff on data tasks. High quality data from across the entire country allows for comprehensive monitoring and evaluation, continuous quality improvement, and rapid conversion of data to action.

Source of Funding: Global Fund

Abstract N°: 1036

Investigating the Relationship Between Socioeconomic Status and HIV Risk Among Adolescents and Young Adults in Kisumu, Kenya: A Qualitative Analysis

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Background:

Studies have reported a positive association between socioeconomic status (SES) and HIV infection in sub-Saharan Africa (SSA). This contradicts widespread understandings of how health disparities are created and maintained through socioeconomic disparity. The nature of high HIV prevalence in SSA among wealthier individuals, especially those aged 15-24 who experience wealth and HIV risk differently than other age groups, is less understood. Qualitative investigation can provide contextual “how” and “why” into the relationship between wealth and HIV in this population, aiding intervention and policy efforts.

Methods:

We used data from the Adolescent Sexual Health and Economic Study, a qualitative study which aimed to understand how adolescents and young adults (AYA) conceptualize socioeconomic status (SES) and linkages between SES and sexual behavior. Data comprised of in-depth interviews with 25 AYA aged 15-24 years residing in Kisumu County, Kenya. Participants were selected based on age, rural vs. urban status, housing, and school attendance to achieve variation in perspectives. AYA were asked to explain their understanding of high and low social standing and describe the social standing of their peers, a measure encompassing SES, social image, access to resources, and material possessions. AYA then described their peers’ sexual relationships and what they believed to be the relationship between social standing and sexual behaviors. We analyzed data using thematic analysis.

Findings:

Transactional sexual relationships were a common experience for all AYA in the study. Notably, wealthy young men and women were reported to engage in transactional relationships more frequently than their less wealthy counterparts. However, AYA from high SES were also more open about their sexual relationships compared to their low SES peers. While wealthy young men engaged in transactional sex to boost or maintain social status, wealthy young women sought money out of their transactional relationships to buy luxury items they could not afford with their current supply of money. Although less wealthy women also experienced transactional sex, they often did so to obtain money for food and shelter. Participants also discussed a high awareness of HIV in the community, but did not report that their peers utilized HIV-preventative measures beyond condoms.

Interpretation:

Research efforts and interventions cannot overlook groups who traditionally have not been the focus of HIV prevention and management, such as wealthy young men and women. The HIV epidemic in SSA is complex among AYA and cuts across gender and socioeconomic classes.

Source of Funding:

Advancing New Standards in Reproductive Health and NIDA Grant R25DA043441.

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Background:

Quality health services are a key component of Universal Health Coverage (UHC) but challenging to implement in resource-limited settings. Continuous quality improvement (QI) is a recommended approach to improve health services in low-and middle-income countries (LMICs) but has not yet been widely implemented in Kenya. In March 2021, the Academic Model Providing Access to Healthcare (AMPATH) piloted a QI training and mentorship program for Ministry of Health (MOH) healthcare workers (HCWs) in Busia County, Kenya. HCWs from 9 health facilities in Bunyala subcounty attended a 4-day QI training. This training was followed by mentorship visits to facility QI teams. A qualitative process evaluation was conducted to assess barriers and facilitators to forming and sustaining facility QI initiatives.

Methods:

11 semi-structured key-informant interviews and 5 focus groups (totaling 37 voluntary participants) were conducted one year after the initial QI training by purposeful selection at participating healthcare facilities which included dispensaries, health centers, and the subcounty hospital. Data were deductively analyzed using domains and constructs from the updated 2022 Consolidated Framework for Implementation Research (CFIR) with modifications for the LMIC setting using NVivo software.

Findings:

Within the CFIR domains, constructs that emerged as key facilitators to facility-level QI implementation included the following: Domain I: 1.) the adaptability of QI aims to facility priorities and 2.) MOH ownership; Domain II: performance measurement pressure from the MOH; Domain III: QI knowledge through training; Domain IV: 1.) continued mentorship through the MOH supervision structures, 2.) teamwork and 3.) engagement with HCW participants and the community. Key barriers identified in Domain VI, an LMIC modification, included 1.) poor resource continuity (supply chains and human resources) and 2.) health systems architecture that transferred HCWs outside the subcounty.

Interpretation:

Deductive analysis using the updated CFIR constructs with modifications for the LMIC setting provided insight into the experiences of participants and MOH leaders involved in the QI program that informed scaling. Recommendations for continuous QI as an approach to improving health services include adequate training and continued mentorship through MOH structures, MOH ownership and performance measurement pressure, and strategies to address resource continuity issues.

Source of Funding:

Indiana University Department of Medicine Professional Advancement for Clinician Educators and Scholars (PACES) Grant

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1045

Revolutionizing Global Health Education: Cultivating Transformative Learning Experiences with an Introductory Online Course for Increased Enrollment Capacity and Enhanced Student Flexibility at the University of Washington

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Background:

The University of Washington’s (UW) Department of Global Health (DGH) offers GH 101, a foundational undergraduate course, "Introduction to Global Health: Disparities, Determinants, Policies, And Outcomes." This 5-credit course consistently has the highest enrollment in DGH. With a strong focus on social (in)justice, this course invites students to critically examine global health disparities, societal determinants of health, health policies, disease burdens, and the legacies of colonialism and racism.

To address soaring demand, a fully online version was created in 2016, to be offered in quarters when the in-person course is not taught. Module-based asynchronous learning allows students flexibility to complete work at their own pace, but an environment rich in intellectual engagement and instructor feedback is maintained.

Methods:

The team produced 80 instructional videos to replace content taught in the in-person course. Course material is broken into short, digestible segments consistent with best practices in online learning. With support from DGH’s e-learning (eDGH) team, the work to create this comprehensive but easily updateable online course was divided across three faculty.

Since 2017, 3063 students have enrolled, generating significant revenue for the DGH, supporting five yearlong teaching assistantships annually. The course immerses undergraduates in global health realities through a modified Global Fund proposal assignment, transforming theory to practical application. Additional reflective assignments include essay-only exams (unique for a large-format course) and a Racism in Public Health group presentation project, fostering awareness of problematic legacies in public and global health. Videos are continuously updated to align with the evolving field and the evolution of DGH’s commitment to anti-racist and anti-colonialist principles.

Findings:

Course evaluation shows positive results, with students reporting a more profound understanding of global health complexities, improved self-reflection, and enhanced capacity to consider and respond to systemic disparities. Students cite the Global Fund project as challenging, but the teaching team is consistently impressed by the quality and creativity of student deliverables.

Collaboration between faculty and eDGH drives course success as faculty provide key content that eDGH transforms into engaging pedagogy for over 200 students each offering. This technical expertise in online learning design enhances departmental capacity for ongoing improvements.

Interpretation:

The course is committed to DEI, dedicating sessions to colonialism, racism in global health, power dynamics, and privilege. The innovative instructional model could be adapted for other courses as modules are designed for simple, routine updates and include content honoring diverse student experiences, fostering an environment of inclusion and respect.

Source of Funding:

None

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Background:

Most of the existing research conducted on pregnancy-related anxiety (PrA) in Sub-Saharan African and low-and-middle-income countries (LMICs) relies on screening tools which fail to adequately capture the unique determinants of PrA in these settings. Our objective was to identify, pilot, and evaluate a comprehensive, translatable scale suitable for use in evaluating PrA in Ghana.

Methods:

From a preliminary pool of 25 scales, 5 scales were selected based on practicality and suitability to setting. These scales were evaluated to determine if they assessed the nine dimensions of PrA as determined by Bayrampour. The Tilburg Pregnancy Distress Scale (TPDS) was selected as the best fit. The TPDS were translated from English to the two primary local languages in Ghana (Twi and Ga), back-translated, and reviewed. Researchers administered the survey in the patient's preferred language. Immediately following, the women answered questions to assess their opinions on the survey and willingness to complete it during their future care visits.

Findings:

This scale was piloted and administered to 168 pregnant women presenting for antenatal visits at a tertiary hospital in Accra, Ghana. The participants of the pilot study had more education and were older than the national average for pregnant women in Ghana. Participants expressed positive sentiments towards the TPDS during interviews, and 84.16% stated that they would complete this survey again at a future visit. Cronbach's Alpha scores for the total TPDS scale and each of the two subscales, Partner Involvement (PI), and Negative Affect (NA) were calculated (TPDS: 0.33, PI: 0.57, NA: 0.79).

Interpretation:

The TPDS did not show good internal consistency overall; however, the Negative Affect subscale was internally consistent. Variables such as sample size and number of questions may have influenced the results of the internal consistency analysis. The TPDS was developed to screen for PrA in caucasian Dutch women, and the factors that influence PrA, especially as it relates to partner involvement, may not align in these two populations. This highlights the need for more screening tools developed specifically for pregnant people in Ghana and that existing tools do not meet the population's needs.

Source of Funding:

None

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Background:

Community participation in the planning and management of health service delivery is well established as an important strategy for strengthening health systems governance within the Global South. Since about 2007, the Honduran Ministry of Health has been implementing a decentralized health service delivery model at municipal level. While prior research has investigated the direct effects of this reform and the local institutional arrangements that emerged in response to it, relatively less attention has been given to its consequences for community participation. This study examines the influence of decentralization on community participation and social capital, with the aim of comprehending how such reforms can foster feedback and social accountability for more effective primary healthcare governance.

Methods:

This study employs a quasi-experimental design and data from an original household survey following the protocols of the DHS (Demographic and Health Survey) conducted in 2016. Within a matched sample of 65 municipalities, 42 decentralized and 23 centrally administered, multiple survey questionnaires were administered to respondents from about 9,000 households (about 140 representative households in each municipality). The study utilizes weighted regression analysis to assess the relationship between decentralization and several indicators of community participation and social capital. Additionally, the study considers differences among three distinct varieties of decentralization implemented in the Honduran context: single municipal government, association, and NGO-led decentralization.

Findings:

Preliminary results of the study show limited evidence of differences in participation and social capital on the part of community members between centralized and decentralized health systems. When comparing the three varieties of decentralization, community members in decentralized health systems led by single municipal governments reported relatively higher participation, and those in NGO-led systems exhibited greater social capital. This suggests that municipal governments under decentralization can have positive effects on conventional forms of participation, while NGOs may engender, and perhaps draw on, more diverse forms of community engagement and social capital. Overall, these findings show that the local institutional arrangements present within decentralization are critical for understanding the consequences of these reforms.

Interpretation:

The study is consistent with prior research on Honduras' health system reforms and extends those insights from direct service delivery outcomes to ancillary consequences for community participation. The findings present important implications for policy design, by highlighting a possible tradeoff across different organizational types under decentralization and health systems reforms that should be addressed when designing strategies, to support community participation and ultimately improve primary healthcare services.

Source of Funding:

National Science Foundation, The University of Chicago Kiphart Center.

Abstract N°: 1054

Automating Rapid On-Site Evaluation (ROSE) to Determine Breast Fine Needle Aspiration Adequacy in Sub-Saharan Africa

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Background:

Breast Cancer is the world's most diagnosed cancer. Its incidence and mortality are rising globally, with the steepest rise observed in Sub-Saharan Africa (SSA). 70% of Breast cancer in SSA is diagnosed when the cancer progresses to late stages (Stages III and IV). There is low accessibility to Pathology in SSA countries: one pathologist serves over one million persons and most pathologists and diagnostic services are concentrated in urban areas. This results in a diagnostic turn-around time (TAT) of more than three months and contributes to the high mortality of breast cancer.

Diagnostic TAT is prolonged when biopsy samples acquired at peripheral health centers are deemed inadequate for interpretation after transport over long distances to an urban center for interpretation. Rapid on-site evaluation (ROSE) is known to improve diagnostic yield but is not practiced in resource-limited environments.

ROSE in breast cytology currently consists of subjective evaluation of cellularity. In this study, we propose and create a proof of concept of using machine learning (ML) to determine the sample adequacy of breast fine needle aspiration cytology (FNAC) in a resource-limited setting.

Methods:

A single de-identified breast FNAC slide from the archives of the Johns Hopkins Hospital pathology laboratory was scanned using Ventana DP 200 (Roche Diagnostics, USA) whole slide imager. The resulting image was fragmented using a Python script into over 900 1024 X 1024 px images representing a light microscope's 16X magnification field of view. These images were manually annotated by creating bounding boxes around epithelial cell fragments on Roboflow (Iowa, USA) and formed the training dataset of the machine learning model (YOLOv7 was used).

Findings:

The model developed from 900 breast FNAC image fragments yielded a mean average precision (mAP) of 67%. A HAYEAR digital eyepiece was installed on a light microscope and a one-minute video of a breast FNA slide moved along the microscope stage was recorded. The generated model from this study was run on this video, resulting in bounding boxes overlaid on the video, successfully identifying epithelial cell fragments through a standard microscope.

Interpretation:

The ML model developed in this study demonstrates technical feasibility of automated ROSE on a light microscope using artificial intelligence. ROSE is a first-level evaluation that determines FNA sample adequacy. This development can improve the number and quality of slides reviewed by pathologists and potentially reduce TAT in LMICs.

Source of Funding:

Johns Hopkins Center for Bioengineering Innovation and Design

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1055

Using Simulation-Based Experiential Learning to Increase Students’ Ability to Analyze Increasingly Complex Global Health Challenges: A Mixed Methods Study

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Background:

Traditional didactic teaching approaches fall short of adequately supporting diverse student learning styles. In the context of global health, recent crises such as COVID-19 have sparked increased interest among students in pursuing a global health education. Complementing didactic teaching approaches with simulation-based experiential learning has shown promise in bridging the gap between theoretical knowledge and practical application. However, few studies have rigorously examined the outcomes of this approach in global health training. This study aims to evaluate the impact of the World Health Organization World Health Assembly Simulation (WHA Sim), a simulation-based experiential learning platform designed to enhance the application of students' skills in practical settings relating to global health governance.

Methods:

We employed a sequential mixed-method study between September 2022 and July 2023, starting with an anonymous survey among undergraduate students in the Faculty of Health at York University to evaluate self-reported quantitative metrics related to students’ understanding of simulation-based learning prior to the WHA simulation. We also conducted qualitative interviews among participants of the WHA Sim from diverse health disciplines, aiming to capture multi-disciplinary perspectives. Data were analyzed using simple descriptive statistics for the quantitative part and a framework analysis for qualitative data.

Findings:

Among 39 survey respondents, 18 were interviewed. The simulation bolstered a wide array of skills, including research capabilities, critical analysis, time management, and organizational prowess. Participants also reported improvements in effective communication, public speaking, networking, and solution-driven dialogues. Interpersonal skills like collaboration and leadership were notably improved. Moreover, the simulation provided an enhanced understanding of complex issues and offered a fertile ground for career preparation, filling existing knowledge gaps more effectively than traditional learning environments.

Interpretation:

These findings underscore the value of simulation-based learning, particularly the WHA Sim, for undergraduate global health education. It improves cognitive learning, fosters early career development, and hones skills crucial for future global health leaders. Additional research is essential to examine the long-term educational impact of these findings.

Source of Funding:

DIGHR, YUFA, York University and Jack & Mae Nathanson Centre.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1056

Terminology in Global Surgery Research: A Quantitative Analysis

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Background:

Global health lexicon employed for describing countries is often bottlenecked into dichotomous phrases such as ‘developing/developed country’, ‘first vs. third world’ and ‘global north vs. south’. Considering criticisms of being inaccurate and having colonial undertones, it is crucial we reflect on the implications of using such phrases in global health discourse and consider the effects on perpetuating colonial views. This is increasingly important as emerging spheres, such as global surgery, advocate for increased representation in tertiary care around the world. Current publications on global health terminology provide perspectives regarding decolonization yet lack quantitative insight into what vocabulary is actively used in global surgery literature. Here, we aim to analyze the frequency of global surgery publications utilizing selected terminology based on geographic location.

Methods:

Using the easyPubMed R package, we retrieved abstracts from global surgery literature on PubMed published between 2015 and 2023. We organized the abstracts by their first author’s country and screened abstracts for the global health phrases highlighted by T. Khan et. al (2022) using the stringR package.

Findings:

We identified 278 publications on PubMed with our search strategy. 33 publications were excluded from the analysis because they did not have associated abstracts. Thus, we analyzed 245 publications, of which 35 countries are represented. 142 (57.9%) of these were published by first authors from the United States. Only 17 (6.9%) papers represent first authors from African countries, 8 (3.3%) papers from Asian countries and 4 (1.6%) from South America/ the Caribbean. The majority of global surgery authors classified countries primarily by income status (ie. low income, high income), followed by development status (ie., underdeveloped, developing) and finally resource status (ie., resource limited, resource rich, resource poor). Three papers (1.2%) utilized “old vs new,” “north vs south” and “eastern vs western medicine”. Additionally, no papers employed the term “minority vs majority,” a descriptor based on population size.

Interpretation:

There is a preference for categorizing countries based on income status, development status, and resource status in global surgery publications. This contrasts recommendations from decolonization theory which highlights the ambiguity and inaccuracies around these phrases.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1057

Qualitative Investigation of Digital Tools to Equip Community Health Workers to Address Vaccine Hesitancy in Rural Western Kenya

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Background:

Immunization is one of the most cost-effective measures in public health to reduce child morbidity and mortality worldwide. Community Health Workers (CHWs) are vital to promoting vaccine acceptance; however, CHWs face barriers as vaccine educators. The barriers include the proliferation of misinformation, lack of reliable, up-to-date information, and limited training in effective vaccine communication. Digital tools can be useful in addressing vaccine hesitancy and providing training to remote CHWs, without disrupting their work. This qualitative study seeks to understand how to develop digital tools that can help CHWs address vaccine hesitancy in rural western Kenya.

Methods:

Applying a learner-centered study design process, we conducted 20 strategic, key informant in-depth interviews (IDIs) with CHWs in Migori County. IDIs focused on gathering feedback on vaccine-related training messages and sought reactions to prototype communication tools. We also led 8 focus group discussions (FGDs) with 32 community members to investigate attitudes about childhood immunization and barriers to vaccine uptake. IDIs and FGDs were conducted in English and in the local Dholuo language. Inductive and deductive analysis and constant comparative methods were used to systematically code data and identify key themes emerging from interview data.

Findings:

While members of the rural communities indicated a strong trust in CHWs and CHW-delivered information about vaccines, they shared a fear of judgment from hospital health workers, particularly if they fell behind on vaccine schedules, which deterred mothers from bringing children to facilities for vaccination. Although many of the CHWs interviewed were well-trained and could provide support to the concerned mothers, they indicated the need for tools to share difficult concepts with patients and to reinforce their credibility. CHWs have access to and experience using smartphones and were interested in having access to videos, photos, images, and charts to communicate credible information about vaccinations.

Interpretation:

CHWs can help overcome barriers to vaccination. Given that CHWs may be seen as less judgmental, they can serve as bridges between community members and healthcare providers. Supportive and informed CHWs can help families overcome vaccine concerns. Yet, even well-trained CHWs indicate the need for more resources that are easily accessible and transportable.

Source of Funding:

Funding for the study was provided by the Vaccine Confidence Fund.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1058

Advocating for Refugee Health Care Training in U.S. Medical School Education

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Background:

Given that the number of refugees will only continue to increase in the upcoming years due to intensifying climate change, rising autocracy, and growing inequality around the world, receiving training in refugee health care is more pertinent than ever for U.S. physicians. However, despite its relevance, refugee health care training remains limited in U.S. medical education, and graduates continue feeling underprepared in caring for this patient population. In response, a Refugee Health and Advocacy workshop was created at Loyola Chicago Stritch School of Medicine. The goals of the workshop were that participants would be able to recognize how migratory status adds additional complexity to refugee healthcare, discern how trauma permeates one’s health, and finally, feel empowered on interprofessional teams to wholly address the health and well-being of refugees.

Methods:

The 4-hour workshop, sponsored by the school’s Center for Community and Global Health, was divided into three parts: a lecture overviewing U.S. refugee policy and dynamics, a case study grappling with a simulated patient’s history of present illness (HPI), and a personal story. First and second-year medical students were targeted. The workshop built on prior pedagogical methods via a lecture format and interactive patient cases. However, a personal refugee story was intentionally added, too, due to its potentially more memorable impact. Consequently, the workshop was innovative in that it catered to the various dimensions of what refugee health education means: theory, practice, and emotion.

Findings:

Of the approximately 300 first and second-year students scouted, 26 students attended the workshop. Preliminary survey questions were sent to these students assessing their refugee health knowledge. This same survey was sent after the workshop to evaluate enhanced and/or changed understanding. Of the 11 objectives assessed on a Likert scale, over 80% of respondents in post-surveys strongly agreed or agreed with achieving each objective. Substantial improvements between the pre- and post-surveys were students’ confidence in communication with refugees, being able to provide appropriate resources to refugees and addressing their biases in refugee care. Our workshop thus proves that students’ refugee health knowledge positively changes if given didactic coursework on the topic.

Interpretation:

As students demand more multicultural education, an annual Refugee Health workshop in any domestic or international medical school can be a solution. Not only will it prepare students to care for this patient population, their enhanced sensitivity and knowledge will emanate to all their vulnerable patients improving global health practice.

Source of Funding:

None

Short-Term General Surgery Partnerships in Low- and Lower Middle-Income Countries within the Non-Governmental Organisation Sphere: A Systematic Review of Measures of Health Impact and Sustainability

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Background:

Surgical non-governmental organisations (s-NGOs) establish short-term global surgery partnerships (GSPs) to address disparities in surgical care in low- and lower middle-income countries (LMICs). However, it remains unclear whether GSPs generate positive and sustainable impact in LMICs due to lack of robust evaluation. This study aims to elucidate measures of health impact and sustainability used by general surgery GSPs in LMICs.

Methods:

In this systematic review, peer-reviewed and gray literature published in English between 2000-2023 were identified from PubMed, EMBASE, Global Health, Google Scholar, and an existing database of s-NGOs. Inclusion criteria consisted of sources describing GSPs in LMICs involving adult general surgery interventions including hernia repair, appendectomy, and laparotomy, and quality of evidence was evaluated with the Critical Appraisal Skills Programme and JBI Critical Appraisal tools. Outcomes reported by GSPs were identified based on a synthesis of three existing frameworks in the literature describing dimensions of effectiveness, cost-effectiveness, preparedness, education, and sustainability. Descriptive features were identified through thematic analysis, and proportions of GSPs reporting outcomes based on the synthesized framework were obtained.

Findings:

After an initial search of 2049 sources, 63 (3.1%) were included for final review, comprising 29 (46.0%) peer-reviewed studies and 34 (54.0%) gray literature publications, and representing 26 GSPs operating in 34 LMICs. Outcomes describing any of the five dimensions of GSP impact were reported in a range of 3.2-50.8% of sources. The most frequently reported outcomes described the sustainability dimension in 32 (50.8%) sources, while the least frequently reported described the cost-effectiveness dimension in 3 (4.8%) sources. Peer-reviewed sources reported outcomes describing the effectiveness dimension, such as total mortality and peri-operative complications, more frequently than gray literature sources.

Interpretation:

This is the first large scale review investigating evaluation mechanisms of s-NGOs in both the peer-reviewed and gray literature. Limitations of this study include a heterogeneous evidence base and exclusion of non-English sources. To fully evaluate the health impact and sustainability of GSPs, more reporting of diverse outcomes and peer-reviewed research is required. We recommend a comprehensive evaluation framework to increase transparency of GSPs and examine their long-term impacts on LMICs.

Source of Funding:

None

Abstract N°: 1072

Factors that Influence the Uptake of Routine Antenatal Services by Pregnant Women in Low Resources Settings: A Mixed Method Study in Lesotho

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Background:

Despite the global reduction in maternal mortality, the maternal mortality rate is significantly high in Lesotho, which is 566 maternal deaths per 100,000 live births. Among the key factors that contribute to maternal mortality is the lack of access to early antenatal care access. Assessing the factors that contribute to low antenatal care attendance is crucial to developing mitigation strategies to improve access to early antenatal care services. The aim of this study was to identify the sociocultural and economic factors that contributed to low antenatal care services.

Methods:

We conducted a convergent mixed method design, qualitative interview (N=42) focus group discussions (N=4), and antenatal care service utilization survey (N=398) to explore some additional barriers that may affect the antenatal care services. The study was conducted in selected 25 health facilities across seven districts of Lesotho from March to June 2023.

Findings:

In our study, we found that 65% of women had access to first antenatal services, 55% completed at least four antenatal care visits, and 45% of women delivered at health facilities. The main factors that contributed to low antenatal care services were lack of transport (77.4%), lack of money for transport (18.3%), and long-distance from facilities (11.8%). In the survey, 12% of women who get access were not happy with the health services they received when they access health services. 26% of the women mentioned that they had a negative experience with the health workers which made them not come to the health facilities for subsequent antenatal care services.

Interpretation:

Addressing barriers to access to antenatal health services and provision of social support such as transport fees would help to improve maternal and child services in lower and middle-income countries. There is a need to design maternal health services that are appropriate, accessible, acceptable, affordable, and of high quality.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1075

Decolonising the Educative Process- Co-Design and Multisectoral Collaboration in Curriculum Development to Create Sustainable Global Health Education Through Learner-Centred Design.

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Background:

Contemporary Global Health should seek to avoid ‘parachute’ models of education which center the ‘Global North’ as arbiters of knowledge. One way to circumvent the re-instantiation of these power structures is to commit to co-designed socio-culturally responsive and sustainable practice with continued impact beyond a single instance of program delivery. Further, multi-sectoral collaboration between global health content experts and education specialists can support the implementation of learner-centered design and decolonizing methodologies. This paper presents a case study of a custom education program co-designed with extensive bilateral and multisectoral collaboration between Indonesian and Australian stakeholders.

Methods:

The curriculum was co-designed in collaboration with a multi-sectoral team of learning designers, One Health and health security experts, government, and institutional stakeholders, as well as ongoing feedback from participants. The project began with consultations on developing content learning goals that were of direct relevance to learners and would meet the local requirements for their professional accreditation. Learning materials integrated cultural and institutional contexts of learners, such as local case studies with a group project of mock interventions. The course was delivered in country and the national language of learners. Refinement based on feedback during and after each course iteration resulted in a strong cultural preference for social learning being adapted into the curriculum and production of bi-lingual facilitator and learner manuals.

Findings:

The ongoing codesign and collaboration with multi-sectoral specialists including education and learning specialists achieved two significant goals. The first was maximizing the capacity of the course and its learners to build a community of practice, accomplished using learner centered methodologies. The second was to reach a point where facilitation could be conducted by local trainers and integrated into the professional development framework for civil servants in Indonesia.

Interpretation:

Authentic processes of co-design and multi-sectoral collaboration can avoid reinforcing colonial models of education. Models of global health education that apply a learner-centered approach to capacity building yield higher levels of satisfaction from learners, greater applicability of skills and knowledge, and sustainable communities of practice.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1078

Medium to Long Term Impacts on Former Participants of the Shoulder to Shoulder Global Short-term Experiences in Global Health

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Background:

Shoulder to Shoulder Global (STSG) has been sending interprofessional groups of students and practitioners on short-term experiences in global health (STEGH) to work with a year-round clinic in a peri-urban community in Santo Domingo, Ecuador since 2002. It is unclear what impact this experience has on the approximately 150 participants yearly.

Methods:

This convergent mixed methods study used experiential learning theory to explore the educational, personal, and professional impacts of the STEGH on the participants. The study population was STEGH alumni who are currently professionals or pursuing their professional studies. An electronic survey was deployed to 915 participants. The survey collected demographic data as well as responses to questions about learning a global perspective, learning to work in interprofessional teams, serving the underserved, change in career direction, and volunteering. Quantitative data were analyzed with Chi squared tests. Open-ended responses were analyzed with qualitative methods with responses coded and grouped into themes.

Findings:

Seventy-five respondents closely mirrored the overall mix of STEGH participants regarding profession, age, gender, race, and ethnicity. Regarding Spanish facility, 22.67% indicated no Spanish ability, 9.33% indicated ability to hold complex conversations, and 4% were native speakers. The remainder had some Spanish speaking abilities. 41.10% of respondents stated that they approach working with community health education differently because of participation. 20.55% indicated they have made changes in the way they approach the subject and 23.29% indicated they have made minor changes. 54.05% indicated they are more aware of cultural differences and how those differences impact their field. 27.03% were seeking to engage in more international experiences, while 2.70% indicated more involvement with policy. 31.94% felt inspired to learn or improve skills with a foreign language. 25.69% indicated they are better listeners during professional interactions due to the STEGH. Increased levels of civic engagement and volunteering more within the US was mentioned by 24.3% of respondents. Forty-four percent stated their career direction shifted due to the STEGH. Qualitative data support the quantitative findings. Themes of eye-opening exposure, understanding, increased awareness, joy, cultural competency, skill development, and interprofessional education and practice emerged.

Interpretation:

STSG impacted participants learning a global perspective, working interprofessionally, and learning another language. Participants pursued serving the underserved in the US and abroad. The program inspired some to take courses outside of their discipline and resulted in participants improving listening skills and developing an ability to work with fewer resources.

Source of Funding:

none

Role of Family in Home Blood Pressure Monitoring in Urban Ghana: A Qualitative Analysis of Pregnant Women's Perspectives

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Background:

Preeclampsia is a leading cause of adverse maternal and fetal outcomes globally with the greatest burden in low- and middle-income countries (LMICs). In high income countries home blood pressure monitoring (HBPM) is used increasingly to detect preeclampsia ahead of routine facility-based monitoring. Barriers to HBPM in LMICs include responsibilities at home or work, lower health literacy and numeracy, and difficulty remembering. Our objective was to elicit pregnant women's perspectives on family involvement in HBPM broadly and with respect to these barriers.

Methods:

The study setting was Korle Bu Teaching Hospital (KBTH-IRB 00098/2021 ethical approval) in Accra, Ghana. Inclusion criteria were age 18 years or older, currently pregnant, less than 28 weeks gestation, and presenting to establish antenatal care. A qualitative study design was used; semi-structured interviews were carried out using an interview guide in participants' language of choice (English, Twi, Ga). Participants were purposively recruited and underwent written informed consent. Demographics and medical history were collected, participants were trained on HBPM, and then logged their BP at home for 2-4 weeks. At their next ANC visit, semi-structured interviews assessed participant perspectives on family involvement with their HBPM.

Findings:

Among 33 participants (number determined by thematic saturation) most were married (71.9%), multiparous (69.7%), and had completed at least a senior high school education (60.6%). Qualitative analysis revealed that participants overwhelmingly felt family involvement made HBPM easier and contributed to their enjoyment of HBPM. Most participants reported husbands as the involved family member, but children, mothers, and siblings were also mentioned. Family involvement was categorized into a hierarchy of thematic involvement: (1) passive approval of HBPM (2) assistance with the monitoring process; and (3) participation of the family members, themselves, in HBPM. Assistance was most commonly experienced, and most frequently came in the form of reminding the participant to check their BP, but also by interpreting and recording values, physically arranging the cuff on the participant's arm, or watching the children while the participant checked their BP. Situations in which family was unhelpful were limited to disruptions from children and rarely when participants preferred to monitor alone.

Interpretation:

Family was involved with all participants, contributing positively by offering approval, assistance, or participating. Integrating family members in HBPM programs in LMICs may help overcome barriers of adherence and health literacy.

Source of Funding:

Global REACH at the University of Michigan

Adapting the Montreal Cognitive Assessment (MoCA) Scoring for Formal Educational Variability in Early Detection of Cognitive Disorders in Uganda.

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Background:

Aging often increases susceptibility to cognitive disorders, especially Alzheimer's disease, highlighting the importance of precise and early diagnosis. Although the Montreal Cognitive Assessment (MoCA) is widely utilized to screen adults aged 55-85 for mild cognitive impairment and incipient dementia, its standard scoring system is less effective for individuals with less than six years of formal education. To address this issue, an adapted scoring system has been introduced that takes into account educational variations, with a maximum score of 24 and an impairment threshold set at 19. We aimed to evaluate and adapt the Montreal Cognitive Assessment (MoCA) scoring system to better accommodate educational disparities, enhancing its effectiveness for early detection of cognitive disorders in the Ugandan population.

Methods:

The study recruited 106 community-dwelling participants in the Busukuma and Nansana villages of Wakiso district, Uganda, aged 65 and above, between July and September 2023. The screening process was conducted by three research assistants who were trained on the use of the MoCA tool.

Findings:

With an increasing number of years of education, the average MoCA score tends to increase by an average of 0.7 units, as indicated by a correlation coefficient of 0.40 ($P = 0.007$). A trend test was conducted, resulting in a significance level of $P = 0.007$. No significant difference in MoCA scores was found between males and females ($p = 0.252$). Age was found to have an inverse association with the MoCA score, with a reduction of 0.2 units for every one-year increase in age ($p = 0.001$). After adjusting for education level, 81 (76.4%) participants were found to have Dementia, 15 (14.2%) had mild cognitive impairment, and 10 (9.4%) had no cognitive impairment.

Interpretation:

MoCA accurately detects early dementia and mild cognitive impairment but isn't apt for individuals with under six years of education. Our research shows that education boosts MoCA scores, age decreases them, suggesting age-specific adjustments are needed. Gender doesn't significantly affect MoCA scores, which may enhance dementia diagnosis accuracy in seniors.

Source of Funding:

NINDS of the NIH under Award Number D43NS118560

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1090

The impact of the refugee youth health literacy program in the community, in Syracuse, NY

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Background:

Health literacy for refugees plays an important role in improving their health status and healthcare access. Refugees who arrive in their adolescent years face a pivotal time in their developmental independence as well as a crucial role in functioning for their families. Cultural and family obligations compound with the stress of assimilation amidst dynamic adolescent years to put young refugee adults at greater risk for reducing the opportunities to take care of their health. Therefore, It is essential to provide them with the health knowledge they need to influence healthy behaviors.

Community-Clinic partnership (CCP) between SUNY Upstate Medical University and the refugee resettlement agency Catholic Charities Northside CYO has conducted a bi-weekly health literacy educational program since February 2023, in Syracuse, NY. This initiative aims to bolster the health literacy of refugee adolescents during this vulnerable and influential stage of their lives.

Methods:

The refugee youth health literacy program targets participants aged 15-21, recruited primarily from refugee high school/GED students enrolled in the Catholic Charities youth program, and word of mouth among students. Didactic and interactive sessions were organized to establish a solid foundation of healthy habits. Pre- and post-surveys were administered in each session, utilizing the knowledge-attitude-practice (KAP) framework.

Findings:

A total of eleven sessions have been conducted, with an average of nine students per session as of September 2023. The pre/post surveys revealed that most participants acquired new knowledge, exhibited positive attitudes, and expressed a willingness to integrate healthier behaviors learned during the sessions.

While the sessions have effectively increased health literacy, challenges persist in promoting an understanding of how cultural differences influence health-related behaviors. These challenges arise from variations in participants' backgrounds and the composition of each session.

Interpretation:

Over time, a trusted relationship has developed between staff and student participants, fostering a comfortable learning environment which has provided more bidirectional exchange of ideas over time. The CCP team remains committed to addressing these unmet goals and serving as agents of change within their community.

Source of Funding:

This program was funded by NNLM.

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Background:

The conflict in Syria has profoundly affected child health, however, research on this is sparse. This study examined paediatric (<18 years) healthcare consultations in northwest Syria between 2018-2022 and explored associations with conflict-related forced displacement.

Methods:

A retrospective quantitative analysis was conducted using paediatric consultation data from the Syrian American Medical Society (SAMS) facilities in Idlib and Aleppo governorates. Consultations were categorised by diagnosis category (infectious, non-communicable (NCDs), injuries, neonatal, nutritional, and sexual, reproductive and health). To explore associations between forced displacement and consultations, we utilised data from the UN-OCHA's Internal Displacement Monitoring Centre. Monthly displacement was divided into quartiles: Low (≤ 5409 displaced), Medium (5410-26,553), High (26,554-43,059), and Severe ($>43,059$). Multivariate logistic regressions quantified the associations between forced displacement and consultations, while also analysing the lagged effects of displacement.

Findings:

3,185,644 paediatric consultations were reported across 51 facilities in Idlib and Aleppo governorates. Seasonal trends were observed with infectious, neonatal, and nutritional disease consultations peaking during winter, while NCD and injury consultations peaked in the summer.

Displacement had differential associations across consultation categories. All displacement levels showed increased odds of nutrition-related consultations (severe displacement OR:1.62, $p<0.0001$) with significant associations lasting two months beyond the displacement event (OR:1.42, $p<0.0001$). Severe displacement also showed an OR=1.13 ($p<0.0001$) for NCDs, which reduced to OR=1.05 ($p<0.0001$) two months after the displacement event. Conversely, all levels of displacement showed reduced odds of infectious diseases consultations, with severe displacement associated with an 11% reduction ($p<0.0001$) compared to low displacement. This reduction attenuated over subsequent months, but remained significant two months after the displacement event (OR:0.96, $p<0.0001$).

Interpretation:

Forced displacement has differential associations with consultation types, largely persisting in the months following. After displacement, utilisation of infectious disease services significantly decreased while others, such as NCDs and malnutrition increased. Understanding these patterns, along with the observed seasonal trends, can inform future health service policies for child and adolescent health needs.

Source of Funding:

None.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1097

Improving Adherence to Essential Newborn Care Utilizing Quality Improvement Methodology in Burundi

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Background:

The World Health Organization Essential Newborn Care (ENC) course teaches quality standards for newborn care at birth to reduce neonatal mortality. Recent curriculum revisions recommend incorporating quality improvement (QI) methodology to provide a framework for closing gaps between current practices and ENC guidelines.

The project goal is to evaluate the feasibility and utility of including QI training into a locally delivered ENC course in rural Burundi. Objectives of this project were 1) to assess the ENC educational intervention on newborn care before and after the training, and 2) to employ QI techniques to address gaps in best practices.

Methods:

This training utilized the revised ENC-1 and ENC-2 curriculum with a one-day QI component including SMART aims, Cause and Effect and Key Driver Diagrams, and PDSA Cycles. During July and August, 2023, forty-seven staff, including nurses, midwives, and physicians, completed the course in a health center operated by an international non-profit in Burundi. None had prior ENC training.

During the QI training, participants identified gaps in ENC. A review of medical charts and administrative records from January to July 2023 was performed to extract baseline data regarding these practices. A first PDSA cycle was completed and data collection is on-going through November 2023.

Findings:

Four gaps in ENC were identified: 1) delayed cord clamping, 2) immediate skin to skin care, 3) eye care, and 4) vitamin K use. Among 169 newborns delivered prior to the intervention, 0 (0%) received tetracycline ointment, 1 (0.05%) received vitamin K, and no records existed to verify skin-to-skin or delayed cord clamping. Participants generated a SMART aim to increase adherence to the 4 ENC gaps for all newborns from a baseline of 0% to 75% within 3 months of ENC QI training. Among 21 newborns delivered in the month after intervention, 19 (90.4%) received tetracycline ointment, 11 (52.4%) received vitamin K, 6 (28.6%) received skin-to-skin care, and 3 (14.3%) received delayed cord clamping.

Interpretation:

In a short interval after ENC training, eye care and vitamin K administration increased despite medication shortages and documentation challenges. Pre-intervention practices for skin-to-skin and delayed cord clamping were not documented, but staff reported these guidelines had not been practiced. An ENC register book was created following the first PDSA cycle to better document these practices.

A one-day QI training is a scalable addition to the ENC curriculum that may aid in meeting the challenges to change clinical practice in many low-resource settings.

Source of Funding:

None

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Background:

SolarSPELL Health is a solar-powered offline digital library initiative delivering high-quality health information to students and clinicians in regions where library resources are otherwise unavailable. To date, dissemination has occurred via in-country train-the-trainer workshops conducted by the SolarSPELL team, wherein users are trained to use and teach others to use the library. However, the in-person modality limits scalability. We describe the fidelity of an advanced train-the-trainer approach wherein trainers are prepared to deliver a full SolarSPELL workshop.

Methods:

In January 2023, the SolarSPELL team conducted two 2-day train-the-trainer workshops at a health sciences university in Malawi. Workshop participants completed a written survey to assess motivation and confidence using the digital library, perceptions about information literacy, and workshop quality. A prospective SolarSPELL trainer from South Sudan participated in both workshops, plus unstructured conversations with SolarSPELL staff. Two weeks later, the South Sudanese trainer conducted a SolarSPELL Health workshop at a nursing college in South Sudan, collecting identical participant surveys. We compared results for Likert-style questions between groups.

Findings:

There were no significant differences regarding participants' comfort level using the library ($p=.47$), motivation to use the library ($p=.44$), confidence that library use will assist with future learning ($p=.23$), or confidence in training others to use the library ($p=.47$). While all participants rated information literacy as important, Malawi participants were more likely to rate information literacy as "very important" ($p=.003$). However, there was no significant difference in confidence that library use would build participants' own ($p=.21$) or others' information literacy skills ($p=.37$). While there was no significant difference in perceived clarity of the training ($p=.45$), South Sudan participants were more likely to feel that the training duration was sufficient ($p=.01$).

Interpretation:

The train-the-trainer approach has the potential to enable scalability and enhance capacity-building for programs designed to reach areas where travel limitations and severe resource constraints might restrict direct training interventions from external partners. As a result, future deployment of offline digital health libraries for developing regions may focus on training multinational trainers with a capacity-building focus on future system-level training.

Source of Funding:

Private philanthropy

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Background:

Enterics for Global Health (EFGH) is a research consortium study establishing the incidence and consequences of *Shigella* diarrhea in seven high burden countries. Investigators from EFGH implementation institutions are surveyed bi-annually to identify priorities for operational and administrative needs. One consistently noted priority is the desire of LMIC-based institutions to receive direct funding from study sponsors, instead of through subawards from coordinating-bodies (usually based in the US or UK/Europe). EFGH assessed institutions' interest in and readiness for receiving direct funding in ongoing efforts to decentralize consortium funding and grant management models, and empower local implementing institutions to lead these processes.

Methods:

Common tools used to assess financial capacity were reviewed for relevance, including Humentum's Financial Health Check. Interviews were conducted with grant administrators in Malawi, Kenya, and The Gambia to understand organization history, administrative structure, financial policies and procedures, other funding sources and preferences for future funding. Interviews with partner administrators in Mali and Peru are anticipated for early 2024. EFGH Pakistan and Bangladesh institutions already receive direct funding. Documentation of lessons learned from institutions receiving direct funding within consortiums is ongoing.

Findings:

All respondents included in this assessment stated a preference for direct funding and view it as an opportunity to strengthen institutional financial management capacity and systems. It also boosts the prestige of the site principal investigator and institution. Challenges with direct funding identified during the assessment include reliance on US/UK-facilitated supply chains, cash flow requirements, and legal registration processes for institutions. Direct funding has implications for the functioning of research consortiums. Typically, a central coordinating body manages budgets, communications, procurement, protocol implementation monitoring and standardization, reporting, and dissemination. With direct funding, the sponsor will need to take on the coordination role or put mechanisms in place to ensure clear delegation of responsibility and accountability at each consortium site.

Interpretation:

The preferences of institutions are highly valuable when making decisions about direct funding. Direct funding to international sites is a way to redefine funding pathways and financial decision-making and strengthen local institution administrative leadership, moving towards changes in global health research power dynamics. Direct funding can also lead to career advancement for investigators. Direct funding within research consortiums should be paired with clear governance models, tailored training, and project and grant management support as necessary.

Source of Funding:

Funded by the Bill and Melinda Gates Foundation, INV-031791

Abstract N°: 1106

Making Medical Oxygen Available in Lesotho: Lessons Learned from Partners In Health's Building Reliable Integrated and Next Generation Oxygen Services (BRING O2) Project

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Background:

Surging oxygen demand during the COVID-19 pandemic unmasked long-standing deficiencies in medical oxygen ecosystems worldwide. At the start of 2020, Lesotho was entirely reliant on imported liquid oxygen tanks from South Africa. To meet domestic needs during the pandemic, South Africa halted oxygen exports, creating critical shortages in Lesotho. In November 2020, Partners In Health (PIH) installed Lesotho's first oxygen production plant at the Botsabelo MDR-TB Hospital and started producing and distributing oxygen to health facilities throughout the country. In December 2021, with funding from Unitaid, PIH launched the multi-country BRING O2 project to increase access to oxygen. In Lesotho, BRING O2 recruited and trained biomedical engineers and technicians, maintained and repaired oxygen plants, and implemented a national oxygen cylinder distribution network.

Methods:

We assessed BRING O2's impact in Lesotho by analyzing data from monthly REDCap surveys designed to capture information on oxygen plant operations and the tracking logs used by the cylinder distribution network. Data collection began in July 2022 and is reported through August 2023. Continuous and ordinal variables were summarized by medians and interquartile ranges (IQR).

Findings:

Over 14 months, the Botsabelo plant produced 20,485m³ of oxygen and filled 1,635 cylinders. Per month, the median production and cylinders filled were 1,365m³ (IQR: 1,054 to 1,618) and 115 (IQR: 74 to 141), respectively. During this period, a total of 1,981 cylinders were delivered to 17 facilities through the cylinder distribution network. The median number of cylinders distributed and facilities served per month was 136 (IQR: 86 to 193) and 6 (IQR: 5 to 9), respectively. BRING O2 was able to adapt cylinder distribution in response to oxygen plant downtime, ensuring a continuous supply of oxygen to facilities within the network.

Interpretation:

With BRING O2 support, the Botsabelo plant produced enough oxygen to treat the equivalent of 1,200 patients with severe COVID-19. The BRING O2 cylinder distribution network established a model for ensuring a continuous decentralized oxygen supply on a national scale. Ensuring adequate availability of medical oxygen requires investments in biomedical staff, equipment, production and storage space, and monitoring systems.

Source of Funding:

BRING O2 is supported with funding from Unitaid (Grant SPHQ15-LOA-045)

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Background:

Limited research has explored healthcare workers' perspectives on the role of decentralized primary health care management in improving health systems. We conducted a qualitative study to gain insight into health workers' perceptions of Lesotho's Primary Health Care Reform (LPHCR) initiative. Implemented in collaboration between the Ministry of Health and Partners In Health, LPHCR aimed to enhance the quality and quantity of service delivery and improve primary health care services in Lesotho by decentralizing healthcare management to the district level.

Methods:

We conducted 21 semi-structured key informant interviews (KII) with healthcare workers and Ministry of Health officials purposively sampled from various levels of Lesotho's health system, including the central Ministry of Health, district health management teams, health centers, and community health worker programs in four pilot districts of the LPHCR initiative. The World Health Organization's health systems building blocks framework was used to guide data collection and analysis. Interviews with key informants assessed health care workers' perspectives on the impact of the LPHCR initiative on the six-health system building blocks: service delivery, health information systems, access to essential medicines, health workforce, financing, and leadership/governance. Data were analyzed using directed content analysis.

Findings:

Participants described several benefits of decentralization, including improved efficiency in service delivery, enhanced accountability and responsiveness, increased community participation, improved data availability, and better resource allocation. Participants highlighted how the reform resulted in more efficient procurement and distribution processes and increased recognition and status in part due to the empowerment of district health management teams. However, participants also identified limited decentralization in financial decision-making building block and encountered barriers to successful implementation, such as staff shortages, inadequate management of the village health worker program, and a lack of clear communication regarding autonomy in utilizing and mobilizing donor funds.

Interpretation:

Our study findings indicate that the implementation of decentralized primary health care management in Lesotho was associated a positive impact on a number of health system building blocks. However, it is crucial to address the implementation challenges identified by healthcare workers to optimize the benefits of decentralized healthcare management.

Source of Funding:

The Skoll Foundation and the Wagner Foundation

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1109

Improving Reproductive Health Among Afghan and Arab Refugees Through Innovative Reproductive Health Literacy Training

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Background:

Health literacy improves people’s access to health information and their capacity to use it effectively, making it critical for empowerment. Refugees often neglect reproductive health due to other pressing priorities during resettlement. This can result in late diagnosis of cervical and breast cancer, undiagnosed cardiovascular diseases during pregnancy, and improper prenatal and postpartum care.

We developed reproductive health literacy (RHL) training for newcomers to the United States with a special focus on Afghan and Arab immigrants within the refugee population. The training involves videos and online interactive tools in Dari, Pashto, and Arabic and leverages the strength of bilingual, bicultural students and international medical graduates. It aims to improve not only reproductive health knowledge but also women’s digital health literacy (DHL) and reproductive health literacy in the context of health promotion, disease prevention, and healthcare knowledge.

Methods:

Eight series of three RHL sessions were developed with input from refugee women. They selected topics including cervical cancer, family planning, maternal health, and postpartum care. The sessions built upon Nutbeam’s conceptual framework, emphasizing a learner-centered, culturally sensitive approach addressing low literacy through digital media and native language speakers.

The sessions were in English, Dari, Pashto, or Arabic, taught by international medical graduates. Pre- and post-tests on DHL and RHL were administered to attendees with the help of bilingual, bicultural students. Pre-recorded presentations, PowerPoints, and scripts underwent careful review for medical and linguistic accuracy and were available to the session facilitators. Participants included women aged 16 and up who arrived in the Sacramento area from Afghanistan or an Arab country as refugees, parolees, or with a special immigrant visa.

Findings:

Due to outreach with refugee community-based organizations, there were 16-38 attendees per session. We observed increases in both DHL and RHL after training, and women expressed higher levels of self-confidence in both areas.

Interpretation:

Addressing reproductive health as part of the resettlement process normalizes conversations on reproductive health. The focus on digital information-seeking and use of information enables refugee women to be successful self-advocates. The digital component of the intervention is scalable to areas with a scarcity of female health educators.

Source of Funding:

NLM, G08 LM014109; PCORI, 14471-UCI-I

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1111

HPV catch-up vaccination for cervical cancer prevention: a qualitative study on the role of social support in vaccination decision-making among young women in rural Mysore, India

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Background:

India has the highest number of estimated deaths from cervical cancer globally, with most cases attributed to Human papillomavirus (HPV). Primary HPV vaccination is recommended for girls ages 9-14, with catch-up vaccination for young women ≥ 15 , if feasible. As India rolls out HPV vaccination nationally for the first time, we collected qualitative data from young adults in rural Mysore, India to better understand how family and community members impact young women's healthcare decision-making regarding HPV vaccination. Perspectives were elicited from women and men, who may influence women's vaccine uptake.

Methods:

Between September 2022-November 2022, participants were recruited with assistance from community health workers. Gender-stratified, audio-recorded focus group discussions (FGDs) were conducted in *Kannada* with young adults ages 18-26. Participants received education about cervical cancer, HPV, and HPV vaccination. FGDs were transcribed, translated, and analyzed using rapid approach to identify themes relating to healthcare decision-making and social support.

Findings:

Fifty-two young adults (female=31, male=21) participated in seven FGDs. Average age of participants was 23 years, 65% were married, and all had completed high school. While 28% had heard of cervical cancer, only 6% knew of the HPV vaccine. Only 3% of women and 10% of men reported making independent decisions about their healthcare; 29% of women and 33% of men reported healthcare decisions were made entirely by a spouse (women only), or other family members (women and men). FGDs identified several key social groups whose support would impact women's decision-making for HPV vaccination: 1) family in multigenerational households, particularly parents, husbands, in-laws, and older brothers; 2) vaccinated peers; and 3) trusted community persons, especially village community health workers, rural childcare center teachers, and doctors. Young people anticipated that concerns about side effects, community STI-related stigma, and reluctance to vaccinate unmarried women may prevent families from supporting young women to receive the HPV vaccine.

Interpretation:

A majority of young adults in rural Mysore reported familial involvement in healthcare decision-making. Maximizing HPV vaccine uptake for young women will require education campaigns that are targeted toward multigenerational families and suitable for low-literacy populations. Additionally, trusted local stakeholder should be mobilized to disseminate vaccine information.

Source of Funding:

Dean's Leadership in Health and Science Scholarship from UCLA.

Abstract N°: 1113

Perceived feasibility of a multicomponent intervention to promote uptake of childhood vaccinations during pregnancy: Findings from a national cross-sectional survey of prenatal providers

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Background:

Pregnancy presents a unique opportunity to proactively build confidence in childhood vaccinations. An intervention has been proposed that includes prenatal providers offering childhood vaccine recommendations, a patient-focused educational website, and patient consultations by a vaccine navigator. Prenatal providers' perceived feasibility of implementing the intervention was assessed.

Methods:

An online cross-sectional survey of members of two national prenatal provider organizations in the United States was conducted from April-June 2022. Questions assessed provider and practice characteristics, providers' perceived role as vaccine advocates (Motors of Engagement with Vaccine Advocacy (MoVAd) Scale), training needs, intervention feasibility, and implementation factors.

Findings:

Of 1677 eligible responses received, 495 responses were included after data validation. Over half were between the ages of 31-40 years and female (51.5% and 57%, respectively). Three-fourths were non-Hispanic or Latino origin (76.6%), the most frequently reported racial group was White (63.2%). Certified nurse-midwives, midwives, and professional midwives comprised the largest provider group (37.6%), follow by physician assistants and nurse practitioners (18.0%). Among providers reporting their own vaccination status, most received COVID-19 (primary series, 97.6%) and influenza vaccines (96.2%). Only half (49.3%) reported recommending influenza vaccines and less than half (42.4%) reported recommending COVID-19 vaccines to pregnant individuals routinely. Responding to the MoVAd Scale, providers expressed high autonomy and value in advocating about vaccines but lower impact on changing people's views. Intervention feasibility was rated highest for the educational website, then provider recommendation, and lowest for vaccine navigator. Perceived implementation challenges included availability of adequate staff resources (48.0%), time constraints during appointments (47.8%) and training needs on childhood vaccines (45.4%). The most important perceived facilitator identified was provision of educational materials or resources on childhood vaccinations for patients (57.7%).

Interpretation:

The study informs the feasibility and potential challenges related to the implementation of the proposed childhood vaccination intervention. The disparity between providers' own vaccination status and vaccination recommendation to pregnant persons presents an opportunity to also strengthen maternal vaccination recommendations in pregnancy.

Source of Funding:

Cooperative agreement with the Centers for Disease Control (U01IP001200).

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1116

OpenWHO Emergency Health Online Learning: A Global Analysis of User-Driven Adaptations and Sharing

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Background:

The massive open-access online course (MOOC) format is a broadly embraced strategy for the widespread dissemination of the rapid training of healthcare workers during health emergencies. Yet, digital literacy, weak technical support, access to the internet, limited cellular coverage, and language and cultural barriers prevent access for many frontline health workers. There is tremendous potential for MOOC developers to increase the global scale and contextualization of learning; however, at present, few studies examine the adaptation and sharing of health MOOCs to address these challenges.

Methods:

The World Health Organization’s Learning and Capacity Development Unit in the Health Emergencies Programme and the Stanford Center for Health Education’s Digital Medic initiative collaborated to survey learners from four emergency health MOOCs on the OpenWHO platform to determine (1) how health education MOOCs are being used and shared by learners; (2) how health workers adapt global MOOC content to meet local training and information needs; and (3) how content adaptations can help frontline health workers overcome the barriers to using MOOCs. This study analyzes survey responses from 926 learners from the four MOOCs with 96,395 total enrolled global learners.

Findings:

Of the enrollees who indicated their country of residence, half were from lower-middle-income countries (LMICs) (50%) and another 9% were from low-income countries (LICs). The majority of all survey respondents shared the course content (88%) and used it in official training (61%). Respondents were more likely to share and use course content for training in LMICs than in high-income countries (HICs) (91% vs. 81%, $P=.001$). Learners in LMICs also shared content with more people on average compared to learners in higher-income countries (9.48 vs. 6.73 people, $P=.084$). Compared to learners in HICs, they were more likely to adapt materials to distribute via offline formats or technologies, such as WhatsApp or SMS (31% vs. 8%, $P<.001$), to address cultural, linguistic, or other local contextual needs (20% vs. 12%, $P=.076$), and to meet local guidelines (20% vs. 9%, $P=.010$). Learners in LMICs indicated greater accessibility challenges with the four MOOCs due to technological and linguistic barriers.

Interpretation:

Learners commonly share content from MOOCs about public health emergencies; this is especially true in LICs and LMICs. However, content often is adapted and shared via alternative formats. Our findings identify a critical opportunity to modify the design and dramatically scale the impact of MOOCs to better meet diverse global needs.

Source of Funding:

None

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Background:

The COVID-19 pandemic has presented many clinical challenges, including neuroinflammation disorders. More specifically, there is increasing concern over reports of post-COVID-19 encephalopathy. Numerous case series have documented COVID-19 patients developing autoimmune encephalitis post-infection, and epidemiological studies have revealed that up to 82.3% of hospitalized COVID-19 patients experienced neurological symptoms after infection. This case series was conducted to evaluate the use of immune modulators to treat Pediatric Acute-onset Neuropsychiatric Syndrome (PANS) in children following COVID-19 infection. Because immune modulators are effective against autoimmune encephalitis secondary to infection, we posited that they would treat post-COVID-19 encephalitis well.

Methods:

This case series was conducted at Dartmouth-Hitchcock Medical Center with patients in the pediatric neuroimmune clinic. Participants were 4 children who presented to the clinic with neuroinflammation symptoms. Patients were included in this study based on a diagnosis of COVID-19 preceding neuroimmune symptoms. The study was approved by the IRB.

Findings:

Immune modulators were found to reduce neuropsychiatric symptoms in the patients in the study. The immune modulator treatment helped return patients closer to baseline; in one case, a patient returned to 70% of baseline within six weeks of being treated with intravenous immunoglobulin (IVIG). No adverse events were observed, though issues with intravenous administration were experienced in a patient with severe OCD.

Interpretation:

The existence of neuropsychiatric disorders following COVID-19 infection is concerning as the disease becomes endemic. This presents another challenge for children at a time when pediatric mental health is a significant public health concern. That said, the success of the immune modulator treatment in this study highlights the need for more research. Immune modulators have shown strong short-term promise in small studies and case series, but further investigation is needed to evaluate their effectiveness over the long term and in broader populations.

When applied to a global health perspective, the results suggest that pediatricians and school counselors must work to screen children with COVID-19 for neuroinflammation symptoms. With better screening, children might have faster access to treatments like immune modulators that could help to resolve these symptoms more quickly.

Source of Funding:

Dartmouth College undergraduate research assistant grant (URAD) paid for my time.

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Background:

There is little research on how a cervical cancer diagnosis financially impacts women and their families in low-and middle-income countries, including the burden of out-of-pocket costs. This is important to understand because it can provide an understanding of the economic burden of cervical cancer on women and their families. The objective of this analysis is to describe the economic impact of cervical cancer treatment, including how this differs by socio-economic status (SES) in Uganda.

Methods:

We conducted a cross-sectional study from September 19, 2022 to January 17, 2023. Women were recruited from the Uganda Cancer Institute and Jinja Regional Referral Hospital, and were eligible for this study if they were \geq of 18 years, being treated for cervical cancer, and provided consent. Participants completed a 45-minute survey which included questions about their out-of-pocket costs, unpaid labor, and changes in their family's economic situation. A wealth index was constructed from the participants ownership of household items to determine their SES. Descriptive statistics were reported.

Findings:

Of the 338 participants who completed the survey, 183 were from the lower SES. Women from the lower SES were significantly more likely to be older, have \leq primary school education, and have a more advanced stage of cervical cancer. Both groups of women reported paying out-of-pocket for cervical cancer care (higher SES 95.5%, lower SES 92.3%). Only 15/338 participants stopped treatment because they could not afford it. Women of a lower SES were significantly more likely to report borrowing money (p-value=0.004) and selling possessions to pay for cancer care (p-value=0.006). With regards to unpaid labor, women from both groups reported decreasing the amount of time that they spent caring for their children since their cervical cancer diagnosis.

Interpretation:

Regardless of their SES, women in Uganda incur out-of-pocket costs related to their cervical cancer treatment. However, there are inequities as women from the lower SES groups were more likely to borrow funds to afford treatment. Alternative payment models and further financial support could help alleviate the financial burden of cervical cancer of care on women and families in Uganda. The results of this analysis can be used to demonstrate the indirect economic impact that a cervical cancer diagnosis has on not only women, but their families as well. This in turn can be as evidence to expand global cervical cancer screening programs and eliminate cervical cancer worldwide.

Source of Funding:

Canadian Institutes of Health Research

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1131

Reassembling the Pieces: Social Medicine Education as a Structural Health Intervention in Palestine

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Background:

Palestinian health is overdetermined by historical, political, and other structural determinants. The Palestine Social Medicine Course (SMC) was developed to provide a pedagogical approach to Palestinian health through critical interdisciplinary structural frameworks that exceed the biological and clinical training of most health professional students. Course objectives included: (1) Identify and challenge the current problematic frameworks of Palestinian health through intentionally centering Palestinian narratives, (2) Engage with concepts of structural and social determinants of health and structural competency, and (3) Engage with critical discourses and their applicability to the determination of Palestinian Health.

Methods:

The Palestine SMC was conducted in 2023 as a three-week experiential course held at the Institute of Community and Public Health at Birzeit University, Palestine. Participants included 9 International and 21 Palestinian students representing specialties including medicine, public health, nutrition, pharmacy, social work, and nursing. Curriculum topics included: core theoretical frameworks, Palestinian history and Palestinian health, and ‘action, activism, & organizing.’ 22 organizations were represented by core and guest speakers which included scholars, activists, physicians, public health and human rights practitioners. Course delivery methods included interactive case studies, experiential field visits, didactic lectures, and small/large group discussions/reflections. Participants completed pre-course (n= 30) and post-course (n= 27) knowledge, attitudes, and practices (KAP) Likert scale surveys. An open-ended questionnaire was completed for qualitative feedback (n= 27).

Findings:

Students reported an increase in all KAP categories. Qualitative feedback demonstrated positive comments around traveling to geographic locations typically unavailable due to movement restrictions, engagement with fellow Palestinians and International students, identifying previously underexplored health issues related to Palestine, and engagement with curriculum content unavailable in their specialty trainings. Countering traditional global health educational models designed for the benefit of students from the Global North, the Palestine SMC provides an educational model that centers Palestinian and subaltern narratives, prioritizes representation of marginalized students including those fragmented by settler colonialism, and centers solidarity and shared struggle for transformative change. The SMC also provides students with an understanding of the structural determinants of Palestinian health, providing an important starting point for envisioning future interventions for structural change.

Interpretation:

The Palestine SMC provides a decolonial pedagogical model that explicitly engages and challenges many of the inherited colonial legacies of global health and its educational practice, including the engendering of white saviorism, centering western epistemologies, and prioritizing Global North student and practitioner engagement.

Source of Funding:

FXB Center for Health and Human Rights & WHO oPt

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1136

An Assessment of Attitudes Toward Homelessness in Medical Students Across the Country: Comparison of Pre and Post Test Attitudes after Street Medicine Volunteering Experiences

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Background:

Individuals experiencing homelessness make up a community of people whose humanity, integrity, and health often go overlooked. Street medicine programs across the U.S. aim to address the unique health disparities of this population as well as provide meaningful service-learning opportunities for medical students. Understanding the beliefs of medical students and any biases toward the homeless community before and after involvement in these programs can help inform street medicine programming.

Methods:

We administered the Attitudes Toward Homelessness Inventory (ATHI) survey to students who volunteer through The Stritch Homelessness Outreach Coalition (SHOC) and other medical-school based street outreach organizations in the U.S. before and after their outreach experiences. Additionally, we incorporated supplemental questions geared toward understanding their degree of exposure and how such experiences have impacted their insight.

Findings:

We collected data from 132 total participants. Based on our data, the majority (76%) of participants have had 3 or more previous experiences working directly with individuals experiencing homelessness prior to volunteering with Street Medicine. The average total ATHI score for the “pre” survey was 42, while the average total ATHI score for the “post” survey was 52.7.

Interpretation:

The difference of +10.7 points when comparing the “pre” and “post” surveys represents an increase in positively associated attitudes toward homelessness in students after volunteering directly with unhoused community members. Street medicine programs provide a classroom without walls that allows students to interact first hand with our local homeless population, and the ATHI provides an opportunity to reflect on those experiences. We aim to shed a light on the impact of these experiences as to influence the type of physicians that go on to care for these individuals in their career. Our model encompasses American schools with broad ranging environments. This scope allows other practice sites world-wide to be able to look at findings from programs in different settings that may parallel their circumstances and inform curricular changes globally.

Our results could aid in implementing hands-on street medicine curriculums to schools across the world in order to address the global issue of providing medical care for those experiencing homelessness through shaping the attitudes of students who will go on to become physicians treating this population.

Source of Funding:

None.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1137

Evidence-based recommendations for ethical and sustainable medical volunteer programs in low- to mid-income countries (LMICs): a guide for successful program implementation

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Background:

Medical volunteering, or “voluntourism” has been a common and popular practice since the 1960s. A growing body of evidence over the past decade highlights ethical and sustainability concerns in short-term medical volunteering and international student placements in low- to mid-income countries (LMICs). Concerns include failure to address the root causes of health care problems, burden on local infrastructure and resources, limited cultural competence, and other perpetuating factors that lead to poor health outcomes. The author aims to form evidence-based recommendations to support nonprofit organizations, nurses, and midwives in identifying ethical and sustainable strategies, with a focus on knowledge exchange rather than a “savior mentality,” for the implementation of short-term medical volunteer programs in LMICs.

Methods:

A literature review of peer-reviewed publications was conducted to define current practices, barriers, and efficacy of short-term international medical volunteer programs, also known as “medical relief trips” or “medical missions”, in LMICs. These findings were then utilized to develop best practice recommendations to support nurses and midwives in the implementation of ethical and sustainable programs in LMICs.

Findings:

30 articles were identified matching the search criteria. Recurrent themes included -the sustainability, barriers, and lack of long-term effectiveness of international medical volunteer programs. In addition, the lack of implementation evaluation, and standardization in clinical practice were noted. Literature findings point to varying levels of cultural competence and “savior mentality” of volunteers, lack of preparation of visitors, varying local health worker attitudes toward international medical volunteers, social and political infrastructure, local-resource availability (i.e., access to medical supplies, economic status), population-based health needs, local nurses, and midwives' scope of practice and limitations. Many of these programs are implemented by educators and practitioners from high-income countries with a focus on their own country's policies, procedures, and allocation/utilization of resources, which may not be applicable or transferable into practice in LMICs.

Interpretation:

Evidence-based practice that is sensitive to a host country's culture, resource, social and political infrastructures, are imperative to achieve program success and sustainability in Latin American countries.

Source of Funding:

None

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Background:

The electronic medical record (EMR) system in Malawi, introduced through a public-private partnership initiative, is in its infancy. The health information management system (HIMS) at Kamuzu Central Hospital (KCH), a tertiary center in Lilongwe, remains largely paper-based despite the addition of computer hardware on inpatient wards, highlighting difficulties in the transition to EMR. We aimed to evaluate the current HIMS at KCH Department of Surgery.

Methods:

Between June and December of 2022, we prospectively collected data on all patients scheduled for surgery at the six main operating theatres (OTs) at KCH using information from hard-copy daily schedules, surgical staff interviews, and OTs logbooks. To evaluate the system, we attempted to retrieve medical records of patients identified in 2022 (corresponding to the period in which the prospective data collection took place) after 6 months and before 1 year of discharge (beginning in September 2023). In addition, we interviewed surgical ward clerks, research associates involved in chart reviews, and surgical staff about the current state of the HIMS at KCH.

Findings:

We present results from the female surgical ward based on records dated October 2022 - January 2023. We identified 391 entries (340 unique patients) prospectively and matched 189 entries (48% of total; 164 unique patients [48% of total]) to medical charts. Forwards and backwards cross checking of recorded information revealed precision and accuracy errors across records. Staff interviews pointed to improvements within the last 2 years including coursework on record keeping, the addition of registration numbers, chart matching across admissions, improved storage and organization, and the hiring of additional clerks. Interviews also pointed to challenges, including inconsistencies in recording names (whether last, or father's name is used, and multiple English spellings) and ages (date of birth is often not recorded), and duplicate registration numbers.

Interpretation:

Improvements have been made in the organization of HIMS at KCH, however less than half of the records from a 3-month period could be retrieved. Consistency in recording patient's identifying information and the development of a functional registration system are areas for improvement in paper HIMS.

Source of Funding:

Yale MacMillan Center, Yale School of Medicine Fellowship for Medical Student Research

Abstract N°: 1141

Developing the Sub-Saharan Africa University Gender-Based Violence Research and Prevention (SUBVERT) Network

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Background:

Gender-based violence (GBV) constitutes a global public health crisis, occurring across geographic and cultural contexts, with attendant consequences on acute and chronic physical, psychological, emotional, and reproductive injury. Despite the ubiquity of GBV, there has been very little focus on GBV at universities in sub-Saharan Africa from a policy or research perspective. This programmatic work is to examine best practices for network development, partnerships, and collaboration amongst organizations in high-income countries and low- and middle-income countries working to prevent and respond to GBV. The overarching goal was to use these best practices to develop the structural framework for the newly developed *Sub-Saharan Africa University Gender-Based Violence Research and Prevention (SUBVERT) Network*.

Methods:

The project is in three phases: 1) Phase I focused on a systematic mapping of the literature to identify elements of existing networks related to public health in sub-Saharan Africa that are *pertinent to success*; 2) Phase II is focused on generating empirical evidence through interviews with expert network leaders to explore the *structural dynamics inherent in networks and best practices for decolonizing research networks*; and 3) Phase III involved the co-creation of the *framework and structure for the SUBVERT Network*.

Findings:

From Phases I & II, major themes were identified in network development, including: 1) imbalance of power, 2) economic resources, 3) capacity building, 4) trust 5) definition of roles, and 6) promoting good governance. We provide a description of how these themes influenced the development of the SUBVERT organizational structure, membership criteria, cooperative agreement for data sharing and dissemination, and research and prevention priorities.

Interpretation:

Best practices in global GBV network development include reforming the organizational structures of interdisciplinary teams from high income countries and low- and middle-income countries. Recommendations are included as means to overcome barriers.

Source of Funding:

University of Michigan Center for Global Health Equity

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1142

Burnout Among Medical Residents In Haiti: A Mixed-Methods Study

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Background:

The postgraduate medical training requires regular monitoring of the balance between education, healthcare, and the residents' well-being. The significant period of high demand due to socio-political instability across the country along with the personal and professional concerns of the residents could be great factors at the origin of the residents developing burnout. The objective of this study was to investigate the prevalence and risk factors associated with burnout among residents and to explain their experiences.

Methods:

This was a mixed-methods explanatory study conducted at Saint-Nicolas Hospital and Mirebalais University Hospital within 8 residency programs over a two-week period in July 2023. All the residents were invited to participate, except those on leave during the study period. IRB approval was obtained. Quantitative data were collected through an anonymous questionnaire handed out to the residents after signing a consent form. A license to use a French-translated version of the Maslach Burnout Inventory was purchased. Qualitative data were collected through a focus group with the chief residents after verbal consent.

Categorical variables were compared using Chi square or Fischer exact when appropriate and quantitative data using t-test. P-value < 0.05 was considered statistically significant. A coding system allowed extraction of thematic contours within the residents' verbatim narratives around workload, autonomy, personal satisfaction, self-care and professional relationships.

Findings:

127 residents were registered within the 8 programs in both hospitals during the study timeframe. Notably, 26 were on leave, 2 refused to participate and 1 was off-site and unreachable, therefore concluding at 98 residents for our study population, with a response rate of 97.02 %. Overall burnout prevalence was 79.59%. About 43% of the residents estimated working more than 80 hours/week. Their overall principal sources of stress were the socio-political climate of the country (88.78%), patient overload (79.59%), needing time to study (79.59%) and lack of leisure (73.47%).

Residents with a lower average number of children (p=0.01), 2nd year postgraduate residents (PGY2) (p=0.01), feeling overloaded (p=0.04) and levels of satisfaction with academic performance or clinical skills (p=0.01) were statistically linked to burnout. Furthermore, the sources of stress contributing to burnout were lack of leisure (p=0.01) and extended working hours (p=0.02).

Interpretation:

Burnout prevalence is worryingly high in this academic structure. Qualitative data show that the factors are linked to each other. The medical education department needs to implement relevant initiatives hoping to have significant impact on patient healthcare, boost the residents' morale and create a big step towards accreditation.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1144

Fighting Stigma, Raising Awareness, and Sharing Resources: An Online Global Mental Health Course

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Background:

According to the WHO, one in eight people suffer from mental illnesses worldwide, with 82% in low- and middle-income countries (LMICs). Mental illness related stigmas may result in an even higher burden of mental illness and lack of treatment for those in need. In LMICs, the ratio of mental health workers is 1:100,000 people, compared with more than 60:100,000 in high-income countries (HICs). Additionally, LMICs allocate only 1% of their health budgets to mental health [WHO. World mental health report: Transforming mental health for all. 2022].

In 2021, the University of Washington (UW) Department of Global Health e-learning program developed the Global Mental Health (GMH) 10-week hybrid course to reduce stigma, raise awareness of how mental illnesses may present in different parts of the world, and identify resources for treatment, prevention, and advocacy. Most participants pay, on average, between USD \$20-35.

Methods:

GMH has been offered four times, with over 5,000 participants from nearly 50 countries, primarily LMICs. Fifteen UW and international experts cover topics including stigma reduction, task sharing models, and assessment tools. The course features initiatives developed or adapted by both HICs and LMICs, including cognitive-based therapy in the Democratic Republic of the Congo, Friendship Bench in Zimbabwe, and Post-Traumatic Growth support for women in Ukraine.

Findings:

On average, 89% of participants pass GMH, with only 5% dropping out after week 5. Participant feedback is overwhelmingly positive: 98% of survey respondents (69% average response rate) are satisfied with the knowledge and skills gained and would recommend it to others. Many participants reported more empathy towards people experiencing mental disorders. Several respondents shared that they would implement ideas from the course in their facilities and programs. Participants from a few countries have formed partnerships with ministries of health to improve the mental health of people in their community.

Interpretation:

GMH raises awareness about mental illness across cultures and provides suggestions for addressing limited mental health services. It is a platform to show how interventions have been adapted to local contexts and facilitates ideas for addressing the lack of services in their regions.

Source of Funding:

None

Abstract N°: 1149

Epidemiology of Asylum Seekers and Refugees at the Mexico-US Border: A Cross-Sectional Analysis from the Migrant Settlement Camp in Matamoros, Mexico

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Background:

As migration around the Mexico-US border increases, the utilization of healthcare services in migrant encampments at US ports of entry remains both common and understudied. The objective of our study was to characterize the demographic profile and medical treatments of migrating people seeking care in humanitarian clinics in Matamoros, Mexico.

Methods:

In this cross-sectional study, we found 8156 patient encounters at a migrant encampment in Matamoros, Mexico from November 2019 to March 2021. We extracted demographic and medical information from fast Electronic Medical Record (fEMR), an open-source health record used in two clinics operated by Global Response Medicine (GRM) in a migrant tent encampment in Matamoros, Mexico. Patient demographics included age, sex, and self-reported country of origin. Medications were classified according to the World Health Organization Model List of Essential Medicines. All analyses were conducted in R (version 4.3.1). Our study received “not regulated” status from the Institutional Review Board at University of Michigan Medical School (HUM00222340).

Findings:

Among 8156 patient encounters, we found predominantly young (median age 26.8, IQR 8.0-37.5), female (n= 4748, 58.2%) people migrating from Central America (n=5598, 68.6%). 7145 medications were distributed in these encounters. The most frequently distributed medication classes were “Medicines for Pain and Palliative Care” (n=2181, 30.5%), followed by “Anti-Infective Medicines” (n=1611, 22.5%), “Ear, Nose, and Throat Medicines” (n=1021, 14.3%), “Antiallergics and Medicines Used in Anaphylaxis” (n=605, 8.5%), and “Vitamins and Minerals” (n=601, 8.4%). The least frequently distributed medication classes included “Anticonvulsants/Antiepileptics” (n=2, <0.1%), “Antimigraine Medicines” (n=3, <0.1%), and “Medicines for Mental and Behavioral Disorders” (n=9, <0.1%).

Interpretation:

Medications distributed to migrants in Matamoros, Mexico focused on the supportive treatment of pain, infection, and allergy. Future studies may benefit from investigating the impact of immigration policy on access to treatment of chronic health conditions and opportunities to bridge gaps between medical diagnoses and available medications. These results can be used to guide future health initiatives for this under-resourced population.

Source of Funding:

None

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Background:

Cancer is one of the leading causes of death, accounting for about 10 million deaths worldwide in 2020. Due to its high heterogeneity and complex determining factors, the same treatment may excel different curative effects even in patients with the same tumor, leading to the needs for personalized, precise treatment for cancer patients. Artificial Intelligence (AI) based on big data and novel computational technologies can be used to improve the prediction of treatment and related outcomes for cancer patients. This systematic review aims to summarize factors that have been included in the AI algorithms for cancer treatment and prognosis outcome prediction and evaluate the accuracy and effectiveness of AI algorithms containing different factors.

Methods:

Eligible studies were searched on databases (PubMed, Scopus, Embase, and Web of Science) up to July 17th, 2023 using key words: Artificial Intelligence, Cancer, Precision Medicine, Treatment, and their synonyms. ROB2 was used for quality assessment. Factors included in the existing AI prediction for precision treatment and prognosis and the accuracy and effectiveness of the AI algorithms were extracted and summarized.

Findings:

A total of 1,354 studies were identified, and 19 studies were eligible for review, most of which (n=17, 89%) had some concerns of risk of bias. Lung, colorectal, lymphoma, and gastric cancers were the common cancer types that AI algorithms have been applied for precision treatment. The most common AI algorithms included Watson for Oncology (WFO) and deep learning models, such as Convolutional Neural Network (CNN). Many algorithms used Least Absolute Shrinkage and Selection Operator (LASSO) for characteristics extraction and model construction. Factors that were commonly included in the AI algorithms include CT or relevant medical images, cancer stage and smoking status. Nearly half of studies explicitly indicated that the performance of AI algorithms is higher than that of doctors, while the rest indicate that AI rivaled doctors' performance.

Interpretation:

The factors, including CT images or relevant medical images, cancer stage, and smoking status were commonly included in the currently available AI algorithms assisting cancer treatment and prognosis prediction. Future development of algorithms including patients' history, health status, lifestyle, sociodemographic, and other social determinants considerations may further improve the accuracy and effectiveness in cancer treatment.

Source of Funding:

None.

Factors Associated with Resilience Capacity among Cancer Survivors: A Systematic Review from A Socioecological Perspective

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Background:

Resilience capacity - an individual's ability to maintain or restore relatively stable psychological and physical functioning when confronted with stressful life events and adversities – is crucial for cancer survivors who are experiencing substantial distress for being diagnosed with cancer and undergoing its treatments. The aims of this study are threefold: 1) to identify the factors that influence resilience capacity among cancer survivors; 2) to summarize the resilience-related individual-level outcomes; and 3) to propose a conceptual framework describing the resilience mechanisms among cancer survivors.

Methods:

Eligible studies published in English or Chinese were searched on six databases up to August 16, 2023. Basic study information, factors related to resilience capacity, and resilience-related outcomes were extracted and summarized. Factors were further stratified into five socioecological levels according to the social ecological model (SEM).

Findings:

A total of 1,148 studies were identified, of which 78 were finally included for review. The included studies were published between 2001 and 2023, mainly focusing on breast (n=40, 51.3%) and prostate cancers (n=13, 16.7%) and conducted in the United States (n=32, 41.0%) and China (n=15, 19.2%).

Socioeconomic status, education level, cancer burden, health literacy, and religious belief were individual-level factors associated with resilience capacity among cancer survivors, while family resilience and perceived social support were the commonly mentioned interpersonal-level factors. Resilience-associated factors at institutional, community, and policy levels were seldom identified in the studies. Resilience-related outcomes included quality of life, physical, psychological (e.g., posttraumatic growth, fear of recurrence, depression, anxiety, loneliness, life satisfaction), and social well-being (e.g., social adaptation). A resilience mechanism framework linking socioecological determinants and resilience capacity and its related holistic health outcomes were summarized and proposed.

Interpretation:

Increasing research has underscored the importance of understanding the resilience mechanisms and building resilience capacity among cancer survivors. However, current research on this topic majorly focusing on identifying and intervening individual- and interpersonal-level factors, resulting in a lack of macro-level determinants identification and intervention. Future studies are needed in order to develop effective multifaceted and life course intervention to enhance resilience capacity among cancer survivors.

Source of Funding:

None.

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 1165

Perceptions of Peer Kindness, Parental Understanding, and Social Isolation Among Adolescents in 84 Countries

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Background:

Adolescent mental health is an understudied priority area for global health. While loneliness is recognized as a concern for all ages worldwide, little research has examined how social isolation may be linked to social distrust. Lack of trust in neighbors, peers, governments, healthcare systems, and other institutions may lead to greater social polarization and, by extension, to a worsening of the global loneliness crisis.

Methods:

The Global School-based Student Health Survey (GSHS) uses a standardized two-stage cluster sampling method and a validated questionnaire to examine health and risk behaviors among nationally-representative samples of secondary school students ages 13 to 17 years in participating countries. We examined the associations between social isolation (loneliness and/or friendlessness) and social distrust (perceptions that classmates are unkind and/or parents are uncaring) among 333,980 adolescents in the 84 countries that included all four of the relevant questions in their GSHS survey instruments.

Findings:

An average of 53% of students in each country (standard deviation 11%) reported that their classmates were rarely or never kind and/or their parents rarely or never understood their problems and worries, and about 19% (standard deviation 6%) reported that they felt lonely most of the time or always and/or had no close friends. The prevalence rates were similar for boys and girls. In 72 of 84 countries (86%), there was a statistically significant association between expressing at least one social distrust characteristic (classmates unkind and/or parents not supportive) and at least one type of social isolation (lonely and/or no close friends).

Interpretation:

Studies that look for similarities and differences across world regions and country income levels are critical for advancing global health theory, policy, and practice. Our analysis confirms that loneliness is a common adolescent experience across boys and girls in all countries, and it reveals a new link between social isolation and social distrust. School- and community-based interventions that promote a culture of kindness and empathy to build social trust may make a positive impact on the social and mental health of school-attending adolescents by increasing social connectedness and reducing levels of loneliness.

Source of Funding:

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1166

Laying a foundation for a human centered design (HCD) hub within the Government of Tanzania to innovate nutrition solutions: Workshop experience

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Background:

Human centered design (HCD) is an innovative approach to developing solutions driven by people’s needs. The implementation of National Multi-Sectoral Nutrition Action Plan (NMNAP) – II by the Government of Tanzania in addressing the triple burden of malnutrition is an opportunity to apply HCD methods to innovate context-appropriate solutions that tackle nutrition issues across the lifecycle in Tanzania. While HCD is used increasingly in global health, projects are typically led by individuals based in countries outside of the research location. This educational initiative aimed to lay a foundation for an HCD-trained hub within the Government of Tanzania’s Tanzania Food and Nutrition Centre (TFNC). We developed a context-specific workshop for TFNC to learn HCD methods and develop projects aligned with NMNAP-II.

Methods:

TFNC in collaboration with University of Washington and Helen Keller International organized a 4-day workshop at Dar es Salaam in June 2023. We developed the workshop based on discussions of what HCD methods may be contextually appropriate and of interest to TFNC. Participants selected for the training submitted applications detailing what they hoped to gain from the training. The workshop included interactive lectures, hands-on exercises with mock data in Kiswahili and English, case studies, and group work.

Findings:

A total of 14 research nutritionists, 3 male and 10 female from TFNC and 1 nutritionist from Helen Keller participated. The training enabled participants to gain knowledge, skills, and motivation to utilize HCD to solve nutrition challenges in the country. By the end of the four-day workshop, participants drafted three concept notes based on NMNAP-II priorities using HCD methods: exclusive breastfeeding, transition from exclusive breastfeeding to complementary feeding, and care seeking for children with severe acute malnutrition. These concept notes will be used to submit for funding. The workshop also established a new partnership between TFNC and University of Washington.

Interpretation:

The HCD training equipped TFNC researchers with new skills to design innovative and scalable interventions addressing persistence malnutrition in Tanzania. TFNC researchers trained in HCD can also serve as a resource for other Tanzania government ministries.

Source of Funding:

University of Washington Population Health Initiative

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1170

The use of Virtual learning platforms to build the capacity of healthcare workers for effective service delivery

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Background:

In Nigeria, due to high attrition rates of healthcare workers, insufficient training institutions, and increasing retirements of aged staff without proper replacements, there has been a decrease in the proportion of healthcare workers with the necessary knowledge and capacity to care for and manage HIV patients. This is common among rural and hard-to-reach health facilities. This has a negative impact on the health outcome of patients on treatment, linkage to care, retention, and provision of HIV-friendly services, particularly the key population. The Extension for Community Healthcare Outcomes (ECHO) model aims to allow for the treatment of complex and chronic health conditions, in underserved communities, by linking health professionals with subject matter experts (SMEs) through a virtual learning platform

Methods:

Facility site assessment was conducted, and knowledge gaps were identified in HIV/TB care and treatment, key population, quality improvement, and surveillance. Subject matter experts were engaged to develop content for the training of health workers in weekly meetings, via video and teleconference (TeleECHO sessions), during which healthcare workers listen to a didactic presentation, share challenging cases, and ask questions about best practices.

Findings:

An upward trend in facility participation was observed from 223 in October 2021 to 390 in May 2022. Access was given to PHCs to interact with medical experts in different disease areas to learn global best practices in the care and management of HIV. This has drawn commendations from key stakeholders, including the activation of 44 new health facilities in Abia and Katsina State.

Interpretation:

The ECHO platform has been an effective way of capacity building for healthcare workers by linking health professionals from underserved communities to subject matter experts. It also shows high acceptability based on the growing number of participants although this study did not review participants' retention. The platform, while currently used for capacity building for HIV care and management, can be utilized for general medical capacity building

Source of Funding:

None/Self-funding

Inequities and trends in polio immunization among children aged five and under in Ethiopia

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Background:

Despite Ethiopia's policy intention to provide recommended vaccination services to underprivileged populations, inequities in polio immunization persist. This study examined inequity trends in polio immunization and determinant factors among under-five children in Ethiopia between 2000 and 2019.

Methods:

Cross-sectional data from the 2000, 2005, 2011, 2016, and 2019 Ethiopian Demographic and Health Surveys were analyzed with the updated version of WHO's Health Equity Assessment Toolkit (HEAT) software. Six standard equality measures were used: equity gaps, equity ratios, population attributable risk, population attributable fraction, slope index of inequality, and relative index of inequality. Datasets were analyzed and disaggregated by five equality stratifiers: economic status, education, place of residence, child's sex, and region. Multilevel logistic regression analysis was used to identify determinant factors; *P*-value <0.05 with 95% CI was taken as indicating significance.

Findings:

Polio immunization coverage were 34.5% (2000), 44.7% (2005), 44.3% (2011), 56.4% (2016), and 60% (2019). Wealth index-related inequality in polio immunization coverage between quintiles 5 and 1 were greater than 20 percentage points for all surveys. The population attributable risk and population attributable fraction measures in 2011 indicate that the national polio immunization coverage in that year could have been improved by nearly 36 and 81 percentage points if absolute and relative wealth-driven inequality, respectively, had been avoided. Coverage varied across regions; the absolute difference between Addis Ababa and Afar Region in polio immunization was 75 percentage points in 2000 and 65 percentage points in 2005. Mothers who gave birth at a health facility were 1.38 times more likely to utilize polio immunization services for their children than mothers who delivered at home. After controlling for other variables, the odds of a child living in a rural area getting a polio vaccine were 40% lower than for a child in an urban area.

Interpretation:

Polio immunization coverage in Ethiopia has increased gradually in the last 20 years. However, high inequities in wealth index, educational status, residency, and subnational region persist. Increasing service coverage and improving equitable access to immunizations services may narrow the existing inequality gaps.

Source of Funding:

Addis Ababa University.

Abstract N°: 1175

Epidemiological and Sociodemographic Trends of Brain and Central Nervous System Tumor Incidence, Death, and DALYs from 1990 to 2019: An Age-Period-Cohort Analysis

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Background:

Brain and Central nervous systems (CNS) tumors is a significant global health issue, with 308,102 new cases diagnosed and 251,329 deaths occurred in 2020 worldwide. Over the past three decades, there has been about two-fold increase in brain and CNS cancer incidence globally, amid significant shifts in socio-economic development, demographic structure and various risk factors. This study aims to describe the existing condition and changing patterns of brain and CNS cancers globally by investigating the independent effects of age, period, and cohort across WHO regions, and explore the possible link between sociodemographic index (SDI) and brain and CNS tumor outcomes, in order to offer evidence for the optimal use of health resources across economies and reduce brain and CNS cancer morbidity and mortality and to promote health equality and social justice.

Methods:

Data on the global disease burden of brain and CNS tumors (including incidence rate, death rate, and DALYs) from 1990 to 2019 were retrieved from the Global Health Data Exchange (GHDx) (<http://ghdx.healthdata.org>). Nations and territories were classified into five SDI quintiles based on their SDI values (ranging 0-1): low, low-middle, middle, high-middle and high-level groups. Age-period-cohort (APC) analysis was used to estimate age, time, and cohort trend across WHO regions and SDI countries.

Findings:

From 1990 to 2019, the incidence, mortality, and DALYs of brain and CNS tumors showed increasing trends. The mortality risk increased with the increase of age, the risk peaks in the 60-69 age group and then begins to decline. The incidence, mortality and DALYs in the 65+ age groups increased significantly in European, Western Pacific, Americas and Eastern Mediterranean regions. There was a strong positive relationship between SDI and mortality rate globally ($P < 0.001$). Low- and low-middle SDI countries experienced an increase in DALYs across all the age groups from 1990 to 2019.

Interpretation:

The burden of brain and CNS cancers increased globally in the past three decades, while it varies significantly across regional, age, and SDI groups. Nations should prioritize brain and CNS cancer prevention, raise public awareness, and develop and implement population-/region-tailored policies and screening and treatment measures to reduce the disease burden in the future.

Source of Funding:

None.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1190

A Community Based Approach in Ending Sexual Gender-Based Violence against Adolescents in Kono District, Sierra Leone

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Background:

The DHS 2019 shows that adolescents aged 15–19 in Sierra Leone continue to experience physical (54.2%) and sexual (3.4%) violence. This has put them at risk of being excluded by society, gets early pregnancy and sexually transmitted infections. The No woman or Girl left behind project carried out a three (2021-2024) year intervention project to address SGBV challenges facing adolescents in Kono District. The project outcomes were to increase awareness about SGBV among adolescents and strengthen referral pathways of survivors to healthcare and legal support.

Methods:

The project goal was to improve provision of quality health services to SGBV adolescent survivors. The project desired outcomes included a reduction in violence against adolescents, reduction in unwanted pregnancies and STIs and increase number of SGBV adolescent survivors referred for healthcare services. The project targets adolescent girls and boys aged 10 to 19 years. The project is being implemented by community police units, Community influential leaders, Kono Rainbo Center team, legal support team and school teachers and peers. The project also trained these stakeholders on SGBV issues. A virtual one-stop-centre platform to strengthen the referral pathway was created. Performance indicators are monitored monthly against set quarterly targets.

Findings:

The monitoring and evaluation report for the past two years (2021-2023) show that the project has reached 5,047 adolescents with SGBV messages in fifteen communities. An end of second year survey also showed that 76% (3,836) of adolescents possess basic knowledge regarding attitudes, knowledge, and practices related to SGBV. The report also showed that to date 635 SGBV survivors (females) were reported of which 62% (395) were sexually assaulted and 38% (241) were physically assaulted. Of reported survivors, 125 contracted STIs and 35 got pregnancies and majority of them were referred to Kono Rainbo Center for medical, psychosocial and legal support services.

Interpretation:

There is underreporting of male SGBV survivors due to cultural norms. The virtual one-stop centre (OSC) approach, together with school clubs formulation, community outreach and training of key stakeholders has contributed to an increase in SGBV referrals for support.

Source of Funding:

Global Affairs Canada

Abstract N°: 1191

Designing culturally and linguistically appropriate vaccine education to be delivered via social media to Indigenous communities in rural Guatemala

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Background:

The World Health Organization estimates that childhood vaccination rates declined 5% globally during the COVID-19 pandemic. Currently, Latin America faces a significant challenge, with 25% of children missing crucial vaccines. Even prior to the pandemic, childhood vaccinations in Guatemala were among the lowest in Latin America. This study seeks to understand how to develop an effective social media campaign and digital resources tailored for community health workers to address childhood vaccine hesitancy and increase uptake among Indigenous communities in rural Guatemala.

Methods:

This study uses a formative qualitative research design as part of our human-centered design approach to inform social media content on routine immunizations. The formative qualitative research design process collected data through (1) 9 Focus Group Discussions (FGDs) with 41 Indigenous community members in 4 communities and (2) 16 In-Depth Interviews (IDIs) with community health workers. The FGD/IDI questions focused on understanding what barriers exist to childhood immunization (including the HPV vaccine), what misinformation exists, and what health messages and content are seen as trustworthy. FGDs/IDIs were conducted in Spanish, K'iche, or Kaqchikel, based on participants' preferences. Inductive and deductive analysis and constant comparative methods were used to systematically code data and identify key themes emerging from interview data.

Findings:

Both community members and health workers highlighted a significant gap in accessible vaccine-related information within their communities, leading to distrust. Specifically, respondents believed that much of the available health information wasn't in Indigenous languages, was difficult to understand for people with low literacy levels, and failed to convey the purpose of vaccination. The significant gap in vaccine information included information about the HPV vaccine. Vaccine-hesitant families were unsure why they needed to vaccinate their children and were misinformed about the vaccines they were familiar with. Community health workers, who were often active in social media groups such as WhatsApp, indicated that they also lacked patient-friendly information to share.

Interpretation:

This study identified a knowledge gap about vaccines, especially in rural Indigenous communities, that was attributed to the lack of reliable information. Given that community health workers are often active in social media groups, designing linguistically and culturally appropriate digital material that is user-friendly and easily accessible may create an opportunity for health workers to share knowledge and fill that information gap. Ultimately, having access to linguistically and culturally appropriate digital material may help promote vaccine uptake in Indigenous communities.

Source of Funding:

Funding for the study was provided by the Vaccine Confidence Fund.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1194

Children's Visual Health Program, Fundación Baylor Argentina

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Background:

Screening programs enable health conditions to be identified so that effective interventions can be offered. The aim of vision screening in children is to prevent, or to identify early, negative outcomes of visual pathology. Impaired vision has a negative effect on quality of life and restricts equitable access and achievement in education and the workplace. In Argentina, sight disorders are prevalent and affect 15 to 20 % of school-aged children. Early childhood is a crucial period for identifying visual impairment as visual cortex plasticity progressively diminishes after age 2 years. As there are no visual health programs in the areas served by Baylor Argentina, we sought to develop a comprehensive eye care program for children.

Methods:

The program goal was to establish a comprehensive vision- screening program combining screening, ophthalmologist examination and eyeglasses prescription. The program began in 2018 by first engaging key stakeholders, such as schools, summer camps, local social clubs, local hospital and health centers. We secured resources for logistics, equipment and personnel as our program is founded. The process for the "Vision Screening Program" includes three visits. Children are first screened by pediatrician and those detected with abnormal screening exams are then referred to the ophthalmologist. Finally, eyeglasses are provided to children without medical coverage or children under social surveillance. The program has now expanded from schools to kinder, clubs and health clinics, and screens infants as young as 12 months.

Findings:

From January 2018 to June 2023, 5602 children between 9 months to 14 years old were screened. We identified 1069 children that had visual acuity defects and were referred to the ophthalmologist. Refractive error was diagnosed in 84% with 540 children having severe amblyopia. Over 442 eyeglasses have been delivered since the program inception. These children are also followed closely to assess for other outcomes.

We were able to expand into other communities and to address and identify challenges due to effective collaboration between stakeholders. We started to measure the impact that the program has on these children's quality of life and improvements on emotional, social, physical and school functioning.

Interpretation:

The prevalence of sight disorders in our communities is consistent with data from Argentina.

Source of Funding:

Baylor College of Medicine, Chevron, YPF, Tecpetrol

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Background:

The global burden of cancer in children is increasing, becoming a prominent cause of illness and death. Annually, around 400,000 children worldwide are diagnosed with cancer. In Sub-Saharan Africa (SSA), approximately 100,000 children are diagnosed with cancer each year, and sadly, nearly 90% of them do not survive. The primary reasons for these high mortality rates in SSA are due to lack of timely and accurate diagnosis, challenges in accessing healthcare, toxic treatment side effects, and relapse. Effective diagnostics, such as laboratory tests, medical and nuclear imaging, and molecular testing, play a crucial role in diagnosing and managing cancer. With the increase in childhood cancer-related deaths and health issues in SSA, it is important to evaluate the accessibility of pediatric cancer diagnostics in the region. This evaluation is crucial as it will guide the implementation of comprehensive interventions that will address regional inequities and inadequacies in cancer care to children.

Methods:

A comprehensive review in access to pediatric cancer diagnostics within SSA was conducted. A systematic search strategy using electronic databases, specified inclusion/exclusion criteria, and extracted pertinent data from selected studies were employed. Thematic analysis facilitated the synthesis of findings. The resulting narrative synthesis organized key findings into thematic categories, allowing for the identification of trends and patterns in the literature.

Findings:

Currently, in many SSA countries, basic diagnostic procedures such as laboratory tests, medical and nuclear imaging, and molecular testing are physically inaccessible for many children, especially those residing in geographically isolated areas. Most diagnostic tools are located in tertiary facilities. There is a shortage of qualified medical personnel who can perform, interpret, and validate imaging and laboratory results for pediatric cancer diagnosis. Additionally, there is strong political will in SSA countries to prevent cancer in children. However, fear of financial catastrophe, financial constraints, and lack of health insurance are significant factors causing delays in cancer diagnosis in many children in SSA.

Interpretation:

This study identified barriers to diagnostic procedures for pediatric cancer in SSA. Barriers included: inadequate work force to run and interpret tests, inaccessibility of tests for large regions, and healthcare infrastructure unable to support testing for many children. To effectively reduce the regional cancer burden, it is imperative to implement regional policies that focus on instituting a national health service with rural capacity, enhancing coordinated laboratory services, expanding infrastructure development, promoting the production of qualified health workforce and enforcing universal health insurance policy.

Source of Funding:

none

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Background:

In low- and middle-income countries, trauma is the leading cause of death among youth and it is also a major cause of disability. Globally, more than 1,600 children and adolescents below the age of 19-years die every day from preventable injuries. Traffic-related injuries, falls, sports-related injuries, assaults, burns, and drownings are the most reported causes of traumatic mortality among children. The mechanism of injury is always diverse in different contexts due to the difference in social determinants of health. The objective of this research is to determine the epidemiological pattern of trauma among children 0 – 9 years in Cameroon.

Methods:

This is a retrospective analysis of prospectively collected data from the Cameroon Trauma Registry currently running in 10 pilot sites across seven of the ten regions of Cameroon. We retrieved data for all children aged 0 - 9 years from June 2022 to August 2023. Data was analyzed with respect to the demographics, injury characteristics and outcomes.

Findings:

Of the 5,439 patients captured in the trauma registry, 267 (4.9%) were children aged 0-9 years. Over 50% of the patients were males and 38.4% (93/267) from rural settings. Most patients [130 (48.7%)] presented with a blunt injury, with the top injury mechanisms being road traffic injuries (RTI) [137(51.3%)]. These injuries occurred on the streets [142(53.2%)] during leisure activities [205(76.8%)]. Majority of children [104(39%)] involved in injuries were pedestrians with no prehospital care offered to 216(80.9%) of them. The most commonly involved body parts were the extremities [61(22.8%)]. A total of 39 (14.6%) were discharged with major disability, 111 (41.6%) had limited ability to move and 5 (1.9%) contributed to the death toll.

Interpretation:

This preliminary analysis highlights the burden of trauma among children aged 0 – 9 years and its contribution to the proportion of disabled persons in Cameroon. Leisure activities on the streets increased the number of pediatric injuries. It is therefore imperative to put in place or reinforce environmental interventions to reduce the burden of pediatric injuries.

Source of Funding:

None

Impact of Financial Distress on the Quality of Life Domains among Cancer Patients in Rural Uganda

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Background:

Studies suggest financial distress can significantly impact cancer patients' perception of their quality of life (QoL). In rural Uganda, where resources are scarce, understanding the relationship between financial distress and QoL is crucial for developing interventions to improve cancer patient outcomes. This study aims to explore the impact of financial distress on various QoL domains among cancer patients in rural Uganda, utilizing the validated European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30). The EORTC QLQ-C30 has been previously used mainly in high income countries but has not been applied to a rural patient population in Sub-Saharan Africa.

Methods:

A cross-sectional study using the EORTC QLQ-C30 questionnaire was conducted with 50 patients from Kyabirwa Surgery Center in rural eastern Uganda. The questionnaire evaluated several domains of quality of life, including physical, role, cognitive, emotional, and social functioning, and various symptom scales such as fatigue, pain, and insomnia. Logistical Regression analysis, Pearson's R, and Spearman Correlation were employed for analysis.

Findings:

Overall, patients experiencing worse financial toxicity reported suboptimal outcomes in cognitive, emotional, social, physical functioning, overall QoL and symptom status. Notably, financial distress correlated with suboptimal outcomes in physical functioning (Pearson's R = .476, p = .001), cognitive functioning (Pearson's R = .352, p = .009) and social functioning (Pearson's R = .626, p < .000). Financial difficulties were also significantly associated with higher reports of pain, fatigue, and insomnia. Logistic regression indicated that increased financial difficulties significantly predicted overall lower QoL status (odds ratio = .022).

Interpretation:

This study underscores the profound impact of financial distress on the QoL of cancer patients in rural Uganda. Addressing patients' financial difficulties, within the context of comprehensive cancer intervention, can mitigate the financial burden among cancer patients, potentially enhancing patients' overall well-being in resource-limited settings. Future strategies should focus on identifying sustainable solutions to alleviate financial toxicity for patients living with resource scarcity.

Source of Funding:

None

Abstract N°: 1215

Explaining changes in educational disparities in competent maternal healthcare services in urban and rural areas in Ethiopia

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Background:

Aggregate statistics of maternal health care services have improved in Ethiopia. Nevertheless, the country has one of the lowest universal health coverage's (UHC) service coverage index, with slight improvement between 2000 and 2019. There are accumulate disparity studies using a single dimension of inequality today, but inequality studies combining multiple dimensions of inequality simultaneously may have important policy implications for closing inequalities. In this study, we investigated education inequalities in receipt of five maternal healthcare services in rural and urban areas separately and whether these inequalities decreased, increased, or unchanged.

Methods:

The data for the study came from the 2011 and 2016 Ethiopia Demographic and Health Surveys. Using women's education as a dimension of inequality, we separately analyzed inequalities in maternal health care services in urban and rural settings. Inequalities were measured through the Erreygers concentration index, second differences in average marginal effects, and relative index of inequality (RII). Whether or not inequalities changed over time was analyzed by relative and absolute measures. Oaxaca-type decomposition approach was applied to explain changes in absolute disparities over time.

Findings:

There were glaring educational disparities in maternal health care services in urban and rural areas, where the services were more concentrated among women having better schooling. The disparities were more severe in urban than in rural areas. In urban areas, skilled birth service was the most unequal in both periods. Disparities in rural places were roughly similar for all services except that in 2011 postnatal care was the least unequal, and in 2016, skilled birth was the most unequal service. Trend analyses revealed that disparities significantly dropped in urban areas by absolute and relative measures. On the other hand, in rural regions, the disparities grew by the concentration index measure for most services. At the same time, the RII and second differences presented conflicting results regarding whether the gaps were increasing, shrinking, or remaining the same.

Interpretation:

Substantial disparities in maternal health care services remained in both urban and rural areas, and even increased in rural areas. High aggregate statistics in urban neighborhoods should not hide massive urban inequality. Different and targeted strategies are needed for urban and rural places that parallel the states of inequalities in these areas.

Source of Funding:

Addis Ababa University.

Abstract N°: 1217

Health Provider Perspectives on Antimicrobial Resistance Among Female Venezuelan Migrants in Norte de Santander, Colombia

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Background:

Antimicrobial resistance (AMR) disproportionately impacts vulnerable communities including migrants and refugees. Prior studies have focused on AMR in conflict settings, but communities fleeing state collapse have largely been ignored. Since 2017, the Venezuelan crisis has driven more than 1.8 million migrants into Colombia, many of whom are undocumented. The impact is greatest on women, who have the highest utilization of health services, precipitated by an unmet need for sexual and reproductive health (SRH) in Venezuela. Previous studies have highlighted increased rates of sexual and gender violence, disruption in the SRH supply chain and failing hospital infrastructure. Along with poverty and lack of awareness, these factors play a critical role in medication mismanagement, non-adherence and loss to follow-up of patients. Their role in driving AMR, however, is not fully appreciated. Here we aim to provide new insights into stewardship of antimicrobials and the perspectives of healthcare providers treating female migrants from Venezuela in Norte de Santander, Colombia.

Methods:

This study is based on medical provider (pharmacist and physician) interview data. We used a validated tool to interview eight physicians and ten pharmacists at randomized sites in Villa del Rosario, a border crossing point for Venezuelan migrants into Colombia. Each participant was verbally consented under protocol 5681X.

Findings:

Local pharmacists reported more of their female clients to be Venezuelan migrants. The most common SRH conditions were bacterial vaginosis, STIs and pelvic infections, abortions and postpartum infections. Pharmacists reported increased rates of treatment failure (26-50%) compared to medical providers (11-15%). While 80% of pharmacists and 100% of medical providers thought AMR is a problem in their country, 80% of pharmacists and 75% of medical providers had not heard of reserve, access and vigilance classification of antibiotics. Furthermore, 78% of pharmacists said they know of patients accessing antibiotics without a prescription while 9/10 reported having no guide or standard for prescribing.

Interpretation:

Data demonstrates increasing extreme maternal morbidity throughout Colombia (54.7 per 1,000 births in 2022). Additionally, infection after delivery (endometritis and postpartum sepsis) continue to rise. Due to established connections between BV, STIs, postpartum infections and rising gonorrhoeae resistance, it's crucial to expand AMR awareness and low-cost STI and susceptibility testing.

Source of Funding:

Center on Forced Displacement Boston University

Factors contributing to postnatal growth failure in the follow-up of preterm newborns born <2000 grams in Ethiopia

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Background:

Globally, preterm birth is the leading cause of under-five mortality and is also commonly related to postnatal growth failure (PGF). Although most preterm births occur in low-resource settings, little is known about their postnatal growth outcomes, especially in rural areas. We assessed the incidence and risk factors associated with PGF among preterm neonates born less than 2000 grams in selected public hospitals in Ethiopia.

Methods:

Prospective follow-up study of preterm newborns who survived and were discharged from hospital at least after 14 days of hospital stay were included. A cohort of babies born <2000 grams and who could have been born or admitted to the study hospitals from March 2017 to February 2019, constituted the study population. These preterm newborns were observed from the time of delivery or admission until discharge from the hospital or 28 days of life to examine PGF status. For each newborn, z-scores and percentiles were produced for weight at birth and discharge or 28 days of postnatal age using sex-specific INTERGROWTH-21st growth standards. We used newborn size charts to assess birth size and Preterm Postnatal Growth Standards charts to assess postnatal growth. Newborns weighing below the 10th percentile were classified as small-for-gestational age (SGA); those >10th-90th percentiles were classified as appropriate for gestational age (AGA); those > 90th percentiles, were as large for gestational age (LGA). A fall in weight z-score >1.28 from birth to discharge or 28 days of life was used to define PGF. Incidence rate of PGF was determined. Neonates were compared for variations in multiple risk factors. Multivariable logistic regression was used to explore factors associated with PGF.

Findings:

Among 390 preterm infants with a mean gestational age of 33.29 weeks was 66.67% (95% CI 61.75%-71.33%). About 81% of babies born small-for-gestational age (SGA) at birth had PGF. Factors significantly associated with PGF included: male gender (adjusted odds ratio [AOR] 8.22 95% CI 3.59-18.78), very low birthweight/VLBW (AOR 2.41 95% CI 1.01-5.77), being born SGA (AOR 10.69 95% CI 3.86-29.62), and length of hospital stay (LoS) ≥21 days (AOR 11.46 95% CI 4.68-28.03).

Interpretation:

The incidence of PGF is high in the cohort we followed. Nearly three-quarters of preterm infants managed at neonatal units in the study hospitals had PGF. The findings of this study suggest that it is important to monitor the growth of preterm infants closely, especially those who have been born SGA and have longer LoS in the neonatal units.

Source of Funding:

Addis Ababa University.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1222

Rwandan EM Residents: Making Waves with POCUS - The Sound of Success

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Background:

Point of Care Ultrasound (POCUS) is increasingly utilized in emergency medicine (EM) and a requirement in residency training in high-income countries. POCUS training in low- and middle-income countries, however, is lagging. Before COVID-19 restricted travel, EM residents at The University Teaching Hospital of Kigali (CHUK) in Rwanda received a big part of their ultrasound training from overseas physicians. The absence of these physicians during the pandemic created an educational gap, which highlighted the importance of fostering sustainable local solutions. To address this, we developed a longitudinal POCUS education training program for EM residents at CHUK.

Methods:

In collaboration with CHUK and Butterfly Network Inc., the initiative provided handheld ultrasound probes, iPads, and stands. The intensive in-person bootcamp consisted of lectures, hands-on skill sessions, and practice scanning sessions in the CHUK emergency department. An aspect unique to our initiative was the implementation of a virtual and ongoing quality assurance (QA) process for residents' saved scans, allowing for real-time feedback. Residents are required to complete a set number of QA-ed scans to qualify as ultrasound-trained EM physicians, comparable to what is expected in high-income countries.

Findings:

Residents were given pre- and post-bootcamp written examinations and surveys regarding their POCUS use. The assessments revealed an average pre-test score of 58.5% which increased to 76.5% post-bootcamp. In a post-bootcamp follow-up survey, 92.3% of respondents found the initiative's teaching methods effective, and all residents would recommend the program. Participants reported increased confidence in scanning abilities and improved ultrasound diagnostic skills. However, 5 months later, barriers to regular POCUS use remained. Barriers included time constraints, lack of supervision, and issues with internet connectivity or machine functionality.

Interpretation:

Our initiative demonstrates the successful enhancement of POCUS training among EM residents. Incorporating a longitudinal virtual QA process and focusing on sustainability contributes to the potential for scalability beyond CHUK. If global barriers to ultrasound use can be addressed, this project paves the way for more widespread adoption of POCUS in low- and middle-income countries, facilitating the development of local experts, and ultimately improving patient care.

Source of Funding:

Stanford Center for Innovation in Global Health seed grant

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Background:

Developing countries are burdened with health challenges exacerbated by late diagnoses and limited healthcare access. Effective interprofessional teamwork among healthcare professionals, encompassing doctors, nurses, and pharmacists, is vital for improving patient outcomes, enhancing professional satisfaction, and curbing costs. While research on such teamwork in Low and Middle-Income Countries (LMICs) exists, a synthesized review delineating common experiences, barriers, and facilitators remains missing.

Methods:

This study conducted a scoping review to comprehensively understand the nature and extent of research on interprofessional teamwork in LMICs. Employing the PRISMA guidelines, databases like PubMed/MEDLINE and Scopus were searched, yielding 1651 articles. Following inclusion/exclusion criteria and a screening process involving two independent reviewers, 20 studies were finalized for analysis.

Findings:

The selected studies spanned regions including Africa (57.1%), Asia (32.1%), and South America (10.7%). Common barriers to teamwork identified were: communication gaps, inadequate skill integration, negative professional attitudes, unclear roles, and a dominant hierarchical structure in healthcare institutions. These barriers significantly affected information sharing, understanding of professional roles, and collaborative decision-making. Meanwhile, fostering open dialogue, promoting shared leadership, and encouraging collaborative environments were noted as facilitators.

Interpretation:

The challenges of teamwork in LMICs revolve predominantly around communication and understanding of professional roles. Addressing these barriers requires multifaceted strategies, not just at the individual level but also at institutional and organizational dimensions. This review underscores the imperative of further research to craft tools tailored for assessing and educating about teamwork in the unique settings of LMICs. Such endeavors would be instrumental in shaping policies and strategies that bolster effective teamwork and, by extension, enhance healthcare outcomes in resource-limited settings.

Source of Funding:

None

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Background:

Sri Lanka reported a Maternal Mortality Ratio (MMR) of 1694 per 100,000 live births in 1947 and gradually reduced the same over the last few decades to achieve the best MMR in the South Asian Region. In 2020, MMR in Sri Lanka was 30.2 per 100,000 live births. MMR has stagnated in Sri Lanka between 28 to 32 per 100,000 live births in the past fifteen years. It was similar to the stagnated MMR in the UK in the 1950s. Sri Lanka is expected to reach an MMR of 10 per 1000,000 live births before 2030 per the Sustainable Development Goal. Therefore, the Ministry of Health Sri Lanka is searching for applicable solutions to reduce the MMR.

Methods:

A qualitative study was conducted in the UK and Sri Lanka to study both countries' Maternal Death Review (MDR) system. An in-depth desk review of the literature (documents/reports/Internet search), observations, and key informant interviews are used to gather the data. The study period was between February 2022 to February 2023.

Findings:

In both Sri Lanka and the UK, organization, institutionalization and processes are driven by government policies and directives, whether national or subnational; there are precise organizational and managerial arrangements.

Implementation from the beginning of the MDR system has been relatively uniform throughout the country in the UK and Sri Lanka. The system has been strengthened uniformly, including mandatory maternal death notification in both countries.

Facility-based maternal death reviews, Confidential Enquiries into Maternal Deaths (CEMD), surveys of near-misses and clinical audits are the methods of audit in use in the UK, while Sri Lanka is using Facility-based maternal death reviews, community-based maternal death reviews (verbal autopsies) and surveys of near-misses.

UK had a stagnation in the MMR in 1950, and it was overcome by instituting CEMD.

Interpretation:

The experience of the United Kingdom, where CEMD is well established, highlights the importance of confidential inquiry in reducing maternal mortality.

In Sri Lanka, implementation of the national CEMD is possible.

Source of Funding:

No

Abstract N°: 1231

School Nurse-led Health Education to Reduce Helminthic Infection Among Children in Rural Bangladesh: A Non-randomized Cluster Controlled Trial

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Background:

Helminthic infection is a major health issue among school-age children, especially with no established school healthcare system. Thus, we trained the nurses and experimentally placed them in the school setting as school nurses for the first time. This study aimed to reduce helminthic infection by school nurse-led health education in rural Bangladesh.

Methods:

A non-randomized cluster controlled trial (clinicaltrials.gov(NCT05012592)) was conducted in rural Bangladesh from September 2021 to September 2022. After obtaining ethical approval, children (5 to 12 years) were enrolled from selected 4 primary schools within 1- 4 academic grades; their parents provided written consent to participate. The school nurses used semi-structured questionnaire and health checkup for data collection and provided 9 months of evidence-based health education to the children. Per protocol analysis, descriptive statistics, chi-square test, and Wilcoxon signed ranks test were used to analyze data based on data distribution.

Findings:

Out of 455, in the intervention group 235 and the control group 220 children were allocated. Among them, 263 (57.8%) were female; 213 (46.8%) had approximately 100-200 USD monthly family income; 201 (44.2%) had one sibling in both groups. In the intervention group, 163 (69.4%) and 57 (44.5%) respondents, and in the control group, 154 (48.6%) and 71 (55.5%) respondents disposed of household waste anywhere near their house and had no access to hand washing with soap and water at their toilet, respectively. During baseline data, in the intervention group 25 (59.5%) and the control group 17 (40.5%) children were helminthic-infected; however, considering the study outcome, the total number of helminthic-infected children was reduced in the intervention group (20.0%) compared with the control group (80.0%) during endline which was statistically significant ($p < 0.001$). The awareness and knowledge related to helminthic infection were improved within the intervention group which was statistically significant ($p < 0.001$).

Interpretation:

In Bangladesh, school children are still suffering from helminthic infections with preventable causes. However, implementing school nurses in the school health setting may play a vital role in improving children's health status and reducing helminthic infections including other preventable diseases through quality care and health education.

The governmental initiatives and prompt actions involving health policymakers' constructive concerns may support satisfying this gap in health sectors in Bangladesh including other developing countries. To enhance the children's overall health status sustainably need to focus on a universal standard health policy that may positively contribute to health innovation globally.

Source of Funding:

Grants-in-Aid for Scientific Research Program (KAKENHI), Japan (Kiban B, 21H03250).

Abstract N°: 1233

Prevalence and determinants of Mental Health Challenges among Undergraduate Students at Busitema University in Eastern Uganda – A Post-COVID-19 Lockdown Snapshot.

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Background:

As many people are still struggling with effects of COVID-19 pandemic and lockdowns, in Uganda students at higher institutions of learning have reported increase in many health challenges with some ending up in suicide. This study aimed at assessing the prevalence and determinants of mental health challenges among undergraduate students at two campuses of Busitema University in Eastern Uganda after the COVID-19 lockdown.

Methods:

A total of 658 students aged ≥ 18 years were recruited from faculties of Engineering and Health Sciences. Mental health challenges including common mental disorders and alcohol and other substance use were assessed using Mini International Neuropsychiatric Interview and Alcohol, Smoking and Substance Involvement Screening Test respectively. Also relevant participants' sociodemographic and clinical factors were also collected.

Findings:

The prevalence of at least one mental disorder was 51.0% with majority (37.1%) of students screening positive for at least two mental disorders. Major depression was the most prevalent disorder (32.4%), followed by suicidality (25.5%), generalized anxiety (14.9%), mood disorder with psychotic symptoms (11.9%), social anxiety (10.5%), mania (7.9%), psychotic disorder (7.6%), panic disorder (6.7%) and hypomania (3.6%). Additionally, 24.0% of students reported of alcohol while 5.5% used other substances like tobacco, cannabis, cocaine stimulants and hallucinogens within last three months. Having any mental health challenge was associated with attending faculty of health science (adjusted odds ratio (AOR)=1.4, p value (p)=0.030), being often worried about academic activities (AOR=1.5, p=0.045), feeling pressured by relatives about academics (AOR=1.8, p=0.001) having history of a chronic medical condition (AOR=2.2, p=0.026) and having family history of mental illness (AOR=1.7, p=0.022).

Interpretation:

The findings indicate that mental health challenges among university students remain markedly high after COVID-19 lockdown posing threat to their wellbeing. Hence there is need for higher institutions of learning to design intervention to prevent and manage mental health challenges among students in order to improve their mental health and general functioning.

Source of Funding:

Busitema University Research and Innovation Fund.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1234

Multi-Agency International Collaboration for a Ventricular Septal Defect Repair in Santo Domingo, Dominican Republic

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Background:

Congenital heart disease is a leading cause of mortality worldwide (1) and accounts for nearly a third of major congenital anomalies (2). The most common congenital heart lesion is a ventricular septal defect (VSD), an abnormal communication between cardiac chambers (3). Most defects resolve without intervention, however, a fraction necessitate surgical closure to prevent complications including faltering growth, heart failure, and death (3). Late complications are exemplified in the case of a 2-year 6-month-old Dominican girl with VSD-related heart failure refractory to pharmacologic management, who lacked financial means to undergo indicated surgical correction. Medical experts estimated her condition would be fatal within a few years without surgical intervention.

Methods:

The Foundation For Peace (FFP), a US organization optimizing global medicine through education and local community collaboration, referred the patient to the USNS COMFORT Medical Site in Santo Domingo, Dominican Republic for pediatric cardiology evaluation. Cardiac surgery was unavailable on the military hospital ship, the USNS COMFORT. The World Pediatric Project (WPP), an international non-profit advancing pediatric healthcare through transcontinental partnerships, intervened following discussion with the evaluating pediatric cardiology team. Within days, the WPP coordinated and funded an uncomplicated, successful repair by a Dominican cardiac surgeon.

Findings:

Serious VSD complications are rarely seen in the US military pediatric population considering minimal healthcare-related financial strain with excellent healthcare access to include early surgical repair. However, impaired access and financial stress related to healthcare is heightened in many populations globally. This case illustrates the coordinated efforts of several international entities including the FFP, USNS COMFORT, WPP, and host nation, to deliver high-impact, timely, and lifesaving healthcare. Furthermore, the importance of global health engagement to enhance understanding of cultural and socioeconomic factors contributing to medicine and to improve healthcare and reduce inequities is illuminated. Continued future collaboration amongst these global organizations could effectively bolster accessibility to culturally competent, prompt, and affordable healthcare.

Interpretation:

Source of Funding:

None

Resources

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Background:

There is a preponderance in the use of motorcycles as a means of transportation and leisure in major cities in Cameroon with a subsequent increase in road traffic crashes resulting in injuries. The burden of these injuries is borne by pedestrians and motorcycle users. Despite causing disproportionately high injury burden, the epidemiological profile of individuals involved in motorcycle injuries in Cameroon is poorly characterized. To identify policy targets for the implementation of preventive measures, we evaluated the epidemiology of injuries, and compared injury patterns and clinical outcomes for pedestrians and motorcycle users in Cameroon.

Methods:

This is a retrospective analysis of the Cameroon Trauma Registry (CTR), which collects information on injured patients presenting to 10 hospitals across seven of the 10 regions of Cameroon. Patients presenting with motorcycle injuries between June 1st 2022 and May 31st 2023 were assessed for demographic characteristics, injury characteristics, clinical patterns of care and treatment outcomes. The analysis was done using R version 4.2.1.

Findings:

A cross-section of 2,757 motorcycle injury patients were included from the CTR database (2,339 motorcycle users and 418 pedestrians), of which 83% (motorcycle users) and 62% (pedestrians) were males. The median age was 30 years (interquartile range 23-42 years). Only 3.0% of motorcycle users used a helmet at the time of the injury. Motorcycle-pedestrian related collisions constituted 15% of the road traffic crashes. Extremities injuries were the most frequent, present in 50% pedestrians and 46% motorcycle users (p=0.102). The head and neck were injured in 32% of the motorcycle users and 36% pedestrians (p=0.102). The face of 22% of the pedestrians and 27% of the users of motorcycle was injured (p=0.061). Pedestrians (3%) suffered less frequent chest injuries compared to motorcycle users (6%) (p=0.013). In-hospital mortality was 4% in motorcycle users and 3% in pedestrians (p=0.985).

Interpretation:

Motorcycle crash injuries remain a growing concern among young people in Cameroon with an important morbidity and mortality. Extremity and head injuries are common among motorcycle users. Efforts should be made to educate motorcycle riders to be particularly careful when making turns in cities to reduce collision with vulnerable pedestrians.

Source of Funding:

Fogarty International Center of the National Institutes of Health under Award Number D43TW012186

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Background:

Surgical site infections (SSI) pose substantial challenges to healthcare quality globally. The World Health Organization (WHO) Surgical Unit Safety Programme (SUSP) provides multimodal, evidence-based recommendations to reduce SSI in low-resource contexts. Infection prevention measures implemented through SUSP include five practices as follows: antibiotic prophylaxis within 1 hour of first incision, bathing, hair removal, hand hygiene, and skin preparation. Prior studies at Ayder Comprehensive Specialized Hospital (ACSH) showed high rates of SSI despite hospital protocols that follow the general WHO guidelines for safe surgery. We aim to determine adherence to surgical practices at ACSH to five SUSP guidelines, and how adherence impacts the development of SSI.

Methods:

This prospective cohort study examined surgical cases at ACSH, evaluating the surgical team's compliance with SUSP guidelines and the development of postoperative SSI. This was achieved through perioperative observation of surgical teams and postoperative patient telephone follow-up with validated surveys. A total of 1051 cases were analyzed. We determined the relationship between compliance with the five guidelines and the odds of infection development with further stratification by operating specialty, wound class, and ASA classification.

Findings:

Of the five SUSP-recommended practices studied, compliance with antibiotic administration within 1 hour of the first incision was the only practice associated with a statistically significant reduction in SSI (OR = 0.36, CI 0.17-0.78). When grouped by departments performing the procedure, antibiotic prophylaxis was associated with a significant reduction for colorectal and general surgery (OR= 0.08, CI 0.01-0.53), and obstetrics and gynecology (OR = 0.28, CI 0.10-0.83). No statistically significant association was seen between compliance and SSI among ENT, maxillofacial, neurosurgery, orthopedic surgery, urology, or plastic surgery. Antibiotic prophylaxis was associated with a statistically significant infection reduction in clean-contaminated wounds, but not clean wounds, and was only associated with infection reduction in ASA class I. Limitations for this analysis include low case volume in various surgical subspecialties requiring specialty grouping to ensure adequate power.

Interpretation:

Based on this study, future interventions should focus on timely antibiotic administration, particularly for general surgery, colorectal, obstetric, and gynecologic procedures. Identifying workflow limitations, such as restricted pharmacy hours or limited antibiotic availability, may improve antibiotic timing and ultimately decrease the overall SSI rate.

Source of Funding:

Craig Scholarship Institutional Grant.

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Background:

Nepal has the highest mortality rate from chronic lung diseases globally. The World Bank reports that over 30 percent of Nepalese patients currently use tobacco products. Yet, the smoking epidemic is still under-researched in Nepal. This research seeks to understand the Nepalese peoples' attitudes towards smoking, in order to develop sustainable, culturally appropriate smoking cessation programs in Nepal.

Methods:

Participants were recruited from the outpatient multispecialty clinics at Tribhuvan University Teaching Hospital in July 2023. Participants (n= 250) met eligibility requirements if they were 18+ years of age and had used a tobacco product in the last 15 years. Participation was voluntary and both verbal and written consent was obtained. The 46 question survey was administered verbally using interpreters and answers were entered into data management application Qualtrics. Data analysis was conducted using R statistical analysis software, and results are reported as numbers and proportions.

Findings:

Participants included 231 (92.4%) males, 18 (7.2%) females, and one participant who identified with neither (0.4%). Of the participants, 36 were 18-24 years old (14.4%), 82 were 25-39 (32.8%), 64 were 40-54 (25.6%), and 68 were 55-89 (27.2%). Approximately 69% of participants were married, and 17% didn't attend school at all. Peer pressure by friends or family (Friends smoking by 78%, and family smoking by 21%) was given as a reason for smoking initiation, and curiosity was selected by 48%. The most popular reason for delaying smoking initiation was lack of peer pressure (friends do not smoke (66.8%)). Continued smoking was attributed to killing time (22.4%), energy and euphoria (21.2%), and dealing with anger and anxiety (18.8%) as the most popular reasons. The large number of male participants supports previous results that men are three times as likely to smoke as women. Social pressures were the most dominant factors that accounted for smoking initiation. Similarly, lack of social pressure resulted in delayed smoking initiation. Friends smoking was not offered as an option for continued smoking. The continuation reasoning points to stress and boredom as contributing factors.

Interpretation:

The results of our cross-sectional study suggest a potential for public health interventions to reduce social pressure to smoke or introduce measures to replace the habit and decrease stress.

Source of Funding:

Denver Rotary Club and Global Chest Initiatives

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 1251

Evaluation of Practice Patterns in Medical Groups Participating in Short Term Medical Missions in Rural Guatemala

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Background:

Many low-income countries rely on short-term medical missions (STMMs) for healthcare delivery. Lack of continuity and variety in medical group practice patterns raise concerns about the effectiveness of these trips. This study examines prescribing patterns among medical groups on STMMs. Understanding variation in practice can locally enhance coordination and standardize care, but also provide insights for improved practice.

Methods:

This was a retrospective review of all patient visits, from May 2018 to May 2023, to clinics run by STMM groups in and around San Lucas Tolimán, Guatemala. During this time, care was provided to a mostly indigenous Mayan population by 8 medical groups. Information regarding demographics, complaints, diagnoses, and treatments was obtained from a rudimentary electronic medical record (EMR) established in 2018. This study was approved by the San Lucas Medical Board and exempted by UW IRB.

Groups were compared using chi-squared or logistic regressions analyses. Key outcomes included group prescribing patterns and demographic information.

Findings:

8649 patient encounters occurred during the study period. All had completed information. Patients were mostly female (70.29%) and average age was 28.91 (+/- 0.44). Most patients (64%) had more than one complaint. 85% of patients received some medication, and 50% received more than one, including OTCs (65.96%) and antibiotics (13.49%). More medications were prescribed to adults compared to children (2 vs. 1.6), which persisted between groups. Significant ($p < 0.0001$) group differences were seen in numbers of medications dispensed (1.5-2.91), rate of prescriptions for almost all classes of medications, and quantities of OTC pills dispensed (23-80).

Interpretation:

There is clear variability in prescribing patterns between medical groups participating in STMMs in San Lucas Tolimán. These differences were seen across medication types and quantities prescribed.

The EMR is limited by variability in data entry and reporting. Despite this limitation, completed data on all patients allow for valid group comparisons.

These results examine the challenges in promoting equitable treatment for patients served on STMMs, highlighting the importance of developing and adhering to simple guidelines for standardization across such groups. We believe these guidelines should be developed in partnership with the local community.

Source of Funding:

Johnson supported through grant from Shapiro fund through UWSMPH.

Abstract N°: 1256

Characterization of the Clinical Manifestations, Diagnosis, and Treatment of Human Brucellosis in Cochabamba, Bolivia

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Background:

Brucellosis is the most common zoonotic infectious disease worldwide and is a major public health concern in resource-limited areas. In Bolivia, brucellosis is frequent, yet often underdiagnosed or misdiagnosed, particularly in rural areas of the country. Brucellosis is not classified as a notifiable disease, and therefore isn't part of the epidemiological surveillance system in Bolivia. As a result, there are limited resources for the diagnosis and treatment of brucellosis. When patients are eventually diagnosed, they often present with complications from chronic infection and may face difficulties in accessing treatment. This study aims to characterize human brucellosis infection in Cochabamba, Bolivia to highlight the importance of implementing an epidemiological surveillance program for the prevention, diagnosis, and treatment of brucellosis.

Methods:

IRB approved, retrospective study of patients who received a positive serological diagnosis of brucellosis at two hospitals in Cochabamba, Bolivia from 01/01/2018-05/01/2023. Primary outcomes were demographics and clinical presentation of brucellosis. Secondary outcome was 30-day mortality rate secondary to brucellosis related illness.

Findings:

64 patients received positive serological testing for brucellosis. Of those positive patients, 52% were male and 48% were female. The age range was between 18 and 20 with a mean age of 48. 22% of patients reported close contact with animals and 59% reported consumption of unpasteurized dairy products. Patients presented with a range of systemic complications: 34% with spondylitis, 25% with osteoarticular involvement, 11% with genitourinary, 11% with reproductive, 3% with dermatological, 2% with cardiovascular, and 2% with ocular. The five most common reported signs and symptoms included myalgias, fever, low back pain, fatigue, and headache. Other reported symptoms included weight loss, depression, joint swelling, recurrent spontaneous abortions, and genital secretions. The observed 30-day mortality rate was 1.6%.

Interpretation:

These findings may serve as potential indications for the screening of populations at higher risk of brucellosis, namely individuals who work closely with animals or consume unpasteurized dairy products. Additionally, they highlight the importance of further public health efforts geared towards brucellosis prevention through increased access to pasteurized dairy products.

Source of Funding:

University of Massachusetts Chan School of Medicine

Category: 3 - Planetary Health, One Health, Environmental Health, Climate Change, Biodiversity Crisis, Pollution - Program/Project Abstract

Abstract N°: 1259

Providing one-stop health services for nomadic pastoralists and their livestock in hard-to-reach areas through integrated One Health outreach in Turkana County, Kenya, June 2023

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Background:

One Health is an integrated unifying approach that aims to sustainably balance and optimize the health of humans, animals, plants, and the ecosystem. Turkana County One Health Unit (COHU) with support from CORE Group Partners Project (CGPP) and other partners developed the One Health strategic plan to sustainably address the gaps faced by the pastoralist community in hard-to-reach areas. This strategy provided a roadmap for the government, development partners, local communities, and other stakeholders to work harmoniously to achieve a healthy and sustainable ecosystem while embracing the principles of collaboration, coordination, and communication across the human, animal, and environmental interface.

Methods:

The County One Health Unit took a significant step towards implementing the One Health strategic plan in collaboration with CGPP and other partners by conducting joint One Health integrated outreaches in Loima subcounty. This innovative approach allowed for animal health services to be provided alongside human health services to unreached and underserved nomadic populations along the borders of Ethiopia, South Sudan, and Uganda. Through this integrated One Health approach, the logistics and transportation for service delivery were shared, incurring little to no extra cost as health and veterinary teams went from one village to the next together providing integrated services for both pastoralists and their livestock.

Findings:

During integrated One Health outreach, 672 under-5 children were vaccinated, of whom 80% were zero-dose children. Integrated services screened 716 under-5 children for nutritional status and provided eye care services to 312 people. Overall, 1,419 people received outpatient services, of whom 18% (251) were under-5, 130 school-aged girls were vaccinated against human papilloma virus. A total of 1,040 laboratory investigations were done, 700 people received national hospital insurance fund services. As part of the outreach, County One Health Unit sensitized 3,734 people on priority zoonotic diseases. A total of 17,445 livestock were attended to by Animal health workers including 9,432 goats and 43 dogs vaccinated against contagious caprine pleuropneumonia and rabies respectively.

Interpretation:

Integrated One Health outreaches demonstrate a transformative approach to improve access to both human health and veterinary services. The co-provision of services led to increased vaccination coverage and strengthened risk communication and community engagement.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1261

Bridging Cultural Gaps for Improved Care of Hispanic Patients: Lessons from Ecuador

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Background:

Despite the integration of cultural humility into medical education and healthcare, Hispanic patients report that they are disproportionately disrespected by their physicians. While physicians are encouraged to communicate in Spanish if they are able, understanding cultural nuances remains a challenge. However, acknowledging cultural differences is essential for enhancing provider-patient interactions. Our aim is to highlight some of these differences, drawing from our experiences in the Ecuadorian healthcare system.

Methods:

Our team participated in a month-long medical Spanish immersion program in Riobamba, Ecuador, focused on language proficiency and cultural appropriateness in doctor-patient interactions. Our Spanish professor, a linguistics specialist from Ecuador, provided lectures and guided us through clinical experiences.

Findings:

In Latin America, the use of multiple greetings and honorific titles is essential to convey respect, a practice distinct from American norms. We observed a noticeable improvement in our patient interactions once we became proficient in employing respectful greetings and titles.

Many patients supplemented their medical care with remedies prescribed by *curanderas*, or natural healers. While not commonplace in the U.S., inquiring about alternative medicine use is important for obtaining a complete history from Latin patients.

Patients in Ecuador tended to respond directly to questions, providing information without elaboration unless prompted. For example, a patient may respond "no" to the question "do you take medication," if the medication is injected rather than orally administered.

Finally, physical touch played a more prominent and welcomed role in clinical settings. We noted that most clinical encounters involved physical connection, including a kiss on the cheek or hug, a practice uncommon in U.S. healthcare.

Our experience highlights that mastering the Spanish language alone is insufficient to bridge the cultural gaps that contribute to Hispanic patients' dissatisfaction with their care. Using appropriate greetings and titles can enhance patient comfort and trust. Furthermore, asking open-ended questions and recognizing that Hispanic patients may utilize alternative medicine is crucial for building relationships and obtaining a complete clinical picture.

Interpretation:

We believe that the cultural insights gained from our experience can equip healthcare providers with valuable considerations to foster meaningful connections and enhance the quality of care for Spanish-speaking patients.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1265

Evaluation of a global health internship program in South Korea: A mixed-method approach

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Background:

Global health internship programs provide opportunities to experience the reality of global health research and activities to students who have interests and explore their careers within the field. However, the programs are rarely implemented and evaluated in Asian countries, though the participation of Asian countries in global health is growing. We aimed to introduce and evaluate a global health internship program in South Korea and to suggest future directions for the internship programs.

Methods:

The JW LEE Center for Global Medicine, South Korea, has led a six-week global health internship program of academic education and field work since 2014. The center has recruited about 3~4 students every quarter from domestic and international universities. To evaluate the program's effects, the study employed a sequential exploratory mixed-methods approach. Among those who completed the internship program between 2015 and 2020 (total n=110), 41 participants responded to a retrospective survey, and 12 were joined to in-depth interviews. We analyzed (1) the satisfaction and limitations of the program, (2) the influence of the program on global health experience and attitude afterward, and (3) suggestions for enhancing the program's effectiveness.

Findings:

The satisfaction level with the program was an average of 4.1 (SD=0.8) out of 5. After the internship program, about 51.2% of respondents were engaging in the global health field including pursuing academic degrees in global health. They recognized the program's positive effects (score of 4.0 SD=0.7) in their decision afterward. In the qualitative results, they were satisfied with the opportunity to broaden their perspective through studying and discussing global health topics with other interns and global health practitioners. However, some mentioned insufficient time for interaction with current practitioners due to work commitments, and limitation of participations owing to the project schedule. Some participants suggested maintaining their interest and network after the internship through newsletters and alumni events.

Interpretation:

Overall, the global health internship program was satisfactory and developed a positive attitude toward global health, encouraging their engagement in global health areas. To enhance the program's effectiveness, it is necessary to consider the interns' challenges and maintain interaction with alumni after the program.

Source of Funding:

Seoul National University College of Medicine

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1272

Using Global Health Partnerships to Support Post-Graduate Training Programs in Low-Resource Settings

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Background:

Thirty-one countries in Sub-Saharan Africa have a critical shortage of health care professionals. To address this challenge, many African medical schools are increasing their enrollment of students and availability of post-graduate training programs, and consequently increasing the demand on their limited faculty. Strategic, long-term partnerships between US and host country institutions present opportunities to assist with clinical training and meaningfully address shortages in healthcare providers at the faculty level.

Methods:

Seed Global Health and Busitema University partnered to employ pediatric faculty from the US to support a new pediatric post-graduate training program in Uganda from 2018-2023.

This partnership placed 4 US pediatricians as physician educators to support medical education, including the Master's in Pediatrics and Child Health program that was started in 2018. Monthly reports submitted by pediatric educators and quarterly partnership planning meetings by Uganda faculty provided both quantitative and qualitative data for review.

Findings:

Despite interruptions encountered due to COVID-19, the 4 Seed pediatric educators have helped teach multiple courses, facilitated simulations, conducted skills trainings, supported journal clubs, assisted with quality improvement projects, provided bedside clinical instruction and enhanced teaching methods for the 13 post-graduate trainees, 4 of whom have now graduated residency and provide the country with a valuable human resource, as 2 are employed at health centers and 2 at regional referral hospitals in the country. During the period from 2018-2023 Seed educators have seen more than 2,700 patients with trainees. In a survey of post-graduate trainees, all respondents report that Seed educators have improved the quality of their pediatric training, introduced new teaching methods and contributed to improved clinical skills.

Interpretation:

Employing long term clinical faculty to support post graduate education has demonstrated a successful model for partnership. Similar partnerships between US organizations and academic programs in resource-limited settings could offer a meaningful opportunity to address critical shortages of healthcare workers by enhancing the educational capacity of local organizations and ultimately supporting the development of skilled specialists and future faculty.

Source of Funding:

Seed Global Health

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1274

Addressing Barriers to Attendance at Prenatal Care Visits in Agbélouvé, Togo: Interval Results of a Quality Improvement Project Aiming to Improve Follow-Up Rates

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Background:

WHO updated guidelines in 2016 recommend eight prenatal care (“PNC”) visits per pregnancy, but women at the Compassion Medical Center of Agbélouvé (“CMCA”) attended a median of 3 PNC visits in 2022. To reduce barriers to care, an up-front payment system for PNC and delivery, appointment reminder phone calls, and free transportation to CMCA are being implemented from April 2023 to March 2024. The primary outcomes of this project are intervention utilization, maintenance in care through delivery or 37 weeks gestation, and number of visits attended per pregnancy.

Methods:

This project was designed in a partnership between CMCA and the American NGO Global Partners in Hope. Staff make reminder phone calls to all women enrolled in PNC, and women can enroll in the optional up-front payment system. Free transport to the clinic is advertised to all patients. Intervention uptake is recorded in the medical record. Appointment reminder calls are scheduled into existing clinic downtime and the up-front payment system is set at a price deemed sustainable by clinic management.

Findings:

In September 2023, 50% of women have opted into the up-front payment system (n=68) and 70% of women have reported receiving reminder calls. 4% of women have utilized free transport. Among women who have completed pregnancy in the intervention period, (n=21), intervention utilization is positively correlated with PNC attendance, $p < 0.05$. Women receiving PNC during the intervention period are more likely to maintain follow-up vs. historic controls, though insufficient power exists to identify a significant difference ($p = 0.095$, $n = 28$). No difference in average number of visits has been identified.

Interpretation:

The up-front payment system and reminder phone calls have been well-received. While intervention uptake is positively correlated with PNC attendance, we await additional data to determine if this project improves follow-up rates and number of visits. While interval data has not proven a significant difference, we expect improved maintenance in follow-up at the end of the project period. After confirming the success of up-front payment and reminder calls, we plan to continue them as an element of routine PNC at CMCA.

Source of Funding:

MUSC Center for Global Health Travel Grant

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Background:

Over the past 30 years, the quantity of funding and number of countries involved in development assistance for health (DAH) has exploded. Global disbursements for DAH increased by over 600% from \$8.6 billion (2021 USD) in 1990 to an estimated \$62 billion by 2020, with the last year's increase largely driven by funding for the COVID-19 pandemic. Meanwhile, the number of donor-recipient relationships more than doubled. We analyze this growing network of DAH actors to characterize the distribution of aid to recipient countries over time.

Methods:

We borrow from descriptive network analysis to interpret the flow network of DAH between donor and recipient countries, also considering disbursing agencies like NGOs and development banks. Then we analyze the distribution of aid across recipient countries and test for associations between features of this distribution with donor, agency, and recipient characteristics and interactions. Our analysis is based on a database produced by the Institute of Health Metrics and Evaluation which compiles public and private reports of development assistance to estimate flows of DAH at the donor-agency-recipient level.

Findings:

Our preliminary results show that DAH became more evenly distributed across recipient countries over time. In the earlier years of our analysis, the average donor's funds were concentrated among fewer recipients, who tended to have lower gross domestic product. As the number of donor-recipient relationships intermediated by a disbursing agency increased substantially over time, donor funds became more widely distributed amongst recipients, including countries with higher GDP. As a result, even though overall DAH grew substantially over the period of study, the proportion of a donor's available aid disbursed to the average recipient decreased. In later years, recipients achieved higher levels of DAH by maintaining more connections with donors, typically through intermediate agencies.

Interpretation:

Our initial findings suggest that DAH has become more equally distributed amongst developing countries and that this may be associated with the increasing role of aid agencies. Further analysis will investigate whether this increasingly equal distribution is also increasingly equitable.

Source of Funding:

Bill and Melinda Gates Foundation

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Program/Project Abstract

Abstract N°: 1276

Building Public Health-Academic Partnerships for Equitable, Community-Engaged Research

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Background:

The COVID-19 pandemic had devastating effects for marginalized and vulnerable communities and demonstrated a need for rapid research to inform policies. In response, the California Collaborative for Pandemic Recovery and Readiness Research (CPR³), a partnership between the University of California, San Francisco (UCSF), the California Department of Health and Human Services (CalHHS), and the California Department of Public Health (CDPH), was created to quickly leverage lessons learned about the effects of the pandemic in California.

Methods:

CPR³ had three goals to be completed between July 2022 to June 2023: 1) define priority research areas (PRAs), 2) fund policy-relevant, community-engaged research across the University of California (UC) system, and 3) develop infrastructure to support the research portfolio. A scientific steering committee (SSC) composed of multidisciplinary policy and academic experts defined the PRAs, and, to inform requests for proposals (RFPs), the CPR³ team identified critical gaps in each PRA through rapid landscaping. Eligibility for CPR³ funding included principal investigator (PI) status at a UC campus and a focus on California populations. Proposals underwent a comprehensive evaluation process that included technical/academic, community, and policy reviewer assessments.

Findings:

Four PRAs were identified: children & adolescents, mental health, social & economic outcomes, and behavior change & public health communication. Landscaping revealed evidence gaps across all PRAs, especially regarding strategies to address outcome inequities. Of 82 applications across the four PRAs, 31 proposals were funded. A total of \$6.27M was obligated to PIs from all 10 UC campuses by June 2023 with 41 community organizations included as partners. Monitoring, evaluation, and sustainability plans including works-in-progress sessions, midterm/final reports, technical assistance and evidence translation activities, and a results symposium are in development for 2024.

Interpretation:

CPR³ achieved all 3 first-year goals. Challenges included limited time to identify evidence gaps in PRAs, disseminate RFPs equitably across UC campuses, and recruit reviewers to complete evaluations. Appropriate community engagement was also a consistent challenge due to the rapid scale-up of activities, with specific gaps noted in social and economic outcomes research. Lessons learned and infrastructure established through CPR³ will help ensure ongoing sustainability of program activities. CPR³'s innovative infrastructure provides a direct interface for policymakers, researchers, and community members to share expertise, collaborate on prioritization and research efforts, and generate high-impact evidence to better inform public health policy in California. This partnership model may be used to rapidly respond to emerging public health threats or priorities.

Source of Funding:

CPR³ funding comes from the California Department of Public Health.

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Background:

It is estimated that 1 billion women exist outside the workforce; an untapped potential that could booster the healthcare system. Human-centered design (HCD) is a problem-solving technique that involves the end-user in problem definition and solution generation. This project uses HCD to design a women-centric initiative aimed to improve recruitment and retention of women in healthcare working in LMICs.

Methods:

In 2022 Operation Smile (OS) conducted four all-women surgical programs in Morocco, Peru, Malawi, and the Philippines. Qualitative data was collected through 76 interviews of medical volunteers to inform the HCD process.

At the conclusion of the surgical programs, the transcripts were analyzed, and recurring themes were grouped. Opportunities for potential intervention were then identified. End-users were recruited from 2 pilot countries, Perú and Rwanda, to participate in co-creation sessions for the ideation phase. Ideas for a variety of different programmatic offerings were brainstormed with women from high school, university as well as those at various stages in their healthcare career. The ideas were refined into three distinct prototype models that addressed the needs for funding, information, education, and mentorship.

Findings:

The transcript themes were the importance of exposure to healthcare, needed mentorship, barriers women face in their career and progression, causes of gender inequality in their workforce, and a desire for increased training, education and funding.

The co-creation sessions expanded on these themes and identified fears about starting or finishing a degree due to finances lack of information about scholarships and educational resources for career advancement; and the need of mentorship for professional/ personal development and emotional support. To address these findings three prototypes were created. The three prototypes were presented to individuals from Peru and Rwanda who represented potential users and those who represented potential donors with the most positively received prototype being fellowship program.

Interpretation:

HCD has enabled inclusion of the end-user's perspective and has enhanced ideation creativity. This ongoing initiative can serve to support and inform the use of HCD in the international NGO space. This will help the global health community ensure the solutions generated are framed from the perspective of the people they are aiming to service.

Source of Funding:

Operation Smile Inc.

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Background:

Neonatal hypothermia is a worldwide health burden with a global incidence ranging from 32-85% in hospitals and 11-92% in homebirths. It has been well-studied that neonatal hypothermia is associated with increased morbidity and mortality. While limited studies are available on the prevalence of neonatal hypothermia in Nepal, the cold climate places newborns at elevated risk. The World Health Organization recommends various practices that have been shown to prevent hypothermia, including Kangaroo Mother Care (KMC), immediate drying of the infant, early skin-to-skin, and early breastfeeding. Unfortunately, their adoption is not universal, with one study estimating that only 10% of community births receive proper thermal management, and few studies have been done to assess rates of thermal management and their effect on hypothermia in higher-resource hospital settings in Nepal. The purpose of this study is to quantify the prevalence of neonatal hypothermia and assess the impact of thermoregulatory practices during resuscitation.

Methods:

This was a prospective cohort study that was based at Dhulikhel Hospital in Nepal, an affiliate of Kathmandu University. A convenience sampling of babies > 35 weeks gestational age who were admitted to the newborn nursery between January and June of 2023 was included in this study. Any thermoregulatory practices were recorded, and an axillary temperature was measured at 1 hour of life as well as complications and discharge information.

Findings:

193 infants were included in this study. 13 infants (6.7%) were preterm and 21 infants (10.8%) were less than 2500g. At 1 hour of life, 69 (35.8%) of infants were normothermic, 110 (57.0%) had mild hypothermia, and 14 (7.3%) had moderate hypothermia. Those born via C-section had less hypothermia than those born via vaginal delivery (48.3% vs. 79.8%, $p = <0.005$). All infants were dried after delivery, 50.2% had early skin-to-skin, 21.2% had KMC, and 11.9% had early breastfeeding. Infants who received early skin-to-skin were more likely to be hypothermic (78.4% vs. 50.0%, $p < 0.005$) and those who received KMC were also more likely to be hypothermic (78.0% vs. 60.5%, $p = 0.044$). Early breastfeeding appeared to have no impact on 1-hour hypothermia (60.9% vs 64.7%, $p = 0.817$).

Interpretation:

A high prevalence of neonatal hypothermia at one hour of life exists in a tertiary referral hospital setting in Nepal. Vaginal delivery, KMC, and early skin-to-skin are all associated with higher rates of hypothermia.

Source of Funding:

N/A

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Background:

Childhood physical violence is a type of child maltreatment, one of the most common forms of violence against children. It happens daily in different settings, and it is the 16.2.1 Sustainable Development Goals which aims to eliminate physical violence against children. This study aims to evaluate the impact of exposure to childhood physical violence on health outcomes through systematic review and meta-analysis.

Methods:

This study is part of an open systematic review, which searched seven databases for literature reporting the health effects of violence against children and gender-based-violence. Only the data pertaining to childhood physical violence were analyzed in study. Cohort and case-control studies with children from 0 to 18 years old were included. The Burden of Proof Risk Function (BPRF) methodology was used to run a meta-analysis with the MR-BRT tool (meta-regression-Bayesian, regularized, trimmed) for pairs with a minimum of three eligible studies to estimate relative risks (RR) and 95% uncertainty intervals that incorporate between-study heterogeneity. The systematic review was PRISMA compliant, and a protocol was published and registered with PROSPERO (CRD42022299831).

Findings:

A total of 67,221 records were found, from which, after the full-text screening, 108 studies were extracted for child physical violence, and 89 were included in risk-outcome pairs analysis. Eleven health outcomes were identified and associated with exposure to child physical violence. Translating how strong the evidence of this association is, the BPRF results for exposure to child physical violence show a moderate association (78% increase in risk, 3-star rating) with self-harm, weak evidence of an association (2-star rating) with depressive disorders, asthma, ischemic heart disease, eating disorders, and maternal abortion and miscarriage, and weakly associated (1-star rating) with anxiety disorders, alcohol use disorders, drug use disorders, cardiovascular disease, and diabetes mellitus.

Interpretation:

Exposure to child physical violence is related to many health outcomes, with the largest observed association to self-harm, depressive disorders, and eating disorders. The limitations are related to variability in input studies, and the strengths are the compilation of results associated with this topic. This evidence could be used in global public policies to reduce and eradicate violence against children through evidence-based interventions, increase awareness, and provide support for survivors.

Source of Funding:

Bill & Melinda Gates Foundation

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Background:

While research ethics is essential in providing guidance for the responsible conduct of research, few have considered how ethical standards for the conduct of human subjects' research differs across countries. Global emergency medicine research ethics faces many challenges, which can result in negative consequences for the ethical conduct of research. Seeking to understand how research ethics governance varies across regions, we held a didactic in May of 2023, in which highly qualified emergency medicine researchers from different regions discussed how research ethics is governed in their respective country.

Methods:

Our didactic was accepted to be presented at a nationally recognized conference: The Society for Academic Emergency Medicine. The five speakers represented India, Haiti, the U.S., and Jamaica, and discussed how ethics is governed in their country and the existing challenges. The didactic aimed to explain how clinical research ethics governance varies globally, understanding the ethical challenges in conducting research in LMICs, and identifying opportunities to improve global research ethics. PollEverywhere was utilized to ask the audience questions.

Findings:

The didactic discussion found that research ethics differs greatly across world regions—and especially among LMIC, MIC, and LIC countries. We found that there are many challenges and areas of improvement in global emergency medicine research ethics, including quality of consent, fair participant selection, blurring the role of clinician and research, and determining the risk/benefit assessment—areas which all of the audience members agreed upon. The audience poll results also showed that 67% thought it would be useful to create a working group to standardize global EM research and address the issues with governance of research in LMIC/MIC and LICs.

Interpretation:

The didactic suggests that global health emergency medicine research ethics faces significant barriers that must be addressed. Moving forward, we plan on developing a working group to improve work towards standardizing the field of global EM research ethics, especially in LMIC/MIC/LICs. This working group will consist of highly qualified EM clinical research that will engage in discussions of possible solutions on standardizing the field of global emergency medicine research ethics, in addition to developing minimum requirements for conducting research in LMICs.

Source of Funding:

None

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 1312

Implementation and evaluation of a digital health intervention to reduce gaps in routine childhood vaccinations in rural Tanzania

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Background:

Tanzania is among the 20 countries with the majority of under-vaccinated children. In prior research, we demonstrated gaps in timely routine childhood vaccinations in Tanzania, including greater delays in vaccinations for children from rural areas. To reduce gaps in timely routine childhood vaccinations in Tanzania, we developed and evaluated a digital vaccination reminder and tiered conditional incentive intervention.

Methods:

Between 2016-2019, 406 mothers in Mtwara region of southern Tanzania were enrolled and assigned to receive no intervention, reminders only, or reminders with a tiered conditional incentive offer for timely vaccination of their child (vaccination within 28 days of the due dates). At the end of follow up, vaccination coverage and timeliness were assessed for 281 mother-child dyads using the child's government issued vaccination card. Descriptive statistics and multivariable regression models characterized barriers to timely vaccinations for rural versus urban children, and vaccination coverage and delays by study arm.

Findings:

More than 900 reminder messages were sent using the digital health intervention 7 days or 1 day prior to, or 14 days after a vaccination due date, including 411 (45.1%) reminders with conditional incentive offers. The digital health intervention was feasible to implement in Tanzania. Findings revealed residual barriers to vaccination as mothers of rural children demonstrated lower vaccination-related knowledge and issues with accessing health facilities.

Interpretation:

A detailed logic model was created by the research team to highlight barriers addressed by specific intervention components and to inform potential implementation strategies to pilot in an ongoing study. A new knowledge intervention component was piloted and proposed to be added to the digital intervention to address vaccination-related knowledge gaps. Training and engagement of local community health workers in intervention delivery was identified as a key potential implementation strategy. Intervention components will be tested in a type 1 effectiveness-implementation hybrid study in two predominantly rural regions in Tanzania to generate robust evidence on intervention effectiveness. Key implementation outcomes to be assessed will include the intervention's reach, acceptability, and fidelity, as well as CHWs' self-efficacy for intervention delivery. Findings of this study may inform future adaptation and testing of implementation strategies in a type 2 hybrid study.

Source of Funding:

Grants from the NIH: 1R01HD110844-01 and 1R21TW010262-01.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1326

Evaluating the Success of Marketing Peer Group, a Virtual Community of Practice for a Global Health Network

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Background:

For nonprofit organizations, marketing is important to communicate with beneficiaries and identify supporters who become volunteers or donors. The Marketing Peer Group (MPG) was established as a virtual community of practice (vCoP) for communications managers within the Texas Children's Global Health Network (TCGHN), a nexus of foundations across 9 countries in Romania, Latin America, and sub-Saharan Africa that focus on the care and treatment of vulnerable children and young adults. The MPG aims to (1) promote the awareness of network foundations through coordinated social media efforts, (2) share marketing best practices and resources, (3) and build a community of support for communications. We seek to evaluate the success of this vCoP over the past 3 quarters.

Methods:

Communications liaisons from each of the sites were invited to join the MPG. The group collaboratively established guiding principles for our meetings. These included social engagement, knowledge sharing, collaboration, active participation, and open dialog. A qualitative and quantitative mixed methods survey was developed, consisting of four multiple choice questions, three open-ended questions, and six 5-item Likert scale questions. The survey was administered anonymously to participants between January 25, 2023, to August 23, 2023, following each monthly session, and analyzed using a cloud-based online survey platform.

Findings:

Of the survey respondents (n = 10), 80% agreed, with strong consensus (IQR = 1), that MPG activities allowed for learning about and from other members and provided an opportunity for enhancing knowledge, skills, and attitudes. 70% of respondents agreed, with consensus (IQR = 2), that MPG activities provided an opportunity that met personal expectations. Additionally, this group found it easy to participate using the internet and technology available and felt an increased sense of community and belonging from participating. Finally, 70% of respondents agreed, with poor consensus (IQR = 3), that MPG activities provided an opportunity to foster collaboration with other members.

Interpretation:

Building a marketing-related vCoP for the sharing of knowledge and resources remains successful for participants, although more opportunities for peer group collaboration need to occur. We recommend the incorporation of activities requiring collaboration on joint communication campaigns and strategies to foster more peer group interaction.

Source of Funding:

None

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Background:

The recent political and civil unrests in Myanmar deteriorated healthcare institutions, rendering health services inaccessible. The violence caused by the civil unrest has created wave of forced migration and displacement, both within Myanmar and to neighboring countries. Thailand has been a destination for many Myanmar refugees. Substantial numbers of asylum seekers chose to reside in Myanmar-Thai border towns. As the healthcare resources have been insufficient locally, the unmet healthcare needs are alarmingly high among Myanmar refugees. This study aims were to explore how community health stakeholders perceive the intersecting impacts of the military coup and COVID-19 on Myanmar refugees' health and wellbeing.

Methods:

In this project, we conducted a qualitative study with 7 focus groups with stakeholders at Mae Sot, Thailand in July 2022, a border town between Myanmar and Thailand. Inclusion criteria includes Burmese currently living in Thailand and age 18 and above. Participants were recruited from community members, health workers and Myanmar migrant schoolteachers, with 3-5 participants in each group. Total of 33 participants join five focus groups. Participants age range from 18 to 53 years old with 12 male and 11 female in this project. Two Myanmar-speaking researchers facilitated the focus group discussions. All focus group sessions were tape-recorded and then transcribed verbatim in Burmese. Then, the transcriptions have translated into English for coding-scheme development and quality assurance.

Findings:

The study themes were, 1. more refugees in border town with even scarce resources, poor health and financial assistance in border town, 2. teenage pregnancy increased during pandemic and acculturation stress and 3. discrimination toward Myanmar refugees in Thailand. The military coup and COVID-19 interact with each other and severely hamper local pandemic containment efforts, in addition to the trauma they independently bring to this vulnerable population.

Interpretation:

The limitation is that since the data was analyzed in English, there were many trivial culturally relevant information were lost during the translation process. However, this is one of the pioneer studies focusing on Myanmar refugee and migrants currently living in the neighboring countries. This data will provide the backbone of the future intervention migrants globally where face the similar situation.

Source of Funding:

UCLA School of Nursing Intramural fund 2022, NIH/FIC R21TW11277 (PI: Chen, Wei-Ti Chen)

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Background:

Sexual and gender-based violence (SGBV) is widespread in many educational institutions globally which requires strong institutional frameworks and policy guidelines. Most research about university SGBV policies has focused on high-income countries with little or no recourse to universities in low- and middle-income countries. This study, therefore, aimed to analyze university policies in sub-Saharan Africa to provide guidance on best practices on SGBV policy development for universities across the region.

Methods:

Thirteen policies (seven university policies and six national policies) from six countries across sub-Saharan Africa (Ghana, Liberia, Nigeria, Rwanda, South Africa, Zimbabwe) were reviewed using a standardized data extraction form. The policy analysis identified eight key elements of policies related to SGBV for sub-Saharan African universities, which were verified using a nominal group technique with five international experts in the field.

Findings:

Across the studied policies, the study observed significant variations in accessibility, terminology, definitions, format, and inclusivity across the sites. The findings demonstrated that only two university policies provided data or evidence to illustrate the impact of SGBV on their specific university campus. Also, most of the university policies lacked details about who was involved in drafting the policy and program implementation. It was noted that all policies were created with a female student audience in mind.

Interpretation:

Identifying best practices for SGBV policy development will help ensure the safety of university students globally. SGBV policies for universities in sub-Saharan Africa should: 1) be evidence-based, 2) be readily available in multiple formats, 3) define key terms broadly with gendered signifiers, 4) be succinct and concise, 5) incorporate broad definitions for all university stakeholders, 6) identify who created the policy and when, 7) address prevention, and 8) address response. Evidence-based policies addressing SGBV prevention, response, and justice are sorely needed at universities across the globe.

Source of Funding:

University of Michigan Center for Global Health Equity

Abstract N°: 1340

“Those difficult days seemed to be unending”: Impact of the COVID-19 Pandemic and Lockdowns on Sex Workers in West Bengal, India

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Background:

India's COVID-19 lockdowns were among the strictest globally and exacerbated existing inequities. Sex workers in India face marginalization and health disparities, including increased rates of HIV, but extremely limited literature has examined the impact of the COVID-19 pandemic and lockdowns on this population. We aim to address this gap.

Methods:

We conducted 40 individual in-depth interviews with cisgender female (n=30), cisgender male (n=5), and transgender female (n=5) sex workers in Kolkata, India. Participants were recruited through Durbar Mahila Samanwaya Committee (Durbar), a community-led organization in West Bengal. Interviews were analyzed using inductive thematic coding.

Findings:

Eight themes emerged from the data: 1) Lockdown experiences, 2) Social isolation, 3) Lack of customers, 4) Financial stress, 5) Decreased negotiating power, 6) Food insecurity, 7) Reliance on instrumental support, and 8) Mental health impacts. Lockdowns resulted in isolation from others and an inability to earn money from seeing clients. Financial instability led to severe food insecurity and reliance on support from others, including Durbar. Upon return to in-person work, negotiating power and ability to turn away clients was reduced. Despite these challenges, many participants described providing support to dependents. Participants described significant mental health concerns including stress, depression, and anxiety from COVID-19 and cascading lockdown impacts. Further, food insecurity negatively impacts physical health, and financial instability and decreased negotiating power can lead to sexual health risk, including for HIV and other STIs. Results are interpreted using the gendered stress process model and will be presented with key quotes from participants and a conceptual model mapping the relationship between themes. These findings describe the devastating impact of COVID-19 on this community and may inform the development of financial security interventions to protect against future economic shocks.

Interpretation:

Despite the potential protective effects of COVID-19 lockdown measures, health implications were extreme and were exacerbated by pre-existing vulnerabilities. These results also demonstrate the importance of community-based organizations that are highly trusted and uniquely situated to deliver interventions including food and vaccine distribution even in times of crisis.

Source of Funding:

Financial gift from the Beneventures Foundation, Inc.

Abstract N°: 1342

The Impact of Group-Based Interventions on Emotional and Behavioral Difficulties among Adolescents Living with HIV

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Background:

In 2022 there were an estimated 1.7 million adolescents aged 10 to 19 years living with HIV (ALHIV) globally, of whom 89% live in Sub-Saharan Africa (SSA). Importantly, although new HIV infections have declined over the last decade, the decline has been slower among adolescents compared to younger children 0 to 9 years of age and adults. ALHIV have been found to have high prevalence of behavioral and emotional difficulties (EBDs) including conduct problems, peer relationship problems, hyperactivity, impulsivity and attention deficit, depression, and anxiety. Despite high prevalence of emotional and behavioral difficulties (EBDs) among adolescents living with HIV (ALHIV), there are limited randomized trials assessing the impact of interventions on these outcomes.

Methods:

We assessed the impact of two evidence-based interventions in a three-arm cluster randomized controlled trial (RCT) where nine clinics were randomized to one of three study arms: 1) Usual Care; 2) Group-Cognitive Behavioral Therapy (G-CBT) + Usual Care; and 3) Multiple Family groups (MFG) + Usual Care. All data were collected using instruments that were adapted, tested and refined in other Suubi studies conducted in Uganda. We utilized mixed effects models to assess the effect of the intervention on child EBDs. The model had three levels, with the repeated outcome measures at level 1, while the caregivers and clinics constituted levels 2 and 3, respectively. In the model, we included the interventions, time variable, their interaction terms, and the random participant and clinic intercepts to assess the main effects of the intervention, time, and intervention-time interaction.

Findings:

While the main effect of the intervention was not significant, $\chi^2(2) = 0.43$, $p=0.806$, the main effects for time $\chi^2(2) = 32.47$, $p<0.001$, and intervention-time interaction, $\chi^2(2) = 59.59$, $p<0.001$, were statistically significant, suggesting reduction in the EBDs across the groups overtime. Pairwise comparisons showed that in the G-CBT group, EBDs reduced at three months [contrast=-7.59 (CI: -8.20 – -6.99), <0.001] and 6-months [contrast=-8.11 (CI: -12.64 – -3.57), <0.001] compared to baseline. No statistically significant pairwise comparisons across time were observed in the control group, which confirmed that the significant group-by-time interactions were driven by our intervention effects.

Interpretation:

Findings that G-CBT improved EBDs in this pilot trial highlight the potential efficacy of this intervention in addressing EBDs among ALHIV. Further studies are warranted to delineate the nuances of the different intervention components to inform development of tailored interventions for addressing EBDs in this vulnerable population.

Source of Funding:

National Institute of Mental Health (NIMH).

The Association between Intimate Partner Violence, Probable Depression, and Suicidality Among Adolescent Mothers in Kawempe, Uganda

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Background:

Depression affects 26.9% of pregnant or postpartum mothers while 39.6% of women have experienced any form of intimate partner violence (IPV) in Uganda. IPV may increase the risk of suicidality among adolescents (10-19 years). This study evaluated the association between IPV forms and probable depression as well as suicidality among adolescent mothers attending a postnatal clinic (PNC) in Kampala, Uganda.

Methods:

This cross-sectional study included consecutively consented participants at the Child and Family Foundation PNC in Kawempe, Kampala in July 2023. Interviewers administered a 20-item Center for Epidemiologic Studies-Depression (CES-D), and MINIKID diagnostic tool to 234 consenting participants to assess symptoms of depression and suicidality. Depression cutoff scores were CES-D <16(no) vs ≥16(yes). Logistic regression analyses tested the independent association between IPV forms and depression symptoms, and suicidality respectively. Odds ratios (OR) and corresponding 95% confidence intervals (CI) were reported. P<0.05 were considered statistically significant.

Findings:

Among 227 participant data analyzed, 66.3% had scores indicating probable depression, 54.6% experienced at least one form of IPV, 39.2% experienced physical IPV, 17.1% experienced sexual IPV, and 47.5% experienced emotional IPV. After adjusting for potential confounders, those who reported physical IPV were 3.7 times more likely to experience depression compared to those who did not report experiencing physical IPV (adjusted OR 3.7, 95%CI 1.24-11.2, p=0.019). Those reporting emotional IPV were 4.8 times more likely to experience suicidality (adjusted OR 4.8, 95%CI 1.1-20.6, p=0.036) compared to those who did not report experiencing emotional IPV.

Interpretation:

Physical and emotional forms of IPV were associated with depression and suicidality respectively among mothers in this study population. Integrating violence prevention, response services, and regular IPV screenings in PNC may take an important step towards increased detection and management of depression and IPV in this population of adolescent mothers.

Source of Funding:

Wm. Collins Kohler Family Foundation

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 1349

A Needs Assessment of Information Tools to Link Clinical, Laboratory and Public Health Data for IDSR Priority Diseases in Sierra Leone

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Background:

A large portion of patient health records in Sierra Leone is paper-based, serving as a barrier to rapid tracking of disease outbreaks and subsequent action. There has yet to be a comprehensive evaluation of health information systems in place at health care centers and laboratories across the country. Here, we conduct a needs assessment of health data management systems in various facilities across Sierra Leone to delineate the current state of clinical, laboratory, and public health data management in Sierra Leone along with accompanying needs; we aim to use these needs to provide recommendations for potential information tools fitting the broader context of the country.

Methods:

Over five weeks, we conducted 48 in-country interviews corresponding to a standardized interview guide at 27 sites (clinical and public health research and diagnostic laboratories, national epidemiological programs, and secondary/tertiary healthcare facilities across Freetown, Kambia, Bo, and Kenema) centered around understanding each facility's data collection pathway. We chose sites based on achieving a representative amount of each facility type. Interviews were conducted with the head clinician, laboratory manager, and head data manager. Participants were provided with consent forms and ethical approval was obtained from Sierra Leone Ethics and Scientific Review Committee and Harvard IRB.

Findings:

Although interviews were limited to a maximum of 3 people per site, we were still able to outline each site's data capture methods and map out the ideal data pathway envisioned by national programs, identifying breaking points at each step preventing pathway adoption. We identified common issues and linked them to associated breaking points. We noticed much nuance among paper-based vs electronic recording, emphasizing that investigative approaches should not be constrained to simple paper-based vs electronic classifications. There were strong disparities between public and private sites, but we also noticed issues unrelated to funding that affected all groups. We observed a lack of real-time communication between labs and clinicians and noted that frequent data transcription resulted in quality issues. Interestingly, facilities adopted many unique solutions to combat issues faced. Finally, we provide recommendations for a prospective software and the systemic needs it should address.

Interpretation:

Source of Funding:

NYU International Health Program.

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Background:

COVID-19 has strained healthcare globally, including in high HIV-prevalent countries. The influence of HIV-induced immunosuppression on SARS-CoV-2 transmission is unclear. This study investigates the impact of HIV-associated immunosuppression on SARS-CoV-2 viral load in Botswana.

Methods:

This cross-sectional analysis was conducted in Gaborone, Botswana, covering 6 healthcare facilities. Gaborone residents with confirmed SARS-CoV-2 infection without hearing, speaking, or cognitive difficulties were included. Recruitment involved active screening, passive diagnosis, and contact tracing. The primary outcome was SARS-CoV-2 viral load, estimated using RT-PCR cycle threshold (Ct) value. A higher Ct-value indicates a lower viral load associated with reduced risk of transmission. Multiple linear regression models and causal mediation analysis were employed to determine the association and assess the mediating effect of symptom duration. Ethical approval was obtained from University of California, Irvine, and Botswana Human Research Development Committee. Adult participants provided informed written consent, and guardians gave consent for participants under 18.

Findings:

Of the 203 with valid Ct values out of 255 enrolled participants, 71.4% were female, with a median age of 38.0 years (interquartile range [IQR], 26.5-47.0); 18.7% were HIV-positive with a median CD4 count of 696.0 cells/mm³ (IQR, 590.0-838.0). The overall median Ct-value was 20.5 (IQR, 16.5-23.6), with no significant difference between HIV groups (p=0.717). There was no correlation between CD4 count in HIV patients and Ct-value (Spearman's rho -0.029, p=0.88). In multivariate linear regression, longer symptom duration was associated with higher Ct values (p=0.033) after controlling for covariates. HIV status and CD4 count were not significant predictors of Ct values.

Interpretation:

We found no evidence of an association between HIV status or CD4 cell count with SARS-CoV-2 viral load. Reduced SARS-CoV-2 viral load was observed among participants with longer symptom duration at the time of sample collection. The study's strengths are its rigorous methods and data from a high HIV prevalence region, whereas the limitations are limited sample size of people with low CD4 counts and cross-sectional design. The impact of HIV-induced immunosuppression on SARS-CoV-2 viral load in individuals with low CD4 counts warrants additional investigation.

Source of Funding:

This research was supported by US NIH grant#R01AI170204.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 1353

Examining debt and development assistance for health in low- and middle-income countries, 2018-2025

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Background:

In the last year, the magnitude of debt and its associated debt service payments in low- and middle-income countries have been highlighted in various global policy engagements. Such discussions are of importance to global health stakeholders because rising debt in low- and middle-income countries have been historically associated with cuts to social sector budgets including health. Separately, data on the future availability of development assistance for health (DAH) suggest a stagnation in funding. For some low-income countries for whom DAH represents a sizeable fraction of their health spending, this trend is concerning. This study examines trends in debt volume, debt interest payments and development assistance for health from 2018 through 2025 in order to provide insight for policy planning.

Methods:

We utilize data from the World Bank International Debt Statistics and the Institute for Health Metrics and Evaluation Development Assistance for Health databases. We describe trends in debt volume, interest payments and development assistance for health by income group and region. We also characterize rates of growth as well examine potential determinants.

Findings:

Our preliminary results suggest that across low- and middle-income countries debt volume and interest payments have increased. Development assistance for health on the other hand, increased substantial due to the health response to the COVID-19 pandemic in 2020 (\$61.3 billion, up from \$43.1 billion in 2019) and 2021 (\$67.3 billion) but has since plateaued with some donors cutting back on support. Potential determinants include increased interest rates and additional new debt incurred in response to the COVID-19 pandemic.

Interpretation:

Our initial findings suggest that additional attention is needed in understanding the debt burden in low- and middle-income countries and the associated impact of a limited availability of development assistance for health funding. Further analysis will investigate the drivers of this increased debt burden.

Source of Funding:

Bill & Melinda Gates Foundation

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1354

Examining the Cultural Appropriateness of a Traditional Birthing Attendants' Training Program in Rural Guatemala

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Background:

In Latin America, Guatemala has the third-highest maternal mortality rate, with a staggering 290 maternal deaths per 100,000 live births. The majority of obstetrical care in this region is entrusted to traditional Mayan birth attendants, or comadronas, who possess minimal formal training. In light of the absence of a national comprehensive training program, a pioneering educational initiative was conceived, known as the School of POWHER. This study examines the cultural appropriateness and sensitivity of this training program.

Methods:

Our research employed a 10-question survey distributed among 33 graduated, and *actively* practicing comadronas in Guatemala, that were recruited via phone calls by the educators. Informal group interviews with open-ended questions were conducted, recorded and subsequently transcribed and analyzed. Data underwent statistical analysis, quantifying the average percentage of responses. Demographically, all participants were female with a mean age of forty-six years old. Written consent was obtained and IRB committee approval was obtained prior to initiation of the study.

Findings:

97% of comadronas believed that their communities now felt more comfortable after their training, with 100% attesting to increased support for women. However, a notable 21% expressed concerns regarding the representativeness of videos and pictures used.

The small-group interviews highlight the program's sensitivity to cultural beliefs and influences of the community. Additionally, comadronas believe that there are now fewer maternal deaths and more referrals for critical cases. However, they also emphasized areas for improvement, notably the need for additional instrumentation, review classes, and enhanced facilitation of their relationship with the Ministry of Health.

Interpretation:

The program aims to provide TBAs comprehensive training regarding prenatal care and safe labor. Our findings highlight the successful establishment of a culturally sensitive educational institution, while also identifying specific areas for further development and enhancement.

Source of Funding:

None

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 1357

Developing the Next Generation of Global Health Leaders: The University of Washington Strategic Analysis, Research and Training (START) Center's Approach

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Background:

Established in 2011, the START Center provides graduate students at the University of Washington with hands-on consulting experience facilitated by faculty mentorship, paired with a 2-year training curriculum. Coupling rigorous academic training in their graduate programs and consulting experience in a variety of health content areas with experiential skills training, START produces well-rounded professionals with the skills to be successful in a diverse workplace.

Methods:

START has graduated over 120 alumni since its inception. In the 2022 – 2023 academic year START trained 23 graduate student RAs, including:

- 8 international students, representing Bangladesh, Canada, India, Nepal, Nigeria, and Venezuela,
- 11 Black, Indigenous, and people of color
- 19 women

START hires graduate level research assistants (RAs) for 2-year engagements. Our training curriculum aims to supplement their classroom instruction by providing additional training in professional skills including cultural competency on diverse teams, leadership, project management, strategic communication, and client management.

Utilizing a facilitated mentorship approach, START's global health consulting work is completed on student-led teams, offering graduate RAs the opportunity to practice and hone professional skills in a unique, hands-on consulting opportunity. Project teams include one faculty lead and 2-3 RAs, one of whom serves as project manager. START's curriculum provides guidance and training alongside the consulting work the RAs are doing, building their professional skills in real time while they work as consultants.

Findings:

Bi-annually, START RAs complete 360-degree reviews, with the goal of tracking progress throughout their tenure with START and providing feedback on performance in several skill areas. RAs have reported growth in all skill areas, with the greatest improvement in strategic communication, leadership, and client and project management. START graduates are currently employed as public health consultants, research and data scientists and analysts, epidemiologists, and program officers at global health focused foundations, Departments of Health, consulting firms and NGOs.

Interpretation:

START illustrates how hands-on training, coupled with a training curriculum centered in professional skills, can lead to graduates who translate their rigorous academic methods into implementation through strategic communication and partnership and are, therefore, better prepared to enter the global workforce. It is essential that rising global and public health leaders receive training to strategically lead teams and communicate across disciplines and stakeholders with effective project management skills. Components of the START curriculum can be adopted into academic and workforce training efforts.

Source of Funding:

The Bill & Melinda Gates Foundation provides START's core funding.

Abstract N°: 1359

Addressing Period Poverty Through Sustainable Solid Waste Management Practices in Indian Himalayas

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Background:

Proper solid waste management of menstrual products (SWM MHM) in the high Himalayas is vital for preserving communal public health, limited agricultural fertility and fragile ecosystems. An increased understanding of current waste management practices and the introduction of training and compost interventions can provide this preservation.

Methods:

A cross-sectional study of SWM MHM was conducted with twenty-seven adult menstruating women (N=27) from three villages in the Himalayan Spiti Valley, district of Lahaul and Spiti, India. Convenience sampling was used. This study followed the protocol approved by the University of Utah Institutional Review Board. Following the conclusion of the study, training on menstrual hygiene product disposal was provided to the same participants. A train-the-trainer approach was adopted, and participants were encouraged to train other members of their village community. A model waste management system was demonstrated in one of the villages from the study area.

Findings:

Majority of women used sanitary pads (82%), remaining reporting the use of cloth in combination with pads (15%) or any other material conveniently available (3%). Random dumping of menstrual product waste was practiced by 67% of the participants with 30% opting for burying, and rest 3% chose burning as other methods of handling the waste. Used sanitary pads were dumped by more than half of the women and either buried or burnt by the rest of the users of this product.

Interpretation:

The findings demonstrate a lack of proper solid waste management training. Following the trends, likely to continue upwards, more than 25000 pads/year will be improperly disposed in the three villages included in this study. Spiti Valley has a total of 231 villages. If the current practice of random disposal persists, health of community members could be impacted due to contamination from excretory waste. The arid high desert ecosystem also provides little fertile land, which could become even more scarce with waste buildup. A sustainable SWM MHM is a dire and emergent need of the Himalayan region of the Spiti Valley.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1365

Strategies to improve visual health in 3 to 5 years old children. Fundacion Baylor Argentina

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Background:

Pediatric vision screening is an essential element of well-child care for young children given the importance of adequate vision to overall cognitive and social development. Appropriate vision screening in young children can detect amblyopia at a time when treatment is effective, ideally before age 7 years. We initiated visual screening at well child care checkups in 2017 using chart based screening. However, chart based screening requires compliance so it is difficult to perform in younger children. As a result, less than 10% of children 3-5 years could be visual screened during well child care visit. Visual screening can be done on younger children using portable photo screeners so we began using a photo screener in 2020. Our aim was to detect visual abnormalities by performing visual screening on 100% of children 3-5 years of age during the well child visit since January 2021.

Methods:

Fundacion Baylor Argentina carries out pediatric well-child care visits and visual health programs in two remotes towns in Neuquen 's province, with limited health care resources and poor access to transportation. By strategic partnership with key stake holders we are able to provide high quality pediatric services to children from newborn to 16 years of age. FBA pediatricians, instructed by Baylor ophthalmologist, performed instrument vision screening during routine check-up visits for 3 to 5 years children.

Findings:

From January 2021 to June 2023, we have performed 689 instrument based vision screening in children between 3 to 6 years old during the well child care visit. During these period, 100% of children aged 3 to 5, attending well child care visits, were visual screened with the photometer. We detected 38 children between this age with vision impairment that where successfully referred to the ophthalmologist and 100 % of them received glasses prescription. Instrument-based vision screening for preschool-aged children can be effectively implemented into primary care practice and results in substantially improved rates of amblyopia detection at earlier ages when treatment is most effective. As part of a QI project we will start measuring the impact on quality of life that has the program in children, by measuring impact in physical, emotional, social and school functioning.

Interpretation:

Source of Funding:

Baylor College of Medicine Chevron , YPF

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 1369

Implementing a Point of Care Ultrasound Quality Assurance Program at the University Teaching Hospital of Kigali

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Background:

In many low- and middle- income countries (LMICs), limited diagnostic imaging remains a clinical challenge in emergency medicine (EM). Point of care ultrasound (POCUS) has emerged as an accessible, affordable, and accurate diagnostic modality.

Despite these advantages, POCUS is highly user dependent, and lack of formal training can limit its utility. Providers performing ultrasound in these settings receive varied levels of training and certification ranging from no formalized teaching to integrated training programs (1). In order to optimize POCUS competency, clinical utility and safety, the standardization of educational curriculums, credentialing processes and quality assurance (QA) workflows is necessary (3).

Methods:

Through a collaboration between the University Teaching Hospital of Kigali (CHUK) and Stanford University, we established a POCUS QA program. We trained EM residents at CHUK in ultrasound image acquisition, interpretation, and documentation. A secure image storage, QA and credentialing database was introduced using Butterfly Network Inc. software. Three CHUK residents were trained as superusers to further educate their colleagues in POCUS workflow and perform QA. To assess the impact of this intervention, the number of ultrasounds recorded, number of users and superusers trained, and number of studies reviewed for QA were counted. Accuracy of resident ultrasound interpretation was compared to expert QA interpretation. Program barriers were identified through direct observation and discussions with superusers.

Findings:

Over 8 months, a total of 403 separate ultrasound scans were performed by resident physicians at CHUK and recorded and reviewed. The highest user performed 107 scans while the two lowest users performed 2 scans. The average number of scans recorded by each resident was 21.39. The sensitivity of resident-performed scans based on interpretation by the QA reviewers was 92.45% and the specificity was 95.3%.

Interpretation:

Overall, our program has trained residents at CHUK to obtain and record POCUS studies in their clinical practice. Resident usage of POCUS remains variable. We believe barriers to the new ultrasound workflow include unreliable Wi-Fi connection, time constraints and added steps in recording each ultrasound study performed. We intend to work with Butterfly and resident superusers to address these barriers moving forward.

Source of Funding:

CIGH SEED Grant, Stanford University

Abstract N°: 1371

Implementation of a genomic surveillance model for the timely detection of pathogens with epi-pandemic potential

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Background:

Infectious diseases are one of the main causes of morbidity and mortality worldwide. Rapid pathogen detection and the understanding of factors contributing to their emergence and spread are paramount in guiding effective prevention, preparedness, and response strategies to outbreaks and epidemics. In the past few years, Brazil was the scenario of the Zika virus emergence in the Americas in 2015, and the country with one of the highest mortality rates due to COVID-19. Therefore, implementing a surveillance system that provides early alerts for timely detection and monitoring of both known and unknown pathogens is crucial for improving outbreak responses in the country, and to control the spread of pathogens of epi-pandemic potential to other regions.

Methods:

This project aims to integrate data from health information systems and other sources to establish an early warning system for outbreaks and changes in epidemiological scenarios in Brazil. Additionally, it will utilize metagenomic approaches for pathogen detection in cases where infections cannot be diagnosed using conventional laboratory methods. The project will count with the involvement of multiple stakeholders, including health authorities, research institutions, epidemiologists, laboratory technicians, molecular biologists, healthcare professionals etc. These participants will be trained by experienced professionals and scientists to perform collection of data and samples from patients; molecular detection of pathogens by qPCR/RT-qPCR and sequencing; molecular and epidemiological data analyses; recording of data in the national databases; elaboration and publication of public bulletins and scientific articles.

Findings:

The molecular panel for detection of respiratory viruses by the Public Health Laboratory was expanded based on results from the project. Additionally, the surveillance of arboviruses was improved, as well as the bioinformatic pipelines for genomic analyses of pathogens. The development of cost-effective detection and genomic sequencing protocols applicable to the surveillance programs of the Brazilian Unified Health System (SUS) will be a key outcome. Given the territorial borders with other South American countries and the significant population movements in the region, the project will include pathogen surveillance in the Southern Cone of the Americas, contributing to global public health by reducing the health and economic burden of infectious diseases.

Interpretation:

By incorporating metagenomic approaches and expanding genomic monitoring, this project constitutes a significant advancement in predictive surveillance, allowing better control of the spread of emerging viruses. Furthermore, it will contribute to the development of prevention strategies for outbreaks, epidemics, and pandemics.

Source of Funding:

This project has funding from FAPERGS and CNPq, Brazil.

Abstract N°: 1379

Household Air Pollution from Cooking is Associated with Cognition and Altered Structural Brain MRI Among Cognitively Healthy Individuals in Rural Karnataka, India

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Background:

Air pollution has been implicated in the development of Alzheimer's Disease and Related Dementias (AD/ADRD). Despite being a leading modifiable risk factor for global dementia cases, the mechanism by which air pollution affects ADRD is unknown. Indians experience extreme levels of household air pollution (HAP) from the use of traditional cooking methods and thereby face potentially serious deleterious effects on cognition. The objective of the study tests the association between structural brain imaging metrics and cognition in the Srinivaspura Aging NeuroSenescence and COGnition study (SANSCOG) and determines if these measures correlated with household cooking.

Methods:

Cross-sectional data from the SANSCOG was analyzed, a major community-based ADRD study of adults living in rural Karnataka running since 2017. The sample of 959 individuals was stratified into three age groups: 45-54, 54-65, and 65+. Cooking was assessed according to HAP exposures: fuel type (polluted or clean), ventilation (with or without a chimney), and equipment (stove or chullah/open fire). Multivariate linear regression was used to test the associations between structural MRI measures (left and right hippocampal volume, white matter hyperintensities, subcortical gray matter volume, total gray matter volume, left and right white matter volume, and total white matter volume) and i) cognition (Hindi-mini-mental state examination score), and ii) HAP exposures. Regression models adjusted for intracranial volume, gender, marital status, education, number of family members, smoking, alcohol consumption, hypertension, and diabetes.

Findings:

Structural MRI metrics were significantly associated with both cognition and HAP exposures for rural Indians who were 65+. Smaller total gray matter volume was associated with worse cognition ($p = 0.033$) and high-risk cooking equipment ($p = 0.042$). Similarly, smaller total white matter volume was associated with worse cognition ($p = 0.015$) and unsafe cooking equipment ($p = 0.035$).

Interpretation:

Exposure to HAP as assessed by cooking methods is associated with deleterious findings on structural MRI, providing one possible mechanism underlying the relationship between HAP and ADRD.

Longitudinal follow-up and more precise exposure assessment will provide additional insights into the mechanisms by which HAP increases the risk of ADRD. These findings have implications for billions of people worldwide who are exposed to HAP.

Source of Funding:

This research was supported by the Metcalf and Kiphart Family Foundation under the auspices of the University of Chicago Center for Global Health.

Abstract N°: 1380

Development of a literacy scale to assess knowledge, attitudes, and behaviors towards climate change and vector-borne disease dynamics in Suriname

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Background:

Prior research has shown that climate change literacy is sparse among low- and middle-income countries (LMICs). Additionally, there is currently no standardized questionnaire available to researchers for measuring climate change literacy among general populations, particularly regarding climate change effects on vector-borne diseases (VBDs). Using this information, we developed and implemented generalized climate and VBD literacy scales to assess current knowledge, attitudes, and behaviors towards climate change and VBD dynamics among adult women currently enrolled in the Caribbean Consortium for Research in Environmental and Occupational Health (CCREOH) cohort in Suriname.

Methods:

Potential items for the scales were generated by our research team and then reviewed by a group of six outside climate and health experts. After expert review, a total of 31 climate change-specific and 21 infectious disease-specific items were retained. We estimated our sample size at a 10:1 ratio of participants to items for each scale. We calculated a 30% oversampling rate to account for participant withdrawals or non-responses, bringing our initial sample size to 390 randomly selected participants from the CCREOH cohort. Data collection was conducted between May and July 2023. In total, 301 women were surveyed.

Findings:

We validated our scales through exploratory (n = 180) and confirmatory factor analyses (n = 121). Exploratory factor analysis for our general climate change scale provided a seven-construct solution of 16 items. Our chi-squared value ($X^2 = 71.78$, $p = 0.123$) indicated that seven factors was sufficient. Confirmatory factor analysis reinforced our findings, providing good model fit ($X^2 = 80.99$, $p = 0.547$; RMSEA = 0.00). Our infectious disease scale gave a four-construct solution of nine items, which was sufficient per our chi-squared test ($X^2 = 153.86$, $p = 0.094$). Confirmatory factor analysis confirmed these results with a chi-squared of 19.16 ($p = 0.575$) and an RMSEA of 0.00 indicating good model fit. We created a comprehensive climate change literacy scale and one that thoroughly assessed VBD associations with regards to climate change effects like temperature and precipitation. This research is vitally important for furthering climate and health education, especially with increases in VBDs spread by *Aedes* mosquitoes in the Caribbean, South America, and parts of the southern United States.

Interpretation:

Our major goal with this work is to expand the scope of global climate change literacy through continued implementation of our scale throughout the Caribbean, South America and parts of the U.S. to determine specific knowledge gaps with the intention to provide more purposeful climate change education in the future.

Source of Funding:

Fogarty International Center of the National Institutes of Health (D43TW009340).

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Background:

Perinatal Depression (PND) is a public health concern impacting women globally and is especially underdiagnosed and undertreated in sub-Saharan Africa (SSA).

Methods:

This systematic review's objectives are to: 1. Assess the PND burden in SSA; 2. Identify methodological challenges in the measurement of PND in SSA; and 3. Provide recommendations for improved systematic PND screening and treatment to improve well-being of women and children in SSA. A systematic review of the literature was conducted, primarily sourcing studies from PubMed. Studies that reported screening for PND in SSA were included in the review. Eligible studies were peer-reviewed and conducted in SSA between the years 2010 and 2022 in which PND was measured and diagnosed using a questionnaire-based instrument. Qualitative studies were excluded to allow for quantitative synthesis.

Findings:

A total of 41 studies from 12 African countries involving 33,848 participants were included. Most recruited women from health facilities (n = 31, 75.6%), and 10 recruited women from a community-based setting. Twenty-nine studies were cross-sectional, 10 were longitudinal, and one was a case-control study. Most (n = 25, 60.9%) screened for depression during the postpartum period, while six screened during pregnancy, and 10 screened during and after pregnancy. In more than one-half of the studies (n = 26) the prevalence of depression was 20% or higher among the sample population. Prevalence rates ranged from 3.8% to 60%, however, the approximate overall mean prevalence of diagnosed depression during the perinatal period was 25.17%. Several methodological issues were identified, including the absence of routine PND screening and treatment options in primary health care facilities, inconsistencies in screening practices and tools, and the measurement of differing lifestyle factors.

Interpretation:

This systematic review identified a high proportion of mothers with depression during the perinatal period (25.17%). However, despite the high prevalence of PND, numerous inconsistencies in measurement tools used, time of screening, and reported lifestyle factors make it difficult to determine a temporal pattern and fixed prevalence rate of PND. To properly address PND in SSA, routine and uniform PND screening and treatment are recommended.

Source of Funding:

None

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Background:

The 2014 Ebola Virus Disease (EVD) epidemic affected an estimated 10,678 Liberians. To characterize the long-term sequelae of EVD, the Liberian government and NIH established the Partnership for Research on Ebola Virus in Liberia (PREVAIL) III Ebola Natural History Study. Participants completed neurocognitive testing to determine whether EVD survivors had cognitive deficits compared to controls. The current study aims to assess challenges encountered while administering the Cogstate neurocognitive subtests to a Liberian population.

Methods:

In 2016, EVD survivors and EVD-seronegative close contacts (controls) were administered five Cogstate subtests at JFK Memorial Hospital in Monrovia, Liberia by one of eight trained examiners, including two Liberia staff. Survivors and controls were age and gender matched. Instructions for Cogstate, which requires a computer and mouse, were read to participants in English (translators were used if necessary). During the evaluation, administrators completed an open-ended paper questionnaire regarding the participant's familiarity with technology, instruction comprehension, and disruptions. 241 questionnaires were reviewed from 8 different examiners. The data presented here were collected from this questionnaire.

Findings:

Of 241 participants (152 survivors, 89 controls), median age was 33, 51% were female and 14% reporting no formal education. Seventeen percent had never used a mouse and 52% had never used a computer. Standardized technology training was provided when necessary, and of the 68 for which such training was mentioned, 43% remained uncomfortable using the technology. Of 238 participants completing at least one subtest, 34% had difficulty understanding task instructions. Testing interruptions (noisy environment, phone ringing, power outage, baby crying) occurred for 18% of participants, with 21% of interruptions precluding administration of at least one test. Ten percent of participants had to skip a task due to interruptions, technology challenges, and/or misunderstanding instructions.

Interpretation:

These data highlight important test considerations when evaluating neurocognition, which may be particularly salient in low- and middle-income countries. We acknowledge limitations given the open-ended nature of our questionnaire. We advocate for development of better tools with cross-cultural sensitivity and standardized tools to collect test administration challenges.

Source of Funding:

NIH/NIAID

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Background:

Skin conditions in Tanzania are magnified by limited resources, including dermatologists and geographical barriers that hinder healthcare access. Bagamoyo, a village of 300,000 residents, lacks any dermatologists. Teledermatology (TD) offers a promising opportunity to bridge this gap. Our study aimed to broaden the availability of TD services to rural health facilities, ensuring that residents can readily access expert care without the necessity of traveling to Bagamoyo District Hospital (BDH). We accomplished this by training Tanzanian primary clinicians in rural Bagamoyo on TD platform usage. Additionally, we evaluated diagnostic and management concordance between the primary clinicians and board-certified dermatologists through consultations.

Methods:

IRB approval was obtained, and TD services were incorporated at four rural health facilities in Bagamoyo, distant from BDH. Social workers referred individuals of all genders and age groups with skin-related concerns to the nearest clinic, where written informed consent was obtained. Patients presented their skin issues to the primary clinician who collected relevant medical history, formulated a tentative diagnosis and plan, and captured skin photographs. This initial assessment was uploaded onto the secure telehealth platform, Africa.telederm.org. Board-certified dermatologists from the Medical College of Wisconsin reviewed the consultation and provided a diagnosis and plan. Descriptive statistics were used to assess the diagnostic and management concordance between Tanzanian primary clinicians and U.S. dermatologists.

Findings:

Out of 131 teleconsultations conducted across all four rural sites, diagnostic results revealed 42.0% concordance between Tanzanian providers' diagnoses and U.S. dermatologists, with 21.4% showing partial concordance (level I or level II), and 36.6% being discordant. For management concordance, 34.3% exhibited complete concordance, 29.8% had partial concordance (level I or level II), and 35.9% were discordant.

Interpretation:

Roughly 36% of cases revealed diagnostic and management disparities, impacting a substantial patient population and creating an opportunity for educational interventions. Our findings demonstrate the necessity of expanding TD services to rural Bagamoyo, which not only alleviates patient travel burdens but also empowers Tanzanian primary clinicians, enriching their education. Further goals include reducing response times and developing educational modules and treatment algorithms.

The results of the study highlight the use of telemedicine in bridging healthcare gaps. To meet rural dermatologic needs, a global health policy could promote expansion of telemedicine services to ensure equitable access to underserved regions.

Source of Funding:

St. Joseph's PES Fund; Dr. Elaine Kohler Summer Academy of Global Health

Introducing the Idea of Physical Therapy Exercises as an Option to Treat Back Pain in the Patient Population of Rural Honduras

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Background:

Back pain is a frequent complaint addressed at the Hombro a Hombro clinic in rural Honduras. The predominant occupation in this area is subsistence farming for men and labor-intensive housework for women. The current treatment standard is ibuprofen or paracetamol. Patients receive a set quantity of the medication as supplies are limited. Some patients also self-treat with over-the-counter steroids. Under the COPC model, the local physician, Dr. Castillo, and the Health Committee identified back pain as an important issue to address. They requested help implementing physical therapy as a treatment for back pain. Physical therapy exercises were demonstrated and practiced with Dr. Castillo and exercise instruction sheets from the website Health Information Translations were approved by local staff for appropriate dialect, language levels, and content, and were distributed to patients who presented with back pain.

Methods:

The project goal was to introduce physical therapy as a treatment option for back pain in patients in the Hombro a Hombro clinic and to explore the effect on prescribed and OTC medication use. Patients who reported back pain and were willing to try physical therapy were taught the exercises and given therapy sheets.

Findings:

From February-September 2023, there is documentation of 43 people agreeing to try physical therapy. Patient satisfaction with this modality will be measured with follow up surveys. Preliminary feedback shows patients' willingness to utilize this modality and reported improvement with it. Dr. Castillo reports a noticeable decrease in requests for analgesics and decreased self-treatment with steroids. Physical therapy instruction for other body regions has also been requested.

Interpretation:

Ongoing challenges include limited provider availability to demonstrate and teach physical therapy exercises, patient literacy levels, patient adherence, and patients' ability to do exercises correctly at home. Future activities can expand upon alternate ways to teach patients the exercises, including using non-physician volunteers to decrease provider burden, and encouraging adherence.

Source of Funding:

None

Abstract N°: 1397

Mobilizing Communities through People-Centered Zero Open Defecation Movement Towards Sustainable Sanitation in the Province of Iloilo, Philippines

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Background:

To address the problem of open defecation, high cases of food and water-borne diseases and high prevalence of undernutrition in the Province of Iloilo, Philippines, the Zero Open Defecation (ZOD) Movement program was started in 2014. The goal of the program is to achieve sustainable sanitation through mobilizing communities in a people-centered approach to improve health and nutrition outcomes and quality of life of Ilonggos. The program targets to achieve province-wide declaration with all municipalities and villages certified as ZOD, reduction in cases of food and water-borne diseases, and contribute in the reduction of undernutrition.

Methods:

The program utilized the following strategies: 1) Institutionalizing the ZOD movement province-wide; 2) Accelerating program implementation and target-focused monitoring; 3) Engaging communities for behavior change and proper hygiene practices; and 4) Recognizing and incentivizing local government (LGU) unit performance. Pivotal program intervention was the enactment of the provincial ordinance on ZOD with its subsequent adoption by all LGUs that resulted to resource mobilization and sharing. The province provided budget for the toilet facilities to support the behavior change by the households. Capacity building of all sanitary inspectors was also conducted to ensure program implementation, monitoring and evaluation from the province down to the local levels. Partnerships and collaboration with NGOs, government agencies, people's organizations and community volunteers were essential in the local implementation of the program. Local health workers and community volunteers were mobilized in the verification for the ZOD certification and in the continued monitoring.

Findings:

Iloilo Province was the first to be declared as ZOD province-wide with all 43 municipalities and 1,721 villages certified ZOD in the Philippines. The program resulted to reduction in cases of food and water-borne diseases from 9,418 cases in 2017 down to 383 cases in 2022. The program also contributed in the steady reduction in the prevalence of underweight, wasting and stunting of children from 2014 to 2022.

Interpretation:

The program on ZOD movement in Iloilo Province can be a model for other areas at the sub-national and local levels in implementing interventions for the sanitation program to improve health outcomes.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1398

Qualitative Evaluation of Girls Invest, A Mobile-Enabled Economic Empowerment Intervention: Health, Social, and Economic Outcomes among Girls in Ibadan, Nigeria

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Background:

Girls Invest is an app-based economic empowerment intervention with trainings on financial literacy, gender equity, relationships, and health – and the intersection of these issues in girls' lives. *Girls Invest* emphasizes how these issues shape girls' futures. In 2023, *Girls Invest* was implemented among 376 girls ages 15-19 across 16 secondary schools in low-income communities in Ibadan, Nigeria. The current study analyzes qualitative data collected to understand participant satisfaction with *Girls Invest* and how the intervention influenced participants' economic, social, and health outcomes.

Methods:

Five focus groups were conducted among 60 participants six months after completing the intervention, ensuring participation across each school. Trained facilitators conducted the 60-minute focus groups in a private setting. Focus group questions sought to understand satisfaction with the app-based intervention as well as benefits over time. Data were analyzed using conceptual content analyses and independently coded by two researchers for themes related to participant satisfaction as well as intervention impact on economic, social, and health outcomes.

Findings:

Participants were 16 years of age on average. The majority (86.1%) were from the Yoruba tribe of southwest Nigeria and most (62.3%) were Christian. Participants reported overall satisfaction with the intervention as well as gaining economic, health, and social benefits as a result of their participation in *Girls Invest*. The most common themes reported were: 1) increased confidence in managing finances independently, 2) greater awareness of issues regarding gender equity and women's rights, 2) benefits from receiving female-specific health information, particularly on the topics of menstruation and sexual/reproductive health, 4) increased understanding of what constitutes healthy dating and sexual relationships, and 5) girls reported discussing these issues with friends as a way to support friends.

Interpretation:

Given the increasing ownership of smartphones across the globe, the use of mobile platforms to deliver health interventions has become increasingly popular and is often more low-cost and scalable than in-person interventions. Our research findings suggest that leveraging mobile technology may represent a promising avenue for bolstering economic empowerment among adolescent females by improving knowledge and awareness of economic, social, and health topics pivotal in supporting their future opportunities.

Source of Funding:

Wellspring Philanthropic Fund

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Background:

Civil unrest during the 2019 social movements in Hong Kong, China involved one-quarter of population (2 million) and had profound social, political, and economic consequences. Although disruption of services and destruction of public facilities was widespread, previous research on the 2019 social unrest have not evaluated the population level impact. This study evaluates the impact of the civil unrest in 2019 on clinically diagnosed depression, anxiety, post-traumatic stress disorder (PTSD) on the Hong Kong population.

Methods:

We analysed 200,000 healthcare attendances for psychiatric disorders covering all public healthcare services in Hong Kong from 2016 to 2019 was analysed. We conducted an interrupted time-series analysis on monthly visit rates for clinician-confirmed psychiatric disorders. We tested for a temporary level change in June 2019 and slope change from June 2019 to January 2020. We performed subgroup analysis by age (under 35, 35-64, 65 and over) and sex as robustness checks.

Findings:

The 2019 social movement was associated with immediate increased visit rates for depression in primary and secondary care (7.5 per 100,000 and 5.5 per 100,000). Onset of the social unrest was associated with immediate increases in visit rates for depression (7.5 per 100,000) and PTSD (1.9 per 100,000) in primary care; and increased visit rates for anxiety (1.3 per 100,000), depression (5.5 per 100,000), and PTSD (0.3 per 100,000) in secondary care. Sensitivity analyses showed higher visit rates during the social unrest in female and the elderly groups for most psychiatric disorders.

Interpretation:

Social unrest during the '2019 social movement' was associated with higher rates of clinician-confirmed depression, anxiety, and PTSD throughout the population. Increased health utilization requires improved planning and resource allocation to make health systems resilient to public mental health crises.

Source of Funding:

Research Grants Council of the Hong Kong Special Administrative Region, China (17601520).

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1400

Introduction of Fundamentals of Vaginal Surgery to Obstetrics and Gynecology Trainees In Ghana

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Background:

Supporting gynecologic surgeons in low-and-middle-income countries (LMICs) to be proficient in vaginal surgery should be prioritized. Vaginal surgery is cost-effective, minimally-invasive, and can increase patient’s access to minimally-invasive surgical care when laparoscopy is limited. Fundamentals of Vaginal Surgery (FVS) is a vaginal simulation system that could be used in LMICs to assess, develop, and maintain vaginal surgical skills. This study aims to evaluate Ob/Gyn trainee exposure to vaginal surgery, their confidence in vaginal surgical skills, and their performance using FVS for basic surgical skills.

Methods:

This study was conducted at a teaching hospital in Ghana and recruited trainees within a 3-year Ob/Gyn residency program. 34 participants were enrolled, comprising 20 (58.8%) first-years, 4 (11.8%) second-years, and 10 (27.8%) third-years. Participants completed a pre-test survey which included participant demographics, exposure to vaginal surgery, and confidence in vaginal surgical skills and procedures. Subsequently, participants performed five tasks: one-handed knot tying, two-handed knot tying, plication suturing, Heaney transfixion pedicle ligation, and free-pedicle ligation. Standardized videos and one-on-one guidance preceded each task. Tasks were performed twice, timed, and an overall normalized score for each participant was calculated. Cut-off times, penalties, and an overall minimum proficiency score of 400 were established for the simulation system in prior studies. Data were summarized using descriptive statistics. The Mann-Whitney U test was used to compare scores between novice (first-year) and experienced (second and third-year) participants.

Findings:

97.1% (33/34), completed 0-50 vaginal surgeries in the past 12 months. Among the 22 participants who specified their vaginal surgery experience, most listed minor obstetric procedures. Only 9.1% (2/22) had completed a vaginal hysterectomy. Confidence in performing vaginal surgical skills was overall low, with the median confidence rating for each task being “slightly or somewhat confident” and for vaginal surgeries being “not at all confident”. These ratings were consistent between novice and experienced participants. For the surgical skills assessment, participants scored a median of 81.0 (IQR 26.5 to 184.0), with no participant achieving the proficiency score of 400, and four participants received a score of zero. When comparing overall median scores, experienced participants scored significantly higher than novice participants (p=0.005).

Interpretation:

This study highlights the limited exposure to vaginal surgery for these trainees. Low confidence levels and low performance scores suggest a need to improve vaginal surgical skills. The simulation distinguished novice from experienced trainees and can be used as a high-fidelity, low-cost tool for skills practice and assessment.

Source of Funding:

University of Michigan Women’s Health Innovation Grant

Brideprice and Bodily Autonomy as Barriers to Cervical Cancer Care: A qualitative ethnographic study among women and men in Malaita, Solomon Islands

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Background:

Solomon Islands has some of the highest cervical cancer morbidity and mortality rates in the world. Three-quarters of people reside in rural, resource-constrained areas with significantly limited access to preventative care. While the government has committed to building a national cervical cancer screening program, it is unclear what barriers including logistics and infrastructure could hinder this effort. To identify potential barriers, we conducted a qualitative ethnographic study among women and men in Malaita, the most populous province and largest ethnic group in Solomon Islands.

Methods:

The study was conducted in Malaita from March – June 2023 with permission from the Solomon Islands Health Research and Ethics Review Board (SIHRERB, Project No. HRE 009/23). Research sites (n = 37) were selected based on geo-distributed ethnolinguistic group. Within each site, we invited a convenience sample of women (n = 691), men (n = 305), female medical professionals (n = 17), and male medical professionals (n = 9) aged 18 and older to participate. After obtaining verbal consent, we conducted semi-structured/informal interviews (n = 208) and focus group discussions (n = 31) in Solomon Islands Pijin. We employed participant observation to identify barriers related to transport, housing, education, and medical facilities.

Findings:

Data was audio-recorded in Pijin then transcribed into English. We thematically analyzed data in Pijin and English, identifying four prominent themes – logistics (transportation, money, time), infrastructure (availability/functionality/efficacy of medical services), female bodily autonomy (brideprice), and education (anatomical/cervical cancer/medical care). Qualitative responses from participants relating to brideprice focused on the commodification of female bodies as sources of labor, male sexual pleasure (monogamy exclusive to wives not husbands), and children. Men, and their relatives, access and control these commodities through paying a negotiated price to the woman's family. A woman's autonomy is thus relinquished to her husband, making her healthcare his decision. According to participants, cultural taboos around discussing sex-specific health topics limits knowledge of cervical cancer risks and care, especially among men. Male participants who had limited knowledge of cervical cancer and preventative care were less likely to express a willingness to consent for their wives to receive care.

Interpretation:

We found, among other significant barriers, that brideprice negatively affects access to cervical cancer care in Malaita. However, we found a positive relationship between awareness/education among men and their willingness to consent to care. Thus, awareness and preventative care campaigns should include both females and males to be most effective.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1405

How was your trip? Implementation and Evaluation of a Post-Return Debrief Curriculum for Trainees Participating in an International Medical Elective

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Background:

While the importance of pre-departure orientation for learners participating in international medical electives (IME) is well established, debriefing after return has received less attention.

Methods:

Indiana University (USA) and Moi University (Kenya) have had a bilateral exchange of trainees for 30+ years. Between 2021-2023, 60 IU trainees who completed an IME in Kenya participated in a debriefing curriculum after their return to the US. The curriculum included an asynchronous component (an online module consisting of video and written reflection questions) and synchronous component (a faculty-led small group debriefing session). Trainees' satisfaction with the curriculum and culture shock were assessed with surveys administered at three timepoints: after completing the asynchronous online module, after the small group debriefing session, and several months after return from Kenya. Moral distress was measured with a Moral Distress Thermometer before and after the small group debriefing session.

Findings:

Participants included medical students (46%), residents (50%), and fellows (2%) and were predominantly female (63.5%), White (75%), and had not previously traveled to a LIMC (77%). The survey response rates were: 87% (upon completion of the IME), 60% (immediately after small group sessions), and 42% (several months after return). Trainees spent an average of 2.9 hours (1.9 hours asynchronous, 1 hour synchronous small group debrief). 61% of respondents indicated that the debriefing video and written reflection questions were helpful or extremely helpful. 75% felt the small group session was helpful or extremely helpful (sustained at 80% several months after their return). 53% of trainees reported some degree of reverse culture shock. Trainees' degree of moral distress decreased after a small group debriefing session (5.12-> 2.53, 1= low distress, 10= high distress, p<0.0001). The majority of respondents indicated that after doing the IME-related debriefing, they found debriefing useful in other areas of their professional and personal lives.

Interpretation:

This study demonstrated that a structured debriefing curriculum is a valued part of transformative immersive learning for trainees and helps alleviate the high levels of moral distress trainees report after IMEs.

Source of Funding:

Indiana University Department of Medicine PACES Grant

Abstract N°: 1415

Critical Evaluation of a Trauma Care Capacity Building Program in Vietnam: A Mixed-Method Approach

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Background:

High trauma-related mortality and disability rates have imposed significant social and economic burdens on Vietnam, while the country's capacity remains limited. In response to this pressing issue, the JW LEE Center for Global Medicine has initiated a comprehensive capacity-building program in Vietnam. This program includes a three-month invitational training in the Republic of Korea (ROK), an on-site educational workshop in Vietnam, and collaborative e-learning initiatives with the Trauma Center at the 175 Military Hospital in Ho Chi Minh City (HCMC), Vietnam. This study aimed to assess the capacity-building program using critical evaluation approaches.

Methods:

We employed a mixed-method approach for critical evaluation to assess the program's performance in meeting its intended purpose, addressing encountered challenges, and fulfilling community needs. We conducted a participant survey to evaluate the program (n=63). In addition, in-depth interviews were conducted with selected participants (n=5) and instructors (n=3) to assess participant motivations, identify program limitations, and determine potential future directions for the program.

Findings:

The results from the survey indicate that participants generally expressed satisfaction with the workshop program. In particular, the participants reported the intended objective was met (mean score: 4.2 out of 5) and addressing need and demands for local community were satisfactory. In-depth interviews with participants revealed needs for additional hands-on practical training and guided surgery in a form of small group. From the instructors' perspective, they raised concerns regarding possible gaps between participant satisfaction and actual knowledge acquisition. It was suggested that the workshop should cover not only the topic requested by the community, but also fundamental knowledge in the field of trauma care that the medical instructors determined.

Interpretation:

The findings underscore the need for an ongoing capacity-building program, which has also identified areas for potential improvement. The program should encompass more than just theoretical lectures; it should include practical education, such as hands-on training and guided surgical experience to cater to the specific needs of the community. Furthermore, the program should aim to strike a balance between community-driven content and foundational trauma care knowledge curriculum components, determined by qualified instructors. To ensure the program's effectiveness, it is encouraged to foster collaborative decision-making between program providers and the community.

Source of Funding:

None

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Background:

Road traffic injuries (RTIs) continue to be a huge burden in developing countries. Currently, no systematic reviews are available on RTIs in Sri Lanka. This review aims to increase understanding of the circumstances and impacts of RTIs in Sri Lanka by characterizing the evidence on RTI patterns, health outcomes and financial burden to patients and the healthcare system.

Methods:

PubMed, Google Scholar, Ovid, Global Index Medicus and Epistemonikos were searched for literature, using MeSH terms (“Accident,Traffic”) and other key words (e.g.“Road Traffic Injury”, “Accident” and “Sri Lanka”). Studies on injury patterns, health outcomes or economic burden of RTIs in Sri Lanka were selected. Case reports, global/regional studies were excluded.

Findings:

From 350 search results, 25 articles were chosen, after merging duplicates and several stages of screening using inclusion/exclusion criteria. Populations mostly involved were males, young adults, and motorbikes and three-wheeler users. Incorrect, negligent or violent driving is the most common underlying cause of accidents. Very few RTI victims receive any prehospital care. Three wheelers are the most common mode of transport utilized to reach medical care. The most common site of injury was the lower extremities while the injury most highly associated with mortality was head injury. Overall the RTI fatality rate was 3 - 6.72% across studies, however the literature demonstrated that pedestrians, motorbike and three-wheeler users suffered higher than average rates of both mortality and long term disability. In recent studies, loss of income per injured road user was \$98.94 – \$208.11, mean cost to hospital per injured road user was \$ 65.33- \$194.93. Cost per road traffic injury has increased from \$117.25 in 1999 to \$666.37 in 2016.

Interpretation:

This review highlights a number of key road user groups suffering from a large portion of RTI related morbidity and mortality in Sri Lanka, resulting in significant associated cost, both to the patient and healthcare system. As only online resources were used, there is a limitation of articles from local journals and conferences in this review. Not restricting the literature search to a specific time period is a strength of this review. The results of this study can be used to guide ongoing research into the root cause of the above patterns, which can drive targeted, RTI focused, public health interventions.

Source of Funding:

none

Abstract N°: 1422

Identifying Barriers to TB Screening in Pregnant Women in Community Health Care Settings in Central India.

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Background:

Indian women of reproductive age represent 26% of TB cases with an estimated 20,000 to 40,000 experiencing adverse maternal and child outcomes. The Government of India's 2021 Collaborative Framework for the Management of Tuberculosis in Pregnant Women recommends mandatory TB screening during antenatal care visits. Despite these guidelines advocating upfront screening for all pregnant women, the prognosis for TB during pregnancy is alarming, characterized by a heavy burden and poor outcomes, a significant knowledge and awareness gap still exists regarding these crucial guidelines. Our study aims to understand the barriers and challenges with respect to TB screening and treatment in pregnant women in a community-based Indian primary healthcare setting.

Methods:

A cross sectional TB Knowledge, Attitudes, and Practices (KAP) survey was conducted amongst the Healthcare workers and Pregnant women in the Mandideep Civil Hospital of the Raisen District of Madhya Pradesh, India between June- July 2023. The study was deemed IRB exempt. All participants provided written informed consent. A structured , pre-validated questionnaire was used to collect data which was analyzed using Microsoft Excel using descriptive statistics.

Findings:

Among 87 pregnant women, 81.61% (71/87) believed TB is treatable, 25.58% (22/87) prioritized TB screening in pregnancy, and 67.44% (58/87) were open to screening. 48.28% (42/87) would seek doctor guidance, 88.37% (76/87) would discuss symptoms, but only 36.04% (31/87) would seek TB treatment immediately.

Of the 18 doctors and nurses, 66.66% (12/18) prioritized TB screening in pregnant women, 83.33% (15/18) lacked awareness of India's TB pregnancy guidelines, and 55.56% (10/18) felt inadequately informed. Among 49 field health workers, 53.06% (26/49) knew about TB welfare schemes, 57.41% (28/49) worried about acquiring TB at work and 28.57% (14/49) received relevant training.

Limitations include single site surveying;

Strengths include considering both Health Care Workers and Pregnant Women perspectives as well as the ability of this KAP study to directly inform Quality Improvement initiatives.

Interpretation:

Despite the guidelines in place and willingness of the majority of pregnant women to be screened for TB, most are not being screened. Healthcare workers reported being unfamiliar with the guidelines. Based on this data, QI initiatives have been launched with ongoing efforts to enhance screening in the community setting.

Source of Funding:

Emory Global Health Institute Field Scholars Award, CETI, GMC Bhopal.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1424

Uncovering Tobacco Dependence Treatment Practices of HIV Healthcare Providers in Kisumu, Kenya

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Background:

Kenya faces a severe HIV- tobacco syndemic, given that people living with HIV (PLHIV) use tobacco at a significantly higher rate than the general population and thus suffer higher rates of preventable mortality due to the compounded harms of both tobacco and HIV. However, there is a scarcity of research on how to effectively integrate tobacco cessation within HIV care paradigm in low- and middle- income countries such as Kenya. This study seeks to investigate factors and conditions that affect Kenyan healthcare providers' delivery of tobacco cessation services for PLHIV.

Methods:

We surveyed 287 HIV healthcare providers working in 20 Ministry of Health clinics in Kisumu, Kenya. Survey questions included demographic characteristics, as well as attitudes and practices regarding tobacco cessation services. Attitude questions included Likert scale options ranging from "strong agree" to "strongly disagree" and questions about cessation services had responses that ranged from "always" to "never". Logistic regression was conducted to assess the relationship between demographic characteristics, attitudes, and the frequency of the "5 A's of tobacco cessation (ask, advise, assess, assist, arrange)".

Findings:

Providers were predominantly female (68%), had a post-high school certificate (28%) or diploma (60%), and had not received tobacco cessation training in the past 24 months (90%). In our logistic regression model, only healthcare providers' education attainment was found to be significantly associated ($p < 0.05$) with how frequently they adhered to the 5 A's. Providers with post-high school certificates had, on average, about 2 times higher odds as those with diplomas to report that they "always or usually" carried out all 5 A's ($p < 0.05$). Those with Bachelor's degrees or higher had about 40% lower odds ($p < 0.05$) of "always or usually" asking or assessing patients compared to those with diplomas, although no statistical significance was determined for the other 3 A's. No other demographic characteristic or attitude was significantly associated with provider responses to the 5 A's.

Interpretation:

The findings convey that additional years of education are associated with lower frequency of conducting the 5 A's of tobacco cessation. This is in contrast with most existing literature. Given Kenya's constrained healthcare infrastructure, task shifting is often implemented to maximize productivity and is a plausible explanation for this finding.

Source of Funding:

Funding was from the National Institutes of Health in USA.

Abstract N°: 1431

Prenatal secondhand smoke exposure and dental caries in children of the Household Air Pollution Intervention Network (HAPIN) trial, India

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Background:

Second-hand smoke (SHS) exposure has been identified as a risk factor for several childhood health problems including dental caries. Globally, more than 600 million children have early childhood caries (ECC). The prevalence of ECC in India is a staggering 50%, majority of which remains undiagnosed or untreated. This has a negative impact on children's growth, neurodevelopment, school performance, and quality of life. Development of primary tooth bud begins in the 5th week of gestation and mineralization occurs around the 13th week; continuing throughout pregnancy into the first year of life. During this crucial period, exposure to SHS can have detrimental impact on tooth calcification and mineralization. This study evaluated the association between the trimester of SHS exposure and ECC in children of the Household Air Pollution Intervention Network (HAPIN) trial, India.

Methods:

Within the HAPIN cohort, consisting of 712 mother-child pairs, data was collected on maternal exposure to secondhand smoke during each trimester through both self-reporting and urinary cotinine measurements. The caries experience in offspring was assessed using ICDAS between 36 to 60 months of age. Adjusted for confounders, log-binomial regression estimated the risk ratio (RR) and 95% confidence interval (CI) of the association between trimester of SHS exposure and the risk of ECC.

Findings:

Thirty percent reported exposure to SHS in the first trimester of their pregnancy, 28% in the second and third. Seventy-six percent of children whose mothers were exposed to SHS during pregnancy had ECC. Exposure to SHS in the first, second, and third trimesters were independently associated with a higher adjusted RR (95% CI) of caries experience.

Interpretation:

Exposure to SHS during pregnancy may adversely impact the oral health of offspring, regardless of the specific trimester in which this exposure occurs.

Source of Funding:

Fogarty International Center, National Institutes of Health

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Background:

Thoracotomy is indicated for several congenital and acquired disorders in children. It is among the surgical procedures which require a well-trained and dedicated surgical, anesthesia and critical care team which can be difficult to assemble in a low-income country setup. As the pattern and outcome of thoracotomy in children remained unreported from such setting, this study aims to shed light on this matter.

Methods:

A descriptive cross-sectional review was conducted. Children who have undergone thoracotomy for non-cardiac pathologies were included in the study. Demographic and clinical data were collected by chart review. Frequencies and percentages were used to describe categorical variables while mean, median, standard deviation and interquartile range were calculated for continuous variables.

Findings:

A total of 68 patients were operated on in the study period, out of which 44 (64.7%) were males. The mean ages of the children at the time of diagnosis and procedure were 4.05 ± 3.9 years and 4.14 ± 4.03 years, respectively. The most common indication for thoracotomy was pulmonary hydatid cyst (17; 25%) followed by congenital lobar emphysema (11; 16.2%). Muscle sparing posterolateral thoracotomy was the most common approach in 66 (97.1%) patients. The analgesic medications that were used in the post-operative period were paracetamol, diclofenac, ibuprofen, tramadol and morphine. Combined analgesics were administered in two-thirds of the patients while a single analgesic was used in the rest of the children. No regional blocks were administered post operatively as pediatric size catheters were not available. The morbidity and mortality rates were found to be 11.8% and 8.8%, respectively.

Interpretation:

The most common indication for thoracotomy in this study was pulmonary hydatid cyst. The provision of postthoracotomy analgesia in our institution is suboptimal as evidenced by no use of regional blocks and poor practice of administering multimodal analgesia. Thoracotomy was associated with fairly high morbidity and mortality.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1441

Strengthening Health Systems through Maternal Death Review to Improve Maternal Health Outcome in the Province of Iloilo, Philippines

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Background:

The Province of Iloilo in the Philippines has achieved lowering its maternal mortality ratio (MMR) to 28 per 100,000 livebirths in 2022, which is below the national average of 64 MMR. To sustain this rate and even achieve the goal of zero maternal death, the health systems in the province must be strengthened through a responsive mechanism. As such, a Maternal Death Review (MDR) system was established in the province since 2017.

Methods:

A total of 33 MDRs were conducted from 2017-2022 in the province to identify the causes of death and the contributing factors in the health system. A structured process being facilitated by the provincial health office is followed during MDR with the expert panelists and stakeholders from the primary care and hospitals. The results and recommendations are disseminated to all stakeholders through a dissemination forum.

Findings:

The results showed that 91% of maternal fatalities occurred during the postpartum period while the 9% happened during pregnancy. Furthermore, 49% of deaths were gravida 2-4, 30% were gravida 5-10 and 21% were primigravid. In terms of place of occurrence, 58% of deaths occurred in the hospital, 39% at home and in-transit, and the remaining 1% in the primary care facilities. The primary factor in all of these deaths is the delay in seeking medical attention. The province strengthened systems to improve health-seeking behavior, family planning, facility-based deliveries and capability of the hospital. As such, province has maintained its low MMR, which is consistently below the national MMR although there was a slight increase in 2020 at the height of COVID-19 pandemic.

Interpretation:

Establishing the MDR system as part of the maternal health program can improve maternal outcome so that strengthening of the health system can be responsive based on the results of the MDRs.

Source of Funding:

None

Abstract N°: 1444

Perceived and Objective Evaluation of Numeracy among Pregnant Women Engaged in Home Blood Pressure Monitoring in Accra, Ghana

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Background:

99% of maternal deaths from hypertensive disorders of pregnancy (HDP) occur in low and middle income countries (LMICs). In high income countries, home blood pressure (BP) monitoring (HBPM) has been used in pregnant women with high risk of HDP. Low health numeracy is a possible challenge barring success in LMICs. Our objective was to evaluate perceived and objective numeracy among Ghanaian pregnant women engaged in HBPM.

Methods:

Participants were currently pregnant individuals at Korle Bu Teaching Hospital (KBTH-IRB 00098/2021 ethical approval) in Accra, Ghana. Participants received training on use and interpretation of an automatic Microlife BP monitor with numerical and color outputs. They then logged their BP at home for 2-4 weeks. At their next antenatal visit, participants were given a numeracy survey which included questions on perceived BP numeracy, objective identification of “normal” vs “elevated” BP outputs using images of 16 monitors (8 with numbers only and 8 with numbers and colors), and a validated numeracy assessment from Bangladesh’s 2011 Literacy Assessment Survey. The assessment has 6 arithmetic questions for a total of 25 points with scores less than 12.5 categorized as “no numeracy” and those equal to or greater than 12.5 categorized as “numeracy”.

Findings:

Among 80 participants, 45 surveys were completed in English, 33 in Twi and 2 in Ga. Formal education ranged from no education to tertiary education. Of the 70% (N=56) of participants who indicated they “definitely” knew if their home BP values were elevated, 95% (N=53) were able to correctly identify 75% (12/16) of the presented BP meters as “normal” vs “elevated”. 77% (N=43) who indicated “definitely” were categorized as having “numeracy” and the remaining 23% (N=13) were categorized as “no numeracy”. A two-tailed t-test was run to compare the average scores on the numerical output only with both the number and color output. Participants correctly identified a significantly higher amount of BP meters when provided with both numbers and colors ($\mu=7.19$, $\sigma=1.35$) as compared to numbers only ($\mu=6.54$, $\sigma=0.81$) with $p=0.0003$.

Interpretation:

HBPM programs in lower-resource settings would benefit from incorporating blood pressure meters which include both numerical and color output. A validated numeracy survey as well as self perceived numeracy questions may be good tools for determining which patients would succeed in HBPM.

Source of Funding:

None

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Background:

Malnutrition continues to be a significant humanitarian concern in Yemen, prompting multiple international and intergovernmental agencies to take proactive measures to reduce its prevalence. To track progress and evaluate the effectiveness of humanitarian responses, data are being routinely recorded, yet a lack of cross-agency coordination makes the analysis challenging, reducing the efficiency of assessing progress. This study aims to address this challenge by harnessing data from two different United Nations agencies in Yemen and evaluating whether multi-site compilation and analysis could effectively predict child malnutrition prevalence based on nutritional treatment actions.

Methods:

To assess the predictive capacity of nutritional treatment on the prevalence of child malnutrition, we compiled monthly time-series datasets from two primary sources covering the period from 2020 to 2022 among Yemen's 20 governorates. The Office for the Coordination of Humanitarian Affairs (OCHA) provided data tracking nutritional treatment activities progress, and the World Health Organization (WHO) supplied data on malnutrition prevalence among children under five. The datasets were harmonized by year, month, and governorate and assessed for completeness; the merged dataset comprised ten distinct OCHA treatment indicators and four WHO malnutrition measurements. We employed vector autoregressive regression models to investigate the longitudinal relationships between variables within these two datasets and conducted Granger causality tests to explore temporal causal relationships among the variables.

Findings:

Data completeness across variables, time points, and location varied, averaging at 33%. Among variables with >90% completeness, we found that the number of children with severe acute malnutrition and complications admitted for treatment in therapeutic feeding centers was positively and significantly associated with both moderate acute malnutrition (MAM) and severe malnutrition (SAM) in the following month in Al Dhale'e (coef_{MAM} = 0.73, p <0.0001; coef_{SAM} = 0.59, p =0.0005) and Al Hudaydah (coef_{MAM} = 1.04, p <0.0001; coef_{SAM} = 1.26, p <0.0001) with a significant Granger causality. Also, children with severe acute malnutrition without complication admitted for treatment in outpatient therapeutic programs and acute malnutrition were positively and significantly associated with moderate malnutrition in the following month in Sana'a (coef_{SAM} = 0.64, p <0.0001) and Al Hudaydah (coef_{SAM} = 0.51, p =0.0003) with a significant Granger causality.

Interpretation:

This preliminary analysis underscores the promise of utilizing malnutrition treatment data for predicting malnutrition rates through data harmonization from multiple agencies. Our next step is to further examine data completeness, algorithmic bias, spatiotemporal trends, and seasonality in predicting the efficacy of active treatment centers to reduce malnutrition.

Source of Funding:

None

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Program/Project Abstract

Abstract N°: 1460

Reducing perinatal death in South Bench Woreda, south west Ethiopia Through a Combined Community and Facility Quality Improvement project

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Background:

As part of its commitment to ensuring Universal Health Coverage (UHC), Ethiopia aspires to provide the full spectrum of essential, quality health services through strengthening the primary healthcare system. The Combined community facility Quality Improvement initiative, will foster collaboration between health facilities and communities taking the role of community participation throughout the cycle of

Methods:

The CCFQI will follow a problem-solving process based on the principles of quality improvement (QI), defining priority problems informed by data, designing improvement projects and implementation through leveraging local solutions and community engagement. The CCFQI aims to reduce perinatal death by a third from the current level for the south bench Woreda west Ethiopia through collaborative efforts between health facilities, the community, community leaders, and healthcare providers. To effectively co-design and operationalize the CCFQI, a design workshop was run where all stakeholders based on data from the district identified a priority problem within the district and developed an aim statement. Quality improvement strategies through multiple Plan-Do-Study-Act (PDSA) cycles implemented.

Findings:

Through this effort, 26 community quality improvement teams were established at each of the communities where the Health posts are present, 6 health centers providing oversight for the 26 health posts strengthen their quality teams and the Woreda health office were also capacitated to provide overall implementation support and oversight. All quality team members were trained on quality improvement and then designed together for a quality project “reducing perinatal death at the district by two-thirds” they identified based on the data at the district and shared tasks that helped them achieve their common goal. The results section will describe the process and output of the co-creation workshop, capacity building, QI process and the PDSA cycle, on-the-job support for the communities and facilities and measurable improvements to the common goal across from community, health center and overall progress of the woreda

Interpretation:

By leveraging collaborative relationships, continuous quality improvement methodologies, and community engagement, the CCFQI has started to show promising improvements in areas of change project and enhanced community participation across the improvement project cycle

Source of Funding:

Bill and Melinda Gates Foundation

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Background:

Healthcare access poses a considerable challenge to India's 1.4 billion population. 150,000 Ayushman Bharat Health and Wellness Centres (AB-HWC) established to improve healthcare access at the sub-centre level warranted introduction of a new cadre of public health professionals called Community Health Officers (CHO), primarily nurses and some graduates of Indian systems of medicine who underwent a bridge course. Interim technical evaluations highlighted challenges of role clarity, confidence, and managerial skills. To support this new cadre, the Distance Education Unit of Christian Medical College Vellore designed a pan-India virtual mentorship program to mentor 36000 CHOs supported by National Health System Resource Centre and Bill and Melinda Gates Foundation.

Methods:

The aim was to develop a competent, functional, and scalable virtual mentorship model to provide high-quality, on-the-job mentoring for the CHO. This 360-degree webbed model was delivered in 4 phases through a cascade of mentors namely, 5 Master Trainers (MT), 30 National Mentors (NMs) and 1000 State Mentors (SMs).

NMs were shortlisted based on qualifications, experience and an interview process. SMs nominated by each state, were selected through a screening exam and underwent as 3-month training phase, followed by a 6-month Observed Mentoring Phase of guided mentoring 36 CHOs each, a 3-month Independent Mentoring Phase with minimal guidance, followed by an ongoing Extended Mentoring Phase and were certified as per criteria.

The curriculum consisted of 3 components delivered asynchronously and synchronously namely App-based self-learning modules, Live Group Mentoring sessions and Personal Mentoring sessions held online. A sustainability plan for effective mentoring of current and future CHOs is handed to State Nodal Officers.

Findings:

This is the largest known virtual mentoring program combining innovative cascading mentorship model and virtual training approaches to mentor large numbers without displacing from workplaces. 30 NMs and 191 SMs have been certified. 6672 CHOs have been enrolled so far from all 28 Indian states and 4 out of 8 Union Territories. Reports from SMs and CHOs indicate personal transformation, increased confidence in CHOs to perform their 3 roles as Clinician, Public Health Specialist and Manager and enhanced quality of service delivery in AB-HWCs.

Interpretation:

Connectivity issues, liaising with all the states of the country, and lack of understanding of the concept of mentorship have been the major challenges.

Source of Funding:

This mentoring Program is funded by Bill & Melinda Gates Foundation

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1465

Vietnam Cancer Club: Connecting and educating health care professionals across disciplines and hospitals in Vietnam through social media, online activities and in-person events

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Background:

Lack of medical knowledge and multidisciplinary collaboration are two barriers to improving cancer care delivery in Vietnam. Communication between different specialists involved in a patient’s care is frequently poor due to cultural norms, physical separation, time constraints, and absence of a universal electronic medical record system. In addition, timely access to updates in cancer diagnosis and treatment is often difficult due to lack of English proficiency and availability of medical journals.

Methods:

Vietnam Cancer Club (VCC) is a volunteer-led organization created in August 2022 which welcomes health care professionals from all specialties interested in the treatment of cancer patients in Vietnam. VCC created a private Facebook page to share articles, webinars, guideline updates and information related to research, training, and grant opportunities. The Facebook group also provides a forum for health care providers to ask questions. In addition, VCC organizes regular in-person and online case conferences, journal clubs and lectures by US experts. VCC aims to improve medical knowledge and the quality of patient care by (1) fostering relationships and communication between providers from different specialties and hospitals, (2) disseminating important research findings related to cancer diagnosis and treatment, and (3) promoting critical thinking skills and open dialog through discussion of journal articles and cases.

Findings:

Over the past 13 months we have recruited 580 members and expanded from one location to three sites including Hanoi, Ho Chi Minh City, and Danang. We have organized 16 in-person and 33 online events for a total of 49 hours of educational instruction. Ninety-seven percent of members report that they have learned something new that will affect how they manage patients after attending an event.

Interpretation:

Utilizing our pool of volunteers and social media we plan on recruiting additional champions to organize events in other cities across Vietnam. Once we are firmly established in Vietnam, we plan on expanding our scope and creating chapters in neighboring Laos and Cambodia.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1480

The Latin America and the Caribbean Code Against Cancer, 1st Edition: a collaborative effort for cancer prevention

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Background:

Preventable risk factors are responsible of at least 40% cases and almost 45% cancer deaths worldwide. Cancer is already the leading cause of death in almost half of the Latin American and the Caribbean (LAC) countries. The LAC Code Against Cancer 1st edition has been developed between 2021 and 2023 to assess the most recent evidence on primary and secondary prevention of cancer, and to provide priority areas of action for reducing the cancer burden in LAC. It consists of 17 evidence-based recommendations for the public and policymakers of LAC.

Methods:

Under the World Code Against Cancer Framework, from the International Agency for Research on Cancer, and the support of the Pan-American Health Organization, independent experts in epidemiology, cancer prevention and public policies, and stakeholders representing the civil society from LAC, were convened. The process has entailed collecting, analysing, and evaluating the most recent scientific evidence, with the objective of supporting cancer prevention recommendations, and anticipating challenges in implementing the recommended policies and innovations. An adaptation of the PRECEDE-PROCEED model was used to establish a planning, monitoring and evaluation framework.

Findings:

17 recommendations, adapted to the socio-economic and cultural context of LAC, to promote a healthy weight, physical activity, healthy diet, breastfeeding, and cancer screening; to prevent cancers due to hepatitis B and C viruses, Human Papilloma Virus, Human Immunodeficiency Virus, and *Helicobacter pylori*; to reduce the consumption of tobacco-related products, alcohol, ultra-processed food or very hot beverages; and to reduce exposure to second-hand smoke, solar exposure, indoor and outdoor air pollution, work-related carcinogens, and hormone replacement for menopause.

Interpretation:

LAC's diversity in geography, developmental progress, literacy, ethnicity, and access to health care resources, are today's challenges to implement cost-effective interventions to reduce cancer incidence and mortality. The LAC Code Against Cancer provides a comprehensive package to educate the public on healthy behaviours, to encourage adherence to preventive interventions, and to guide governments in implementing cancer control strategies. This collaborative effort should build the capacity and competencies to health professionals, policymakers, stakeholders, and patients and their families, to contribute to reducing the burden of cancer in LAC.

Source of Funding:

The Latin American and Caribbean Code Against Cancer project was co-funded by the Sociedade Beneficente Israelita Brasileira Albert Einstein (HIAE) / amigo_h (Amigos Einstein da Oncologia e Hematologia), Brazil (Grant number: DCA-ENV-2020-01), and the International Agency for Research on Cancer (IARC/WHO), France.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1483

Differences Between Viral Suppression and Psychosocial Markers among Adolescents living with HIV: The Role of Self-Efficacy, Quality of Life, and antiretroviral knowledge in Dar es Salaam, Tanzania

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Background:

In Tanzania, two of the three UNAIDS 95% targets for combatting HIV have been reached (identifying PL-HIV, providing ART respectively). The 3rd target has not (95% achieving viral suppression [VLC]). National report indicates VLC among adolescents with HIV(AWHIV) is 56-73%. To address this gap, we examined the association between VLC and psychosocial indicators among AWHIV

Methods:

We administered a culturally adapted battery of self-reported behavior, environmental and self-efficacy measures to randomly selected 558 AWHIV aged 15-19 years on ART from 10 high volume facilities in Dar es Salaam from August 2022 to May 2023, in a cross-sectional study. Primary outcome (VLC) data was from facilities' databases. Total scores and single item indicators were entered as dependent variables into separate general linear models using dichotomous independent variable: VLC (<50) vs. No VLC (>=50). Ethical approval, signed informed consents were obtained before starting

Findings:

There were no significant differences between VLC groups on depression, social support, or stigma ($p > .05$). The VLC group reported significantly higher quality of life compared with No VLC group ($F=10.3$, $p < .001$), a difference which was small in magnitude ($d=.34$). Single item indicators of health self-efficacy ("I am confident I can take care of my health"), life goals/ambition ("I aim to be successful [example, finishing school, getting a job]"), and ARV administration knowledge ("I know at what times I take my ARVs") all significantly differentiated VLC groups. The VLC group reported significantly higher healthcare self-efficacy ($F=3.9$, $p < .05$) and higher life goals/ambitions ($F=4.7$, $p < .05$) compared with the No VLC group. The magnitude of these differences was small ($d's=.21$). The No VLC group reported significantly higher ART administration knowledge ($F=4.1$, $p < .05$) compared with VLC group ($d=.23$).

Interpretation:

Findings suggest that experiencing symptoms of depression and stigma, and perceiving social support occurs regardless of one's VLC status; however, having VLC is associated with higher reports of quality of life, albeit to small extent. Also, to small extent, healthcare self-efficacy and having life goals/ambitions may play some role in viral suppression, and people with No VLCs may be more knowledgeable about their ARV medication regimen, which would be expected given the stressors of having No viral suppression

Source of Funding:

FIC/NIH D43TW010946: Patient Centered Outcome Research (PCOR) in Tanzania

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Background:

India contributes to 18% of global stillbirth mortality and has the highest absolute number of stillbirths worldwide. Improving quality of prenatal and obstetric care is estimated to reduce up to 40% of stillbirths. Despite the high burden and preventable nature, stillbirth reduction is not high on the national healthcare agenda. Moreover, stillbirth is globally neglected. One depiction of neglect is absence of stillbirths in the Global Burden of Disease study estimates. Our study assessed the disease and economic burden associated with stillbirth in India.

Methods:

We calculated the stillbirth rate, stillbirth-adjusted life expectancy (SALE), and disability-associated life years (DALY) based on a framework proposed by Kant in a 2016 study. The number of stillbirths, live births, and life expectancy was derived from Health Management Information System (HMIS) 2019. Two stillbirth rates were calculated- still live birth rate (SLBR) and still total birth rate (STBR). SLBR used live birth as the denominator for rate calculation while STBR used total birth i.e., live and stillbirths. Typically, life expectancy calculations are based on only live births. We calculated life expectancy of total birth (LETB) or SALE using a method proposed by Kant where SALE is obtained by dividing a product of LELB and thousand by a sum of thousand and SLBR. Disease burden (DALY) was calculated by multiplying live births with the absolute difference of LELB and LETB. We calculated economic burden using the value of life year (VLY) approach where we multiplied stillbirth DALYs with per capita gross domestic product, derived from 2019 Reserve Bank of India data. All monetary values are expressed in Indian National Rupees (INR).

Findings:

As per HMIS 2019 data, reported stillbirths in India were 263342. The SLBR and STBR for India were 12.4 and 12.25, respectively. On adjusting, stillbirths decreased national life expectancy by 0.85 years. Nationally, stillbirth contributed to 18.1 million DALYs and the economic burden was INR 7.7 trillion in 2019. States of Odisha, Gujarat, Maharashtra, West Bengal, Madhya Pradesh, Rajasthan, and Uttar Pradesh contribute to more than 50% of the national stillbirth disease and economic burden.

Interpretation:

These findings are useful for integrating stillbirth into the health agenda and for advocating for investments in stillbirth prevention based on potential economic losses. Geographical analysis of the stillbirth burden will aid policymakers in focusing interventions in high-priority areas.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1491

Initiating a novel Master of Science Program in Global Health in Nepal: Lessons Learnt

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Background:

There are limited global health training programs in the universities in low and middle-income countries (LMICs) leading to lack of career and professional development opportunities. This directly impacts the representation of LMICs in the engagement on global health professionals from the LMICs in global health discourses, leadership and program implementation. There is thus an imminent need of developing training programs, preferably formal academic degrees, in global health in LMICs.

Methods:

We at Kathmandu University developed a 2.5 years program of Master of Science in Public Health with Global Health Track with 5-10 students per year enrollment. In the first two semesters the students get extensive training on the foundation of public health, elective courses, and research methods. In the third semester, the students have courses on global health, implementation research, program evaluation, project management, leadership in global health and a practicum experience. The fourth semester comprises of thesis works and the fifth semester is an internship during which the students lead programs under supervision. Throughout the program, the students also get exposure to online and also onsite training programs with universities and organizations from other countries. They also get opportunity to engage in the projects led by leading global health organizations and government. We also developed Consortium of Academic Institutions for Public Health in Nepal (CAIPHEN) to help strengthen the program through mutual exchange of faculty, sharing of resources and organization of joint academic programs.

Findings:

Two batches of the program (total 10 students) have graduated and the fourth cohort is currently enrolled. Besides the theoretical training, it is important to collaborate with various organizations working in global health and carve training opportunities for the students. Whereas it is difficult to get in-country faculty members for the program, creating modular courses that can be run through other institutions, and also utilization of online training opportunities provides unique opportunities. Provision of developing and incorporating newer elective courses of contemporary relevance provides excellent prospects of enriching the program.

Interpretation:

It is possible to develop good quality global health training programs by harnessing the unique strengths of various global health organizations, government, universities and experts; utilizing existing global health projects as learning opportunities in academia; and developing collaborative structures to support the program.

Source of Funding:

None

Factors Associated with Institutional Delivery in Rural Kavre District of Nepal: A Cross-sectional Study

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Background:

Institutional delivery has been proven to be a key strategy in reducing maternal and neonatal mortality and improving their health. The Nepal government provides financial incentive for the women who come to delivery in a health institution to eliminate the financial barrier and boost the institutional delivery and to improve maternal health. It is essential to assess the use of institutional delivery in order to lower the risk of maternal mortality and morbidity in nations like Nepal. Therefore, the study aimed to assess the factors associated with the institutional delivery service utilization among the mothers of rural Kavre district of Nepal.

Methods:

A descriptive cross-sectional study was conducted among 242 mothers of Kavre district who gave birth within one year period prior to the interview using random sampling. Data were collected using a structured questionnaire. To determine the potential factors associated with institutional delivery service utilization, a multivariable analysis using logistic regression was performed with adjusted odds ratio (AOR) and 95% confidence interval (CI). Data were analyzed using STATA-14.

Findings:

Out of 242 mothers, only 18.3% of them had institutional delivery. And among the women who had home delivery, majority of them did not think necessary to deliver in health facility. The mothers with formal education [AOR=3.29 (95%CI: 1.69–6.40)] had significantly higher odds of delivering in a health institution as compared to those who had no formal education. Similarly, age at 1st pregnancy [AOR=1.24 (95%CI: 1.12-1.38)], and number of pregnancies [AOR=2.56 (95%CI: 1.12–5.86)] were significantly associated with higher odds of the institutional delivery.

Interpretation:

Low utilization of institutional delivery prevails among the mothers of rural Kavre district of Nepal. The findings underline the significance of scaling up efforts to attain universal health care, concentrating in particular on illiterate women in rural regions. Raising awareness is necessary in rural places where unfavorable pregnancy outcomes are not taken seriously.

Source of Funding:

This study was funded by Ncell.

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Background:

Exstrophy epispadias complex (EEC) is a spectrum of congenital abnormalities that involves urinary system, musculoskeletal system, pelvis, pelvic floor, abdominal wall, genitalia, and sometimes the spine and anus. It encompasses epispadias, classic bladder exstrophy, cloacal exstrophy and other exstrophy variants. The management of EEC is primarily surgical. The surgical procedures are either functional anatomic reconstruction (single staged or multiple staged) and urinary diversions. The principal goals of surgical reconstruction in EEC are achieving urinary continence with volitional voiding, preservation of renal function, and functional and cosmetic external genitalia.

Methods:

Retrospective descriptive study which assessed the outcomes of patients operated for exstrophy epispadias complex at TASH and MH from September 1st, 2012 until August 31st, 2019

Findings:

One hundred and forty patients with EEC operated during study period, 91 patients (18 isolated epispadias, 66 classic bladder exstrophy, 3 cloacal exstrophy, and 4 variant exstrophy) were included in the study. No patient diagnosed during pregnancy. The median age at first hospital presentation was 5 months (birth to 12 years), and first operation was done at median age of 48 months (4 days to 12 years). The commonest type of EEC was classic bladder exstrophy (71.4%). Associated congenital anomalies was found in 26 (28.6%) of patients. Primary urinary diversions were done for 23 (25.3%) patients. Functional anatomic reconstructive procedures were performed for 68 (74.7%) patients. Most patients with classic bladder exstrophy have failed anatomic functional reconstruction and require urinary diversion to achieve continence. Early postoperative complications occurred in 76 (89.4%) patients. Forty-two patients (29 Mainz pouch II, 7 augmentation ileocystoplasty with catheterizable stoma, 5 epispadias repair and 1 complete primary repair of bladder exstrophy) achieved urinary continence. More than half (52.3%) patients disappeared from their regular postoperative hospital visits.

Interpretation:

Urinary continence after anatomic functional reconstruction to EEC usually require urinary diversion (Mainz pouch II or augmentation ileocystoplasty) except in isolated epispadias.

Source of Funding:

Addis Ababa University college of Health Science

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1505

The Need for Mental Health Services for Children with Early Adversity Living in Northern Thailand

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Background:

Children affected by human trafficking and early adversity are particularly vulnerable to mental health issues. The Baan Kru Nam Foundation, a children's home in Chiang Saen, Thailand, houses at-risk, stateless youth in the area and is dedicated to improving the lives of these children. Since 2008, Emory University School of Medicine (EUSOM) medical students and faculty physicians have partnered with the foundation to provide annual physical exams for Baan Kru Nam children. Annually, EUSOM provides mental and physical health assessments.

Methods:

In 2023, with the help of Thai & Akha language translators, annual exams were performed. Medical students obtained a comprehensive history which included social history and mental health concerns. The children were asked about happy, sad, or neutral feelings. Follow-up questions helped to assess the origin of the feelings expressed. An Emory physician performed a physical exam and provided a care plan for follow-up care. Retrospective analyses were performed on the data collected. Lastly, Kru Nam, the founder, was interviewed about the children's daily health needs.

Findings:

70 (35 male, 35 female) patients were evaluated in 2023. 57.1% reported feeling sad. 10% reported mental health as a chief complaint. 4.2% reported a history of sexual assault. The interview with Kru Nam revealed that mental health support is the most pressing need of the children's home. She specifically noted that Baan Kru Nam caretaker "mental health response training" was needed. Many caretakers first arrived at the home in need of shelter and may have mental health needs, as well.

Interpretation:

The children of Baan Kru Nam continue to thrive despite significant early adversity. However, the history of trauma and lack of access to affordable resources calls for a comprehensive approach to improving their mental health. Steps should be taken to partner with local mental health services, with the aim of targeting resources to aid caretakers in supporting the children.

Source of Funding:

None

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Background:

The Developmental Origins of Health and Disease (DOHaD) is a theory which hypothesizes that interactions among genetics and social environmental factors during conception and throughout the early years have a significant impact on overall wellness later in life. Among DOHaD approaches there are culturally diverse perspectives and practices, such as Indigenous DOHaD, which considers intergenerational environmental factors alongside Indigenous ways of knowing being and doing as effective avenues to promoting children wellness. Although Indigenous Nations/ Tribes each have their own unique teachings and sacred knowledges, the vast majority share the belief that strong intergenerational bonds are essential in promoting wellness, throughout all stages of childhood. However, globally many Indigenous cultural practices, teachings, and languages have been systemically threatened as a result of colonialism (e.g., residential schools) and widespread racism toward Indigenous peoples. This loss of culture is reflected in most existing public health and educational programming and resources for early years children, which are informed solely by Western practices. Moreover, Indigenous children and adults alike are disproportionately represented among those impacted by chronic diseases. To address this gap, our team of Knowledge Holders, Indigenous families, early childhood educators, and community-based researchers, has embarked upon a journey of co-creating a culturally rooted wellness initiative called Nature's Way-Our Way. Together we are cultivating early learning environments, which are diverse, inclusive, and rich in culturally rooted approaches aimed at supporting child-caregiver bonds, land-based play, and overall wellness among Indigenous children.

Methods:

This initiative incorporates a combination of interventional–DOHaD and implementation sciences approaches, alongside *etuaptmumk* (Two-eyed Seeing) to braid Indigenous ways of knowing, being and doing about early childhood wellness and cultural land-based games alongside Western knowledge of developing health promoting behaviours among early years children.

Findings:

To date this initiative has been piloted and shared in rural and urban early learning centres, which together serve 150 Indigenous children and their families. The initiative has resulted in a set of culturally rooted activity cards, educator training, and activity kits.

Interpretation:

By promoting wholistic wellness, Nature's Way-Our Way aims to contribute to reducing health disparities and preserving Indigenous sovereignty in early childhood development approaches.

Source of Funding:

CIHR; SSHRC; SHRF

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1511

Enhancing Global Health Elective Preparedness: Review of the Student Orientation Process

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Background:

The Nuvance Health/University of Vermont Larner College of Medicine Global Health (GH) program has been offering global health electives (GHE) to as many as 48 fourth-year medical students from the American University of the Caribbean School of Medicine and Ross University School of Medicine annually since 2016. Among the program's central learning objectives are the development of interpersonal communication skills and intercultural understanding competencies. To achieve this, we implemented a comprehensive orientation program to ensure that participants understand the primary learning objectives and are guided toward enhancing their cross-cultural awareness in the healthcare setting. Importantly, the orientation program is entirely online, allowing early start and easy access to materials.

Methods:

In preparation for the GHE, we offer a two-step orientation process to the program participants. The first step of the orientation includes an introductory video module covering GHE objectives, curriculum, and requirements; online modules: Tropical Medicine 101, Challenging Moments in GH, Ethical Dilemmas in GH, and Reflections and Cases from LMICs. The second part of the orientation is conducted as an online session based on the case-based approach, focusing on site-specific aspects of the elective and discussion of common safety-, problem-, and ethical case scenarios. After the elective, all participants are asked to complete a Final Survey evaluating their pre-departure and elective experience.

Findings:

From January to September 2023, we received 18 responses from students who completed their GHEs in 2023. Seventy-two percent of students (13 out of 18) agreed or strongly agreed that completion of online modules and reading assignments prior to departure was helpful; 72% (13 out of 18) students indicated that Challenging Moments in GH and Ethical Dilemmas in GH were the most useful modules; 83% (15 out of 18) of students agreed or strongly agreed that pre-departure orientation sessions and content of participant and safety guides were useful. We plan to expand the data and analyse survey responses up to the end of 2023.

Interpretation:

The pre-departure orientation process is an essential step in preparation for the GH experience. Our findings confirm that the focus on ethical dilemmas and challenging moments in GH is of great importance, and these aspects must be appropriately addressed when preparing students for GHEs.

Source of Funding:

Nuvance Health/UVMLCOM Global Health Program

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Background:

International travel has the potential to spread infectious diseases globally, a risk that is increasingly recognized with outbreaks of SARS, MERS, Ebola Virus Disease, COVID-19, and mpox. Surveillance efforts in the United States include universal travel screening in emergency departments (EDs), where the majority of acute medical care is delivered. The frequency with which ED travel screening fails to identify recent travelers is unknown, although unpublished observation by the study team suggests it is around 30%.

Methods:

A pilot analysis of factors associated with false negative ED triage travel screening was performed. A natural language processing (NLP) algorithm was developed to search key language associated with recent travel history in the provider notes of 2.4 million ED visitors with a negative screening for international travel within 21 days. A sample of charts were manually screened to confirm documentation of recent travel and classified as false negative travel screening. A random sample of charts from 100 false negative travel screenings and 100 positive travel screenings (n=200) were reviewed for patient-level and hospital-level factors hypothesized to have association with the accuracy of screening (age, gender, race, primary language, presence of or complaint of fever in triage, triage acuity, method of arrival, time of day, and estimated number of concurrent ED arrivals). Univariate associations were measured using Chi Squared test.

Findings:

Non-significant associations with false negative travel screening were seen for patients having higher emergency severity index (ESI=2, p=0.18) and higher estimated concurrent ED arrivals (≥ 12 per hour, p=0.17). Travelers missed on screening were less likely to have chief complaint of fever or measured fever (9% vs. 14%, p=0.27) and more likely to have primary language English (86% vs. 73%, p=0.15). There were no differences between the two groups with regard to age, gender, hour of visit, or arrival by ambulance. Recent travelers missed in triage screening were significantly more likely to have traveled to Africa (10% vs. 4%, respectively, p = 0.0061).

Interpretation:

Potential systematic errors in ED travel screening may limit sensitivity for identifying patients with risk for transmitting emerging infectious diseases and warrant further study.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1521

The Impact of a Four-Week Diabetes Self-Management Course on A1c Levels among Type 2 Diabetes Patients at UPTH Endocrinology Clinic: A Prospective Study

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Background:

Diabetes is a growing health concern in Nigeria, leading to a need for effective education and support programs. Diabetes Self-Management Education and Support (DSME/S) programs have been globally implemented with success, demonstrating a reduction of A1c levels by 1% among individuals with Type 2 Diabetes (T2D) in the United States. Short-term follow-up studies have also highlighted improvements in A1c, glycemic, and behavioral outcomes.

Methods:

A Diabetes Self-Management Education and Support Program was initiated at UPTH in two phases: training ten healthcare professionals as diabetes educators (Phase 1) and conducting patient education sessions (Phase 2). Baseline and post-course A1c values were collected on the first month's cohort (31 patients in June 2023) to assess the course's impact on patient A1c levels using a one-sided paired t-test.

Findings:

A total of 88 participants, comprising 54 females and 34 males, meeting the inclusion criteria of having Type 2 Diabetes (T2D), being English-speaking, aged 18 years or older, and established at the UPTH Endocrinology clinic, were successfully enrolled in the study. 85 participants (96% retention rate) completed the comprehensive four-week course.

For the June cohort of 31 patients, a one-sided paired t-test was utilized to analyze A1c levels. The results revealed a significant reduction in mean A1c levels after course participation, with baseline A1c levels at a mean of 9.39 (SD=2.28) and 3-month post-course A1c levels at a mean of 8.59 (SD=2.20). The calculated t-statistic was $t(30)=-3.0501$, with a corresponding p-value of $p=0.002375$. Additionally, a 95% confidence interval was constructed for the mean percent difference between baseline and 3-month A1c levels which was found to be [2.7917, 12.7505]. In other words, we are 95% confident that, on average, patients see somewhere between a 2.79% to 12.75% reduction in A1c levels between the baseline measurement and the 3-month measurement.

Interpretation:

This study emphasizes the positive impact of the four-week course on glycemic control among T2D patients at UPTH's Endocrinology clinic. The significant reduction in A1c levels indicates improved diabetes management. These results underscore the importance of structured diabetes education and support programs in achieving better health outcomes among T2D patients.

Source of Funding:

Office of Global Health Seed Funding at the Medical College of Wisconsin

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 1525

Proof of Concept for Large Language Models Targeting Non-Communicable Disease Risk Factors among Kenyan Youth

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Background:

The burden of non-communicable diseases (NCDs) is associated with behaviors that often establish in adolescence. However, literature demonstrates a disparity in NCD education in our study setting with Kenyan youth. In addition, 69% of youth have access to a mobile phone and 48% to a smartphone. Large language model (LLM) technology (such as Chat-GPT) has the potential to engage youth in NCD prevention and promoting healthy behaviors. This study aims to understand feasibility, opportunities, and challenges of using LLMs to improve NCD health outcomes among Kenyan youth.

Methods:

This is a cross-sectional study involving pilot implementation of an LLM-based application designed to increase engagement and optimize use for NCD risk factor education among Kenyan youth aged 18-35 years. We established a community advisory board (CAB), consisting of key stakeholders and people with lived experience, to guide intervention design and implementation. We designed a user-friendly application with adaptation alongside the CAB and study participants. Pre- (day 0) and post-intervention (30 day) assessments were conducted via semi-structured interviews of study participants on NCD and LLM knowledge, attitudes and practices. We plan to complete triangulation of data on LLM use through evaluation of data collected on study participant engagement with the application for the 30 days following study recruitment. Finally, we will conduct focus group discussions to caudify results obtained through interviews and application engagement data.

Findings:

Our findings include: (i) successful implementation of the CAB with 14 members from Nairobi and Busia cities drawn from government, non-government organizations, key population groups, academic institutions, youth led organizations, community-based organizations and the private sector. The members include seven men and six women; (ii) our application was positively evaluated by CAB members and youth respondents, and (iii) incipient results on knowledge, attitudes and practices among Kenyan youth for LLMs are low but willingness to engage with NCD education is positive with requests for additional education. We plan to present results comparing Chat-GPT and Bard use groups and differences on frequency of engagement, engagement type (health, NCD-related or otherwise) and differences in perceived feasibility, knowledge, attitudes and practices.

Interpretation:

Use of community advisory boards, or other community-based participatory approaches, provide an effective means for introducing sensitive interventions in underserved populations. The role for LLMs among Kenyan youth is promising, albeit sensitization on use will be necessary. Future directions include designing and implementing strategies for scaling up use in the Kenya context and similar settings.

Source of Funding:

Bill & Melinda Gates Foundation

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Background:

Inclusive decision-making involves engaging a diverse group of stakeholders with various perspectives and backgrounds, prioritizing transparency and participation in decisions. COVID-19 decision-making varied worldwide, with some countries embracing inclusivity while for others expert advice primarily came from established relationships with governments. Incorporating academia (including universities and researchers) and civil society organizations (CSOs) into decision-making can lead to equitable, evidence-based policies addressing societal needs. Previous research highlighted participation gaps and their impact but concerted efforts are needed to understand and improve engagement with CSOs and academia in decision-making during health emergencies. Our study aims to examine the extent of participation of academia and CSOs and explore strategies for their effective involvement in future health emergencies.

Methods:

We adopted a comparative case study design to collect data from six countries: Nigeria, Singapore, South Africa, Bangladesh, Jordan and the United Kingdom representing varied political and economic contexts, geographic locations, and performance during the pandemic. Data sources include desk review of academic journal publications; government and CSO websites; media reports; and Key informant interviews and Focused group discussions with a total of 63 Stakeholders including government officials (n=28), academic experts (n=20), and CSO (n=15). The university's Institutional Review Board approved the study. Grounded theory was the central analytical approach.

Findings:

During the COVID-19 pandemic, CSOs actively participated in response efforts, but they did so independently of the government, particularly during the initial phase. In a few countries, the government later involved CSOs after reports of spreading infection or low policy adherence. In most cases, CSOs were only asked to assist with risk communication and service delivery, such as vaccine distribution, without being invited to decision-making discussions. On the other hand, a few countries collaborated closely with select public universities with whom they had existing relationships to obtain evidence and data required to make decisions. Experts in epidemiology, mathematical modeling, and infectious diseases were consulted, while economists, sociologists, anthropologists, and ethicists were less involved. Stakeholders recognized the importance of inclusive decision-making and suggested institutionalizing participation mechanisms for CSOs and academia, including reserving seats for experts from diverse disciplines in decision-making bodies from the outset of preparedness and response efforts.

Interpretation:

Interview and discussion-based research methods provide limited insights from individual and small-group perspectives. Nonetheless, our analysis contributes to the theory and practice of inclusive decision-making by presenting the significance of and strategies for including CSOs and academia into the decision-making process.

Source of Funding:

Funded by U.S. CDC through 508 Cooperative Research Agreement (NU2HGH2020000037)

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Background:

Antenatal care (ANC) is one of the high-impact interventions recommended for better pregnancy outcomes. However, its effectiveness depends on how much healthcare providers adhere to evidence-based recommendations and clinical actions. The study investigated the levels and changes in the observed quality and effective coverage of the first ANC in Ethiopia between 2014 and 2021.

Methods:

Linking and further analysis of Ethiopia's Service Provision Assessment Plus (SPA+) surveys (2014 and 2021) and the DHS surveys (2016 and 2019) were done. SPA+ surveys observed 54 recommended clinical actions during the first ANC, which were used to create the observed quality of the ANC general index. ANC effective coverage (EC) was calculated by multiplying the first ANC utilization rate by the observed quality of care general index (% adherence to the ANC guidelines). The DHS surveys provided ANC utilization rates. The assumption was that the observed quality indices remained the same during 2014-2016 and 2019-2021 for the computation of the 2014 and 2021 ECs, respectively. Descriptive statistics were generated, and the changes in indices were checked using the linear regression model.

Findings:

Of the 6,257 first ANC observations, 30.4% were in 2014, and 69.6% were in 2021. On average, the women received only 18.6% [17.4%-19.8%] and 21.9% [21.0%-22.9%] in 2014 and 2021 ($p>0.05$), respectively. The ANC utilization rates in Ethiopia were 62.4 % in 2016 and 73.6% in 2019. When the ANC utilization was adjusted for the respective observed quality general indices, the ANC effective coverage became 21.0% [20.5% - 21.6%] in 2014 and 24.5% [24.1% - 4.9%] in 2021. In the regression analysis, only a 3.4% [2.7% - 4.2%] increase in ANC EC was observed ($p<0.001$). The average ANC EC for the two survey periods was only 23.5% [23.1% - 23.8%].

Interpretation:

Adherence to the recommended clinical actions of the first ANC was very low despite increased utilization rates in Ethiopia, resulting in the loss of substantial potential health gain. In addition, ANC EC was very low, and only minimal improvement was seen in the country between 2014-2021.

Source of Funding:

No fund was obtained for the study.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1533

Collaborative Online International Learning (COIL) Programs for Global Health Nursing Education: Experiences of Collaboration Among Universities in USA, Japan, Thailand and Mongolia.

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Background:

We have been collaborating with 6 Universities in the USA, Mongolian National University of Medical Sciences, Khon Kaen National University (Thailand), and University of Shizuoka (Japan) over the last three years. The objectives were to (1) gain cultural competency and humility, (2) motivate language learning, (3) acquire presentation, leadership, and management skills, (4) relearn objectively Japanese healthcare system and nursing problems and issues, (5) gain a sense of self-efficacy and self-affirmation, and (6) reflect on common roles and mission of nursing across the cultures and borders. We offered 30 COIL classes, covering a wide variety of topics.

Methods:

The class styles are broadly classified into (1) online lectures by overseas/Japanese instructors, (2) presentations from Japanese students to American students, (3) student’s group presentations and Q&A sessions, and (4) Japan-US students joint case study development.

Findings:

Japanese students have different levels of English proficiencies, therefore lecture handouts were translated into Japanese in advance and consecutive interpretation was provided in compulsory classes, relevant medical terms, and reference lists were given before the class. It was important to check the students’ readiness including their interests and knowledge on the topic, and language proficiencies on individual basis. During online classes, to summarize in Japanese as needed, and serve as a facilitator while seeing how well they understood, and important to hold a briefing after each class to confirm their understanding.

Interpretation:

Numerous positive feedbacks from all the participants were given. such as “I was surprised by the health disparity and racial discrimination in healthcare exist in the US,” “I realized the importance of learning about lifestyle, environment, culture, and values that underlie health issues in developing countries,” “It was encouraging to share my concerns and difficulties with my international peers who share the same sense of mission and goals as nursing professionals,” “I want to learn more English so that I can communicate with people in the world and grow together,” “I was able to broaden and deepen my perspective in health and nursing in my own country while gaining a more objective and multifaceted perspective,” and “I was very happy to make friends with overseas nursing students and stay connected with them on social media.” Such reactions indicate strong potentials for the continuance of COIL classes.

Source of Funding:

This program has been funded by the Ministry of Education, Japan on “2018 Inter-University Exchange Project: Support for the Formation of Collaborative Programs”, and a grant from Sophia University COIL program.

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Background:

Increasing numbers of studies are being published worldwide on the harmful effects of anthropogenic (human-driven) climate change on mental health outcomes. Findings suggest that these impacts of climate change-related disasters and events directly affect health determinants such as poverty, housing, food security, and access to social services, further affecting mental health outcomes. These impacts also disproportionately affect vulnerable communities, amplifying existing disparities in care for these populations, particularly in low- and middle-income countries (LMICs). The aim of this study is to explore the existing gaps in the literature in regards to climate change impacts and disparities in global mental health outcomes.

Methods:

The study team developed a protocol using the PRISMA framework. A literature search using PubMed and Web of Science identified 5,766 results in English and Spanish, of which 140 original, peer-reviewed articles were selected. The team selected ~25% of the articles (n=35) and reviewed manuscripts based on inclusion and exclusion criteria, from which 30 articles were selected for final inclusion.

Findings:

Our preliminary findings show that climate change directly affects health determinants while exacerbating mental health outcomes and identify gaps in literature regarding this intersection. In our preliminary analysis of the 30 articles, 20 articles focus on outcomes in high-income countries, and 12 articles mention or address disparities in mental health outcomes by gender, class, race, and other structural markers. None of the articles focused on outcomes or disparities in low-income countries. These are critical gaps in research as climate change continues to affect the most vulnerable groups worldwide.

Interpretation:

Further research is needed to provide critical educational and therapeutic initiatives based on the latest data discoveries. Current and future data on these disparities will allow for funding and policy initiatives aimed at addressing and improving global mental health inequities.

Source of Funding:

None.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1536

“It’s about what is possible outside what society has given us” : Safety and Belonging for Queer South Asians in the Diaspora

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Background:

The South Asian (SA) diaspora is diverse with their unique systems of power and privilege, such as ethnocultural identity, migration history, and class etc.. Gender and sexual identity can result in increased vulnerability due to different systems of oppression in broader Canadian society as well as the axes of power within the SA diaspora. This study aims to explore experiences of individuals in the Canadian SA diaspora who also identify with Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual Plus (LGBTQIA+) communities.

Methods:

We conducted semi-structured interviews with individuals who met the following criteria: 1) self-identify as SAs, 2) self-identify as LGBTQIA+, and 3) are 18 years or older. Participants were recruited using convenience sampling through social media and snowball sampling. The interviews were audio recorded and transcribed using transcription software. Conventional content analysis was used to develop the codebook for thematic content analysis. To ensure rigour, two co-authors coded the transcripts and discrepancies were resolved during analysis meetings.

Findings:

We conducted 16 interviews between July - September 2023. Our semi structured interviews illustrated the following four themes: (i) a persisting impact of colonization in SA cultures, which contributes to a dominant culture of heteronormativity and cisnormativity, (ii) collectivism in many SA cultures can place pressure to conform, (iii) power dynamics are replicated within queer spaces, which are often dominated by white, cisgendered men, (iv) racialized queer individuals often draw strength from communities that share similar lived experiences. Participants also identified several community needs, including, positive representation, safe and inclusive services, spaces for dialogue, and acceptance of individuals for who they are.

Interpretation:

Participants highlighted the importance of intentionally created safe spaces for racialized queer folks which honor lived experiences, often different from the mainstream, white dominant cultures in Canada. Study limitations include limited representation of the diverse SA communities in Canada, especially among the most marginalized identities. Despite these limitations, our findings provide an intersectional, strengths based perspective for representing diverse queer SA communities in Canada. As next steps, the project aims to use findings to advocate for safe spaces of SA queer communities and bring their health concerns to the forefront.

Source of Funding:

Canadian Institute of Health Research

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1541

“My advice for myself is not the same advice that’s right for her”: A Mixed Methods Evaluation of a South Asian Anti-Oppression Workshop for Peer Health Coaches of the BETTER Women program

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Background:

The South Asian (SA) diaspora is one of the largest racialized communities in Canada and globally, experiencing numerous health inequities. However, lay and professional health workers lack training on anti-oppressive and culturally safe practices for SA individuals. SA health workers themselves can perpetuate white supremacy and intra-racial oppression (e.g., casteism, colourism). We designed and implemented an anti-oppression workshop that unpacked the oppression experienced by SAs in Canada, as well as intra-community oppression within the SA diaspora. The workshop was delivered to a group of SA peer health coaches (PHCs) who will serve SA patients in Ontario. The aim of the workshop was to promote culturally safe practices among the PHCs by fostering critical consciousness of how power and privilege manifest within the diaspora.

Methods:

We delivered a three-hour virtual workshop to SA PHCs in November 2021 and September 2022. The training used lecture and discussion formats to cover topics such as the nuanced definition of the SA identity, migration histories of SAs to Canada, privilege, intersectionality, and health equity. The content was informed by the theory of intersectionality and the coin model of privilege and critical allyship. We included activities that encouraged critical reflection on one’s own identity and attitudes, and how this could influence the dynamics between themselves and others in their community. A convergent mixed methods design was used to evaluate the workshop.

Findings:

Quantitative pre- and post-workshop comparisons revealed significant increases in self-rated understanding of anti-oppression practice, intersectionality, and health equity. Qualitative analyses identified three themes: understanding of anti-oppression concepts; self-awareness; and applicability. These themes triangulated or complemented quantitative findings. Participants had increased knowledge of oppression; critically examined their social location, biases, and behavior; and requested more skill-building activities.

Interpretation:

While many equity trainings are developed by dominant groups, this training was designed and evaluated by SAs. This training is the first of its kind that focuses on intra-community dynamics, specializing in issues affecting the SA diaspora. Our results can inform the scale-up of equity training focused on SA communities in health and social settings globally, and the design of similar training for other diasporic groups.

Source of Funding:

BETTER Women is a partnership between the Canadian Cancer Society and Women's College Hospital. BETTER Women is made possible through joint funding from the Canadian Cancer Society, the Peter Gilgan Foundation, Women’s College Hospital Foundation and the Public Health Agency of Canada.

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1542

The Neighborhood Effect: How does the prenatal environmental and degree of residential safety influence maternal mental health in Mexico City, Mexico?

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Background:

Public health literature has established a clear linkage between women's' prenatal environment and maternal and child health outcomes. Similarly, an individual's everyday environment serves as a key predictor of mental health. Given that existing literature tends to focus separately on maternal health and mental health without assessing the interaction between them, the primary objective of this study is to investigate the impact of crime, a proxy for neighborhood quality, on maternal mental health outcomes.

Methods:

In this analysis, we seek to explore the association between an expectant mother's residential environment, characterized by crime rates in the Mexico City metropolitan area, and their pregnancy-related mental health outcomes, while also examining potential correlations between these mental health indicators. This study leveraged OBESO perinatal cohort data (n=274) and crime data obtained from delitosmexico.onc.org.mx. To assess the relationship between colonia and various maternal mental health outcomes, we used multivariate linear regression.

Findings:

Regressing our depression index variable on colonia and controlling for clinical and demographic characteristics reveals that an increase in generalized or prenatal anxiety is associated with an increase in depression levels among pregnant women, as in living in colonia Capulhuac (p=0.05). Increases in generalized anxiety and depression are associated with an increase in prenatal anxiety levels, and living in Capulhuac and Ecatepec de Morelos is associated with higher levels of prenatal anxiety (p=0.05). Increases in prenatal anxiety, stress, and depression are associated with an increase in generalized anxiety levels, and living in Capulhuac, Ecatepec de Morelos, and Nezahualcoyotl are associated with higher levels of generalized anxiety (p=0.05). Lastly, an increase in generalized anxiety and depression is associated with an increase in stress levels, as is living in Chalco and Itztapalapa (p=0.05).

Interpretation:

There is evidence to suggest that there is a significant relationship between the colonia assessed, crime, and maternal mental health outcomes. Overall, the colonias that were found to be drivers of maternal mental health outcomes were also the colonias found to have high crime rates in our descriptive analysis, as well as an empirical relationship with crime levels in our causal analysis. Overall, these findings are intuitive and consistent with previous literature; high crime rates in a community can create a pervasive sense of insecurity and fear among expectant mothers, leading to increased stress and anxiety during and after pregnancy.

Source of Funding:

This research was made possible through generous support from the Kiphart Family Foundation under the auspices of the University of Chicago Center for Global Health.

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Program/Project Abstract

Abstract N°: 1545

Using a participatory approach for the development of a guide on implementation research for non-communicable disease prevention and control in LMICs.

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Background:

Implementation research has great potential to bridge the gap between research and practice, yet perspectives from low- and middle-income countries (LMICs) have largely been excluded from the development of implementation research training. To address this, we present the process behind a collaboration with the World Health Organization (WHO) to create a “how-to” implementation research guide specifically aimed at LMIC researchers, practitioners, and policymakers working in the field of non-communicable diseases (NCDs).

Methods:

A team at UTHealth Houston along with WHO began by holding listening sessions with interested participants in several countries. We then used a modified Delphi process engaging WHO staff, target communities, and international implementation science experts to determine the organization and key content for the implementation research guide for NCD prevention and control in LMICs. Based on this process, the team drafted a table of contents. Implementation science experts reviewed the table of contents and came to a consensus on the structure of the guide. The team then held discussions with partners and collaborators planning or actively working on studies related to implementation science for NCD control in China, Ethiopia, Mexico, Nepal, Pakistan, Thailand, and Ukraine. These semi-structured group discussions identified key concepts within implementation science important for LMIC settings, how to create and tailor guide content responsive to LMIC practitioner needs, and provided concrete, illustrative examples of implementation research for NCD control in LMICs.

Findings:

This process combined expert opinion, evidence from the literature, core competencies of implementation science, and LMIC practitioner experiences to create a guide for implementation research for NCD prevention and control in LMICs. LMIC researchers represented a diverse portfolio of NCD topic areas, including cardiovascular disease, respiratory disease, and cancer. Discussions with collaborators provided case narratives of real-world perspectives from research in their local settings.

Interpretation:

To promote high-quality implementation research, freely available resources for global researchers must be created and disseminated. This participatory approach engaged in-country collaborators to produce a guide for implementation research that is representative of their needs. This guide will provide guidance for future implementation endeavors.

Source of Funding:

We are supported by a WHO contract and the UTHealth Houston Institute for Implementation Science.

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Background:

The Global Health Research Collaborative (GHRC) was created to mentor and train researchers from low- and middle-income countries and provide them with tools to develop research capacity at their institutions. Recently, GHRC launched its Ambassador Program to hear the voices of researchers who have graduated from GHRC's workshops. This initiative will help reach researchers around the world, connecting them with their peers from other regions and help grow the GHRC network.

Methods:

Participants who excelled in GHRC's previous workshops were recruited. Meetings are held regularly with the ambassadors where we update them on current GHRC efforts and provide educational materials for them to forward to their colleagues. We conduct scientific seminars directed toward topics suggested by them and utilizing the resources available at Wayne State University. This longitudinal educational initiative leads to increased awareness and interest among LMIC researchers.

Findings:

Currently, GHRC has 8 ambassadors from 7 countries (India, Jamaica, Lebanon, Nepal, Tanzania, Uganda, and the United States). Their role is to provide feedback on our education methods and connect with their peers and invite them to GHRC's online seminars. This is done through forwarding emails to their colleagues, sharing flyers in informal groups chats (i.e., WhatsApp), and re-posting on social media (mainly Twitter). These efforts have led to 33 individuals signing up for the first seminar and 41 individuals for the second. However, the actual presence at the seminars was lower at 24% (8) for the first seminar and 29% (12) for the second.

Interpretation:

Our program has shown that it can increase GHRC's reach and create our envisioned global health research network. Online seminars seem to spark the interest of international researchers and as such, GHRC is working on implementing them regularly. Seminar topics are suggested by ambassadors and their colleagues to ensure their relevance. However, more work needs to be done to ensure that those who sign up are present and participate actively. Also, GHRC is working on launching a blog which will serve as an avenue for the Ambassadors and their colleagues to voice their opinions on current global health topics.

Source of Funding:

None.

Associations of Toxic Metal Biomarkers with Neurocognitive Performance and Thyroid Hormone in Bangladeshi Adolescents

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Background:

Childhood exposures to metals such as arsenic (As), manganese (Mn), lead and cadmium (Cd) have been shown to have detrimental effects on early life neurocognitive performance. At the same time, these metals may be linked to thyroid hormone (TH) disruption, which is crucial for brain development, mediating neurogenesis, synaptogenesis, and neuronal and glial cell differentiation and migration. We hypothesize that TH may mediate the associations between toxic metals and neurocognitive performance. Our research objective was to collect and analyze preliminary data regarding this potential mechanism of neurotoxicity.

Methods:

A random sample of 39 rural adolescents, between 13-17 years of age from Araihaazar, Bangladesh, was included in our study. Participants completed a computer-based neurobehavioral test battery, Behavioral Assessment and Research System (BARS) that measures an array of neurocognitive functions such as memory, attention, motor function, and response speed. Blood was collected to assess As, Mn, Pb and Cd in whole blood and serum levels of free thyroxine (fT4), total triiodothyronine (tT3), thyroid stimulating hormone (TSH).

Findings:

Male and female participants did not show any significant differences in terms of age and BMI. Adolescent boys had non-significantly higher blood Pb, Mn, and Cd, whereas girls had non-significantly higher blood As. However, girls showed significantly faster Symbol Digit Test (SDT) ($p=0.005$) and Match to Sample (MTS) ($p=0.03$) correct latencies. Mn exposure was significantly associated with slower SDT response ($p=0.05$). Pb demonstrated a significant negative correlation with continuous performance test score ($p<0.01$) and a significant positive correlation with symbol digit test latency ($p=0.03$). All four toxic metals demonstrated non-significant negative associations with fT4, indicating a potential negative impact of metal mixtures on this TH biomarker.

Interpretation:

Preliminary data of our pilot study suggests that increased exposure to Mn and Pb may have negative effects on neurocognition during adolescence. Also, toxic metal exposure may disrupt fT4. Due to the small sample size, further investigation is necessary to fully conceptualize the TH-dependent mechanism of metal neurotoxicity.

Source of Funding:

This project was supported by an external grant from the National Institute of Environmental Health Sciences of the National Institutes of Health (NIH) under Award Number R01ES032149. The content is solely the responsibility of the authors and does not necessarily represent the official views of NIH. Additionally, this study was partially supported by an internal pilot grant from the College of Osteopathic Medicine of Sam Houston State University, Texas.

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Background:

Cardiovascular diseases (CVDs) are the leading cause of death in India and majorly contribute to premature death in Gujarat. Primary and Community Healthcare Centres (PHCs and CHCs) act as the first points of contact for those needing primary/secondary prevention. The Cardiac Care Centres (CCCs) provide specialized care. Timely access to healthcare can help reduce CVD mortality through early diagnosis and treatment. Our study investigates accessibility to cardiac care for seven subdistricts in Vadodara, Gujarat, India.

Methods:

We obtained PHC, CHC, and CCC geolocations for 2022 from a Google Maps search, accessibility motorized friction surface raster from the Malaria Atlas Project, and 1 sq km population counts from WorldPop. We looked at two outcomes a) the density of health facilities per million population and b) the proportion of the population within a certain time threshold from the nearest health facility to them timely. This was analyzed for PHCs/CHCs and CCCs. The density was calculated as the number of centers per million people in the subdistrict. For timely access, the Dijkstra algorithm was implemented for two modes of transport i.e. walking and motorized transport. For PHCs/CHCs, 30 and 60 minutes were used as thresholds for walking and motorized travel. For CCCs, 60 and 120 minutes were used as thresholds for walking and motorized timely access.

Findings:

Vadodara district had 33 PHCs/CHCs and 4 CCCs. The densities of PHCs/CHCs and CCCs were 9.8 and 1.19 centers per million (CPM). The density of PHCs/CHCs was highest for Sinor (31.60 CPM) and least for the Vadodara subdistrict (3.15 CPM). Proportion within 30 minutes of walking from PHCs/CHCs varied from 9% in Kajran to 24.57% in Sinor. Across all subdistricts, 97% of people were within 60 minutes of their nearest PHCs/CHCs by motorized travel. Two subdistricts (28.6%) had CCCs. 60.75% of people in the Vadodara subdistrict could reach their nearest CCC within 60 minutes by walking. Four subdistricts have 0% access to CCCs by walking. Across all subdistricts, >97% of people could access the nearest CCC within 120 minutes via motorized travel.

Interpretation:

There is a dearth of health facilities that gravely limit access to appropriate cardiac care in Vadodara district, Gujarat, India. Future policy interventions should aim to address disparities in access to cardiac care across subdistricts. Such geospatial analyses can help inform appropriate locations for planning new centers.

Source of Funding:

None

Abstract N°: 1555

Quantifying the Relationship Between Ambient PM_{2.5} Pollution Exposure During Pregnancy and Postpartum Fasting Glucose in a Cohort of Women in Pune, India

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Background:

While evidence supports a causal relationship between ambient particulate matter (PM_{2.5}) pollution and type-2 diabetes mellitus (T2DM), there has been less exploration of PM_{2.5}'s association with postpartum diabetes mellitus (PPDM), particularly for women in low- and middle-income countries. Women in India bear a disproportionate share of global and national diabetes burden, placing them at increased risk of adverse health outcomes during the vulnerable peripartum period.

Methods:

We used a retrospective cohort design to analyze the association between antenatal PM_{2.5} exposure, postpartum fasting glucose, and PPDM in women receiving antenatal care at BJ Government Medical College. Women were enrolled in the ongoing Postpartum Diabetes Cohort Study beginning in March 2022 with appropriate IRB approval. Following informed consent, participants were recruited during pregnancy or at delivery and followed for 12 months postpartum. Antenatal PM_{2.5} levels were calculated using ground monitoring station data matched to residential pincodes. We collected fasting glucose concentrations using a 75g fasting OGTT and defined PPDM as fasting glucose > 95 mg/dL at 6 weeks postpartum and ≥126 mg/dL after that point. Multivariate linear and logistic regression models were adjusted for age, body fat percentage, hypothyroidism, household income, and participant education.

Findings:

We included 42 women in analyses. Mean age was 28.29 (SD 5.02). Mean antenatal PM_{2.5} exposure was 56.96 µg/m³ (SD 15.28). Mean PM_{2.5} concentrations for participants with and without PPDM were 59.30 (SD 15.66) and 55.65 (SD 15.20) µg/m³ respectively (between-group difference not significant, α=0.05). Antenatal PM_{2.5} exposure was not significantly associated with postpartum fasting glucose or PPDM. Each 10 µg/m³ increase in PM_{2.5} was associated with a 2.12 mg/dL (95% CI -2.14 - 6.38) increase in fasting glucose and an OR of 1.17 (95% CI 0.722 - 1.89) for PPDM.

Interpretation:

These exploratory findings suggest a possible dose-response association between antenatal PM_{2.5} exposure and PPDM, though results were not significant. Limitations include small sample size and low-resolution PM_{2.5} exposure estimates. On average, participants experienced PM_{2.5} levels well above 5 µg/m³ (the WHO's recommended limit), suggesting that women in Pune and areas with similarly elevated pollutant levels may be at increased risk for developing PPDM.

Source of Funding:

Weill Cornell Office of International Medical Student Education

Category: 4 - Decolonizing - Reforming Global Health, Equity, Justice, Global Health Education and Research - Program/Project Abstract

Abstract N°: 1558

Equitable Global Health Partnerships Initiative

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Background:

The University of California San Francisco's (UCSF) mission is to advance health worldwide. To achieve this mission, UCSF needs to address and strengthen equity in its international research partnerships. The "Equitable Global Health Partnerships Initiative" was launched in 2022 to reduce inequities in global health partnerships. A survey and two stakeholder meetings with UCSF colleagues and global partners were conducted to understand challenges and pain points with UCSF's global health partnerships. This culminated in a two-day in-person meeting with partners in Nairobi, Kenya, in the fall of 2022. From this conference, a five-point plan was developed to advance the cause of equitable partnerships. These five areas were: Relationship Building and Reciprocity, Knowledge Production and Authorship, Education, Training, and Mentoring, Ethics and Community Involvement, and Equity in Financial Management.

Methods:

Working groups centering UCSF's global partners voices were formed and co-led by the partners to develop action plans centered on institutional change in each of their respective areas. The result of this collaborative effort was the development of these plans as well as training content from each group.

Findings:

Several short, medium, and long-term action items were identified by each of the groups that would enhance equity in global partnerships. These were collated into an action plan for institutional change and training content for each of the five working groups were developed.

Interpretation:

UCSF has already implemented several changes in subcontract management resulting from recommendations from these action groups. The next steps include implementation of the action items from each of the groups and developing a training toolkit on equitable global health partnerships, decolonizing global health, and cultural humility as we strengthen our global health partnerships. We envision a wider audience beyond UCSF for the training package. The training content can be used by other UCs and UCSF's global health partners.

Source of Funding:

Sources of Funding: Hewlett Foundation, UCSF Bixby Center, Institute of Global Health Sciences, CFAR, and the Executive Vice Chancellor and Provost's Office.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1561

Development of an Interdisciplinary, Multi-Country Quality Improvement Community of Practice (QICoP) to Foster Clinical Excellence across the Texas Children's Global Health Network (TCGHN)

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Background:

Quality improvement (QI) has been embraced in global health settings as a strategy to improve patient outcomes, reduce costs, and enhance service delivery. TCGHN is comprised of nine affiliated, independent non-governmental organizations with over 2,400 staff supporting healthcare services in low- and middle-income countries with flagship pediatric HIV clinical centers of excellence (COEs) in six countries, with technical support from Baylor College of Medicine (BCM). While discrete QI basics workshops had been offered previously, there had been no ongoing support for QI program development across TCGHN. The aim of this project was to determine the feasibility, acceptability, and uptake an interdisciplinary, multi-country, virtual QI community of practice (QICoP) model to support Network-wide QI program development. Specifically, we aimed to increase meeting attendance by 70% (above baseline), and achieve 100% representation from TCGHN sites between January-December 2023.

Methods:

In 2022-2023 TCGHN QI and global health content experts convened to develop the QICoP concept, conduct in-person site assessments, and recruit interested individuals to join the CoP. We utilized a Virtual Learning Platform (VLP) to launch the QICoP. We hosted monthly QICoP meetings via Zoom and tracked attendance, participant evaluations, and organizer notes. We created a fishbone diagram to identify interventions to improve QICoP engagement. We used "PDSA" cycles as a framework to test implementation of interventions.

Findings:

We have held nine virtual QICoP meetings to date. QICoP meeting attendance improved from baseline by 70% by the 8th meeting. Increased meeting attendance was noted during the sessions where an abstract writing workshop was held and outreach was expanded from VLP messaging only to using the VLP, email, and WhatsApp for meeting reminders. Participants expressed increased confidence in commencing QI programs at their COEs.

Interpretation:

A QICoP utilizing a VLP is a promising model to support QI program development across a geographically dispersed network. Barriers to meeting attendance and site participation included technical difficulties and lack of Spanish interpretation services. Next steps are to integrate Spanish interpretation, develop a curriculum to enhance QI skills, identify QI mentors from BCM to work with local teams, and expand the reference library.

Source of Funding:

None

Abstract N°: 1563

A Retrospective Study of the Impact of Point of Care Ultrasound During Short Term Surgical Missions

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Background:

Short-term surgical missions (STSMs) can be effective when undertaken in an ethical manner and can have a tangible positive impact on the patient population. Amongst the many challenges of STSMs, one is that of imaging. Ultrasound (US) is a portable, rapid and cost-effective modality. Point of care ultrasound (POCUS) has not been well studied for use during STSMs to resource-limited settings.

Methods:

In this study we examine the utilization of POCUS in the peri-operative period. We conducted a retrospective analysis of the use of POCUS during the pre-operative, intra-operative and post-operative course of patients being evaluated for definitive surgical treatment over the course of STSMs at two hospitals in Kabala, Sierra Leone and Mampong, Ghana. POCUS was performed by emergency physicians that were part of the team and served two purposes – first, to definitively diagnose pathology that could benefit from surgical intervention and second, to enhance operative planning and reduce risk while also optimizing the use of scarce supplies/resources.

Findings:

A total of 58 peri-operative point-of-care ultrasounds were performed with operative findings correlating with POCUS in 90% of cases that underwent surgery. Furthermore 33% of scans performed showed findings that were presumably not appropriate for surgical intervention.

Interpretation:

Our work demonstrates that providers such as emergency physicians trained in a focused manner can effectively identify specific pathology with a low rate of error and can thereby function as effective partners in STSMs. Specifically, our experience and results demonstrate that the use of POCUS has a positive impact on patient safety and quality, while also optimizing the use of valuable resources and time. It can be extrapolated that POCUS trained providers can function as a cost-effective imaging modality and help guide surgical care in austere environments.

Source of Funding:

International Surgical Health Initiative

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Background:

Traditional foods offer not only rich nutritional benefits, including essential proteins, omega-3 fatty acids, and vital minerals and vitamins but also play a pivotal role in Indigenous cultural heritage. Beyond physical health, they contribute significantly to the social, emotional, mental, and spiritual well-being of Indigenous peoples.

Objectives:

To investigate the factors influencing traditional food consumption within Canada's First Nations communities.

Methods:

The databases PubMed, Embase, CINAHL, Global Health, and Web of Science were searched from their inception up until February 2022. Eligible studies focused on diet, were published in English or French, and reported dietary data related to First Nations in Canada.

Findings:

Factors positively associated with traditional food consumption included age (particularly those 40 years and older), male gender, presence of a hunter in the household, spring and summer seasons, lesser formal education, exclusive use of Indigenous language at home, income security benefits, lower smoking rates, and heightened physical activity. Consumption patterns differed noticeably across regions and communities, with children from northern communities having a higher intake of traditional foods. Furthermore, traditional food consumption was inversely related to the intake of ultra-processed foods.

Interpretation:

Consuming traditional foods tends to enhance the dietary quality among First Nations. However, challenges stemming from colonization, assimilation, governmental policies, and environmental changes hinder many Indigenous communities from accessing these foods, thereby reducing their dietary contribution.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1568

Improving Contraception Access and Birth Spacing in Rural Honduras

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Background:

Unintended and short interval pregnancy are associated with negative outcomes, including preterm and low birth weight infants and increased maternal and infant mortality. In young Honduran women, 45% pregnancies are unintended, and 42% women have an unmet need for contraception. Although contraception is publicly funded in Honduras, it is often out of stock. In San José, a rural town in northwestern Honduras, the community health board and doctor have identified inadequate knowledge about reproductive health, inadequate contraception access, inadequate postpartum care, and high rates of teenage pregnancy as key issues. A project was developed and designed to increase availability of contraception, provide education on reproductive health, and reduce unintended/short interval pregnancies

Methods:

Progesterone intramuscular injections, intra-uterine devices, and oral contraceptive tablets were purchased for the clinic, initially using funds from US-Honduran nonprofit Shoulder to Shoulder and now with a mixed grant- and patient-funded model. Data was collected using paper forms and since implementation of the project, annual chart review and annual health committee meeting continue to modify interventions as appropriate based on the needs of the community.

Findings:

153 patients received contraception as of March 2023. 96% received their first choice method; 77% of patients received Depo-Provera. In 2023, 12% of multips had short inter-conception interval (<18 months), which was similar to 2020. In 2020, primips used birth control prior to pregnancy about half as often as multips (25% primips versus 50% multips), and this rate decreased by 3-fold from 2020 to 2023, down to only 7% of primips in 2023. From 2020 to 2023, the rate of teen pregnancy quadrupled, from 6% to 23% of pregnant patients. In the long term, data will be captured on continuous use of contraception, unintended pregnancy, and birth spacing.

Interpretation:

Through this initiative, patients without prior access were able to access contraception. The project has also reinforced the need for outreach and reproductive education to teens and patients who have never been pregnant. Work is underway to provide lectures to young and pregnant people to improve reproductive health knowledge.

Source of Funding:

US-Honduran nonprofit Shoulder to Shoulder

Nutritional Metals in Blood, Neurocognitive and Mental Health Outcomes and Thyroid Biomarkers in Rural Bangladeshi Adolescents

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Background:

Nutritional metals (NM) are essential for brain and mental health development in children. NM may play a positive role in thyroid function. However, epidemiological evidence regarding the associations between NM, brain function, mental health, and thyroid hormone (TH) remain understudied. To address these knowledge gaps, we have conducted a pilot study to examine the combined effects of NM biomarkers such as iron (Fe), selenium (Se), zinc (Zn), magnesium (Mg), and copper (Cu) on neurobehavioral functions, mental health, and TH among a group of rural Bangladeshi adolescents.

Methods:

In the pilot study, we leveraged the infrastructure of an adolescent cohort in Araihaazar, Bangladesh. A total of 39 Adolescent participants, aged 13 to 17 were randomly recruited to complete computer-based Behavioral Assessment and Research System (BARS), a neurobehavioral test battery. Blood was collected from these participants to assess Fe, Se, Zn, Mg and Cu as well as serum TH biomarkers including thyroid stimulating hormone (TSH), total triiodothyronine (tT3), and free thyroxine (fT4). Depression was assessed via Patient Health Questionnaire-9 (PHQ9) in 19 participants.

Findings:

After the analysis of NM, TH, BARS, and PHQ9 data, we observed that adolescent girls (n=25) had non-significantly higher Zn ($6008.77 \pm 1005.83 \mu\text{g/L}$) and Cu ($825.42 \pm 90.84 \mu\text{g/L}$) and lower Fe ($351.91 \pm 50.98 \mu\text{g/L}$) than adolescent boys (n=14). Adolescent girls also had non-significantly lower tT3 ($1.85 \pm 0.38 \text{ nmol/L}$) and fT4 ($11.97 \pm 1.49 \text{ pmol/L}$) and non-significantly higher TSH ($1.69 \pm 1.18 \mu\text{IU/ML}$) than boys. Blood Zn, Mg, and Fe were positively associated with continuous performance score ($p \leq 0.05$). Cu ($p \leq 0.05$) was negatively and significantly associated with depression score (PHQ9). We did not find any significant associations between TH and neurocognitive function outcomes.

Interpretation:

The preliminary data suggests potential effects of Zn and Fe on brain function, more specifically on sustained attention and response speed. Cu demonstrated protective effects on mental health. The results will provide preliminary data to elucidate the role of supplementation and/or dietary modifications for proper neurocognitive development during adolescent years. This will help develop nutritional policy recommendations for resource-poor settings in developing countries.

Source of Funding:

This project was supported by an external grant from the National Institutes of Health (NIH) under Award Number R01ES032149. The content is solely the responsibility of the authors and does not necessarily represent the official views of NIH. Additional support came two internal grants from the College of Health Sciences and College of Osteopathic Medicine of SHSU.

SUBSTANCE USE AMONGST UNDERGRADUATE STUDENTS OF A TERTIARY INSTITUTION IN FEDERAL CAPITAL TERRITORY, FCT ABUJA NIGERIA

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Background:

The use of psychoactive substances dates to prehistoric times either to complement some pleasant features of life or escape from the unpleasantness of life. This has become both a social and public health issue globally including Nigeria. According to UNESCO, it is the utilization of utilization of any psychoactive substance or medication, both legally and illegally. The undergraduate students are mostly teenagers and young adults who most times are leaving home for the first time, away from parental control and faced with peer pressure; experimenting and consuming exotic recreational drugs in large quantities. The commonly substances/drugs abused are alcohol, marijuana, tramadol, codeine, benzodiazepines, tobacco, shisha Stimulants.

Methods:

The study was carried out at University of Abuja, FCT Nigeria. It was necessitated by the concern of the health care professionals in the University Health Services on substance use disorder among the regular undergraduate students. The consequences were academic failure, poor academic performance, School drop outs, Mental illness and self harm. At the time of this study, the University Management approved it as a preliminary study to assist the University formulate an intervention program. Using qualitative approach, 25 individuals among staff and students identified as stakeholders were interviewed. There were health care professionals, Student Union Government Executives, safety personnel and officials of United Nations Office on Drugs and Crime (UNODC) - students' club.

The healthcare professionals reported cases of substance abuse disorders (insomnia, depression, psychosis, attempted self harm, schizophrenia) as medical emergencies in the ratio of 4:1/Male: Female between those of 19-25 years. The uses of alcohol, cigarettes, shisa, Marijuana, tramadol, codeine, caffeine, benzodiazepines etc were recorded.

Safety personnel agreed to rampant use of substances by the students.

The students reported large scale use of substances among their colleagues and know those who "do" them. Some of them have smoked cigarettes, shisa or drank alcohol at a time

Findings:

These substances were easily available to students on and out of the campus. Peer pressure, "to belong" and curiosity were some of the reasons for usage. The University has a policy banning smoking in the hostels punishable by expulsion from the hostels.

Interpretation:

There is use of substances and rising cases of substance use disorders among the students. None regulated accommodation for those living off the campus and clearly spelt out disciplinary measures are some of the contributing factors. The overall effects are development/exacerbation of mental illnesses, wastage, dropout, reduced productivity, financial loss and threat to societal wellbeing.

Source of Funding:

None

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Background:

In Tanzania, prostate cancer is among the leading cause of death among men, often diagnosed at advanced stages. Despite the importance of prostate cancer screening for early detection, many Tanzanian men remain unscreened. This study aimed to explore the knowledge and barriers to prostate cancer screening among at-risk men in northern Tanzania.

Methods:

This cross-sectional study was conducted from May to September 2022, involving men aged ≥ 40 years in Northern Tanzania. Participants were recruited through public announcements, brochures, and social media. They were asked to attend a local health facility to complete a questionnaire covering demographics, awareness of prostate cancer, screening practices, and barriers. Data analysis was performed using STATA 16.0, categorizing knowledge as poor ($<50\%$) or good ($\geq 50\%$). Univariate and multivariate logistic regression assessed associations between screening and various factors, with significance at $p < 0.05$.

Findings:

Among 6205 eligible men with a mean age of 60.23 ± 10.98 years, only 1263 (20.4%) had good knowledge of prostate cancer, mainly from mass media 4363 (70.3%). Just 586 (9.5%) had undergone prior screening. Factors associated with screening included having health insurance, knowing risk factors and symptoms, and obtaining information from hospitals. Common barriers to screening were cost 3236 (57.7%), belief in good health 2983 (53.1%), underestimating the seriousness of prostate cancer 3908 (69.6%), and believing digital rectal examination is harmful procedure 3047 (64.7%).

Interpretation:

Knowledge about prostate cancer, having health insurance, and hospital-based information were linked to higher screening rates. Negative beliefs, such as discomfort with the examination and underestimating the disease's seriousness, hindered screening. Future interventions should focus on increasing awareness and providing accurate information to address misconceptions and promote screening, early diagnosis, treatment, and reduced mortality.

Source of Funding:

This work received support from PCF-Pfizer Global Health Equity Challenge Award (Award No. 67641037) and American Society for Clinical Pathology/ Coalition for Implementation Research in Global Oncology (ASCP/CIRGO).

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Background:

Trauma registries are essential for the member countries of the College of Surgeons of East, Central, and Southern Africa (COSECSA) to measure injury disease burden and define the state of trauma systems. Data can be used for policy change, clinical care quality improvement, and injury prevention measures. Biomedical literature from the region focuses heavily on registry findings; however, the availability of literature describing translation to local and national implementation programs is unclear.

Methods:

A comprehensive search of the published literature was performed to identify injury prevention programs, trauma care improvement, and policy changes in the COSECSA region. We employed traditional searches, forward and backward citation chasing, and systematic searches using keywords. The following databases were utilized: PubMed, Embase, Scopus, Web of Science, Global Index Medicus, Global Health, Africa-Wide, and HINARI. Search terms included country names in the COSECSA region and the following: “injury prevention”, “implementation”, “quality improvement”, “trauma or accident”, and “health policy”. We screened all abstracts based on pre-defined inclusion and exclusion criteria. Included full text articles were reviewed for aim of the study, design, and outcome measures.

Findings:

Over 500 abstracts were screened, and 16 translational articles related to injury care and injury prevention in the COSECSA region were included. Of these 16 articles, 7 (44%) pertained to trauma care capacity building and education, 3 (19%) evaluated clinical quality improvement programs in trauma care, 2 (12%) described injury prevention programs, 2 (12%) assessed the benefits of injury prevention policy changes, and 2 (12%) described secondary benefits of registries such as improved documentation and patient assessments. Geographically, 5 (31%) articles originated from Uganda, 4 (25%) from Rwanda, 2 (12%) from Malawi and Tanzania each, and 1 (6%) article from Botswana, Ethiopia, and Mozambique each. There were no translational articles evident from the remainder of the member countries of COSECSA.

Interpretation:

Nearly all publications using trauma data in the COSECSA region focus on measuring and describing injury patterns and associated risk factors. Publications pertaining to implementation programs for trauma care improvement, injury prevention, and policy change are comparatively sparse in the existing literature. In this study, we highlight trauma research in the COSECSA region with tangible, direct local benefits. Ongoing evolution of trauma research must go beyond measuring disease burden and focus on implementation for effective regional development.

Source of Funding:

Yale Institute for Global Health

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Background:

Ghanaians with vertically acquired HIV are now living into adulthood. It is known that adolescents and young adults living with HIV have a higher-than-average risk of mental health comorbidity. Despite increasing global attention on HIV-mental health interactions, the field remains understudied in Ghana, with an attendant lack of contextually feasible and relevant interventions. This study aimed to measure and better understand the burden of depression, anxiety, and stress among young people living with HIV (YPLWH) receiving care at a tertiary hospital in Ghana.

Methods:

An explanatory sequential mixed-methods design was used. Depression, anxiety, and stress were quantified using DASS-21, and associations between these and three measures of quality of life-- socioeconomic status, disease stage, and HIV-related risk-taking behaviors-- were explored. N=173 participants ages 10-24 were enrolled in the study. After preliminary quantitative data analysis, semi-structured interviews were conducted with a sample of those who screened positive for depression and/or anxiety to explore their lived experience with this comorbidity.

Findings:

A relatively low prevalence of depression and anxiety was found in this study sample. Depression and anxiety were significantly associated with higher stigma and lower quality of life. Qualitative data supported these findings and reiterated that stigma around mental health comorbidity in this population is less than other HIV-positive population in Ghana.

Interpretation:

We believe this to be attributable to the effect of several psychosocial interventional programs that were previously piloted with the study cohort. Participants also showed marked resilience and knowledge about their condition. Stigma and QoL are key players in the emotional well-being of Ghanaian YPLWH. The results of this study present an opportunity to further explore and scale up effective locally adapted and strength-based solutions to address the mental illness-HIV syndetic in Ghanaian YPLWH.

Source of Funding:

Aerosmith Endowment Fund (Boston Children's Hospital)

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1585

Assessment of the Utility and Feasibility of a Cardiac Point of Care Ultrasound Curriculum in Ghana

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Background:

Point of care ultrasound (POCUS) is increasingly used in the diagnosis and management of cardiovascular disease (CVD) and been promoted as more readily available in resource limited settings. CVD is an increasing burden in low and middle-income countries (LMICs) including $\frac{3}{4}$ of global CVD mortality. There is little documentation on use of POCUS in Ghana.

Methods:

A POCUS curriculum was designed by U.S.-based faculty and the Society of Family Physicians of Ghana (SOFPOG), consisting of a week of didactics and hands-on practice on healthy volunteers and inpatients. Participants are then expected to obtain and submit 2 ultrasound videos a month for review by US faculty at monthly online meetings for 12 months. Participants were physicians who signed up through learning about the SOFPOG course offering. Data was collected on demographics, current use, and barriers. Pre and post-test was assessed on identification of views and structures on POCUS. Results were analyzed using paired t-tests.

Findings:

There were a total of 25 participants of whom 88% had prior experience in POCUS. On average, participants had graduated medical school 11.7 years ago with total amount of time of having used ultrasound in practice being 9.3 months. Sixty-four percent have access in their current practice. The most frequently reported barrier was lacking ability to interpret images (80%) followed by ability to obtain views (76%). Participants showed improvement in cardiac (mean correct: pre=7.5%, post=76%, $p<0.05$), FAST (pre=45%, post=74%, $p<0.05$), and total scores (pre=16%, post=75%, $p<0.05$). On self-report of confidence in ability to obtain and interpret different POCUS views, participants showed significant improvement on all items.

Interpretation:

Participants improved their assessed knowledge of POCUS, and their confidence in obtaining/interpreting images - the most frequently cited barrier. Ongoing practice and qualified review of videos is likely needed and is anticipated to be provided by subsequent virtual sessions. Further study on long term retention and practice changes is planned.

Source of Funding:

RWJ Foundation-International Health Education and Learning grant

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Background:

South Sudan has experienced a series of crises, including civil conflict, food insecurity, and natural disasters, leading to the displacement of millions of people within the country. Communicable diseases, particularly cholera and malaria, pose significant threats within internally displaced persons (IDP) camps due to overcrowding and poor sanitation. The Southern Sudan Healthcare Organization (SSHCO) is dedicated to providing healthcare services to people living in the Mongalla IDP camp in South Sudan. Understanding the resources needed in a humanitarian emergency setting is crucial to improving overall patient care. However, due to limited resources, difficulties in accessing and evaluating patient data for healthcare utilization persist. To mitigate these challenges and improve public health surveillance, this study aims to examine anonymous patient records to establish electronic public health records and improve patient outcomes.

Methods:

This repeated cross-sectional study assessed quantitative data from 5,326 anonymous patient visit records at SSHCO from February 2022 and August 2023. SSHCO clinic staff were trained to utilize Android tablets equipped with Kobo Toolbox software to collect anonymous information on patient visits. Data consisted of demographic information and diagnosis at the time of visit and was reviewed using Kobo Toolbox. Data analysis was conducted using SPSS- V28 software incorporating descriptive statistics, chi-square tests, and logistic regression analysis.

Findings:

Of the 5,326 patient visits between February 2022 and August 2023, 3355 (63%) were female and ages ranged from 1 month to 89 years, with a median age of 13 years. Of patient visits 4729 (88.8%) were diagnosed with malaria, 1241 (23.3%) with acute respiratory illness, 68 (1.3%) with pneumonia, and 274 (5.4%) with urinary tract infection. Other diagnoses included parasitic infection, arthritis, peptic ulcer disease, injury and trauma, and fever. Over the 19 months that charts were collected and reviewed, an average of 280 patients were seen per month. Clinic visits ranged from 83 visits per month in July 2022 to 620 visits in September 2022. The number of patient visits fluctuated by month based on resources available at the SSHCO clinic.

Interpretation:

This study underscores the importance of strengthening public health surveillance in resource-limited settings. Through improved public health surveillance and capacity, we are better equipped to facilitate the development of solutions that empower evidence-based practices for guiding health interventions effectively.

Source of Funding:

None.

Abstract N°: 1590

Building Community Resilience to Combat Vector-Borne Disease Outbreaks: A Case Study of Community Perceptions of Dengue Prevention and Control in Saint Luci

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Background:

Dengue is the world's fastest-growing vector-borne disease. Human behavior, specifically adoption of interventions to control vectors, is crucial in halting the transmission of vector-borne diseases, including dengue. Understanding the factors that promote or impede adherence to these interventions can influence transmission dynamics. This study explores the relationship between community knowledge, opinions, and behaviors related to dengue prevention and control in the eastern Caribbean Island of Saint Lucia, where dengue is endemic.

Methods:

In June of 2023, we recruited 152 community members from 6 selected regions of Saint Lucia (representing areas of low, medium, and high dengue risk). Participants answered a yes/no questionnaire examining knowledge, behaviors, and opinions about dengue risk factors and prevention. The knowledge-based questions were analyzed through cultural consensus analysis to examine cohesion in culturally shared beliefs across participants and regions. Chi-squared tests and t-tests were used for the behavior and attitude-based questions to examine whether the observed variance in response across regions was statistically significant.

Findings:

Survey results suggest that, collectively across the island of Saint Lucia, there is cultural consensus regarding dengue knowledge, with shared agreement regarding attitudes and behaviors about dengue interventions. However, distinctive patterns of variation in knowledge occur between community subgroups defined by geographic areas. When stratifying by subgroups defined by dengue risk level, attitudes and behaviors also differ significantly. These results indicate important deviations in adherence to vector control interventions across both subgroups by risk and geographic location, specifically regarding the use of physical (i.e. door screen and bed nets, etc.) and chemical (i.e. repellent, coils, etc.) measures.

Interpretation:

Understanding baseline knowledge and risk prevention behaviors, and the extent to where there is a shared understanding, is necessary to develop effective interventions within dengue endemic regions. This, in turn, can serve as the basis for crafting sustainable solutions that are customized to the diverse needs and lifestyles of the communities affected.

Source of Funding:

Funding provided by the Institute of Social Science Research at Arizona State University.

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Background:

The coronavirus disease (COVID-19) outbreak declared a pandemic by the World Health Organization (WHO) in 2020 significantly affected pregnant women. Pregnancy causes immunological and physiological changes making a pregnant woman susceptible to a higher risk of infection with SARS-CoV-2 and death. We described the maternal socio-demographic and obstetric characteristics, clinical presentation, as well as maternal-fetal outcomes among pregnant women with COVID-19 disease at Mbarara Regional Referral Hospital.

Methods:

We conducted a retrospective cohort study at the COVID-19 treatment unit (CTU) of Mbarara Regional Referral Hospital (MRRH) from May 13, 2020 to July 22, 2021. We reviewed files of pregnant women with a confirmed diagnosis of COVID-19 disease by either Polymerase Chain Reaction or rapid diagnostic test (RDT). We used a chart abstraction tool in RedCap to capture the information. We described the maternal sociodemographic and obstetric characteristics, clinical presentation, and maternal-fetal outcomes as frequencies and percentages.

Findings:

A total of 30 participants were included in this study. The mean age was 28.6 (± 5.8) years, majority were multigravida (66.7%), rural residents (53.3%), with gestational age <37 weeks (58.62%) and had severe or critical disease (43.3%) on admission. The most common symptoms at admission were cough (33%) and fever (25%). Majority of the participants had their pregnancy terminated (60.0%, 18/30). Cesarean delivery was conducted in 12/17 (70.6). 13/17 (76.5%) were live births, while (4/17) 23.5% were still births and 13/17 (76.5%) had birth weight of ≥ 2.5 kilograms. 9/30 (30.0%) of the women died, mainly from respiratory failure (33.3%, n=3) and pulmonary embolism (33.3%, n=3).

Interpretation:

The maternal mortality among pregnant women admitted with COVID-19 was high mainly from respiratory failure and pulmonary embolism. Most common mode of delivery was cesarean section. There is need to strengthen Health systems in low resource settings to manage pregnant women with COVID-19 disease.

Source of Funding:

None

Reasons for Missing Antiretroviral Doses among Hazardously Drinking Fisherfolk Men Living with HIV in Uganda: Exploring Constructs through Factor Analysis

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Background:

Fisherfolk (fishing communities) are HIV “hotspots” in Uganda and have a high prevalence of hazardous alcohol use which contributes to sub-optimal HIV treatment outcomes including through missed antiretroviral treatment (ART) doses attributed to reasons such as forgetting. However, adherence measures currently being used were designed before treatment regimens became simpler (fewer pills, fewer times) and there is a need to study reasons for ART non-adherence in this key population that has unique non-adherence barriers to improve HIV programs. We explored constructs within endorsed reasons for missing ART doses among fisherfolk men aged 18-50 years, living with HIV (LWH), and have reported recent hazardous alcohol use.

Methods:

We collected data in 2021-2022 among 159 fisherfolk at five HIV clinics in Wakiso District, Uganda at baseline for the Kisoboka study. Sixteen reasons for missing ART doses adapted from the AACTG adherence instruments adding items specific to missed ARTs due to alcohol use were answered on a 4-point rating scale. We conducted an exploratory factor analysis to identify latent constructs from the 16 reasons. A rotated factor pattern matrix was used to identify items that loaded at ≥ 0.6 . The internal consistency of the final items was assessed using the Cronbach Alpha.

Findings:

Our analysis identified four factors (constructs) which represent a cluster of items. Factor 1 was “consequences of mixing alcohol and ART” and it had four items related to not wanting to mix ART with alcohol, toxicity fears and falling asleep. Factor 2 was “conflicting routines” with 3 items related to being busy and being away from home. Factor 3 was “treatment burden” representing 3 items related to being ill and feeling depressed/overwhelmed. Factor 4 was interpreted as “lack of motivation and skills” with two items related to running out of pills and simply forgetting. Total variance explained by the four factors was 79.6%, the Cronbach Alpha for the 12 items was 0.66 and improved to 0.70 after removing factor 4. The three stable constructs of consequences of mixing alcohol and ART, conflicting routines and treatment burden should be explored to potentially inform a revised measurement scale on reasons for missing ARTs in hazardously drinking populations.

Interpretation:

Adding items specific to alcohol use to measurement tools can potentially improve ART adherence measurement in this population. We recommend the items be further investigated in future data collection with larger sample sizes and in general populations.

Source of Funding:

National Institute on Alcohol Abuse and Alcoholism (NIH), grant: R34AA025891.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1594

Informing policymakers with evidence-based advice on COVID-19 pandemic and Conflict Health Response

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Background:

Ethiopia faced multiple shocks in the last three decades ranging from locust infestation, droughts, floods, and HIV/AIDS to COVID-19 pandemics and Conflicts in the country. Before the first confirmed case of the novel coronavirus in the African region, Ethiopia was among the 13 African countries WHO considered a top priority for COVID-19 preparedness due to direct links or a high volume of travel to China¹. In Ethiopia, the COVID-19 pandemic coincided with the Northern conflicts which have made significant impacts. The COVID-19 vaccine reached Ethiopia on May 24, 2023, after experiencing a total case of 500,872 and death of 7,574. This study aims to document the lessons from the health emergencies from the COVID-19 pandemic and the Northern internal conflict which is estimated as many as 600,000² people have died and health facilities were destroyed and vandalized.

Methods:

Both qualitative and quantitative data have been used. A mix of non-probability sampling techniques and a snowball approach have been used to select 18 key informants and 43 respondents from conflict-affected communities. In addition, research papers from “Think–Thank groups like the Ethiopian Economic Association (EEA), Duke Global Health Institution, and UN Global Framework papers have been reviewed

Findings:

Most respondents expressed that the COVID-19 pandemic is a global challenge that requires coordinated efforts from all stakeholders, unfortunately, vaccine hoarding was apparent, and international collaboration was declining against the IHR (2005) principle that goes with the saying: “...a virus somewhere is pandemic everywhere...”. Think-thank groups like EEA advised the policymakers to make a partial COVID-19 lockdown option which was unpopular both locally and globally. Yet, with Ethiopian Airlines' strategic move to change most of its passengers' flights to Cargo that is used to transport vaccines to most African countries in a massive global economic shock, the airline remains profitable. For a country to sustain multifaceted shocks, it requires the establishment of an Emergency Fund.

Interpretation:

The evidence-based policy advice by the Think-thank groups resulted in a positive success in minimizing the impacts of COVID-19 on the economy. Ethiopia uses COVID-19 as an opportunity to enhance domestic resources mobilization and scale up respiratory Oxygen facilities and laboratory services in particular.

Source of Funding:

Personal

¹ World Health Organization. The African region reinforces preparedness for novel coronavirus. World Health Organization Regional Office for Africa 2020. Available at: <https://extranet.who.int/sph/news/covid-19-preparedness-bulletin-Ethiopia>. Accessed 24 July 2020

² Ghent University Study in Belgium 2022; The National Jan 16, 2023 and The Guardian

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1596

Slemenda Scholars: The Impact of a 25-year Preclinical Experiential Learning Program in Global Health

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Background:

While many programs offer students in their clinical years Short Term Experiences in Global Health (STEGHs), less attention has been paid to the impact of preclinical exposure to high-quality global health partnerships. The Slemenda Scholars (SS) program at Indiana University School of Medicine provides select preclinical medical students with a fully funded opportunity for exposure to the field of global health with the Academic Model Providing Access to Healthcare (AMPATH), a partnership between a consortium of North American and European universities and Moi University in Kenya.

Methods:

Designed utilizing transformative learning theory and ethical standards for global health educational programs such as the WEIGHT guidelines, SS is an 8–10-week program for rising MS2 students consisting of clinical shadowing, program development, didactics, case-based discussions, a project, and participation in diverse global health initiatives. SS are incorporated into Kenyan-led teams to learn bidirectionally and encourage long-term relationships. In this mixed methods study, a qualitative assessment was conducted of didactic and experiential learning opportunities described in narratives written by participants from 1998-2023. Themes were generated based on constant comparative method using grounded theory and finalized in an iterative consensus process. Additionally, in 2023 a cross-sectional survey was administered for quantitative analyses.

Findings:

31 narratives underwent full review, with 6 eliminated due to non-Slemenda authorship. 25 entries in grey sources (narratives, essays, blogposts, open-ended survey responses) were included. Two core categories were identified through coding and clustering of emergent themes: a) the nature of impactful experiences and b) impact of the program. Participants reported expanding perspectives (84%), motivation for a service-oriented career (48%), hope (44%), and innovation (36%) as key themes clustered in the impact category. To date, 96% of survey respondents indicated they enjoyed participating in the SS program and learned more about themselves, global health, and medicine. 72% agreed it changed their career trajectory.

Interpretation:

This study highlights both the personal and professional impact of long-term partnerships in global health education and the benefit of expanded access to such opportunities to preclinical trainees. Increased financial support from medical institutions for international immersion experiences or integration of global health curriculum could provide an opportunity for early transformational learning with the potential to impact not only global but local-global health focused career trajectories to help address health inequity evident in the U.S.

Source of Funding:

None

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Background:

According to WHO, Preeclampsia and eclampsia are the third leading causes of maternal morbidity and mortality worldwide. The burden of preeclampsia and eclampsia is most significant in low- and middle-income countries about 95%, where hypertensive disorders of pregnancy account for the highest number of maternal deaths. Globally, 2 to 4% of all pregnancies are complicated by Preeclampsia and up to 16.7% in developing countries. In Uganda, Preeclampsia is the second leading cause of maternal death. The important connections between women's knowledge of warning signs and seeking appropriate care, little research has addressed the patient perspective of preeclampsia, which has affected the mothers' health-seeking behavior. However, the experience and knowledge of women with preeclampsia and eclampsia in low and middle-income countries is largely unknown. The current study fills this gap by evaluating myths, knowledge and understanding of women of reproductive age about preeclampsia and eclampsia in Mbale City, an urban area in Eastern Uganda.

Methods:

This was a community phenomenological survey conducted during Preeclampsia Awareness Month 2023. 81 mothers of reproductive age were interviewed. All interviews were audiotaped and later subjected to careful verbatim transcription. Codes were generated within Dedoose software deductively and, later merged into four major themes which included Knowledge about preeclampsia, management of preeclampsia, Prevention of preeclampsia and community perceptions about preeclampsia.

Findings:

84 mothers within the community were interviewed to get their understanding of the perceptions, management and prevention of preeclampsia. All the mothers who were interviewed were also screened. A total of 81 mothers responded to our questions. 37.5% of the respondents had never heard about preeclampsia. We also noticed that 48.6% of the mothers were using herbal medicines to manage/prevent preeclampsia. While most of them thought preeclampsia only happened during pregnancy, it was also associated with having multiple sexual patterns, poor feeding, women with stress, witchcraft, twin pregnancies and mothers expecting baby boys and disease poverty. Regarding the prevention of preeclampsia, the majority of the mothers preferred seeking ANC early, utilising traditional medicine, engaging in exercise during pregnancy, avoiding eating fatty foods etc. Regarding the management of preeclampsia, mothers had different ways of managing it from self-medication, to herbal medicine use, seeking traditional healing and seeking ANC.

Interpretation:

The study revealed that the majority of the mothers in the community were still unaware of preeclampsia and therefore this calls for more investments in community engagement strategies on preeclampsia.

Source of Funding:

This study was fully funded by Seed Global Health and Busitema University

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1605

The impact of JaxTHRIVE, a student-led nonprofit dedicated to mentoring and empowering refugee students

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Background:

Jacksonville, Florida has served as a prominent hub for refugee resettlement for over three decades. However, the closure of World Relief's Florida office in 2019 marked a significant change. Despite the discontinuation of most federal funds in 2019, nonprofit organizations continued their support for the refugee community in Jacksonville, FL. Among these organizations is JaxTHRIVE, a student-led nonprofit dedicated to mentoring and empowering refugee students.

Methods:

While other nonprofit refugee support organizations focus primarily on facilitating the resettlement of newly arrived families, JaxTHRIVE targets the social determinants of health that help K-College refugee students adjust to school and life in the U.S. They accomplish this by connecting refugee students with local high school and college students who assist them with literacy and language access, STEAM classes, art, dance and soccer workshops, SAT/ACT test preparation, financial literacy and field trips to museums and local cultural landmarks. JaxTHRIVE offers both in person and virtual educational assistance, tailoring their support to the specific needs and goals of each student.

Findings:

Since its formal establishment in 2017, JaxTHRIVE has shown promising outcomes. They have trained more than 350 volunteers who have helped more than 275 refugee students culminating into over 11,000 community service hours. Through the dedicated efforts of these student mentors, JaxTHRIVE's refugee students have reported improved language proficiency, increased understanding of the local culture, and enhanced self-confidence.

Interpretation:

The findings suggest that a student-led mentoring approach can significantly contribute to the successful integration and overall well-being of refugee students, emphasizing the importance of community engagement and collaboration in this process.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1611

Factors influencing mental disorders among undergraduate university students: an exploratory qualitative study at Busitema University in Eastern Uganda.

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Background:

Following the loss of several students due to health-related challenges at Busitema University and other universities in Uganda, there was an urgent need to understand the factors contributing to the death of students. This study aimed to explore the potential factors influencing mental disorders among students at Busitema University.

Methods:

Key informant interviews were conducted among students diagnosed with mental disorders following a semi-structured interview grid. All participants consented during the study. Each interview was audiotaped and recordings were later subjected to verbatim transcription. Each transcript was carefully reviewed by the principal investigator prior to the analysis. Thematic analysis was done following a deductive approach. Dedoose software was used to support the coding and categorization of thematic areas.

Findings:

A total of 42 interviews were conducted and the results indicated that several factors were associated with mental disorders including alcohol and substance use, poor learning environment, stringent and unfavorable university policies, the big gap that exists between students and administration, relationship challenges, academic pressure, family factors (broken families, poverty), gambling, lack of co-curricular activities, poor counselling services and political pressures.

Interpretation:

Considering the high propensity of mental health issues that hinder the success of students at the university level, it is paramount for universities to continually evaluate the factors influencing mental health of their students and tailor treatment programs and other cost-effective interventions to address them

Source of Funding:

This study was fully supported by the Busitema University Research and innovation fund grant 3/DGSRI/22. We are grateful to the administration of Busitema University and student leaders of Busitema and Mbale campuses who supported us throughout the data collection process.

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 1612

Outcomes of Training Clinicians in the Global South to Conduct Cervical Cancer Screening and Management: A Scoping Review

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Background:

Cervical cancer, despite being highly preventable, is one of the leading causes of cancer mortality for women in low-middle-income countries (LMIC). Challenges to preventing cervical cancer in women in LMIC include lack of Human Papilloma Virus (HPV) vaccine implementation, lack of adequate workforce to screen, adequate resources for screening, and drop off in patient referrals and follow-up for treatment. A key strategy in decreasing rates of cervical cancer is to better equip the workforce that can screen. Our study aims to investigate best practices in cervical cancer screening training programs for LMICs to strengthen the clinical workforce in these settings as one aspect of a larger mixed-methods study assessing factors that influence cervical cancer program implementation and direction.

Methods:

We conducted a comprehensive search strategy in PubMed, Embase, and OVID Medline Global Health. In the title and abstract review, we included studies that (1) examined the implementation of cervical cancer screening programs and (2) focused on the training of clinicians. Studies were excluded from the full-text review based on four criteria: (1) the study topic did not address cervical cancer screening (2) no primary literature was available (3) the study was conducted in a high-income country (4) there was no description of a training program (5) training outcomes were not evaluated. At the data extraction stage, only studies focusing on training outcomes were analyzed.

Findings:

A total of 15601 studies were imported for screening, of which 5104 duplicates were removed. Of the 10496 studies screened, 10247 studies were deemed irrelevant at the title and abstract phase. 211 studies have been assessed for full-text eligibility, of which 43 studies have been included in the data extraction phase and are being assessed for training outcomes. The final thematic analysis is expected to be complete by December 2023.

Interpretation:

Preliminary findings have shown that studies on training for cervical cancer screening vary in their breadth of scope, and only a minority of studies report on training outcomes. These results will provide key knowledge in understanding how to best increase capacity for the cervical cancer prevention workforce in LMIC.

Source of Funding:

National Institutes of Health's Fogarty International Center's Training award D43TW012275

Laparoscopy in Liberia: A Mixed-methods, Nationwide Needs Assessment of Liberian Surgeons' Perspectives on Laparoscopic Surgery Practice, Knowledge, and Training Goals

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Background:

Despite strong enthusiasm for laparoscopic surgery, training remains inaccessible for surgeons in many low- and middle-income countries. We assessed the current state of laparoscopy in Liberia, to determine feasibility of implementing a laparoscopic educational curriculum.

Methods:

This mixed-methods study involved >90% of Liberia's surgeons, including faculty, residents, and interns at two urban and rural hospitals. A 32-item survey assessed laparoscopic knowledge, attitudes, and practices. Knowledge was scored from 0 (none) to 10 (perfect) and categorized as unsatisfactory (0-5) or satisfactory (6-10). Attitudes were captured across 5-point Likert scales. Descriptive statistics assessed frequencies, while knowledge scores were compared to previous laparoscopic experiences using chi-squared test. Qualitative interviews were conducted for thematic analysis, including barriers to laparoscopy implementation and patient perspectives.

Findings:

Among 31 survey participants, most were male (n=27, 87.0%) and attending surgeons (n=17, 54.8%). While 32% had received laparoscopic training, nearly all were from one-time workshops. Only 5 participants (16.1%) had experience performing laparoscopy on patients, and only 3 total laparoscopic operations had been performed in Liberia. Participants demonstrated varied knowledge distribution: low (n=17, 54.8%), high (n=14, 45.2%), $M=5.32$, $mdn=5$. Knowledge scores were significantly higher in participants who had previous training ($P<.0001$) and had completed residency outside of Liberia ($P<.0001$). While only 6% felt comfortable teaching laparoscopy, participants indicated they would like more training opportunities (96.8%) and that laparoscopy is a priority for their hospital (87.1%). Fifteen interviews identified implementation barriers including equipment and anesthesia concerns. Participants perceived that patients would be amenable to laparoscopic operations, but that increased cost could be a restrictive barrier for accessing laparoscopy (86.7%). Past efforts to implement laparoscopic training failed due to limited local autonomy and sustainable partnerships with educational institutions.

Interpretation:

This is the one of the first studies assessing laparoscopic surgery in sub-Saharan Africa and Liberia. Our sample, which included nearly all Liberian surgeons and multiple hospitals, demonstrated limited experience, variable knowledge, and high enthusiasm for laparoscopic training. Future studies should co-design projects to implement educational curricula in Liberian hospitals.

Source of Funding:

Intuitive Foundation Global Surgical Training Challenge Grant.

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Background:

The impact of the COVID-19 pandemic on healthcare systems lingers as patients resume care for existing health conditions after long delays. Understanding the reasons for these delays and the impacted populations is crucial for health system strengthening. This analysis aims to describe the barriers experienced by individuals who delayed care across the dimensions of age and gender in Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

Methods:

This is a descriptive analysis of select countries in the Pandemic Recovery Survey (PRS), a self-report questionnaire of adult Facebook users in 21 countries. Participants were selected through a stratified random sampling approach and recruited via online advertisements between March-May 2023. Individuals reporting existing health conditions were asked whether they had received care in the last six months and if not, why. Reported barriers were categorized into personal (lack of money, no transportation, fear of COVID-19, and partner/family disapproval), health facility (facility closed, turned away, and unavailable services), and other barriers. We derived weighted estimates of barriers among individuals who reported inability to receive care, disaggregated by age and gender.

Findings:

Among individuals reporting a health condition in the six countries (n = 31,552), 48.4% (standard error [SE]: 0.79) were unable to receive care. The proportion due to personal barriers decreased with age for males and females in almost every country, with the lowest proportion due to personal barriers being males above 50 in Argentina (35.02% [SE: 4.51%]), Brazil (32.37% [SE: 4.90%]), and Chile (32.54% [SE: 5.98%]) and females above 50 in Mexico (39.09% [SE: 8.19%]). No clear patterns emerged in Colombia and Peru, where over 43% of all groups who delayed care reported facing personal barriers.

Interpretation:

Our findings highlight the complexity of barriers individuals face in accessing healthcare. This study's strength is its sample size, providing the ability to explore healthcare barriers across age, gender, and multiple countries. Limitations include reliance on self-reported data and use of Facebook users as the study population, which may not represent the true population of interest.

These results suggest a need for policy interventions that address both personal and systemic barriers to healthcare access. Tailored strategies could be developed for specific demographics based on these patterns, potentially improving healthcare accessibility and. Future research could also explore the reasons behind resilience observed in specific age-gender groups to inform policy and practice.

Source of Funding:

GG is funded by Bill and Melinda Gates Foundation; LE is funded by Meta.

Abstract N°: 1633

Recovered but Constrained: Narratives of Ghanaian COVID-19 Survivors Experiences and Coping Pathways of Stigma, Discrimination, Social Exclusion and Their Sequels

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Background:

Research about the coronavirus disease 2019 (COVID-19), its epidemiology and socio-economic impact on populations worldwide has gained attention. However, there is dearth of empirical knowledge in low- and middleincome settings about the pandemic's impact on survivors, particularly the tension of their everyday life arising from the experiences and consequences of stigma, discrimination and social exclusion, and how they cope with these behavioral adversities

Methods:

Realist qualitative approach drawing data from people clinically diagnosed positive of COVID-19, admitted into therapy in a designated treatment facility, and subsequently recovered and discharged for or without follow-up domiciliary care. In-depth interviews were conducted by maintaining a code book for identifying and documenting thematic categories in a progression leading to thematic saturation with 45 participants. Data were transcribed and coded deductively for broad themes at the start before systematically nesting emerging themes into the broad ones with the aid of NVivo 12 software.

Findings:

Everyday lived experiences of the participants were disrupted with acts of indirect stigmatization (against relatives and family members), direct stigmatization (labeling, prejudices and stereotyping), barriers to realizing full social life and discriminatory behaviors across socio-ecological structures (workplace, community, family, and social institutions). These behavioral adversities were associated with self-reported poor health, anxiety and psychological disorders, and frustrations among others. Consequently, supplicatory prayers, societal and organizational withdrawal, aggressive behaviors, supportive counseling, and self-assertive behaviors were adopted to cope and modify the adverse behaviors driven by misinformation and fearful perceptions of the COVID-19 and its contagious proportions

Interpretation:

In the face of the analysis, social campaigns and dissemination of toolkits that can trigger behavior change and responsible behaviors toward COVID-19 survivors are proposed to be implemented by health stakeholders, policy and decision makers in partnership with social influencers, the media, and telecoms.

Source of Funding:

None

Maternal Adipokines During Pregnancy as Predictors of Neurodevelopmental and Anthropometric Outcomes

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Background:

Adipokines, produced by adipose tissue, influence processes like glucose and lipid metabolism, as well as reproductive processes like placentation. However, it remains unclear whether maternal adipokine concentrations relate to neonatal anthropometry and neurodevelopment. This study aims to uncover this association.

Methods:

This longitudinal observational study examined 100 healthy pregnant women and their full-term neonates from the OBESO perinatal cohort at the National Institute of Perinatology, Mexico City. Ethical approval was granted under numbers 2019-1-20 and 3300-11402-01575-17, and all participants provided written consent. Maternal blood samples were collected during each trimester, and we measured pregestational body mass index (pBMI), maternal fat mass (bioelectrical impedance analysis), and gestational weight gain. Maternal serum concentrations of progranulin, brain-derived neurotrophic factor (BDNF), adipocyte-specific fatty acid-binding protein (AFABP), fibroblast growth factor 21 (FGF-21), adiponectin, resistin, and leptin were quantified using ELISA. Neonatal birth weight and fat mass at one month (Pea Pod) were recorded, and neurodevelopment was assessed using the Neonatal Behavioral Assessment Scale (NBAS). Binomial logistic regression and multiple linear regression models were generated to evaluate the relationship between maternal adipokine concentrations and neonatal neurodevelopment and anthropometrics traits.

Findings:

The multiple linear regression model explained neonatal fat mass at one month with an $R^2 = 0.530$ and $aR^2 = 0.471$. The variables that explained the model were progranulin in the second trimester [$\beta = 0.213$ (95% CI: 0.106, 0.320, $p = .001$)] and resistin in the third trimester [$\beta = -0.338$ (95% CI: -0.557, -0.119, $p = .005$)].

The binomial logistic regression explained neurodevelopmental alterations. Maternal age ($\beta = 0.240$, 95% IC: 1.007, 1.605 $p = .044$) and second trimester progranulin levels ($\beta = -0.67$, 95% IC: 0.884, 0.990, $p = .021$) were associated with alterations in NBAS orientation domain. Meanwhile, third trimester AFAB levels ($\beta = -.973$, 95% (IC: 0.155, 0.920 $p = .032$) were associated with autonomic nervous system alterations.

Interpretation:

Our findings suggest that maternal adipokines affect neonatal fat mass and neurodevelopment. These results emphasize the enduring impact of pregnancy on fetal health. With over 30% of pregnant women in Mexico presenting obesity, the effect of adipose tissue and adipokines becomes a pressing issue to investigate and act upon further.

Source of Funding:

Instituto Nacional de Perinatología and the University of Chicago CGH.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1639

Adapting a Youth-Centred Demand Creation and Service Delivery Approach for Adolescent and Youth Friendly Services (AYFS) during and after COVID-19. An Experience in Kono District, Sierra Leone.

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Background:

About 21% of adolescent girls aged 15 to 19 had started childbearing and contributed to 40% of maternal deaths. Moreover, the emergence of the COVID-19 pandemic disrupted social and reproductive health services to protect adolescents. The pandemic had put rural adolescents in Kono district at high risk of due to sexual transactions associated with the hot-diamond trade. The PIH in Sierra Leone leveraged its “No Woman or Girl Left Behind” project to improve reproductive health outcomes among adolescents

Methods:

The AYFS clinic began its operation in May 2020, just after Sierra Leone registered a few cases of COVID-19. The project adapted youth-centred demand creation and reproductive service delivery through a stand-alone Adolescent and Youth Friendly Service (AYFS) Clinic. The project targeted adolescents (10 to 19 years) and youth (20 to 24 years). The AYFS clinic was designed to provide combined family planning counselling and services, sexually transmitted infection (STI) screening, testing, and treatment, post-abortion care, and referral to other services. Service providers were trained to deliver gender-sensitive, rights-based, and user-adaptability services in the ever-changing environment of the COVID-19 pandemic. School clubs, radios, and WhatsApp media platforms were created to enhance demand, access, and acceptability of AYFS services from the clinic.

Findings:

The results showed that a total of 16,158 adolescents (10 to 19 years) and youth aged 20 to 24 visited the AYFS clinic between 2020 and 2023. Of this total number, 4% (700) visited in 2020, 29% (4,669) visited in 2021, 44% (7,056) visited in 2022 and 23% (3,733) visited in 2023. The results show that during the past three years a total of 3,937 adolescents and youth accessed different family methods. Majority of them (1708, 43%) accessed family planning in 2023. Again most of them (2,598, 66%) accessed implant family planning methods. The project also registered 8,813 adolescents and youth tested positive for STIs with majority of them being reported in 2021(3259) and in 2022 (4,649). In all years, adolescents and youth received appropriate counselling, treatment, and referrals to other services.

Interpretation:

The adapted approach of youth-centred demand creation and service delivery through the AYFS clinic was successful in delivering combined reproductive services to adolescents and youth in Kono. The success has set standards for investing more in youth-centred and targeted services for STIs and family planning.

Source of Funding:

Global Affairs Canada

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Background:

In 2021, children under one and adults over 65 were exposed to 3.7 billion more heatwave days than annually from 1986–2005, and there was a 68% increase in heat-related deaths. Children are vulnerable to the environmental impacts of climate change, and an estimated 88% of global mortality due to climate change is expected in children under five.

Methods:

In this retrospective analysis of 844,124 pediatric (<18 years) ambulance dispatches across eight Indian states between Jan-2013 and Dec-2015, we aimed to find the relative risk (RR) of average daily maximum temperature (TMax) impacting ambulance dispatches using a distributed lag non-linear model with quasipoisson distribution. We used a Bayesian network model to determine the emergency types most affected.

Findings:

The cohort was predominantly male (467,193 (55.35%)), rural (527,858 (62.53%)) with a median age of 7 (0.9-14) years, and the average TMax was 31.4°C (95% CI: 31.2-31.6). The RR was statistically significant over the entire prediction range of TMax used (31.4-39.4°C), with the maximum RR (1.33 (95% CI: 1.23-1.44)) observed at 39.4°C and the minimum RR (1.07 (95% CI 1.06-1.08)) at 31.4°C. The elevated RR with rising TMax was identified across all age groups. With rising TMax (10.5-24.8°C versus 32.8-45°C), the probability of calls for trauma (-5.1%), abdominal pain (-3.4%), and calls categorized "other" (-4.1%) decreased while respiratory (+6.5%), neonatal tetanus (+4.2%), convulsions (+1.9%), and poisoning-related (+1.8%) calls increased.

Interpretation:

An 8°C temperature increase is associated with a 26% increased risk of calling an ambulance. As extreme heat events become more common in India, we should operationally prepare for increased ambulance utilization and a shift in chief complaint.

Source of Funding:

CIGH seed grants

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Background:

Fighting against the disparity in women's reproductive health (RH) outcomes is a global challenge targeted by SDG's third goal. RH literacy has greatly impacted women's reproductive decision-making, outcomes, and empowerment. Refugee women are among the most vulnerable populations in the case of RH literacy due to instability and lack of resources in the pre-resettlement environment and post-resettlement barriers, including language barriers, unfamiliarity with the healthcare system, and financial and access barriers. A tailored RH literacy training that targets refugee women's needs can increase awareness of health challenges and available choices, reproductive autonomy, and the capacity to communicate with their partners and providers. This study aims to develop a linguistically and culturally appropriate RH literacy scale that identifies refugee women's needs and measures the elevation of knowledge gain and behavior changes after possible interventions. The scale can be used by health providers, resettlement services, and public health professionals globally to assess the needs and responses and provide further appropriate interventions and programs.

Methods:

After identifying existing RH literacy scales in the literature, the domains and items needed for refugee RH literacy were adopted to create an initial draft. The developed draft was tested through experts' feedback, refugee support groups, researchers, and students. The scale was translated and piloted in English, Dari, Pashto, and Arabic through a series of virtual and in-person RH training sessions.

Findings:

The adapted scale includes three domains: digital literacy, reproductive health literacy, and reproductive health knowledge. The scale was successfully used in the pre-post training sessions of RH literacy meetings in Sacramento, California.

Interpretation:

Health knowledge is often hard to measure and quantify, and although several measures of health literacy have been tested in existing studies, none of them targeted RH in populations that are limited in language, awareness, and familiarity with the US healthcare system. Having a shared-validated tool to measure the vulnerable population's needs will support identifying each community and individual needs and provide targeted education globally and locally.

Source of Funding:

NLM, G08 LM014109, and UC-UROP fundings.

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 1646

Bridging Gaps in Depression Care for Older Adults: A Collaborative Model with Community Health Workers

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Background:

Effective non-pharmacological treatments for depression in older individuals, such as behavioral activation and problem-solving exercises, often remain inaccessible to those in need. To address this challenge, we conducted an iterative pilot study in urban, low-resource settings in Lima, Peru. Our goal was to adapt a collaborative model between healthcare professionals and community health workers (CHWs) to deliver depression care to older adults.

Methods:

From May to September 2023, we enrolled eight older adult participants, each paired with a team of CHWs. Over 14 weeks, these eight pairs of CHWs facilitated a series of eight one-hour sessions with the older adults. The intervention encompassed problem-solving, scheduling enjoyable activities (both social and physical), and psychoeducation. Weekly supervision by a mental health professional team (comprising a psychologist and general practitioner) was provided to CHWs. Qualitative data collection included in-depth interviews with participants and CHWs, analysis of CHWs' field notes and notes from group supervision sessions. Additionally, we used feasibility and acceptability Likert scales.

Findings:

Seven out of eight older adults attended all eight sessions with CHWs, forging strong and trusting relationships. CHWs' ability to establish trust, engage in active listening, and foster non-judgmental conversations greatly enhanced their credibility. Participants reported increased hopefulness, positivity, and demonstrated improved attitudes and behaviors. Supervision group sessions were instrumental in enhancing self-care practices among CHWs. Quantitative scores reflected high feasibility and acceptability among all participants.

Interpretation:

Our innovative approach, harnessing the potential of CHWs to deliver depression care to older adults in low-resource urban settings, has yielded promising results. It has demonstrated high acceptability and feasibility while fostering positive outcomes. This model holds the potential to bridge existing gaps in providing effective non-pharmacological treatments for depression in this population.

Source of Funding:

Fogarty International Center and the National Institute of Mental Health, National Institutes of Health, USA (No. 1K43TW011586).

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Background:

Adolescents with HIV (AWH) are at greater risk of poor health outcomes due to stigma, discrimination, victimization, and resulting stress. Stigma-related stress can lead to hypervigilance which is a state of constant monitoring of the social environment for potential threats and altering behaviour to overcome those. The aim of the study was to examine the lived experience of hypervigilance among AWH in India.

Methods:

Data was utilized from a qualitative study conducted between September 2021 and December 2022. A total of 39 in-depth interviews were conducted to explore psychosocial issues among consenting AWH ages 10–19 years in Pune, India. Participants were selected purposively from a tertiary care institute in Pune and two antiretroviral therapy centers linked to the institute. All interviews were transcribed into the local language of Marathi and translated into English. Analysis was conducted in MAXQDA software. Applied thematic analysis was utilized to identify themes and subthemes in the data.

Findings:

The average age of the adolescents included in the study was 16 years and females constituted 53% of the AWH. The key themes of HIV-related hypervigilance were the salience of stigma, the threat of discovery, hypervigilant monitoring, and social-emotional consequences of hypervigilance. HIV stigma became salient while seeking care from hospitals, falling severely ill, and while interacting with HIV-positive peers or people. Salience was accompanied by threats of discovery and hypervigilant monitoring where AWH avoided places such as the hospital or support groups for AWH. AWH frequently made excuses when confronted about HIV or medications to conceal their HIV status. Hypervigilance was associated with feelings of fear, sadness, and helplessness. Not only did constant monitoring negatively affect mood, but also social interactions, self-image, and adherence to antiretroviral therapy.

Interpretation:

Findings indicate the need for disclosure counseling and screening of AWH for hypervigilance and stress to improve mental health and well-being. The study is novel in identifying place and situation-based triggers for hypervigilance and its consequences that can be used to develop interventions to prevent adverse mental health outcomes among AWH.

Source of Funding:

Funding received by the Fogarty International Center and the Office of Social Behavioral and Population Sciences Grant ##D43TW009340

A feasibility study of hypertension management by community health workers using an mHealth application in rural Guatemala

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Background: Hypertension is a leading cause of disability and mortality worldwide, disproportionately impacting LMIC. This is largely due to insufficient primary care infrastructure and workforce to screen and treat hypertension. In order to address this problem, we are designing and implementing a mobile health (mHealth) application to assist community health workers (CHWs) in the diagnosis and treatment of hypertension.

Methods: This was a single group feasibility study of hypertension care provided by CHWs equipped with a novel mHealth application providing guidance on antihypertensive medication titration (ClinicalTrials.gov ID: NCT05479097). This study was carried out in San Lucas Tolimán, a rural, Indigenous municipality in Guatemala. We aimed to enroll 30 adult patients with hypertension, excluding pregnant patients, with planned follow-up of 6 months. Primary outcomes were agreement of CHWs and supervising physician with application medication recommendations, systolic blood pressure (SBP), diastolic blood pressure (DBP), and percentage of patients with SBP \leq 140 mmHg. Normally distributed continuous variables were analyzed using t-tests, non-normally distributed variables by Wilcoxon signed rank test, and proportions by McNemar's test. Study was approved by the University of Wisconsin IRB and the San Lucas Medical Committee. Written informed consent was obtained from all subjects.

Findings: We enrolled 32 patients, 30 of whom were retained through 6 months. CHW agreement with medication recommendations was 99.5% and physician agreement 96.7%, both above the prespecified target of 80%. Median SBP decreased by 6.5 mmHg (95% CI 12.0 to -0.99, $p = .032$). Mean DBP decreased by 3.1 mmHg (95% CI -6.1 to -0.1, $p = .045$). The percentage of patients with SBP \leq 140 mmHg increased from 66.7% to 76.7% ($p = .505$). There were no serious adverse events.

Interpretation: The mobile application provided reliable antihypertensive medication recommendations and patients experienced clinically and statistically significant improvements in blood pressure, despite small sample size. These results support the feasibility of hypertension management by CHWs equipped with our mHealth application. We plan to more robustly assess the intervention by conducting a larger non-inferiority RCT with physician care as a comparator. If our approach proves to be effective in improving blood pressure control and non-inferior to physician care, it could have a significant positive impact on hypertension care in low-resource settings around the world facing physician shortages and other healthcare infrastructure challenges.

Source of Funding: Funding provided by the Fogarty International Center, NIH (R21TW011891).

Social Determinants of Early Childhood Development In Pakistan: Implications For Global Health Equity

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Background:

Early childhood development is a global health priority aligned with the United Nations' Sustainable Development Goals. Ensuring healthy development in Low and Middle-Income Countries (LMICs), such as Pakistan, is vital for achieving these goals. Despite widespread early childhood adversity in LMICs, research on factors associated with social disadvantage and their impact on developmental vulnerability is limited. This study addresses these gaps by examining the developmental vulnerability and factors related to social disadvantage that predict vulnerability among children in Karachi, Pakistan.

Methods:

In a collaborative effort between Canadian and Pakistani scholars, the Urdu version of Early Years Development Instrument was used to assess the development of young children in five domains: physical, social, emotional, language and cognition, and communication skills. Data were collected from children in kindergarten and grade one in 397 public schools. Demographic information, including child sex, ethnicity, parental education, and family income, was obtained from parents. The analytic sample included 9,372 children (53.9% female) aged 3 to 8 years, spending at least one month in participating classrooms without identified special needs. Descriptive and bivariate analyses estimated vulnerability rates by domain. Mixed-effect logistic regression modeling accounted school-level variance and identified predictors for developmental vulnerability. Ethics approval was granted by the University of British Columbia, Canada, and Aga Khan University, Pakistan, with written informed consent from guardians.

Findings:

Findings indicated that 12.2% of children were vulnerable in physical health, 10.9% in social competence, 11.1% in emotional maturity, 10.2% in language and cognition, and 12.2% in communication skills. Moreover, 27.7% exhibited vulnerability in at least one domain. Boys were more likely to be vulnerable in social competence, emotional maturity, and language and cognitive development. Children from families below the poverty line consistently demonstrated higher odds of poor development, while those from ethnic minority backgrounds were more likely to be vulnerable in language, cognition, and communication. Conversely, children of mothers with post-secondary education displayed lower vulnerability rates (although not statistically significant).

Interpretation:

Our study uncovered that one in four Pakistani children was at risk of poor development at school entry. Multiple social determinants, including child sex, family poverty, and ethnic background, predicted vulnerability. These findings stress the need for universal and targeted interventions to reduce early childhood vulnerability in Pakistan and prioritize high-risk subgroups, fostering equitable opportunities for holistic early-stage child development.

Source of Funding:

Global Affairs Canada (GAC) and Aga Khan Foundation under Partnership for Advancing Human Development in Africa and Asia (PAHDAA) initiative provided funding.

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Background:

The World Health Organization (WHO) reports tobacco causes over 8 million deaths each year including 1.3 million due to secondhand exposure. In addition, tobacco farming causes significant damage due to the impact of deforestation, child labor and health hazards to farming households. A recent compilation of evidence finds an increase in tobacco use among youth in 63 of the 135 countries surveyed and highlights that the tobacco industry continues to target new markets in the WHO African region. Academic research has had a significant impact on WHO FCTC drafting, implementation, and improvement. This scoping review focusing on the WHO African region a) map the extent of academic research examining contextual factors on WHO FCTC national level implementation; b) report on contextual factors impacting WHO FCTC implementation.

Methods:

We used scoping review stepwise methodological framework by Levac, Colquhoun, and O'Brien which builds upon the framework by Arksey and O'Malley. After conducting the search across Scopus, Web of Science, PubMed, and Europe PMC, we generated an initial list of 10,342 articles. From this initial list we removed 5582 duplicate articles and identified 4760 articles for screening. We selected 43 articles for data extraction. We integrated Leichter's four categories of context (situational, structural, cultural, and exogenous) and the stages heuristic policy model (agenda setting to policy evaluation) for data extraction and analysis.

Findings:

The studies reviewed included 15 countries from the WHO African region. In terms of contextual factors outlined: Situational contextual factors such as burden of disease or impact on health can be useful to push governments for policy formulation (e.g., Nigeria, Ghana and Kenya). Structural contextual factors were covered by most papers in the review. Themes identified under structural contextual factors include political contextual factors, macro-economic interests, funding, institutional congruence, strength of policy, institutional capacity (e.g., Nigeria, Ghana, Kenya, South Africa). Cultural contextual factors include strong policy entrepreneur influences, modern trends and education and literacy levels (e.g. Kenya, Ethiopia). Exogenous contextual factors include strong influence of the WHO FCTC, counter influence by the tobacco industry at the national level and bi-lateral partnerships such as Zimbabwe and China.

Interpretation:

Contextual factors have played a significant role in policy formulation, legitimization, and implementation. Further understanding contextual factors affecting WHO FCTC national implementation can strengthen policy formulation and help re-align support to countries by the FCTC secretariat.

Source of Funding:

Canadian Institute of Health Research

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Background:

The COVID-19 pandemic disrupted global pharmaceutical supply chains, impacting low- and middle-income nations like Ghana. In these nations, access to healthcare is greatly influenced by the availability and affordability of medicines at service delivery points. This study examines procurement price trends and stockout rates for essential medicines at Ghana's Eastern Regional Medical Stores (ERMS) during the COVID-19 pandemic. The ERMS is the main supplier of medicines to over 680 public and private hospitals and clinics in the region.

Methods:

Data on procurement prices and stockouts for 50 communicable disease medicines (CDM) and 54 non-communicable disease medicines (NCDM) were collected from the ERMS records spanning from 2018 to 2022. These medicines were part of the National Essential Medicines List. Prices were adjusted for inflation using national inflation adjustment factors from worlddata.info. Stockout data were assessed by the proportion of stockouts, and the duration of months of stockouts within a year. Prices and stockout rates were then compared across the study period.

Findings:

Between 2018 and 2022, CDM prices increased by 12%, compared to a modest 1.7% increase in NCDM prices. Concurrently, the stockout rate for CDM rose from 54% in 2018 to 60% in 2022, with the average duration of stockouts extending from two to three months. Regarding NCDM, the proportion that encountered stockouts increased from 58 to 63%. There was a slight reduction in the average duration of NCDM stockouts, decreasing from four months in 2018 to three months in 2022. There were severe shortages of key medicines used for managing COVID-19 in the country. For instance, the stockout duration for dexamethasone injection steadily increased from none in 2018 to a considerable nine months in 2022. Similarly, the stockout duration for azithromycin capsules increased from one month in 2018 to three months in 2022. These findings highlight the importance of robust supply chain management, particularly for medicines critical in responding to public health emergencies.

Interpretation:

The significant increase in the prices of CDM, coupled with severe shortages of critical medicines during the COVID-19 pandemic, posed a threat to the quality of patient care. Urgent measures are needed to ensure consistent availability of medicines at the ERMS in Ghana, which serves numerous healthcare facilities.

Source of Funding:

None

Burden and determinants of hypertension, type 2 diabetes mellitus and dyslipidemia in underweight middle-aged adults: An AWI-Gen sub-study

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Background:

Sub-Saharan Africa (SSA), historically burdened by infectious diseases, is currently experiencing a substantial rise in noncommunicable disease such as cardiovascular disease (CVD), especially in the middle-aged population (30-70 years old). In the underserved Upper East Region of Ghana, the Navrongo Health and Demographic Surveillance System (NHDSS) has identified hypertension, type 2 diabetes mellitus (T2DM), and dyslipidemia as the primary cardiometabolic diseases (CMDs) responsible for CVD, and increased body weight as a significant risk factor. Yet little is known about CMDs in underweight adults in Ghana or other parts of SSA. We conducted a cross-sectional study, nested in a larger demographic survey of cardiometabolic risk factors, to examine how underweight and other risk factors associate with CMDs in the Kassena-Nankana districts of the Upper East Region of Ghana.

Methods:

A population cross sectional study was conducted in the NHDSS among adults aged 40-60 years old. Weight and height were collected to determine body mass index (BMI), which was defined as underweight <18.5 kg/m², normal weight 18.5-24.9 kg/m², and overweight/obese >25.0 kg/m². Sociodemographic and behavioral information was collected as well as biometric data on hypertension, T2DM, and dyslipidemia status. Socio-demographic factors included age, sex, socioeconomic status, household size, occupation status, and highest level of education. Behavioral factors were tobacco use, alcohol consumption, and physical activity. We conducted multivariable logistic regression using STATA to determine the association between underweight and hypertension, T2DM, and dyslipidemia.

Findings:

In the study cohort of 2014 participants, the overall prevalence of underweight individuals was determined to be 15.49% (95% CI .14-.17%). This demographic displayed varying degrees of cardiometabolic disease (CMD) statuses, notably, with 22.76% affected by hypertension, 5.13% by T2DM, and 59.62% by dyslipidemia. Upon conducting a multivariate analysis focusing on the underweight subset, subcutaneous fat emerged as a significant factor associated with the likelihood of developing hypertension and dyslipidemia. Specifically, an increased presence of subcutaneous was linked to higher odds of hypertension (OR 1.77 [95% CI 1.36, 2.32]) and dyslipidemia (OR 1.44 [95% CI 1.10, 1.90]) status.

Interpretation:

Underweight status amongst participants with increased subcutaneous fat correlates with hypertension and dyslipidemia, independent of numerous other biological and behavioral factors, in this understudied sub-Saharan African population. This finding warrants further confirmation and evaluation for plausible causal mechanisms.

Source of Funding:

NHGRI, NIEHS, OAR, NIDDK (NIH), H3Africa Consortium, APCDR.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1667

Acting for Global Impact in Academic Public Health: Updates from Transformative Approaches to Teaching & Learning and the Framing the Future 2030 Task Force

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Background:

The ASPPH Framing the Future initiative aims to rethink how to stimulate and support accredited schools and programs of public health in preparing students for success in a changing world and global marketplace. The vision for 2030 is for equitable, quality education in public health for achieving health equity and well-being for everyone, everywhere. Initiative efforts are organized into three panels, 1. Inclusive excellence through an anti-racism lens, 2. Transformative educational models and pedagogy, and 3. Expanding the reach, visibility, and impact of the field of academic public health.

Methods:

This paper will provide an overview of the collaborative efforts of the Transformative Education Models and Pedagogy panel. The goal of transformative education in public health is to prepare learners to make informed decisions and drive meaningful actions, both locally and globally, at individual, institutional, and community levels. Transformative education in academic public health does more than impart knowledge and skills; it aims to collaboratively transform the conditions that drive population health and health inequities using a public health worldview, methods, and values

Findings:

Following a multiple-month, iterative process, the panel proposed six (6) recommendations along with deliberative guiding questions designed to stimulate critical reflection and collaborative conversations among its global members and partners. The recommendations will be described, in addition, attention to key lessons learned, practical strategies and considerations for wider adoption and replication will be detailed. The six recommendations are relevant and adaptable to the five FTF 2030 drivers: university leadership and school and program administration; faculty; staff; students; and community partners for planning and implementing educational changes that respond to their institutions' unique missions and complex strategic objectives.

Interpretation:

Focused discussions, prioritization, and decision-making about curricular and co-curricular changes, approaches to teaching and learning, and assessment strategies necessarily involve steps that explore and respect each institution's local environment, culture, structures, and teaching philosophies in relation to readiness for educational transformation.

Source of Funding:

n/a

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1668

Global Health Academic Engagement through Imaging Case Competitions

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Background:

We describe our experience in creating a medical imaging case competition where medical trainees from low- and middle- income countries (LMIC) present unique radiology-focused cases, network, learn, and potentially win prize money.

Methods:

Six competitions have been held via online webinars approached by region: 1) Africa, 2) Latin America and the Caribbean (LATAM), 3) Africa and the Middle East (AME), 4) Asia, and 5) LATAM II, 6) AME II. Competitions begin with a call for participation via social media and emails. Participants submit imaging cases for consideration. A panel of reviewers evaluates the abstracts, choosing the top 20 finalists. These finalists are then required to submit video presentations of their cases, which will be showcased during the live webinar. A regional keynote speaker headlines the webinar and acts as an external judge, evaluating cases alongside the panel for originality, clinical relevance, image quality, and presentation skills. Prizes are \$1,000, \$500, and \$250 for first, second and third places with \$250 for “People’s Choice Award”.

Findings:

Attendance totaled 2,991 people from 50 countries. Keynote speakers from Nigeria, Uruguay, Tanzania, India, Peru, and Ethiopia presented on innovations in interventional radiology, 3D printing and modeling, radiology sub-specialty training, radiology’s importance in patient care, novelty in pediatric radiology research, and outreach initiatives. 283 cases were received from 40 different countries. 25 winners from 15 countries were chosen from 115 finalists. 75 (65%) cases emphasized on pediatrics, 32 (28%) on adult body imaging, and 6 (5%) on adult neuroradiology. 80 cases included Computed Tomography (70%); Magnetic resonance 53 (46%), ultrasound 36 (31%), and radiography 34 (30%). Most (123/132, 93%) viewed the competition as “very good” to “excellent” with well-organized and challenging cases. Diversity of participating countries and women representation was noted. Internet connectivity was a major concern.

Interpretation:

We present a new approach to engage medical trainees in LMICs, fostering collegiality, mentoring, and innovation. These events allow regional and global community building for radiology education.

Source of Funding:

Institutional funding (University of Pennsylvania)

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1671

Performance Assessment of a Short-Term Medical Mission (STMM) in Ecuador

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Background:

Substantial interest has emerged from high-income countries to participate in short-term medical missions (STMMs) to provide healthcare to underserved areas. The main strength of these self-financed STMMs is providing a lower cost for patients than government-based programs. STMMs have been critiqued for their lack of sustainability and cultural/language barriers. Given mixed points of view, there is a critical need to develop a quantitative analysis of STMMs. To address this need, The Health Impact Assessment Tool (HIAT) was developed as a standardized evaluation

Methods:

This 7-day STMM took place from July 27th-August 5th, 2023 at the Hospital General Docente de Calderón in Quito, Ecuador. There was a total of 5 surveys, which included a pre and post visit patient survey, as well as host and team surveys. The surveys were administered on iPads through RedCap in either English or Spanish by UC Irvine students and IMAHelps volunteers. Questions from the surveys were divided into 6 key metrics evaluate cost, efficiency, impact, preparedness, education and sustainability. Likert-scale scores and binary questions were averaged and multiplied by a standardizing coefficient, obtaining a percentage score for each factor. Weighted coefficients were used to generate a combined assessment of all surveys.

Findings:

In total, 935 patients filled out the post-survey. 81.7% of patients felt that the problem was resolved after their visit, and 80.3% of patients noted that their expectations were met. 83.9% of patients felt more informed about their health after their visit. 59.6% of patients expressed acceptable wait times. A shorter wait time for those suggesting improvement was most common (48.7%). 29% of patients requested a shorter wait time. Weighted combined scores for all surveyed were Cost (85.37%), Efficiency (88.96%), Impact (89.43%), Preparedness (70.13%) Education (86.29%), and Sustainability (87.80%)

Interpretation:

This STMM showed a positive outcome when addressing Cost, Efficiency, Impact, Education, and Sustainability. Majority of patients felt their problems were addressed and became more knowledgeable about their conditions. Shortcoming include extended wait times and preparedness. Therefore, additional analysis is warranted to further improve STMM and standardize care appropriately.

Source of Funding:

None

Quality of informed consent for research participation obtained during pregnancy from laboring and non-laboring women in Uganda

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Background:

Obtaining high-quality informed consent for research is an ethical imperative and crucial for protecting participants' rights. Among vulnerable populations, including pregnant women, this becomes even more paramount. We evaluated the quality of informed consent for research participation obtained at different times during pregnancy in Uganda.

Methods:

We conducted this sub-study within a longitudinal birth cohort from 2021-2023. Participants were enrolled in the 2nd or 3rd trimesters of pregnancy, or labor. At enrollment, we administered four standardized questionnaires: 1) Quality of Informed Consent (QuIC, parts A and B; higher scores indicate greater understanding), 2) Medical Researcher Trust scale (MRT; higher score indicates greater trust), 3) Facies Pain scale (0–10, higher score indicates greater pain), and 4) Spielberger State Anxiety scale (-18.8–20.5, higher score indicates greater anxiety). We also collected maternal sociodemographic, obstetric, and medical data. We compared QuIC scores (primary outcome) by timing of consent (primary exposure: labor vs non-labor pregnancy) and pain and anxiety levels using chi squared tests and linear regression.

Findings:

Of 225 participants, 146 were enrolled during non-labor pregnancy, and 79 during labor. Mean age was lower for laboring than non-laboring participants (26.0 vs 29.5 years, $P<0.001$). Non-laboring participants scored higher than laboring participants on the MRT scale (3.7 ± 0.5 vs 3.5 ± 0.5 , $P=0.06$), QuIC-A (68.2 ± 5.4 vs 64.2 ± 9.1 , $P<0.001$) and QuIC-B (88.3 ± 10.7 vs 65.9 ± 22.4 , $P<0.001$). For non-laboring participants, higher income was associated with higher QuIC-A score, while self-reported non contentment ("somewhat") and being upset ("very much so") were associated with a lower score ($P=0.03$ and $P=0.04$, respectively); higher MRT was also associated with higher QuIC-B score ($P=0.01$). For laboring participants, having HIV was associated with higher QuIC-A score while incomplete relaxation ("somewhat") was associated with lower QuIC-A score ($P<0.05$ for both); being upset ("very much so") and incomplete contentment ("somewhat") were associated with lower QuIC-B scores ($P<0.05$ for both); being less anxious ("not at all" and "somewhat") and higher MRT scores were associated with higher QuIC-B scores ($P<0.05$ for both).

Interpretation:

During pregnancy, timing affects quality of informed consent for research participation and is associated with trust in the medical researcher. Non-laboring participants had greater trust and higher consent quality than those in labor, possibly due to feeling more content, calmer, and less anxious and upset at the time of consent.

Source of Funding:

K23AI138856 (to LMB), William F. Milton Fund of Harvard University and K23HD097300 (to AAB).

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1679

Education and Training for Impact: Initial Outcomes from the Fogarty Funded Cardiovascular Research Training in Nigeria (CeRTIN) program

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Background:

The NIH-funded Cardiovascular Research Training in Nigeria (CeRTIN) program seeks to increase the research capacity of Nigerian researchers in cardiovascular research, clinical trials, and patient-centered outcomes research (PCOR) to improve cardiovascular care and outcomes. CeRTIN is a multi-year program modeled after the FIC strategy for research training and capacity building in LMIC, combining mentored short-, medium-, and long-term training opportunities. The partnership links three institutions, the University of Abuja, Northwestern University and Washington University.

Methods:

Three short-term training activities were evaluated. Two in-person events in Abuja, Federal Capital Territory, Nigeria and one hybrid event covering core concepts of clinical trials, PCOR, implementation research, data analysis, and qualitative research techniques. The evaluation was guided by the Kirkpatrick framework. Participants completed pre- and post-activity surveys on REDCAP measuring differences in knowledge and confidence in core domains, intentions and evidence of knowledge application in the work environment. Open-ended, qualitative feedback captured learning insights, engagement, and overall session feedback.

Findings:

Among 49 workshop participants in 2021 and 40 in 2022, 29 (59.1%) and 34 (85.0%) completed the surveys, respectively. Among 76 symposium participants, 25 (32.9%) responded. Most had limited baseline knowledge and experience in cardiovascular clinical trials, implementation research, and PCOR. Respondents reported increased knowledge, particularly in clinical trial study design and implementation research, after the training activities. They reported that activities effectively achieved stated goals, aligning with their personal learning objectives. Most expressed a strong intention to apply their newly acquired skills to their current and future research. Qualitative analysis identified common motivations for program participation, including skill improvements, networking, collaborating with peers, and deepening knowledge in cardiovascular research and related fields. Respondents expressed high interest in future medium- and long-term training opportunities.

Interpretation:

The short-term training activities demonstrated self-reported benefits and improvement in knowledge, with some demonstration of application of knowledge gained. Activities identified an applicant pool for medium- and long-term research training, with future program activities likely to refine workshop content based on participant feedback. Findings underscore the importance of cross-institutional partnerships to culturally tailor research training to address the CVD burden in LMICs.

Source of Funding:

NIH - FIC/NHLBI (D43TW0011976)

Informing Equitable Access to Cervical Cancer Screening in Rural Sénégal: Evaluating a Peer-to-Peer Educational Program on Cervical Cancer Screening Uptake Determinants

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Background:

In Sénégal, cervical cancer is the most common cancer among women and the leading cause of female cancer deaths. Cervical cancer screening rates are very low, particularly in rural regions (<2%). In the Kédougou region located in the southeast corner of the country, communities face significant challenges to achieving health equity, including poverty, low literacy, and shortage of healthcare workers. The aim of this study was to expand on our previous research by investigating the impact of a peer to peer Care Group educational intervention on the determinants of cervical cancer screening uptake in this region and gender perceptions of health behavior.

Methods:

We conducted a cross-sectional survey of 98 participants, 78 women and 20 men (ages 30 – 61), across nine non-probability-sampled communities located throughout three districts in the Kédougou region of Sénégal from August 2021 through October 2021. We collected demographic information and data on cervical cancer knowledge, healthcare decision making, and experience with health services. Preliminary analysis characterizing the data was performed.

Findings:

The majority of our study population speaks one or both of the prevalent local languages, Malinke (74.5%) and Pulaar (38.8%), with the national language French (65.3%) also being commonly spoken. In our sample, 36.7% of respondents reported having avoided seeking medical care in the past due to cost. Among the women participants, while almost all (97.4%) reported having heard of cervical cancer screening, 60.3% had never received testing. Their reported reasons for not getting testing included embarrassment (42.6%), lack of knowledge (21.3%), and fear (19.1%). We found 69.2% of women agreed or strongly agreed that a man should have the final say on decision making at home, and 56.4% of women reported their spouse as the sole decision maker for their healthcare.

Interpretation:

This study demonstrates the structural and informational barriers that must be overcome to increase cervical cancer screening. The results also highlight the gender dynamics in decision making for a woman's health. In this region, continued education and innovation is needed to overcome these challenges and improve health equity.

Source of Funding:

Supported by the NIH and UIC.

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Background:

The age of the climate crisis is here. With rapid global change creating warmer and drier conditions, the planet is more susceptible than ever to climate extremes. High awareness of climate-related issues in young adults, the weighty implications climate change has on their future, and the damage of living through a climate disaster makes 18 to 25-year-olds climate disaster victims a vulnerable group for negative responses to climate change. This study aims to study the negative psychological effects of climate change on this under researched population.

Methods:

Between July and September 2023, 15 semi-structured interviews were conducted with young adults aged between 18 to 25 who have undergone a significant climate-change- related natural disaster in the United States. Interviews were conducted after the completion of the informed consent process. Participants were recruited through purposive snowball sampling. Interviews were transcribed and analyzed to explore the participants' direct experiences with a specific climate disaster(s), attitudes towards climate change, and mental and emotional impacts of the climate crisis. NVivo 14 was utilized to analyze the interview transcripts.

Findings:

Participants had a mean age of 20.9 (SD \pm 2.83). 66.7% of participants were female. 60% of participants lived through wildfires while 40% experienced heat waves. Thematic analysis revealed participants 1) were deeply worried about climate change 2) felt helpless and that their individual efforts to combat the climate crisis are futile 3) felt angry at corporations for their contributions towards climate disasters 4) have participated in "doomscrolling" climate change/disaster news. 100% of heat wave victims have increased anxiety due to heat-induced fatigue and the inability to spend time outdoors. Common anxiety triggers for displaced wildfire survivors include 1) being away from the comfort of their home 2) visiting their hometown post-disaster 3) the smell of smoke.

Interpretation:

The findings of this study suggest that young adult climate disaster victims are negatively impacted psychologically by climate change, prompted by their personal experiences with climate disasters, news sources, and powerlessness in comparison to corporations. This study was limited to wildfires and heat waves and was unable to capture the emotions associated with other climate disasters. Ensuring availability of psychosocial support and counseling resources to this population could be instrumental in helping victims cope with their climate emotions.

Source of Funding:

None

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Scientific Abstract

Abstract N°: 1686

Prevalence of IgG and IgM antibodies to *Toxoplasma gondii* in forensic blood samples from different causes of death and initiation of studies of brain histopathology in decedants.

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Background:

Seroepidemiological studies conducted in various countries identified significant associations between serum *Toxoplasma gondii* antibodies and mental illness. *Toxoplasma* infects brains of >2 billion people worldwide, lifelong. There is lack of data on this association in Colombia. Therefore, objectives were twofold: (1) evaluate method of sample collection to enable measurement of *Toxoplasma* antibodies in forensic samples; (2) identify prevalence of antibodies in deceased individuals due to traffic accidents, homicides, and suicides brought to National Institute of Legal Medicine and Forensic Sciences, Western Region in Armenia, Manizales and Pereira, cities in the coffee-growing region of Colombia.

Methods:

Feasibility of measuring antibodies on filter paper or in Vacutainer tubes was assessed. Serum samples from 15 volunteers were collected as controls, and measurement of antibodies on filter paper was compared with the same samples collected in Vacutainer tubes after 2 days at room temperature and 1 day under refrigeration. Subsequently, 42 blood samples were collected from forensic cases involving various causes of death in Manizales, Armenia, and Pereira. Measurement of anti-*Toxoplasma* IgG and IgM antibodies was performed using VIDAS II kit from Biomerieux. Preliminary studies of brain tissue from decedents were initiated using HemotoxylinEosin.

Findings:

Volunteer blood samples were consistently negative when using filter paper, whereas their positivity was preserved when collected in Vacutainer tubes. Therefore, forensic samples were collected using Vacutainer tubes. Out of 42 forensic blood samples, 19 (45.2%) tested positive for IgG anti-*Toxoplasma* antibodies. All samples tested negative for IgM anti-*Toxoplasma* antibodies. Association was significant between antibody positivity and city of origin ($p < 0.05$), while deaths due to traffic accidents showed a negative association with toxoplasmosis, Statistics-Stata18. Filter paper was unsuitable for collecting samples for post-mortem serological studies, but peripheral blood was suitable. Positivity of antibodies varied significantly depending on the city, and in Manizales, deaths resulting from traffic accidents were not associated with toxoplasmosis.

Interpretation:

Source of Funding:

Kiphart Foundation, Cornwell/Mann, Rodriguez Family, Metcalf Foundations, UC Provost, Miniciencias.

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Background:

Illicit cosmetic injections remain highly prevalent and can cause serious complications, including death. These procedures are considered illicit due either to the use of an illicit substance for injection (i.e. industrial silicone) or the performance of the injection by an unlicensed provider. We aim to explore existing literature regarding the use of illicit cosmetic injections globally.

Methods:

We searched six databases for publications in English, Portuguese, and Spanish, including all study designs, from 1987 to 2022. We included those focused on patients ≥ 18 years old of any gender, who received any illicit cosmetic injection. We then collected data including study type, country, population characteristics (age, gender identity), intervention, and outcomes. Screening and data extraction followed standards from the PRISMA-ScR guidelines. Quantitative (e.g., frequencies and percentages) and qualitative (e.g., content analysis of unperformed procedures) synthesis were conducted.

Findings:

After screening 629 abstracts and 193 full texts, we included 142 citations. In total, we identified articles from 28 countries and 3 multi-country studies. Regarding income levels, 75.3% (107/142) were from high-income countries, 22.5% (32/142) were from low-and-middle-income countries, and 2.1% (3/142) were multi-country. As for gender identity, (87/142) studies included cisgender women, 29.6% (42/142) transgender women, 23.2% (33/142) cisgender men, and 4.9% (7/142) transgender men. Patients had a mean age of 34 years. The anatomic regions most frequently injected were the buttocks 35% (49/142) and breast 13.3% (19/142). The complications most frequently described were granuloma 41.5% (59/142), dermatological problems 41.5% (59/142), infection 35.9% (51/142), and pulmonary complications 34.5% (49/142), most commonly pulmonary embolism.

Interpretation:

This scoping review showed the impacts of illicit silicon injection cases, particularly among cisgender women and the transgender population. Existing barriers have to be addressed, such as prejudice within healthcare services and a lack of knowledge regarding the care for gender minorities. This will require education of at-risk populations regarding the risks of non-regulated procedures, as well as strengthening policies that control illicit procedures worldwide.

Source of Funding:

None

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Background:

Arboviruses continue to pose an enduring challenge to Brazil's population and healthcare system. Over the past two decades, Brazil has grappled with recurring dengue, chikungunya, and Zika epidemics. Our study examined the perceptions of Brazilians from all five regions (North, Northeast, South, Southeast, and Central-West) regarding the risks associated with these diseases.

Methods:

In August 2023, we conducted a survey, personally interviewing 2,129 individuals from these regions. All our analyses incorporated weighted adjustments following data collection. We used Pearson's correlation to explore the relationship between individual perceptions of contracting dengue and various factors: region of residence, age group, locality (urban or rural), socioeconomic development level, personal and familial infection history, and the number of prior infections. When examining risk perceptions concerning chikungunya and Zika, we considered region of residence, age group, and locality as explanatory variables.

Findings:

Our findings revealed that more individuals expressed concern about contracting dengue than chikungunya and Zika. Surprisingly, the Central-West and Northeast regions exhibited the highest concern for all arboviruses despite the Southeast experiencing the highest incidence of these diseases. Individuals between the ages of 40 and 69 expressed heightened concern, while younger (18-19) and older (70-89) age groups displayed lower levels of apprehension. Regarding the perception of dengue risk, significant variables associated with heightened concern included region ($p=0.000$), age group ($p=0.001$), and the socioeconomic development level of the residence, with individuals in more vulnerable regions expressing more significant concern ($p=0.026$). Additionally, a history of individual and familial infections played a significant role ($p=0.000$). Concerning perceptions of risk for chikungunya and Zika, significant variables included region of residence ($p=0.000$ for both) and age groups ($p=0.001$ and $p=0.000$).

Interpretation:

Our findings highlight a knowledge gap in the population regarding factors signifying an increased risk of infection and mortality from these diseases, particularly among the elderly. People residing in regions with limited access to public services exhibited heightened concern regarding arbovirus infections. These conclusions emphasize the necessity for targeted information campaigns regarding these diseases, focusing on raising awareness of their significance for the entire population and how the substantial burden impacts people's daily lives.

Source of Funding:

Fundação José Luiz Egydio Setúbal and FAPESP (2021/08772-9; 2022/10997-1)

Two-decade trends of homicides and suicides in Mexico 2000-2020: a firearm industry driven epidemic

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Background:

The human cost of firearm violence is staggering. Annually, gun violence accounts for over 250,000 deaths worldwide. Mexico has faced unprecedented escalations in homicide and suicide rates in the last several years, affecting an estimated 21 million people in 2021. This study explores firearm violence trends in Mexico at national, state, and municipal levels, from 2000 to 2020.

Methods:

We used Mexican census data from 2000, 2005, 2010, 2015, and 2020, and mortality results from national datasets between 2000-2020. We extracted municipality, sex, age, and causes of death classified as homicides or suicides, using ICD-10 codes. Homicide and suicide were analyzed separately, using multilevel logistic regression models. Children younger than 12 years-old were excluded from the suicide analysis.

Findings:

We observed an overall increase in homicides and suicides, among all sexes and ages, between 2000-2020. The most affected groups were 30-39 year-old males and 24-29 year old females. Homicide rates increased significantly in the male population, from 19.32 to 48.33 per 100,000. Firearm-related homicides increased, from 10.50 to 35.99 per 100,000. Homicide rates in females increased from 2.46 to 5.55 per 100,000, and in firearm-related homicides, from 0.77 to 3.39 per 100,000. The total number of suicides among males increased from 2,914 to 6,294, and among females increased from 540 to 1,392. 9 municipalities had homicide rates higher than 100 per 100,000. 3 were in the state of Nuevo León, 1 in Chihuahua, and 1 in Sonora, all border states. Additionally, suicide rates were highest in 3 municipalities in Chihuahua, with 38.29, 34.00, and 33.37 suicides per 100,000.

Interpretation:

Across two decades, homicide and suicide rates increased dramatically in Mexico. The sharp rise in firearm-related homicides suggests guns are a major contributor. Our results underscore the urgent need to address this complex issue in Mexico through multi-sectoral interventions.

Source of Funding:

None

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1700

Understanding Patient Preference and Choice of Healthcare Providers in Koidu City, Kono, Sierra Leone: A Cross-sectional Study

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Background:

Access to high-quality healthcare services is universally endorsed as a fundamental right. In regions like Sierra Leone, translating patient preferences and determinants of healthcare provider choices becomes pivotal for cherishing patient-centered healthcare systems. While existing research emphasizes the centrality of patient preferences in healthcare satisfaction, indicating factors like provider attributes, convenience, and cost, a noticeable research gap exists for Koidu City, Kono, Sierra Leone as unique constraints like resource scarcity, inadequate infrastructure, cultural nuances, and elevated disease burdens. Given Koidu's specific challenges, it is imperative to explore patient preferences and choices for insightful and region-specific healthcare advancements.

Methods:

A cross-sectional study was designed and conducted, encompassing 1,267 residents of various demographics in Koidu City. The study was conducted in June to July 2023. Employing a stratified random sampling technique ensured the inclusion of diverse economic and social backgrounds. Data collection was conducted through individual interviews. A semi-structured questionnaire was utilized to determine participants' awareness of healthcare options, specifics of patient preferences, levels of satisfaction, and barriers obstructing access.

Findings:

A significant 80% of participants indicated awareness of at least two or more healthcare options within Koidu City. However, investigating deeper, only 45% expressed confidence in their understanding of these options, suggesting potential knowledge gaps. Economic considerations emerged as dominant influencers. An overwhelming 70% of participants identified cost as the primary factor guiding their choice of healthcare provider. Evaluating satisfaction yielded mixed reviews; with an average score of 3.5 out of 5. Observation suggests a correlation between educational attainment and satisfaction levels. Participants with higher educational backgrounds reported a 20% increase in satisfaction, pointing towards potential disparities in healthcare experiences. The barriers identified were multidimensional. Financial constraints topped the list with 55% of respondents citing them. This was followed by logistical challenges such as transportation, reported by 40%, and cultural conflicts with healthcare providers, a concern for 25% of those interviewed.

Interpretation:

The study underscores the need for targeted interventions in Koidu City, bridging economic and knowledge barriers. Insights are valuable for strategizing patient-centric needs; scaling healthcare access; patient satisfaction, and the overall healthcare ecosystem.

Source of Funding:

Wagner Foundation and Partners in Health Boston

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1714

Evaluation of a Synchronous Training on Medications for Community Health Workers in Rural Karnataka, India

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Background:

Non-communicable disease (NCD) management poses a challenge for rural Indian communities due to poor health literacy and improper adherence to medications. Community health workers (CHWs) can fill this care gap because of increased community trust in CHWs as compared to traditional providers. CHWs are tasked with medication management, however, due to variability in training, CHWs may not feel prepared to disburse medications, identify adverse side effects, or encourage medication adherence. Thus, we sought to develop an optimal medication training model for CHWs. Here, we delivered four workshops on NCD medications to CHWs in two districts of rural Karnataka, India from January - July 2023. The objective of this program was to assess the effectiveness of a synchronous training in increasing CHW knowledge and self-efficacy in managing medication regimens.

Methods:

The half-day workshops were composed of 4 sections for hypertension, diabetes, respiratory, and miscellaneous conditions. Each section included physical models to display mechanism of action, role play scenarios depicting side effects, and clinical vignettes prompting participants to consider how to adjust medication regimens based on patient symptoms. All CHWs working at 48 selected primary health centers (PHCs) of 2 districts were recruited. Of the 160 CHWs recruited, 140 (87.5%) completed the pre-test, attended the workshop, and completed a post-test. Knowledge and self-efficacy scores were compared from the pre- to post-test using paired t-tests. To ensure program sustainability, future trainings will be organized by local health officials rather than by an external research group, and the training will be converted to a digital format for asynchronous participation.

Findings:

The median age and amount of work experience of participants was 26 years and 9.5 months, respectively. The median knowledge score increased from 11/20 in the pre-test to 16/20 in the post-test ($p < 0.001$). The percentage of CHWs with high self-efficacy in medication-related responsibilities increased from 90% in the pre-test to 100% in the post-test ($p < 0.001$). The program was successful in significantly increasing CHW knowledge and self-efficacy regarding NCD medication management.

Interpretation:

This training model could be nationally integrated into health departments to train CHWs that are better able to bolster NCD medication adherence in rural Indian communities. Ongoing challenges include adapting the training to fit strenuous CHW work schedules and reducing the number of resources required.

Source of Funding:

Gokula Education Foundation (Medical), Bangalore, Karnataka

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1715

Creating a Gender Affirming Care Model in the Emergency Department

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Background:

Gender affirming care (GAC) is essential to any healthcare delivery system. Gender diverse (GD) individuals are dying by suicide at a catastrophic rate, with transgender adults five times more likely to die by suicide than their cis-gender peers. While important progress is being made, gaps in scientific knowledge of GD-related health equity remain. To our knowledge, an intervention to train all staff of an Emergency Department (ED) in providing GAC is not currently being performed locally or nationally. To improve outcomes for all GD patients, we performed a needs assessment regarding knowledge gaps and educational opportunities for ED staff and providers.

Methods:

The authors circulated an online survey accessible via QR code and received responses from 121 providers (43) and Emergency Department staff (78). The survey was conducted in 2023 at a multi-center (n=6) health network in the United States.

Findings:

Majority of participants (94.4%) agreed that pronouns are important in relation to gender identity, with 89.1% indicating it was important to ask patients their pronouns. However, we observed that more than half (51.4%) of participants do not regularly ask these questions upon first meeting patients and 82.2% do not offer their own pronouns. 14% reported feeling uncomfortable navigating a situation in which they use the wrong pronouns.

Of providers (43), 17% felt uncomfortable obtaining a sexual history from GD patients. 63.4% were unaware of existing institutional resources and where to refer patients for outpatient continuity of gender affirming care.

Qualitatively, participants expressed a need for generating a practice that consistently asks for and documents pronouns in our electronic health records. Participants expressed a shared interest in additional training modalities to improve how we signal acceptance and provide GAC in the ED.

Interpretation:

Our survey confirms a gap between what ED staff feel they should do, and their self-reported GAC practice. Based on survey data, we are creating a tool to expand education of ED staff utilizing standardized demographic intake prompts and a simulation-based GAC curriculum with a multidisciplinary team, including community partners.

Source of Funding:

UVM Larner College of Medicine Frymoyer Grant

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1720

International Rural Emergency Care System Rotation- a 360 rotation into the University of Vermont Health Network by a Ugandan physician

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Background:

International rotations comprise a core part of learning for global health leaders working to transform their in-country health systems. Described is a novel 360°, 5 week rural emergency care systems clinical rotation undertaken by a Ugandan physician at the University of Vermont (UVM). To address historically unilateral rotations, this experience was created to build an equitable partnership by creating a rotation focused on developing emergency care systems.

Methods:

Following orientation, the international Scholar participated in pre-hospital and in-hospital shifts. The rotation consisted of shifts in an academic tertiary care ED, a rural critical access ED, critical care transition team shifts, and ICU shifts. Additionally, the rotation included weekly didactics, board review cases, and hands-on simulation training with ED residents. Pre-hospital shifts were a core component, with time spent orienting to the state Emergency Medical Services (EMS) system, and regional ground and air ambulance services. Time was spent with the Director of the regional transfer center coordinating the flow of patients across the UVM health network between the critical access hospitals to the tertiary care center.

Findings:

The acuity of patients is similar to that in Uganda. UVM critical access EDs are representative of a similar resource limitation found in that of Ugandan EDs. However, the availability of resources (human and non-human) enables prompt implementation of acute care. Rotations in both high volume well-resourced tertiary center and critical care access sites provide a comparison within the same system and an opportunity to learn how to maximize resource availability. Faculty with global health experience in resource limited settings create a more contextually appropriate clinical experience. Incorporation of visiting scholars into local students' or residents' activities facilitates seamless integration and broadens learning opportunities with peer to peer mentorship.

Interpretation:

Visiting scholar driven rotations catalyze exploration of contextually appropriate system development in both contexts, revealing areas for collaboration, and local improvements. Involvement of faculty, residents, and support staff contextualizes cultural differences and facilitates scholar inclusion. Future iterations should include senior level physicians, and ministry of health officials as international collaborators.

Source of Funding:

The University of Vermont Department of Emergency Medicine

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1727

Oral Health and Hygiene Campaign: A Collaborative Intervention at Buiga-Sunrise Primary School in Mukono, Uganda

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Background:

In Spring 2023, two University of Alabama at Birmingham (UAB) Sparkman Center for Global Health interns designed and implemented a community school campaign to provide oral health education and hygiene supplies to students and parents in Mukono, Uganda. This project addressed community needs as expressed by local personnel that emphasized the prevalence of misinformation regarding oral health and lack of access to hygiene supplies. It aimed to enhance primary prevention of oral diseases by providing culturally sensitive and age-appropriate oral health education, while developing collaborative skills with international partners to produce an impactful project.

Methods:

Two interns partnered with Sunrise Center to identify the need for comprehensive oral health education and hygiene supplies at the primary school. A curriculum was developed jointly by UAB interns and local personnel. In-kind and monetary donations were obtained to secure educational and dental hygiene kit supplies. Over 2 weeks, interactive sessions were conducted at Buiga-Sunrise Primary School. These sessions highlighted the importance of preventing oral diseases through nutrition and hygiene and included teeth brushing demonstration, age-appropriate dental activity, and distribution of dental hygiene kits.

Findings:

Collaboration led to successful planning and implementation of this project, which involved education and distribution of dental hygiene kits to 154 students aged 3-14, and 23 parents. The interns, local health officer and teachers created a customized oral health curriculum that included nutritional information relevant to local diet. Local teachers were a bridge to communicate effective oral hygiene practices and proper use of the dental hygiene kits. Pre- and post- tests illustrated increased oral health knowledge after the sessions among all students. Parents and teachers expressed that the sessions were beneficial and desired for annual sessions for their students and themselves. Challenges included school schedule, lack of resources, and language barrier. The intervention sparked further discussion on oral disease prevention such as fluoridation of the school's drinking water and conducting sessions in their sister school, as well as mobilization of local dental professionals for in-school oral health exams. Education material and session guidebook were kept at the school for use by local teachers and future interns.

Interpretation:

This collaborative project model can be utilized to create future oral health projects that are impactful, appropriate, and sustainable. This approach has potential for successful improvement in knowledge of prevention of oral diseases through proper nutrition and good hygiene practices in rural communities, both in Uganda and globally.

Source of Funding:

Sparkman Center for Global Health, University of Alabama at Birmingham

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 1730

Areca Nut and Betel Quid-Driven Primary Oral Cavity Carcinoma Burden in Saipan over a Period of 42 Months

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Background:

The use of areca nut is a routine practice in the Micronesian Commonwealth of the Northern Mariana Islands. Given the high oral cavity carcinoma burden in the region, the purpose of this study is to report on the incidence and special characteristics of oral cavity carcinomas and their associating factors.

Methods:

A retrospective chart review was performed for 94 adult patients diagnosed with a primary oral carcinoma at the Commonwealth Healthcare Corporation, the only hospital in Saipan, over a period of 42 months from July 2018 to January 2022. Patients were selected from the electronic medical record, Resource and Patient Management System (RPMS). Selected patients had demographics, diagnosis, false negative biopsy reports, risk factors (betel nut, alcohol, tobacco use), tumor subsite, staging, and treatment compiled. Cancer staging was performed in accordance with the American Joint Committee on Cancer guidelines. Primary outcome was the crude incidence rate of primary oral carcinoma.

Findings:

The crude incidence rate per 100,000 of oral cavity carcinoma was 38.64 for the general population and 88.49 for the Native Hawaiian and other Pacific Islander (NHPI) population. More than 96% of these diagnoses were associated with areca nut use which was often chewed with additives such tobacco, slaked lime, or betel leaves. Most affected patients were of NHPI ethnicity (96%) and progressed to stage IV.

Interpretation:

There is a significantly higher incidence of oral cavity carcinoma in Micronesia that is strongly associated with the commonplace areca nut use. Incidence rate per 100,000 for NHPI was 88.49, far above the highest reported rates in Papua New Guinea at 25.7, while the general CNMI population still had a higher incidence rate per 100,00 at 38.64. This is the highest ever reported incidence of oral cavity carcinoma and is almost certainly caused by the commonplace usage of the areca nut.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1731

Impact of Social Determinants of Health on the Patient Outcome of a Medical Mobile Clinic in the Philippines

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Background:

Disparities in healthcare access exist in the Philippines and ABC's for Global Health (ABCGH) has established a medical mobile clinic (MMC) providing primary care services to geographically isolated and disadvantaged areas (GIDA) in the province of Pampanga. The MMC had evaluated non-medical factors or the social determinant of health (SDOH) that may contribute to the health outcomes of the patients. The study aims to determine the impact of the SDOH on the health outcomes of the patients of the MMC

Methods:

The MMC provides its primary care services to 15 communities in Pampanga and it is open to all patients but with emphasis for non-communicable diseases such as hypertension, diabetes and their complications. There was a total of 487 participants included in this study: are comprised of adult patients with or without disease, and were initially evaluated using the Short Form 36 (SF-36) survey to determine health outcomes in terms of physical and mental health based on 8 categories. Regression and Chi-Square analysis with confidence level of 90 and 95% were done.

Findings:

The SF-36 health outcomes were into Physical and Mental Health and further divided into 4 categories each: Physical Health – Physical Functioning, Role Limitation due to Physical Health, Bodily Pains and General Health; Mental Health – Role Limitation due to Emotional Health, Vitality, Emotional Well Being and Social Functioning. It has been shown that age, presence of comorbidities, living conditions, employment status, social class and access to government services such as school, healthcare, security, roads/transportation and sanitation have an impact on the 8 categories of physical and mental health outcomes of the patients.

Interpretation:

There are implications that the various SDOH have an impact on the health outcomes of patients of the MMC and does not solely rely on the access to healthcare. There is a need to address this factors if improvements on health outcomes are to be observed.

Source of Funding:

None

Category: 2 - Pandemic Prevention, Covid-19, Emerging Infectious Diseases, and Other Communicable Diseases - Scientific Abstract

Abstract N°: 1732

Beyond the Pandemic: Examining the Impact of COVID-19 and Telehealth on the Ability of Pediatric Hematology-Oncology and Bone Marrow Transplant Social Workers to Perform Psychosocial Assessments

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Background:

The COVID-19 pandemic prompted the rapid adoption of telehealth in fields like pediatric hematology, oncology, and bone marrow transplant (BMT). These diagnoses are emotionally challenging for patients and families, with social workers and medical interpreters playing vital roles in providing psychosocial support. However, the impact of this shift to telehealth on their ability to offer effective care has not been explored. This study aims to investigate how the COVID-19 pandemic and the increased use of telehealth services affected University of California Health System social workers and medical interpreters in Northern California in conducting psychosocial assessments for pediatric hematology, oncology, and BMT families.

Methods:

We employed a mixed-methods qualitative study using an anonymous 13-question electronic Qualtrics survey and virtual semi-structured Zoom interviews. The survey collected demographic data and assessed changes in telehealth practices during the pandemic. Participants were contacted using email listservs for social workers and medical interpreters. Subsequently, social workers and medical interpreters who completed the survey were invited to participate in individual semi-structured interviews. Transcripts from these interviews were created using Descript software and independently coded and analyzed by two researchers using the Framework Analysis method and Dedoose coding software.

Findings:

20 participants completed the survey and 11 were interviewed. Survey results indicated a shift from less than 25% telehealth visits pre-pandemic to 75% during the pandemic, stabilizing at 50% post-pandemic. About 25% of appointments required medical interpretation. Comparing in-person appointments and telehealth visits, medical interpreters highlighted advantages like convenience and access, while social workers cited patient cost reduction, and improved care quality in multidisciplinary settings. However, both groups identified challenges in building patient and physician rapport and issues with families' technology access and literacy. Social workers also highlighted a decline in interpretation quality.

Interpretation:

Telehealth has brought notable benefits to these health departments, including convenience, access, and cost saving. However, it has also posed challenges such as maintaining patient rapport and ensuring interpretation quality. This study lays the groundwork for developing telehealth best practices to enhance the support provided by social workers and medical interpreters to patients and their families.

Source of Funding:

None.

The Association between Workplace Ergonomic Factors and Low Back Pain-related Disability among Nurses in Sri Lanka

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Background:

Low back pain disability (LBPd) is a pervasive workplace disorder. Moderate or severe low back pain disability might impair their work performance and impact daily activities. Karapitiya (THK), Sri Lanka. Additionally, the study sought to explore the association between workplace ergonomic exposures and moderate or severe LBPd.

Methods:

This cross-sectional study enrolled 200 registered nurses from multiple wards at THK, Sri Lanka, in 2022. Measures of interest in the study survey included sample characteristics, workplace ergonomic factors, physical activity level, and LBPd level. The data analysis was conducted in two steps. After describing the occurrence of ergonomic factors (correlates: lifting more than 20kg loads, bending trunk, long-time sitting, and frequent repetitive movements) and LBPd level (outcome variable) stratified by those correlates, the logistic regression model was built to examine the associations between above workplace ergonomic correlates and moderate or severe LBPd. Both unadjusted and adjusted models, controlling for nurses' BMI, service years, education, and physical activity level, are reported as odds ratio and 95% confidence interval.

Findings:

As a result, the prevalence of moderate or severe LBPd was 18.5% among the study sample. All workplace ergonomic factors were positively associated with greater odds ratios of moderate or severe LBPd compared to the non-exposure group. The odds ratio of LBPd was significantly increased from frequent repetitive movements (adjusted odds ratio (AOR): 3.17, CI: 1.45-6.89) to lifting more than 20kg loads (AOR: 3.64 CI: 1.52-8.73).

Interpretation:

Further studies on a large-scale study with the aim of developing a theoretical model in the field of study are needed to provide more empirical evidence and a theoretical foundation on the burden of LBPd among nurses.

Source of Funding:

Duke University

Abstract N°: 1734

Controlling tuberculosis with prospective and systematic whole genome sequencing: First results from a randomized controlled trial evaluating community-wide intervention strategies in rural Madagascar

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Background:

Low tuberculosis (TB) case detection in low- and middle-income countries (LMIC) precludes efforts to control the disease. It is therefore important to understand why these cases are not identified, and how to improve case-finding there. Whole genome sequencing (WGS) of *M. tuberculosis* isolates has demonstrated good resolution when identifying transmission clusters retrospectively, and so could orient case-finding activities towards active transmission settings to increase case detection. Whether prospective and systematic WGS can improve case detection this way in high-burden settings has yet to be demonstrated. Our cluster randomized controlled trial (cRCT) aims to measure the incremental value of prospective active case-finding coupled with WGS and outbreak investigations on TB case detection in rural Madagascar, compared with local and WHO case-finding standards. Results presented herein were obtained after 11 out of 24 months of interventions.

Methods:

Eligible groups of villages (fokontany) of about 1800 participants each in Vohibato were randomized into one of three arms to receive a combination of interventions:

- Arm 1: Malagasy standard of care (passive case-finding, microscopy diagnostics, household contact tracing)
 - Arm 2: WHO best practice (Arm 1 interventions + active case-finding and polymerase chain reaction (PCR) diagnostics)
 - Arm 3: Novel intervention (Arm 1 and 2 interventions + WGS diagnostics and WGS-guided investigations)
- Fokontany were enrolled from May 2022 to March 2023. TB incidence was compared across the three arms.

Findings:

No molecular clusters were identified in Arm 3. Arm 2 TB incidence (188.8 new cases/100000 population/11 months) was higher than Arm 1's (124.3). Arm 3's incidence (124.9) was similar to Arm 1's, and so lower than Arm 2's, in the visited fokontany. Overall, the proportion of cases identified by active case-finding was higher than the proportion identified by passive case-finding in the visited fokontany.

Interpretation:

Based on interim data from the cRCT, active case-finding and PCR diagnostics (Arm 2) increased TB case detection, but the novel intervention (Arm 3) did not have an incremental value over Arm 2. TB incidences across arms will be compared again after one and two years of interventions, with a t-test weighed by fokontany size.

Source of Funding:

This research was funded by a grant from CIHR.

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Program/Project Abstract

Abstract N°: 1739

Breast Cancer Initiative to Consolidate Programmatic Efforts in Pivotal Areas of Impact in Breast Cancer

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Background:

Breast Cancer is the world's most diagnosed cancer. Its incidence and mortality are rising globally, and the steepest rise is observed in Sub-Saharan Africa (SSA) where mortality is between 30-50%. The breast cancer initiative (BCI) at the Center of Bioengineering Innovation and Design (CBID) assembles an alliance of innovators, public health experts, industry experts, and key influencers and researchers. The program aims to identify the most pivotal gaps in current LMIC breast cancer care and bridge them by defining and organizing effective efforts towards improving global breast cancer outcomes.

Methods:

The goal of the program is to significantly reduce breast cancer mortality rates through a holistic approach centered around impact and sustainability, leveraging home-grown efforts and in-country implementors. The program has drafted a white paper examining existing practices in breast cancer pathways in LMICs, expanding on WHO's 4 pillar approach in cancer to include 6 areas: awareness, screening/detection, diagnosis/confirmation, treatment, training, and support for breast cancer patients. The paper explores gaps in existing practices, reviews current solution landscape addressing identified gaps, and proposes strategies to resolve them in the LMIC context – for example, expanding the scope of existing solutions and releasing target product profiles (TPP) when lacking appropriate solutions. This paper is put together and validated through literature review, extensive in-country ethnographic visits, and interviews with in-country stakeholders, experts of diverse expertise in breast cancer, and patients.

Findings:

To date, the program has established in-country partnerships with various organizations including hospitals, research institutes, women's cancer support NGOs, and industry experts. The whitepaper generated over 30 needs cutting across the 6 areas in the breast cancer pathway. We are convening a group of experts to identify pivotal needs and will examine the solution landscape, outputting strategic approaches.

Interpretation:

Existing efforts in the breast cancer space are scattered and often lack in-country and private sector support for sustainability and reach. CBID BCI aims to organize and focus pivotal efforts in transforming breast cancer outcomes by developing an elaborate understanding of existing challenges and proposing a concerted approach to tackling key issues across the breast cancer continuum in a holistic manner. The global health community can make measurable impacts on breast cancer survival. The results will help guide donors to channel funding into high impact areas in breast cancer care. CBID BCI poises itself to monitor and provide accountability to the outcomes of programs tackling breast cancer through this framework.

Source of Funding:

Johns Hopkins Center for Bioengineering Innovation and Design, Hologic

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1741

Mentorship in Surgery: Creating a Global Mentorship Model for Prospective Surgical Applicants

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Background:

Mentorship is a critical component of surgical education, fostering individuals’ professional development and personal growth. Surgical organizations within certain high-income countries embrace formal and informal mentorship programs, but opportunities are virtually non-existent in most low- and middle-income countries (LMICs). To bridge this gap, the Gender Equity Initiative in Global Surgery (GEIGS) organization established a formal global mentorship program in 2020 for medical students and aspiring surgeons.

Methods:

In February 2023, GEIGS launched its third annual mentorship program. Applications were distributed via targeted communication platforms. Mentee eligibility was extended to medical students and recent graduates interested in surgical specialties. Trainees from LMICs and minority groups lacking access to mentorship were prioritized. Each mentor was paired with 3 mentees to form “pods,” with the goal of facilitating formal mentor-mentee relationships as well as peer-to-peer mentoring relationships.

Findings:

The GEIGS mentorship committee received 196 trainee applications from 41 countries, 35 of which were classified as LMICs. We received 9 new mentor applications this year and retained 4 mentors from previous years. Mentors trained in 5 surgical specialties across 7 countries. Applicants’ ages ranged from 17-40 years old. 80.1% (157/196) identified as cisgender women, 15.3% (30/196) identified as cisgender men, and 2% (4/196) identified as queer/ non-conforming. The most requested specialties were general surgery 27.6% (54/196), neurosurgery 18.4% (36/196), cardiothoracics 11.7% (23/196), and pediatric surgery 7.7% (15/196). 74.4% (142/196) of applicants reported having no prior mentoring relationships. 58.2% (114/196) preferred mentors from another country, with the US, UK, and Canada being the most requested. 65.8% (129/196) were considering a US residency. 22.4% (44/196) preferred mentors from their own country with plans to continue practicing post-residency. Ultimately, 48 applicants were matched to 13 mentors, accounting for gender, specialty, country of practice, and interests.

Interpretation:

Demand for the GEIGS mentorship program has surpassed capacity, highlighting a necessity for resources and funding for mentorship opportunities. This is especially the case for trainees from LMICs and women, as indicated by the gender distribution. Further research is needed to understand barriers to recruiting mentors and sustaining mentorship programs.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1745

Social determinants of health and vulnerability to foodborne disease outbreaks

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Background:

Foodborne disease outbreaks (FBDO) are a persistent challenge to public health. Some associations have been established between individual FBDO infectious agents and at-risk populations; however, relatively little has been done to investigate the relationships between FBDO incidence and severity as well as other social determinants of health (SDOH), such as access to care and community health infrastructure. We hypothesized there is a significant difference in socio-demographic factors and social justice indicators that affect food safety and, thus, health and wellbeing. To test this hypothesis, we examined county-level associations for the state of Minnesota (MN) between the incidence of FBDOs reported by the Centers for Disease Control and Prevention's National Outbreak Reporting System (NORS) and socio-demographic or social justice variables/indicators such as healthcare access for hospitals serving MN, primary care physician and other primary care provider availability and uninsured population data recorded by the US Census Bureau and MN Department of Health from 2009-2019.

Methods:

We abstracted 9,407 FBDOs and focused the preliminary analysis on 500 FBDOs reported in MN. Using ArcGIS and US Census Bureau population data, we mapped the incidence rate of FBDO adjusted for population as well as produced dynamic maps for healthcare access factors including availability of hospital systems, primary care providers, other primary care providers, and uninsured population. We explored the association between FBDO incidence and county-specific population density using spearman's rank correlations and spatial correlation coefficients.

Findings:

During the 10-year period, out of 500 FBDOs, only 346 (69%) outbreaks were mapped to a single county with the 0.53 ± 0.97 FBDOs per 100,000 people annually. As expected, the county-specific number of FBDOs correlated well with population density (0.77 , $p < 0.05$), with more outbreak occurring in more populated area, yet no association observed with population density, suggesting that FBDOs may be under-reported in low-population density counties. This warrants further investigation into differences in FBDO reporting practices, access to healthcare systems, and individual insurance status by county.

Interpretation:

We plan to extend our analysis to consider additional states with high FBDO incidence and to include 2020-2022 data to compare associations before, during, and post COVID-19. These findings are critical for identifying populations most vulnerable to FBDOs and opportunities for targeted food safety interventions.

Source of Funding:

None

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Background:

Despite increases in births attended by skilled birth attendants and increases in antenatal visits during pregnancy, the maternal mortality ratio in Uganda is 375 deaths per 100,000 live births. This is 164 deaths greater than the world maternal mortality ratio. Additionally, the lifetime risk of maternal mortality is 1 in 49. The goal of this study is to examine the impact of economic support through remittances on the incidence of skilled delivery at birth. This study will focus on remittance flows in Uganda (from 2019 to 2020), as it is the 6th highest recipient of remittances in Africa.

The aim of this study is to examine the relationship between the amount of monetary remittances received and skilled delivery among households with women who reported a birth.

Methods:

This study is a secondary analysis using Uganda National Panel Survey data. The sample includes women with a recent birth. There are two groups based on exposure to remittances (those who received remittances and those that did not). The outcome of interest is skilled delivery (presence of skilled birth attendant, clean birthing kits, and birth at a health facility). A logistic regression model will test the relationship between remittances and the prevalence of skilled delivery. A dose-response analysis will be conducted in further analyses with a continuous variable for remittances received as a proportion of household income. The dose-response of remittances will be modeled to determine the relationship between amount of remittances and skilled delivery. Ethical approval was received from the UNC-Chapel Hill IRB as an exempt study.

Findings:

Among surveyed women who reported giving birth, 19.7% experienced a skilled birth and 30.4% received remittances. Crude prevalence estimates demonstrated no differences in skilled delivery between groups that received remittances and those that did not. However, logistic regression model with adjustment for education, marital status, and use of mobile money services, demonstrated a positive association between receipt of remittances and prevalence of skilled delivery. For every Ugandan shilling a household receives through remittance, the prevalence of skilled delivery increases by 1.32%.

Interpretation:

This suggests that additional income from remittances has a positive effect of utilization of skilled delivery during birth.

Source of Funding:

None

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Background: Cancers have been one of the major health hazards in China, presenting significant economic and health burden. According to GLOBCAN 2020, among the 19,292,789 newly diagnosed cancer cases worldwide, nearly 23.7% of cancer cases of which are in China. Moreover, there are significant rural/urban and regional cancer disparities in China. It is crucial to understand the causes of the cancer disparities in order to strengthen the health system and promote health equity and social justice across the country. This systematic review study aims to describe the systematic causes of the cancer regional disparities in China using the WHO Building Blocks Framework for Health System Development.

Methods:

This review followed PRISMA guideline. Eligible articles published since 2001 in English or Chinese were searched on four electronic databases, including PubMed, the Web of Science, WANFANG, and CNKI, up to Aug 30, 2023. Articles were eligible for review if they reported factors that caused or related to cancer disparities cross-different regions in China, from one or more following perspectives: 1) service delivery, 2) financing, 3) workforce, 4) health information systems, 5) access to essential medicines, and 6) leadership and governance.

Findings:

A total of 1,470 articles were identified and 78 were included in the final review. Populations in less developed regions or rural areas tended to share more cancer disease burden (e.g., more severe symptoms, higher mortality and morbidity rates, etc.). Among the review studies, service delivery and workforce were the two most commonly mentioned building blocks that related to the cancer regional disparities. Specifically, the significant variation of availability and accessibility to local clinics and hospitals for high-quality and timely care and the uneven distribution of quantity and quality of physicians and healthcare professionals across different regions and areas were tremendously influence the cancer prevention and control outcomes among the Chinese population.

Interpretation:

Service delivery and workforce-related issues were significantly related to the cancer regional disparities in China, and effective policies and interventions are needed to address these issues in order to reduce the cancer inequity in China. More research are needed to extend our understanding of the performance of the rest four health system building blocks – financing, health information system, medicine and stewardship on cancer prevention and control, in order to effectively strengthen the health system and combat the cancer crisis in China.

Source of Funding:

None.

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Background:

Rheumatic heart disease (RHD) remains a substantial public health problem in Rwanda. Patients with advanced disease require life-saving surgeries, but access to cardiac surgery is limited partially due to deficit in investment by domestic stakeholders. This is partially attributable to the poor understanding of the impact of cardiac surgery on patient outcomes. Here, we report quality of life (QoL) before and after heart surgery among RHD patients in Rwanda operated between 2006-2022.

Methods:

A validated QoL Instrument, the 36-Item Short Form Survey (SF-36), was modified to the Rwandan context and translated into Kinyarwanda. We administered the survey to 121 out of 385 randomly selected surgical patients. Five incomplete surveys were excluded. Survey results were analyzed in RStudio. Categorical variables were compared using Pearson chi-squared test or Fisher's exact test for a sample size of less than 5.

Findings:

The majority of the participants were females (61 [54%]). The median (IQR) ages at the time of surgery and at the time of survey were 27 (17-36) and 31 (24-42) years respectively. Participants reported marked improvement in their general health: more patients rated their health to be "excellent" or "good" in the past four weeks than at the time of RHD diagnosis (71 [51%] vs. 2 [2%], $P<0.0001$). Furthermore, patients endorsed improvement in physical, emotional, and social functioning after surgery. For example, significantly fewer patients had to cut down on the amount of time spent on work due to physical health issues (12 [11%] vs. 50 [44%], $P<0.0001$) or worked less attentively due to emotional issues (14 [12%] vs. 45 [39%], $P<0.0001$) in the past four weeks compared to at the time of RHD diagnosis. However, despite the much-improved QoL across domains, patients still report ongoing mental health issues. For example, 8 [7%] patients state they are not feeling full of life.

Interpretation:

Cardiac surgery improved the QoL of RHD patients across physical, emotional, and social domains in Rwanda. It is essential, therefore, to continue developing the local capacity for cardiac surgery. Many patients reported ongoing mental health challenges, warranting further research to improve the follow-up care for this vulnerable group of patients.

Source of Funding:

Stanford Cardiothoracic Surgery Department Fund

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Background:

Research in High-Income Countries (HICs), such as the United States (USA) has extensively documented the Non-operative management (NOM) of spleen injuries in children, resulting in low splenectomy rates (5%). However, there is a paucity of literature on this topic in Low-and-Middle-Income Countries (LMICs), including Brazil. This scoping review aims to analyze the trends in pediatric spleen trauma research in Brazil and the USA.

Methods:

A comprehensive search strategy was conducted across five databases, including primary databases used in Latin America, such as Embase, PubMed and BVS. We considered articles published in English or Portuguese from January 1970 to 2023 that reported on spleen trauma in patients younger than 18 years old in Brazil or the USA. Two pairs of independent reviewers screened the title and abstract, followed by full-text review. Data extraction was performed using Covidence platform, and results summarized descriptively.

Findings:

Our search identified 7,150 studies, of which 305 were eligible for data extraction. Majority of the papers (98.6%, 301) originated from the USA, while only 1.3% (4) were from Brazil. Included studies primarily focused on management (69%, 209), diagnosis (16%, 49), incidence (12%, 37), and treatment (3%, 10) of splenic injuries. Articles were categorized according to the anatomic focus of injury: 47.8% (146) reported intrabdominal injury including splenic trauma, 15.7% (48) liver and spleen injury, and 36.3% (111) isolated spleen injury. The rate of operative management decreased from 100% (30/30) in 1968 to 2.4% (82/3482) in 2022. The overall surgical rate was 11.7% (42,236/362,327) in articles evaluating rates of isolated splenic trauma. The spleen trauma NOM rate was 88,37% in American studies (320,040/362,139), and 27,12% (51/188) in Brazilian studies.

Interpretation:

Brazil contributed only 4 studies on pediatric splenic trauma over two decades. Future studies should explore the incidence and management of splenic trauma in Brazil and other LMICs. Promoting research can inform policies that facilitate knowledge and best practice exchanges among diverse healthcare contexts.

Source of Funding:

None

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 1760

Cervical Cancer in Uganda: An Exploration of Access - Imaging, Staging, Treatment, and Outcomes in a Low-Resource Setting from 2018 to the Present

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Background:

Cervical cancer is a leading cause of morbidity & mortality among females in the developing world. With barriers to prevention and early detection, many patients in low-resource settings are diagnosed at later stages of cervical cancer. The Uganda Cancer Institute (UCI) serves as the only public radiotherapy treatment location in the country. Almost all cervical cancer patients seeking treatment in Uganda will walk the halls of UCI, making its outcomes significant in evaluating cervical cancer care in Uganda as a whole. The objective of this study was to initiate data collection for a larger UCI cervical cancer survivorship study and to assess initial case data findings of cervical cancer treatment outcomes in Uganda, including staging modalities, stage at diagnosis, treatment intent, and three-month treatment response.

Methods:

This quantitative study utilized UCI cervical cancer patient files opened in the years 2018 to present, during which ~3000 patient files were opened. Demographic, socioeconomic, and clinical patient information from each file was entered into a database, totaling 127 fields of entry for each file. Patients were contacted by phone in English or Luganda to fill in missing information. Records entered between June 26th, 2023 and August 27th, 2023 were summarized using descriptive statistics.

Findings:

An interim analysis at 2 months of data entry for 220 cervical cancer patients indicated the most frequently used staging imaging modality was ultrasound of the abdomen and pelvis (151, 68.6%), followed by chest radiograph (33, 15%), and least was CT of the abdomen and pelvis (3, 1.4%). 127 (57.7%) patients received diagnostic cervical biopsies. The majority of patients had locally advanced disease. FIGO 2018 staging at diagnosis was stage I (28, 12.7%), stage II (54, 24.5%), stage III (15, 6.8%), and stage IV (15, 6.8%). The treatment intent for 100 (45.5%) patients was radical, 54 (24.5%) were palliative, and 66 (30%) were unknown. Three months after treatment initiation, treatment responses were partial (126, 57%), complete (35, 16%), and no response (7, 3%).

Interpretation:

Many cervical cancer patients in Uganda are diagnosed at stage II and beyond, and treatment intent is largely radical. Only some experience a complete response. Most patients receive only ultrasound imaging due to the burden of patient cost for CT imaging that is the basis for more advanced treatment. As UCI grows, significant opportunity exists for the global community to support cost-dependent and other outcome-improving measures for cervical cancer treatment in Uganda.

Source of Funding:

WM Collins Kohler Foundation

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1763

Integration of Initial Medical Exams of Unaccompanied Refugee Minors in a Pediatrics Resident Clinic at an Academic Medical Center in Chicago

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Background: The number of unaccompanied children referred to the Office of Refugee Resettlement (ORR) for placement has dramatically increased, from 13,625 in 2012 to 128,904 in 2022, per ORR data. In August 2022, the University of Illinois at Chicago's (UIC) began collaborating with a non-profit organization that provides transitional foster care to unaccompanied children through coordination with ORR. The collaboration involves performing mandatory initial medical exams (IME) and serving as the childrens' medical home while in ORR custody. In the first year, 79 patients from 9 countries in Central and South America were seen, the majority from Guatemala, Mexico, and Honduras.

Methods:

Multiple changes were made to improve the experience of the patients served, including:

1. Vaccination protocols
 2. Resident and faculty education
 3. Scheduling template and smartphrase development
- Data on appointment length was collected to evaluate workflow impact. Resident comfort with refugee care is evaluated with a pre-workshop and post-workshop questionnaire.

Findings:

1. Vaccination protocols: Children arriving without vaccination records need upwards of 10 vaccines to meet ORR requirements. Nursing protocols were updated to allow nurses to give all required shots when previously they allowed no more than 4 shots per appointment, which would lead to delays in ORR processing.
2. Resident and faculty education: Workshops were provided to residents and faculty. Residents could join an ambulatory IME rotation for additional training.
3. Scheduling template and smartphrase: An IME scheduling template was created to ensure that required screenings were completed on rooming the patient. An Epic smartphrase was created to facilitate documentation.

Data collection is ongoing. Preliminary results suggest that these changes may decrease median appointment time and increase provider comfort with migrant health.

Interpretation:

This collaboration shows that integration of IME into a resident clinic can be a successful way to provide care for this population and to broaden pediatrics residents' training experience. There are ongoing challenges, including streamlining access to additional resources, such as nutrition and mental health support. Residency programs are often housed in institutions with these specialties, which strengthens that this model is a viable way to improve access to care for this population.

Source of Funding:

None.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1764

Developing Online Learning Modules to Increase Dermatologic Knowledge in Bagamoyo, Tanzania

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Background:

The Bagamoyo District in Tanzania is home to more than 300,000 people but lacks a trained dermatologist. Most skin conditions in the Bagamoyo District continue to be evaluated and treated by general practitioners with little dermatology training. Case-based educational modules were proposed to address the gaps in dermatologic knowledge in medical schools. The objective of our study was to assess the educational needs of students and create learning modules using deidentified patient cases that have been uploaded to a secure teledermatology platform (africa.telederm.org).

Methods:

In June 2023, a survey was administered to 121 second-year medical students gaining clinical experience at Bagamoyo District Hospital. The survey collected participants' demographic information as well as questions about the amount of dermatology information they had received. The survey also assessed students' confidence in their ability to diagnose common dermatologic conditions, beliefs on the importance of dermatology training, and preferences for additional training.

Findings:

Medical students represented Excellent College, City College, Nyaishozi College, and Ununio College. 87% of students indicated that they had received no more than 3 hours of training in dermatology, with 56% of students stating that they had received 1 hour or less. On a scale of one to five (one being not confident and five being very confident), on average, students ranked their confidence in diagnosing skin diseases as a 3.76 and their confidence in treating skin diseases as a 3.72. Over 90% ranked the importance of learning about dermatology as a five on a scale of one to five. Finally, students ranked a video lesson from a specialist and an atlas of skin diseases available on the phone as the most popular options for continued education.

Interpretation:

This research illustrates gaps in dermatological training and provides a novel understanding of the educational needs of clinical students and general practitioners in Bagamoyo. Based on input from the surveys, we plan to develop educational resources, including learning modules with a pre- and post-test to evaluate effectiveness and a skin disease atlas of local cases.

Source of Funding:

Lynch Global Medicine Education Scholarship, Barry Freeman Fellowship

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1770

Implementation of Refugee Health Resident Curriculum and Clinical Applications of Initial Medical Examinations in an Academic Medical Center in Chicago

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Background:

The number of unaccompanied children referred to the Office of Refugee Resettlement (ORR) for placement has dramatically increased, from 13,625 in 2012 to 128,904 in 2022, per ORR data. In August 2022, the University of Illinois at Chicago's (UIC) began collaborating with a non-profit organization that provides transitional foster care to unaccompanied children through coordination with ORR. The collaboration involves performing mandatory initial medical exams (IME) and serving as the children's medical home while in ORR custody. In the first year, 79 patients from 9 countries in Central and South America were seen, the majority from Guatemala, Mexico, and Honduras. A curriculum was curated for the residents at UIC to achieve competency with these examinations. The learning objectives are:

- Educate pediatric and internal medicine-pediatric residents at UIC on newcomer health.
- Improve confidence performing IME and give appropriate trauma-informed and culturally sensitive care.

Methods:

Curriculum design included: lectures, games, role-play, and case-based discussions. Topics included: pediatric refugee health, trauma-informed care, advocacy of the pediatric refugee population, workflow of the IME clinic, and an application via module of all these concepts. This was intended for residents participating in the care of unaccompanied children and taught during academic half day over the span of a month. The needs of the workshop require a laptop with PowerPoint, screen, and projector. Prior to starting, a quality improvement (QI) questionnaire was distributed to determine comfort with pediatric refugee care.

Findings:

This workshop educated residents and addressed challenges in providing pediatric refugee care. QI surveys were obtained prior to starting the curriculum by 23 residents. Participants' overall comfort level with taking care of refugee patients started at an average score of 10 out of 20 with questions assessing level of comfort with taking care of refugee patients, understanding of pre-arrival experiences and screenings required, and level of comfort with asking about social and behavioral health history. A repeat QI survey will be distributed in December 2023 to determine improvement post-curriculum.

Interpretation:

Baseline data has shown that these residents overall do not feel comfortable with care of the unaccompanied children for their IME, which indicates a need for curriculum surrounding their unique healthcare needs. This curriculum can be adaptable to other institutions teaching pediatric residents. This could have an impact on the curriculum as the number of unaccompanied children rises.

Source of Funding:

None.

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Background:

In Uganda, 25% of pregnancies are among teenagers while depression occurs in 26.9% of all women during pregnancy or postpartum periods. Postpartum depression is likely to be high while routinely under-detected in postnatal clinics. Service delivery challenges include inadequate mental healthcare providers, lack of depression screening practices, high patient-provider burden, and unavailability of validated depression screening tools in this population of adolescents attending postnatal clinics in the neighborhood of Kawempe, in Kampala, Uganda. The psychometric properties of the depression screening tool, CESD-20, was assessed in an accessible sample of adolescent mothers attending a postnatal clinic in Kampala, Uganda. We hypothesized that the 20-item CESD (CESD-20) will reliably detect depression among adolescent mothers when compared to the diagnostic Mini International Neuropsychiatric Interview (MINI) as a gold standard.

Methods:

This cross-sectional study took place at the Child and Family Foundation postnatal clinic. Respondents were screened consecutively using either English or Luganda versions of CES-D-20 among randomly selected adolescent mothers to administer the MINI tool. A CESD-20 cut-off score of ≥ 16 was considered for probable depression. Internal consistency reliability was estimated using Cronbach's alpha. Sensitivity, specificity, positive predictive values (PPV), negative predictive value (NPV) and area under the ROC curve assessed psychometric properties for CESD-20. Respondents who scored positively for depression, suicidality, or other disability were followed up by Child and Family Health Foundation clinicians and referred to the child and adolescent psychiatry physician. This study was reviewed and approved by both the Medical College of Wisconsin and Makerere University Institutional Review Boards.

Findings:

Data analyzed from 227 participants showed that most were married (54.1%), unemployed (80.6%), and had probable depression (65.0%). CESD-20 had an internal consistency of 85.3%, sensitivity of 75%, specificity of 35.4%, PPV of 6.1%, and NPV of 96.2%. The area under receiver operating characteristic (AUROC) curve was 0.8149.

Interpretation:

The CES-D proved to be moderately effective at screening for depression with good reliability, sensitivity, NPV scores and an acceptable AUROC. Increasing use of depression screening tools in adolescent mothers may increase detection and treatment of post-partum depression in this population. Future studies should consider testing CESD-20 in single languages only.

Source of Funding:

Wm. Collins Kohler Family Foundation

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Background:

Traditional medicine (TM) is widely used worldwide, especially in developing countries and rural areas. Although easily accessible, traditional medicine can involve risks, including improper dosing, toxicity, unsafe practices, and unpredictable interactions due to lack of regulation from impure ingredients. More data is needed on using traditional medicine in Haiti, particularly among children. This study aims to determine the prevalence of TM utilization for children by parents in Mirebalais and identify factors associated with this use.

Methods:

This is an analytical cross-sectional study carried out in the commune of Mirebalais from June 14 to July 11, 2023. A sample of 416 parents was needed to obtain a study power of 95%. Data were collected using a structured questionnaire adapted from a similar Ethiopian study. Univariate analysis describes sociodemographic characteristics, and TM uses variables with descriptive statistics. Chi-square or Fisher exact tests were applied to determine associations between traditional medicine use and the independent variables like child age, religion, TM accessibility. The null hypothesis of no association would be rejected at 5% alpha risk if $p \leq 0.05$. Institutional IRB approval was obtained.

Findings:

During the survey, 489 heads of households were contacted, 430 of whom agreed to answer the questionnaire, corresponding to a response rate of 87.93%. Nine copies were canceled because they were incomplete. A total of 421 participants were retained for the study. The majority of participants were female (79.81%), Protestant (60.33%), with secondary education (47.98%), living in urban areas (57%), and with a low monthly income. The results showed that 91.45% of participants regularly use traditional medicine for their children, and 74.58% did so in the last six months. The most commonly used types were herbal infusions (89.55%), prayer (36.58%), and massage (34.44%). The oral route was preferred (90.7%). Bivariate analysis showed a significant association between the use of traditional medicine and children's age (higher between 2-12 years) ($p = 0.0083$), TM accessibility ($p = 0.0006$), and duration of children illness ($p < 0.0001$).

Interpretation:

Traditional medicine is widespread in Mirebalais, especially as a preventive measure for common childhood health problems. Evidence is crucial for its safe integration into Haiti's healthcare system. Awareness campaigns on the potential risks associated with TM should be implemented to enable parents to make informed decisions about their children's healthcare.

Source of Funding:

This study was supported by the education and research departments of Mirebalais teaching hospital / Zanmi Lasante. Data collection were funded by Grant Impact.

Abstract N°: 1780

Refugee stigma and its association with depression symptom severity: Findings from urban refugees living in Mbarara city, southwestern Uganda

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Background:

Refugees in urban areas often face acculturation challenges, stigma, stereotypes that impact their mental well-being. The aim of the present study was to examine the prevalence of stigma and its association with depressive symptoms among urban refugees living in Mbarara city, southwestern Uganda.

Methods:

This cross-sectional study, used snowball sampling and interviewed 343 refugees residing in Mbarara city, southwestern Uganda. The Discrimination and Stigma Scale was used to assess stigma whereas the Patient Health Questionnaire (PHQ-9) was used to screen for depression symptoms severity. Linear regression models determined the associations between stigma and depression symptoms severity. Data were collected between June 2019 and March 2020.

Findings:

Of the 343 participants, 198 were males and 145 females, their mean age was 28.8 years ($SD = 11.0$). Most of the participants (95.3%) had attained formal education. Our findings show that 84% (n=288) participants had symptoms of stigma. Stigma had a statistically significant positive association with depressive symptoms severity ($b = 0.11$; 95% CI, 0.08 to 0.15). Age had statistically significant positive association with depression symptoms severity ($b = 0.08$; 95% CI, 0.02 to 0.14). Education level had a statistically significant negative association with depressive symptoms severity ($b = -0.53$; 95% CI, -0.97 to -0.09).

Interpretation:

Urban refugees experience high levels of both stigma and depression. Interventions aimed at reducing stigma could subsequently reduce depression among refugees living in urban areas.

Source of Funding:

None

Abstract N°: 1783

Alarming high burden of diabetic retinopathy and diabetic macular edema among high risk diabetic patients in West Africa

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Background:

In West Africa, Proliferative Diabetic Retinopathy (PDR) and Diabetic Macular Edema (DME) are leading causes of blindness and visual impairment, respectively. In the United States, the standard of care requires annual retinal examinations because early identification of DR and DME enables timely treatment to prevent irreversible blindness. However, in many low or middle income countries (LMIC), diabetic eye screening is exceedingly rare. In part, this is due to a scarcity of eyecare professionals relative to the number of patients. For example, in Ghana, there are approximately 100 practicing Ophthalmologists compared to 1.6 million diabetic patients. While screening every diabetic patient in LMIC should be the long-term aspiration, screening the highest risk diabetic patients may be more achievable and cost effective short-term goal. In our prospective study, we determine the prevalence of PDR and DME in a high-risk West African diabetic population.

Methods:

Two endocrinologists practicing in a diabetes clinic in Kumasi Ghana identified the highest risk adult diabetic patients that had visits from October 2022 to December 2022. Because not all patients routinely undergo labs due to financial barriers, no strict inclusion criteria were employed and rather the endocrinologists used their clinical judgement (considering type 1 vs type 2, hemoglobin A1C, creatinine, neuropathy, nephropathy, blood pressure, age, etc) to identify patients. Patients were called and offered recruitment in the study. Participants were photographed by diabetic nurses using a standard 45-degree fundus camera (3nethra classic HD) with one optic nerve centered photograph and one fovea-centered photograph. Subsequently, a Ghanaian vitreoretinal specialist graded the fundus images.

Findings:

Of the 93 patients and 184 eyes (2 eyes were excluded due to ungradable photographs), 7 patients (8%) had PDR and 28 (30%) had DME. 6 of the 7 PDR patients were female (p=0.203).

Interpretation:

High risk diabetic patients had an alarming rate of PDR and DME. 50% of untreated PDR patients go blind within 5 years. Because cost effective treatment (laser) exists and the prevalence of pathology is high in this cohort, LMIC should consider routinely screening high risk diabetic patients.

Source of Funding:

Stanford Global Health Seed Grant (\$50,000)

Stanford Rosenkranz Prize (\$100,000)

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1786

Exploring the Mental Health Outcomes of Orphaned and Separated Children Served by Udayan Care in New Delhi, India

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Background:

Orphaned and separated children (OSCs) are extremely vulnerable to negative health outcomes in life. India has the largest population of OSCs in the world, and childcare institutions (CCI) in the country continue to face structural barriers in providing adequate mental health support for these children. Udayan Care is a CCI and NGO based in New Delhi, India that employs the "*ghar*" model as opposed to foster care, placing orphaned and separated children in one of its small-group homes.

Since 2013, Duke has been collaborating with Udayan through an undergraduate Student Research Training program to assess the mental health of Udayan OSCs. The data collected can then be used to inform future implementation of direct mental health support initiatives. As part of the project, the 2023 team conducted interviews with 120+ OSCs and delivered pilot life skills workshops. The findings are being utilized to develop further supports OSCs, including the recent implementation of counselors for all transitioning young adults.

Methods:

The team conducted interviews with OSCs served by Udayan, including those living in the residential care homes and 'aftercare' participants—young adults transitioning out of the homes. Aiming to assess participants' mental health status, the interviews included standardized measures of depression, anxiety, trauma, and stress, among others, while also qualitatively assessing knowledge of coping strategies. To build more confidence about the transition to independent life, life skills workshops were administered to aftercare participants. While in India, the team trained interns and a research coordinator in the delivery of interventions to vulnerable populations. This group will be utilized to continue future sessions of life skill and mental health workshops throughout the calendar year.

Findings:

Qualitative interviews revealed that many young adults were not emotionally ready or equipped with the life skills needed to effectively make the transition out of residential care. However, participants did express the desire to have more workshops similar to those delivered in the pilot, and qualitatively mentioned that these helped them feel more confident about transitioning to independence. As such, the team will work with Udayan to develop a sustainable model for the continuation of these workshops.

Interpretation:

Results showed that not all Udayan OSCs felt prepared to live independently and many desired further mental health support. Based on these, Udayan implemented direct counseling for all transitioning adults. Future programs will utilize recommendations from counselors to better understand how to improve young adults' transition.

Source of Funding:

Duke University's Bass Connections Program

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1787

Investigating Barriers to Managing Gestational Hypertension among Syrian Refugee Women in Jordan: A Qualitative Study

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Background:

Maternal morbidity remains a grand global health challenge with gestational hypertension (G-HTN) being one of the leading causes. Studies have found poor hypertension management among marginalized communities to be highly related to social determinants of health. It is especially true among displaced populations including refugees. Migration stressors are prevalent in refugees but how they affect experiences of pregnancy has not yet been explored. Little is known about barriers to G-HTN management among refugee women, especially in countries of first asylum such as Jordan which hosts around 1.3 million Syrian refugees. This study offers an in-depth analysis of the multilevel barriers impacting G-HTN management among refugee women.

Methods:

We recruited a total of twenty community-dwelling Syrian refugee women through a refugee community center in Jordan. Ten in-depth interviews and one focus group were conducted by a trained native-speaker research team. Interviews were conducted in Arabic, transcribed, translated, and coded using inductive thematic analysis.

Findings:

The study utilizes the Social Ecological Model of Health to examine barriers to G-HTN management. At the personal level, participants lacked knowledge of hypertension self-management and expressed their need to receive extra guidance. The challenges posed by the refugee experience and daily stressors hindered their self-care and ability to care for their babies. On the interpersonal level, loss of social support emerged as a significant barrier. Many individuals were uncomfortable sharing their personal lives, resulting in feelings of isolation when it came to asking for resources. At the institutional level, healthcare costs and absence of institutional support in providing blood pressure monitors were barriers. On the community level, cultural and societal expectations around reproduction created stress, impacting their ability to manage their health. Lastly, at the policy level, women noted the limited policies to allow refugee women to join the local workforce.

Interpretation:

Like other chronic health conditions, G-HTN and its management are detrimentally impacted by overall status of the healthcare infrastructure for refugees. Addressing economic barriers to improve refugees' living conditions would likely increase the effective G-HTN management among refugee women in countries of first asylum.

Source of Funding:

University of California Global Health Institute

Evaluating the Impact of an Integrated SBCC Intervention on Pneumonia Care-Seeking and Treatment Behaviors in Northwestern Nigeria: A Difference in Differences Analysis

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Background:

Pneumonia is a major cause of under-5 mortality globally, particularly in Nigeria, with Northwestern Nigeria experiencing high pneumonia-related deaths. Care-seeking and treatment for pneumonia symptoms remain inadequate due to a myriad of factors. Improving childhood pneumonia care seeking and treatment behaviors will encompass targeting and improving psychosocial influences or ideations such as knowledge of symptoms, beliefs, values, attitudes, and social norms. Specifically, we aim to explore the extent to which Social and Behavior Change Communication (SBCC) programming has influenced ideations for pneumonia care-seeking from formal medical sources and antibiotic use for children with pneumonia symptoms in northwestern Nigeria.

Methods:

This study was a two-stage cluster-sample cross-sectional population-based survey of women with a child under two years living in Kebbi, Sokoto (intervention) and Zamfara (Control) states in Northwestern Nigeria where SBCC programming was implemented. The intervention encompassed integrated messaging on MNCH+ Nutrition behaviors compared to vertical malaria only messaging. Descriptive statistics were used to analyze variables at baseline and endline for each survey wave. The impact of the intervention on pneumonia care-seeking and antibiotics treatment was assessed using Difference-in-Differences (DID) estimates from linear regression models. The predicted probabilities were obtained through the 'margins' command and expressed as percentage points. All analyses were conducted in Stata 17.

Findings:

Care-seeking for pneumonia symptoms decreased by 16 percentage points (pp) in the intervention arm compared to the control arm, but this was not statistically significant ($p=0.28$). Meanwhile, antibiotic use for pneumonia treatment increased significantly by 58 pp in the intervention arm compared to the control arm ($p=0.007$). Furthermore, there was a significant increase in knowledge of pneumonia symptoms and in the perceived efficacy of antibiotics to treat pneumonia in both study arms, with the intervention yielding a 19 pp ($p=0.04$) and 31 pp ($p=0.005$) increase respectively relative to the control. However, there were no significant improvements in perceptions of pneumonia severity, care-seeking intentions and addressing myths.

Interpretation:

The study provides critical insights into the impact of SBCC programming in Northwestern Nigeria, specifically relating to care-seeking behaviors and treatment behaviors for childhood pneumonia. While the intervention did not significantly improve care-seeking from formal medical sources, it considerably improved antibiotic use and enhanced knowledge regarding pneumonia symptoms and antibiotic efficacy. This study emphasizes the importance of addressing myths and promoting positive perceptions to improve treatment behaviors for childhood pneumonia.

Source of Funding:

United States Agency for International Development (USAID) through the Breakthrough RESEARCH cooperative agreement [AID-OAA-A-17-00018].

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Program/Project Abstract

Abstract N°: 1793

Continuity of Care via Telehealth in Rural Guatemala – Strengthening of Global Health Partnerships during COVID 19 and beyond

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Background:

During the COVID 19 pandemic, many global health partnerships were unable to adapt to provide clinical support. The indigenous Guatemalan organization Wuqu' Kawoq (WK) has a longstanding partnership with The Christ Hospital- University of Cincinnati Family Medicine Residency (TCHUCFM), wherein the residency assists with longitudinal patient care. During the start of the COVID-19 pandemic in 2020, telehealth was quickly implemented to continue providing care to the sites we jointly serve. After international travel was reinstated, the telehealth structure was expanded to provide continuity of care for patients in between field visits by TCHUCFM. This talk will discuss how the implementation of this telehealth model is a crucial part of continuity of care and explore the impact this had on our partnership with WK in the context of bidirectionality of global health partnerships.

Methods:

After discussion with staff members and key stakeholders at WK, iPads were provided to the main 3 Guatemalan clinic sites that are jointly served by WK and TCHUCFM. Patient visits were conducted via Zoom video with interpreters and staff present in person. After implementation, key WK staff members at each clinical site and key members of the partnership at TCHUCFM were surveyed regarding usefulness of the telehealth model.

Findings:

The survey revealed that both WK staff members and members of TCHUCFM partnership viewed the implementation of telehealth favorably. The telehealth program has been expanded such that TCHUCFM residents continue to see patients scheduled via telehealth at the 3 main clinical sites regularly; during field visits, patients can be scheduled for follow up via this telehealth program.

Interpretation:

The rapid implementation and further expansion of telehealth used for continuity of care at main clinic sites that WK and TCHUCFM jointly serve speaks to the strength of the partnership between these two organizations. This required frequent communication within the partnership and post-implementation feedback that also speaks to leaning into the importance of bidirectionality within global health partnerships.

Source of Funding:

Philanthropy, University of Cincinnati Family Medicine Global and Underserved Health Fund

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1798

Post-Training Evaluation of Neuroepidemiology Capacity Building Activities for Public Health Researchers in Bangladesh

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Background:

In many low and middle-income countries (LMIC), the burden of neurological disorders substantially affects economic development. Suspected risk factors of neurocognitive deficiencies in early life include environmental contaminants and other socioeconomic stressors. Therefore, understanding the etiology of negative effects environmental neurotoxicants and psychosocial stressors is important for LMIC. However, due to the scarcity of skilled brain health investigators and lack of knowledge regarding the low-cost neurocognitive and neuropsychological assessment instruments, only a small number of neuroepidemiology studies have been conducted in LMIC countries. The objective of our study was to evaluate post-training data collected from the participants of two categories of neuroepidemiology training in Bangladesh.

Methods:

Between December 2021 and June 2023, we implemented two formats of neuroepidemiology capacity building training programs targeting two groups of researchers in Bangladesh. A daylong training program was offered to young and early-career investigators, who were pursuing graduate programs in various academic institutions in Bangladesh to provide information about epidemiological approaches and neurocognitive performance assessment tools. At the same time, a weeklong training program including a field training component was offered to mid-career investigators to thoroughly discuss epidemiological methods for investigating the effects of environmental and psychosocial stressors on brain functions. Post-training evaluation conducted by the trainees was analyzed using SPSS Statistics Version 27.

Findings:

A total of 210 participants, 64% female (n=135), attended five training events in Bangladesh including 161 early-career and 49 mid-career researchers. Post-training evaluations by the Bangladeshi trainees has shown encouraging feedback. The majority of the participants (90.9%) found the training effective for their research skill development. In addition, 98.5% trainees indicated that they would recommend this program to their colleagues and peers. Professional affiliations of the trainees demonstrated a great degree of diversity as participants in both events came from academic institutions, NGOs, healthcare, and government and local health departments across this developing country.

Interpretation:

Feedback from the capacity building training programs offered by the US brain health scientists indicate initial success in terms of enthusiasm and skill development among Bangladeshi investigators.

Source of Funding:

This project was supported by an external grant from the National Institute of Environmental Health Sciences of the National Institutes of Health (NIH) under Award Number R01ES032149. The content is solely the responsibility of the authors and does not necessarily represent the official views of NIH.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1819

Pioneering Sustainable Chronic Disease Care: A Three-Month Follow-Up of Hypertensive Patients in a Low-Income Community in Cameroon

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Background:

The increase in prevalence of Hypertension globally and its related burden is well established in literature. However, to date, most countries have failed to show sufficient improvement in the rate of blood pressure (BP) control with improvements seen mostly in the Western world which has resulted in decreased burden of cardiovascular disease and deaths when compared to third world countries. The aim of this study is to provide results of a three months follow-up campaign of Hypertensive patients in a low-income community of Cameroon as well as address the need of a sustainable healthcare system that could be replicated in many other rural areas and countries in Sub-Saharan Africa.

Methods:

Five hundred and forty-nine (n=549) people in low-income community of Cameroon were screened for Hypertension and those diagnosed were treated and followed in a 30-day increment for 90 days total, with first month follow-up being May, second month, June and third month, July of 2023

Findings:

Of the 549 people screened, 62(11%) were seen during the 90 day follow-up. Male(n=21, 33.8%) Females(n=41, 66.2%), age range(6 to 80 years). For the month of May, mean systolic blood pressure(BP) was 144mmHg (median: 144mmHg, SD:13.5) while mean diastolic BP was 88.2mmHg(median:88.2mmHg, SD:8.20). For the month of June, mean systolic blood pressure was 137mmHg(median:135mmHg, SD: 16) while the mean diastolic BP was 85.0mmHg(median: 85mmHg, SD: 8.99) For the month of July, mean systolic BP was 132mmHg(median: 132mmHg, SD:12.5) and mean diastolic BP was 83.6mmHg (median:83.6, SD: 8.88). The number of people with blood pressure above 120/80mmhg from May to July were: May(females: 25(40.3%); males :11(17.74%)), June (female:24(38.70%); male:9(14.5%)), July(female: 14(22.6%); male: 9(14.52%)).

Interpretation:

Average systolic and diastolic BP reading for the group for May, June and July was 144/88.3mmHg, 137/85mmHg and 132/83.6mmHg respectively. This shows a trend of decreased systolic BP between May and July with relatively stable diastolic BP values. This confirms that a sustainable healthcare system which provides access to free screening and medications to those in rural areas in Sub-Saharan Africa will help improve the rate of HTN cases

Source of Funding:

Healing Beyond the Horizons, LEDUCO-USA, Life-Bridge International

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Background:

Among patients with heart failure with a reduced ejection fraction (HFrEF), ventilatory abnormalities on spirometry are related to poor prognosis affecting both morbidity and mortality. Our study aims to determine if patients with HFrEF and class II of NYHA (New-York Heart Association), hospitalized in the Internal Medicine Department at Hôpital Universitaire de Mirebalais, have ventilatory abnormalities related to heart failure and how these pulmonary findings will affect their stay in the hospital.

Methods:

This is a cross-sectional study. The study population was all patients hospitalized with a HFrEF and a class II of NYHA in the Internal Medicine Department at Hôpital Universitaire de Mirebalais from July to August 2023. For them both a transthoracic echocardiography and a spirometry were performed by appropriate specialists before discharge. HFrEF was considered for any patients with left ventricular ejection fraction (LVEF) $\leq 40\%$. IRB approval was obtained. Analysis included percentages and Fisher exact, p-value less than .05 was considered statistically significant.

Findings:

39 patients (51.28% male) underwent spirometry and echocardiography. Of them 21 (53.58%) had less than 60 year-old, 36 (92.31%) a LVEF $< 35\%$ and 24 (66.67%) of them had ventilatory abnormalities on their spirometry. In our study population, the most frequent etiology was ischemic cardiomyopathy (51.28%). 26 (66.67%) patients had ventilatory abnormalities, the majority of which was a restrictive pattern (84.62%). 22 patients (84.62%) had a FEV1/FVC $> 70\%$ and among them 15 (68.18%) spent more than 7 days; and among those 22 patients 7 (31.82%) had 3 or more prior hospitalization related to heart failure exacerbation. No association was found between FEV1/FVC and how long the patients stayed in the hospital. And also, no association was found between FEV1/FVC and the prior hospitalizations.

Interpretation:

To assess the impact of heart failure and the factors associated with the ventilatory abnormalities find in the patients with HFrEF more studies should be done in Haiti. Hence it will show the importance of spirometry in this population before they get discharged and also in the outpatient clinic.

Source of Funding:

No source of fundings.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1826

Monitoring and Evaluation of Trauma Care Education Programs in Ukraine

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Background:

The Russia-Ukraine war created a need to strengthen Ukraine’s capacity to deliver trauma care. International Medical Corps and Harvard Humanitarian Initiative adapted or created educational programs to address this: Advanced Trauma Life Support®, Trauma Nursing Fundamentals, Pre-Hospital Trauma Fundamentals, Pediatric Trauma Fundamentals, Chemical, Biologic, Radiologic, Nuclear Explosives training, Mass Casualty Management, and Stop the Bleed®. The program’s goal is to strengthen trauma care capacity and preparedness for healthcare workers, hospital administrators, and civilians. It is anticipated that the courses will also improve clinical care for victims of other traumatic injuries.

Methods:

From August 2022-April 2023, over 4,000 Ukrainians participated in the courses. Key stakeholders include civilians, healthcare workers and administrators. To evaluate knowledge acquisition, pre- and post- tests were administered. Participant’s ability to perform critical skills was evaluated against objective checklists. Confidence to implement training in patient care was assessed using a likert scale on pre- and post- self-efficacy surveys. Course satisfaction surveys were administered after classes. National instructors trained to lead courses have core competencies assessed via objective checklists. To understand practical use of the training, follow-up surveys on application to patient care and dissemination of information to others were sent 6-8 weeks post-course.

Findings:

Quality was monitored during the training period using a dashboard to review performance by course and type of trainee via matched test scores and course evaluations. Across courses, over 74% of participants had an increasing test score; median score improvement of over 14%. Confidence to provide trauma care improved across all program streams. Follow-up surveys captured over half of the respondents used their new knowledge in patient care in the two months post-course and >98% of respondents stated the training has a lifesaving effect on patient care they will provide.

Interpretation:

This program describes a successful NGO-academic partnership to implement and evaluate national-scale trauma training for civilians and healthcare workers in a conflict setting. The program meets a global need for contextually adaptable trauma care education for lay persons and healthcare workers. Next steps include training and support of national instructors to facilitate and lead courses, as well as scaling to additional contexts.

Source of Funding:

International Medical Corps

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1830

“But he’s not beating me” - Redefining Intimate Partner Violence: A Qualitative Study from Hohoe, Volta Region, Ghana

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Background:

Intimate partner violence (IPV) impacts 36% of women in Sub-Saharan Africa (WHO, 2021). Most research on IPV focuses on the physical, sexual and psychological forms of abuse, and do not account for other forms such as financial and material abuse. This study explores nursing mothers and traditional birth attendants' (TBA) experiences and perceptions of financial and material support from husbands and significant others.

Methods:

Focus groups and interviews were conducted among nursing mothers and TBAs in Hohoe, Volta region. Participants were recruited through contacts of support staff and nurses at the child welfare centers. Consenting participants completed demographic survey before the discussions. Interviews and discussions were guided by five questions and conducted in Ewe language. Focus groups lasted for 1.5 hours, while interviews lasted for 45 minutes and all were audio-recorded. Data was transcribed into Ewe, then translated into English language for data analysis using thematic analysis approach.

Findings:

27 women participated in the study (ages 19 to 81). Most participants were married or in a relationship (23), and nursing mothers (20). Only 4 women reported having more than secondary school education, while 10 reported primary education or less. Three themes emerged from the data analysis: cultural interpretation of IPV; financial abuse can be a precursor to physical abuse; and TBAs as “community navigators”. Findings revealed that husbands often do not provide financial support to their wives, even when they have the resources to do so. Mothers with more experience of childbirth were more likely to report lack of financial support during pregnancy and childbirth. Mothers who reported lack of financial support did not view lack of financial support as abuse, rather as hinderance to their efforts to care for their children, saying “...he’s not beating me.” TBAs act as navigators interceding on behalf of mothers with their husbands and fathers of their children, while seeking resources to support them.

Interpretation:

Women demanding for financial support can be subjected to physical abuse or sexual abuse. By the same token, TBAs can act as mediators between mates. While the findings are context specific and may not be generalizable to other settings, it contributes to our understanding of how financial abuse is perceived, but more importantly how TBAs can be a resource for intervening as alleviate IPV.

Source of Funding:

NONE

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1833

Prevalence and determinants of parental Self-medication of children in a tertiary Haitian hospital

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Background:

Self-medication is prevalent in numerous countries, both in developed and developing regions. Children constitute a significant portion of the general population in developed countries and are particularly vulnerable to self-medication practices. While the medical literature has explored self-medication practices with antibiotics in Haiti, previous studies have not adequately addressed the pediatric population. Therefore, we chose to conduct our study on the prevalence and risk factors associated with self-medication in children aged 1 month to 16 years at the Mirebalais University Hospital from June 1 to July 1, 2023.

Methods:

This study is a cross-sectional, analytical, single-center investigation conducted at the University Hospital of Mirebalais during the period from June 1st to July 1st, 2023. We included in our study all children aged 1 month to 16 years seen at the Mirebalais University Hospital in an outpatient clinic, in the emergency room and in the hospital ward accompanied by their mother or a close relative during the period of the study. For data collection, we used a questionnaire. The data were entered on Epi Info and analyzed on Excel. For the statistical analysis we used the Fisher and Chi-Square statistical formulas.

Findings:

Among the 199 children included in the study, the majority were accompanied by their mothers, accounting for 81.91% of cases. Parents aged less than 30 years were the most prominently represented group, comprising 50.25% of participants. Most households had fewer than four children, accounting for 76.88%, while only 4.02% of households had more than six children. Concerning the age of the children, the majority were under 5 years old, representing 77.89% of cases. Female children were predominant, constituting 51.76% of the study population. It was found that 49% of parents admitted to practicing self-medication for their children in the past three months. Clinically, fever (29.15%) was the predominant symptom justifying self-medication. Among the medications used for self-medication, most parents confessed to administering Acetaminophen in 28.14% of cases. Regarding antibiotics, amoxicillin was the most used (2.51%).

Interpretation:

Self-medication practices among parents attending the University Hospital of Mirebalais are widespread. Acetaminophen is the most frequently utilized medication, and despite the unregulated sale of antibiotics in the streets, this class of drugs is only minimally used in self-medication. Further studies are needed to address certain questions, such as the factors influencing parents' decision to not extensively use antibiotics in self-medication practices.

Source of Funding:

None

FACTORS ASSOCIATED WITH THE NUTRITIONAL STATUS IN PATIENTS RECEIVING NUTRITION ENTERAL IN ICU

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Background:

Enteral nutrition is a therapeutic technique that consists of the administration of nutrients through different types of formulas. The assessment of nutritional status is an indicator used to evaluate the evolution of patients. This study was motivated by the need to reduce the prevalence of in-hospital malnutrition, related to higher health costs, lower quality of life and increased morbidity and mortality. The objective of the study was to determine the factors associated with nutritional status in adult patients receiving enteral nutrition.

Methods:

The study was carried out in Carlos Alberto Seguin Escobedo National Hospital - EsSalud Arequipa (Peru). The study is descriptive, prospective, and longitudinal. 15 patients (4 women and 11 men) were included, obtained in a non-probabilistic manner. The inclusion criteria, patients hospitalized in ICU over 18 years of age, hemodynamically stable (APACHE II test), who received exclusively enteral nutrition (minimum 10 days). Researchers excluded patients with parenteral or mixed nutritional assistance, patients with enteral nutrition suspended for more than 48 hours and patients with pre-dialysis, dialysis, or hemodialysis. Authorization and approval were requested from the hospital's Ethics and Research Committee and patients' guardians were asked to participate through written informed consent.

Findings:

We worked with 15 individuals who were then grouped according to each indicator of nutritional status (anthropometric, biochemical, and immunological). Epi-Info version 6.0 statistical software was used for statistical analysis. Descriptive statistics were carried out with measurements (mean and percentages). To make comparisons between groups of patients, the McNemar test was used (significance $p < 0.05$). Within the results it was obtained that there is an association between the start of enteral nutrition and the percentage of carbohydrate adequacy with nutritional status according to total lymphocyte count. On the other hand, factors such as percentage of caloric, protein and fat adequacy, as well as the ratio of non-protein calories per gram of nitrogen, were associated with nutritional status according to albumin.

Interpretation:

Each factor studied was associated with at least one of the nutritional status indicators. A better nutritional status is obtained when adequate enteral nutrition is applied. Few studies on this topic in Peru were found when the study was developed. The study received the complete support of the hospital to data collection. Knowing the factors associated with nutritional status helps to improve and correct hospital nutritional management protocols to provide quality care to critically ill patients and establish health policies to be implemented in hospitals.

Source of Funding:

None funding source.

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Background:

Drowning is one of the leading causes of preventable deaths worldwide, with young children in low- and middle-income countries making up 90% of the 235,000 drowning-related deaths. Although drowning exists as a major public health threat in Uganda and other Sub-Saharan African countries, there remains a disconnect between public knowledge of drowning risks and national government policy. Starting in July 2022, Swim Safe Uganda, Energy in Action, and USC GRIT lab collaborated to implement the first Splash Safe Camp – a three-day event in Kampala focused on engendering youth drowning prevention knowledge and skills. Based on successful camp completion and continued community interest, Splash Safe Camp was reimplemented in Kampala in July 2023. This paper evaluates the efficacy of Splash Safe Camp over time as a youth-based educational intervention that can be implemented worldwide.

Methods:

Splash Safe Camp 2022 and 2023 trained between 50 to 130 Ugandan youth in water safety and drowning prevention. Camp participants, between ages 7 to 15, were recruited from schools in communities around Lake Victoria in the vicinity of Mukono, Uganda. Youth rotated daily through workshop stations; topics included water sanitation and hygiene, community drowning prevention strategies, CPR and first aid, mental health, teamwork and gender equity, learn-to-swim, and both dry land and pool water polo. Pre- and post-camp assessments were administered during each station, and each camp day ended with water-safe games to encourage youth engagement. Upon completion of the camp, participants taught back material through performing arts and were given ‘Water Safety Ambassador’ titles.

Findings:

Evaluation of pre-assessment surveys from Splash Safe Camp 2022 and 2023 revealed decreased access to lakeside drowning prevention emergency services and limited bystander first aid knowledge. Youth participants from the 2022 and 2023 camps demonstrated improvements in water safety knowledge and skills. Approximately 45% of participants from both camps reported higher confidence in swimming, better understanding of recognizing drowning victims, and increased comfortability in teaching community members about drowning prevention practices.

Interpretation:

With youth knowledge increasing across both years, Splash Safe Camp promises improved community-level drowning prevention awareness. As nationwide drowning prevention policy continues to be a challenge in Uganda, more water safety program implementation – especially in schools – is encouraged. Therefore, continued NGO collaboration remains essential for expanding Splash Safe Camp’s success.

Source of Funding:

Splash Safe Camp is funded by non-profit Energy In Action.

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 1855

Disparities in Cervical Cancer Screening among Asian American and Pacific Islander Women in Eastern Virginia – Results from a Recent Community-based Survey

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Background:

Although cervical cancer is preventable with regular Pap tests, Asian American and Pacific Islander (AAPI) women have the lowest rates of Pap screening among all U.S. ethnic groups; and cervical cancer is a leading cause of deaths among AAPI women. This study examined the patterns and correlates of Pap tests among AAPI women, using recent community-based survey data collected in Eastern Virginia.

Methods:

Data came from a sub-sample of 1,042 female who participated in an online survey conducted in April/August 2022. Participants were recruited via social media channels and in-person events, using three sampling criteria: 1) being decedents of Asian and Pacific Islanders; 2) ages 18-85 years, and 3) residents of Hampton Roads and the Eastern Shore. A range of information were collected, including participants' socioeconomic background, major health concerns, health behaviors, and healthcare service utilization. Descriptive statistics were used to present sample characteristics. Chi-square analyses and multinomial logistic regression were performed to examine factors related to the utilization of Pap tests among AAPI women, using SPSS software package.

Findings:

Of the 1,042 women, 63.9% ever had a Pap test, among which 40% received a test within the past year, 56.8% within the past 2-3 years, and 3.6% more than 3 years ago. The proportion of women who had ever received a test was the lowest among Chinese (53.1%), followed by Filipino (59.7%) and other AAPIs (68.9%). Results from multinomial regression revealed that the odds of never having a pap test were higher among women who had language barrier (AOR: 1.71, 95% CI:1.06-2.78), no health insurance coverage (AOR: 1.83, 95% CI:1.12-2.99), high school education or less (AOR: 1.97, 95% CI:1.19 – 3.29); religious belief (AOR: 0.72, 95% CI:0.51-0.99); and decedents of Chinese (AOR: 1.47, 95% CI:1.01 – 2.19) and Filipino (AOR: 1.74, 95% CI:1.20 – 2.53; P<0.05). Among those who received a test, the odds of having a test within the past three years was significantly lower among Chinese (AOR: 0.29, 95% CI:0.06-0.98) and Filipino women (AOR: 0.29, 95% CI:0.08-0.99; P<0.05), adjusting for confounding factors.

Interpretation:

Findings revealed inadequate utilization of Pap tests among AAPI women, and lower likelihood of ever receiving a test and timely testing among Chinese and Filipino women, and women who were socially and economically advantaged. Findings highlighted the need for targeted interventions to reduce the barriers to Pap testing to reduce the mortality, morbidity, and health disparities associated with cervical cancer among AAPI women.

Source of Funding:

Eastern Virginia Medical School Presidential Research Fund

Category: 5 - Translation and Implementation Science, Bridging Research to Policy, Innovation and Research - Scientific Abstract

Abstract N°: 1858

Primary healthcare - heart of community health. Community and healthcare workers empowerment through a mechanism for informing, public monitoring and feedback in primary health care organizations (MIOMOS).

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Background:

As a home for best practice of primary healthcare (PHC) through Alma-Ata and Astana Declarations Kazakhstan started rethinking and reforming primary healthcare (PHC) since 2018. Shift for results-driven payment mechanisms and incentives for PHC services created need for better understanding of local needs. This has resulted in project MIOMOS, which was implemented and created by National association of PHC, experts from Kazakh National University and 17 pilot centers of excellence in Kazakhstan.

Methods:

The aim of this framework was to tackle the issue of low trust and high rate of complaints to PHC services and organizations. Frameworks consist of 3 blocks: 1st block's aim is to gather qualitative data from different population groups and employees on issues and barriers to individual and community health, together with suggestions for improvement. 2nd block includes creating committee from local activists, hospital administration and patients to create work plan on suggested changes. 3rd block includes implementing and monitoring work plan.

Findings:

Implementing MIOMOS helped to identify suggestions for improvement in hospital, rehabilitation services, infrastructure and drug supply. MIOMOS helped decrease complaints rate from 50% to 100% and develop community health care worker model. For instance, in Enbekshikazakh regional hospital it helped solve issues of accessibility of health and build new facilities in remote areas. In Talas regional hospital Committee helped solve issues with electricity shortage at rural medical outpatient clinic. In Merke it resulted in better interactions with youth, and creation of youth health volunteering alliance, that now has around 200 members.

Interpretation:

Empowering community and healthcare workers to implement and incorporate health in all approaches is a main goal of this framework, which helped to incorporate trust building as a standard procedure into Primary Healthcare facility structure.

Source of Funding:

None

Assessing Population-level Accessibility to District Hospitals in India: A Geospatial Modeling Study of 36 States and Union Territories

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Background:

In 2021, the topmost government think tank in India - NITI Aayog published a report compiling key performance indicators for District Hospitals (DHs). Notably, the report overlooked a crucial aspect: timely access to DHs. Our study focuses on addressing this gap by examining the geographical distribution of DHs across India's states and union territories (UTs) and developing models to assess timely access to these healthcare facilities.

Methods:

The NITI Aayog address data was geocoded using machine techniques, and then manually verified using Google Maps. We incorporated 2020 motorized and walking travel-time friction surface rasters from the Malaria Atlas Project. Population estimates for India at a 1-square-kilometer resolution were sourced from WorldPop. Additionally, we conducted an examination of the number of DHs per million inhabitants across 36 states and Union Territories (UTs). We introduced the concept of Healthcare Access Coverage (HAC), representing the population proportion residing within specified time thresholds (30 and 60 minutes) from the nearest DH, considering both walking and motorized travel modes. We categorized the travel friction rasters based on the defined time thresholds using a raster-based analytical approach. Then, we overlaid these categorized rasters with the population raster to derive population estimates for regions where healthcare accessibility fell within the timeframes.

Findings:

In 2021, India had 707 DHs and a density of 0.51 DHs per million people. Uttar Pradesh had 150 DHs while small UTs of Chandigarh, Lakshadweep, Dadra and Nagar Haveli and Daman and Diu had 1 DH each. Across states, densities ranged from 0.15 for Telangana to 25.34 per million for Lakshadweep. Nationally, only 4.11% of people were within 30 minutes of walking from their nearest DH. Puducherry (28%), Chandigarh (29%), and Delhi (35%) were the only regions with >20% HAC for walking. For motorized transport, nationally, only 78.83% of people were within 60 minutes from their nearest DH by motorized travel. Among states/UTs, 31 regions had >50% HAC with UTs of Chandigarh and Delhi depicting 100% access coverage.

Interpretation:

These results emphasize the importance of incorporating factors like timely access into policy frameworks for a more comprehensive evaluation of health system performance in a country as geographically vast as India. This type of geospatial analysis can provide useful information for identifying the optimal locations for building new facilities.

Source of Funding:

None

Category: 1 - The Social Determinants of Health - Scientific Abstract

Abstract N°: 1869

Understanding Vaccine Hesitancy and Ideational Factors Influencing Routine Immunization Uptake among children aged 12-23 months in Northwestern Nigeria

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Background:

Nigeria contends with high under-five mortality rates, exacerbated by low immunization uptake, with only 36% of children (12-23 months) receiving recommended vaccines, and even lower estimates (25%) in Northwestern Nigeria. Historically, focus has been on enhancing supply of immunization services, overlooking demand-side factors like vaccine hesitancy, shaped by psychosocial influences or ideations such as knowledge, beliefs, values, attitudes, and social norms. The prevalence of hesitancy, despite vaccine availability, emphasizes the pivotal role of underlying ideational factors and necessitates comprehensive insights into caregivers' decision-making processes. This study quantitatively examines vaccine hesitancy, focusing on the impact of ideational factors on childhood routine immunization uptake in Northwestern Nigeria.

Methods:

This study was a two-stage cluster-sample cross-sectional population-based survey of women with a child under two years living in wards within Kebbi, Sokoto and Zamfara states in Northwestern Nigeria. We adapted the WHO Vaccine hesitancy metrics to develop ideational metrics based on the ideational model of strategic communication and behavior change. Mixed-effects logistic regression models were used to analyze the associations between vaccine-related ideational variables and the outcomes of full vaccination, 3 doses of Diphtheria Pertussis Tetanus (DPT3) vaccine, and measles vaccine uptake. Average marginal effects estimated from the logistic regression models were expressed as percentage points (pp). All analyses were conducted in Stata 17.

Findings:

Among 1,608 women with recent live births, 6.2% of children aged 12-23 months received full immunization, measles vaccination (18%), and DPT3 vaccination (9.6%). Complete immunization was significantly associated with women's knowledge of initial vaccination timing (3 pp, $p=0.03$) and ability to locate vaccination sites (4.4 pp, $p<0.001$). Additionally, trust in health workers and spousal influence were pivotal, increasing DPT3 uptake by 16 pp ($p=0.001$) and 10 pp ($p=0.012$) respectively. Perception of illness severity (14 pp, $p=0.003$) and vaccine efficacy notably enhanced measles vaccine uptake by 23 pp ($p<0.001$).

Interpretation:

This study shows that factors like women's knowledge and self-efficacy, community trust in health workers, and spousal influence play significant roles in the uptake of vaccines. The influence of health providers was notably impactful across all immunization types, suggesting that trust and perception of healthcare providers are crucial in vaccination decisions. Additionally, the recognition of illness severity and perceptions of vaccine efficacy were significant contributors to immunization, especially evident in the uptake of the measles vaccine. Tailored communication interventions addressing these factors can improve immunization rates in Northwestern Nigeria.

Source of Funding:

United States Agency for International Development (USAID) through the Breakthrough RESEARCH cooperative agreement [AID-OAA-A-17-00018].

Category: 7 - Non-Communicable Diseases, Health Systems, Public Health, Primary and Surgical Care - Scientific Abstract

Abstract N°: 1876

Comparative assessment of the Edinburgh Postnatal Depression Scale, the Patient Health Questionnaire and the Center for Epidemiologic Studies-Depression scale as screening tools for depression in postnatal care

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Background:

Although there have been numerous calls to screen women for depressive symptoms during the perinatal period, this is not routinely done in most resource limited settings like Zimbabwe mainly due to lack of policy on screening of women for perinatal depression, time constraints, unavailability of proper screening instruments, lack of appropriate training among healthcare providers and stigmatization of mental illness.

Methods:

We evaluated criterion validity of the Edinburgh Postnatal Depression Scale (EPDS), Patient Health Questionnaire (PHQ-9) and Center for Epidemiological Studies-Depression (CES-D) scales against an independent, blinded, and psychologist-administered clinical interview using Diagnostic Manual of Mental Disorders (DSM-5) criteria.

Findings:

Prevalence of depression was 25% (95%CI 19.04-31.74). Internal consistency was high for all tests (PHQ-9 Cronbach's alpha 0.87; EPDS Cronbach's alpha 0.90; CES-D Cronbach's alpha 0.88). Receiver operating characteristics (ROC) analysis and Youden Index criteria indicated that: i. on the EPDS, a threshold score of 12 offered optimal discriminatory power (sensitivity=74%, specificity=80%), ii. optimal cutoff for the PHQ-9 was 7 (sensitivity=87%, specificity=75%) and iii. optimal cutoff on CES-D was 19 (sensitivity=80%, specificity=69%) against DSM-5 criteria. The area under the ROC curve (AUC) for EPDS was 0.85 (95% CI 0.779-0.912), PHQ-9 0.88 (95%CI 0.836-0.942) and 0.82 for CESD (95%CI 0.767-0.899). Differences were significant (p=0.03).

Interpretation:

The Shona-language versions of the three tools had good sensitivities and specificities for detecting depression among Zimbabwean women and may be useful in screening for depressive symptoms in postnatal care.

Source of Funding:

This study was funded by the University of KwaZulu-Natal PhD Scholarship Funds

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1883

Using Digital Technology and Innovation to Increase Access to Quality and Affordable Medicines - A Case of Med4All.

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Background:

In Ghana, like lower- and middle-income countries, there are significant problems with the quality, affordability, and availability of medicines. These have serious implications on public and the health system in Ghana. Healthcare providers also have limited access to sustainable financing to pay for medicines they procure. Pharmaccess Med4All program based in Ghana leverages on digital Technology to provide a regulated medicines supply chain platform that connects credible pharmaceutical suppliers and healthcare providers. Med4all seeks to increase access to and use of quality and affordable essential medicines.

Methods:

Med4All achieves these goals through effective collaboration with stakeholders who have regulatory functions, influence, and authority on medicines use like the Food and Drugs Authority of Ghana (FDA), the Christian Health Association of Ghana (CHAG), and National Health Insurance Authority (NHIA). Suppliers on the platform are accredited by the FDA with market authorization for their medicines and have national presence. Health providers are CHAG members with representation from all levels of healthcare. Med4All builds capacity of its health providers through training in medicine management. It the pools their medicine needs and use the aggregated volumes to negotiate for economies of scale. The program has credible patterns and a business case to guide its sustainability.

Findings:

After 30 months of Med4All operation, medicines prices on its platform are averagely 30% lower than the open market. Good quality medicines are more accessible, and affordable with reduced out-of-pocket payment practices. Medicines availability has increased with lower frequency of stockouts. All the 750 brands of medicines met the FDA standard in a post-market surveillance quality test. Healthcare providers have access to financing to pay promptly for medicines they procure. Med4All hopes to reach over 11 million people with good quality medicines by the end of 2026.

Interpretation:

The main challenges the program has faced are supply chain disruption which affects medicines availability and currency instability which leads to price volatility.

Med4all model, when scaled up, will contribute to solve global health challenges of access to quality essential medicines and counterfeit and substandard medicines menace.

Source of Funding:

Hemsley Foundation and Norad Foundation.

Category: Global Health Education - Select this Track if submitting a “Global Health Education” abstract.

Abstract N°: 1885

Embedding Planetary Health Education into the Medical Teaching Unit (MTU) - Quantifying Healthcare Emissions Using a Case-Study Approach

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Background:

Educating medical learners on the climate change impact of healthcare has been well documented as a key element to reduce the emissions produced by the medical field, as has the high desire of medical learners to learn more about this topic. However, educating students on this topic is complicated by the difficulties inherent in connecting healthcare practices to actual emissions. The purpose of this project is to overcome this difficulty by allowing medical learners to quantify the emissions produced by the components of the healthcare system within which they work.

Methods:

This project uses an educational framework by which learners conduct case studies of patients they have treated on the Internal Medicine inpatient ward at the Halifax Infirmary in Halifax, Nova Scotia, which began in the Fall of 2023. They chart the number and types of investigations and procedures done during their selected patient’s admission, in addition to other factors including the length of stay. Subsequently, they cross-reference their findings with the Healthcare LCA Database, which catalogues studies assessing the greenhouse gas emissions of common medical investigations & other aspects of healthcare, to create an estimate of the total greenhouse gas emissions per patient stay.

Findings:

This model allows for learners to create an estimate of the total emissions from the hospital stay of a patient they helped care for, which establishes a clear and readily comprehensible link between common healthcare practices and greenhouse gas emissions. These case studies serve as a broader teaching tool as each are presented as part of a monthly forum including learners and staff, with discussion focusing on ways to reduce the total emissions of each stay. In this way the method established by this project allows for learners to develop a nuanced understanding of the climate change impact of a hospital stay, to identify aspects of healthcare that contribute disproportionately to greenhouse gas emissions, and to foster a climate change-informed approach to medicine. In doing so, we hope to provide a means of improving the education provided to medical learners about the nexus between healthcare and climate change.

Interpretation:

We aim to formalize this approach into a teaching model that is readily translatable and available to other medical schools and hospital systems within Canada and internationally, and hope to foster research regarding the effects of locality on healthcare emissions to improve the generalizability of the data underlying this model.

Source of Funding:

Grant provided by CASCADES Canada (<https://cascadescanada.ca/>)

Category: 1 - The Social Determinants of Health - Program/Project Abstract

Abstract N°: 1886

Element of Play®: Increasing Access, Engagement and Completion Rates in Ethiopia

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Background:

In Ethiopia, education emphasizes rote memorization and recall of information as primary teaching mechanisms. This program review seeks to illuminate factors that support access, student engagement and grade completion. In September 2016, Worldwide Orphans (WVO) opened a play-based preschool in Addis Ababa. The preschool served 72 children, 3-6 years of age in three grade levels over 4 years. As part of the preschool program, children received 2 meals a day, had access to an onsite health clinic and parents volunteered at the school, receiving a stipend. WVO then brought teacher training and play-based learning into government preschools. Today, there are 10 preschools and more than 7,000 students accessing WVO's Learning Spaces. According to Woodhead et al. (2014)³, inequalities in household circumstances rapidly translate into inequalities in learning. Using data previously collected, WVO is exploring the elements of their play-based preschool program, both within the school setting and in the home environment, that may have the greatest determining impact on educational outcomes.

Methods:

This program review explores the long-term impact of participation in WVO's preschool, 4 years later. The most vulnerable students were identified by the local Bureau of Education, through parent interviews and home visits. WVO has maintained access to the group of 72 students who participated in the preschool program ending June 2020, with these children now entering 1st to 4th grade in public schools. Data has been collected over years on the educational outcomes, health, and home environment of each child and includes the core engagement in WVO's preschool programming.

Findings:

In the preliminary findings, students who attended WVO's preschool had access to a quality early learning experience, are actively engaged in school and are completing each grade-level. Further analysis will inform the development of WVO's future preschool programming, including the challenges of equity and access, resource constraints, parental awareness/involvement, malnutrition, health issues, and quality of education.

Interpretation:

While there are many ongoing challenges facing Ethiopia's government preschools, the results of this program review may lead to a stronger and more holistic approach to WVO's early childhood programming in Ethiopia.

Source of Funding:

Private Donor

³ Woodhead, M., Dornan, P. and Murray, H. (2014). 'What inequality means for children: evidence from Young Lives'. *International Journal of Children's Rights* 22 (3): 467-501.

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Background:

In June 2021, the French Ministry of Health relaxed regulations on HIV pre-exposure prophylaxis (PrEP) prescription to allow General Practitioners (GPs) to initiate PrEP. However, the number of French PrEP patients remains low. We completed a pilot PrEP self-assessment of GPs' attitudes and knowledge about PrEP to guide training and practice improvement as a part of an ongoing multicenter study evaluating the initiation and retention of PrEP by Paris GPs.

Methods:

Ten GPs participated in 60-minute, semi-structured focus groups discussing their attitudes, knowledge, and experiences with PrEP care. Focus group transcripts were analyzed utilizing a thematic analysis approach by two reviewers. Themes were compared and differences were reconciled through consensus discussion.

Findings:

Six participants identified as women and four identified as men. Through qualitative analysis, four central themes were identified. 1) Initiating PrEP Care: Most GPs' PrEP encounters were renewals for patients who knew of PrEP prior to the visit, most of whom were Men who have Sex with Men (MSM). 2) Facilitators of PrEP Prescription: The shift of PrEP care to GPs allowed improved care integration, patient comfort, and easier follow-up. 3) Individual-Level Barriers to PrEP Prescription: Lack of training, time restrictions, discomfort discussing sexual health, a perceived increase in workload, and fear of PrEP promoting sexual risk-taking all hindered PrEP prescription by GPs. 4) Systemic-Level Barriers to PrEP prescription: The lack of diversity in French PrEP Marketing and limited resources for counseling cisgender women and African migrants particularly prevented GPs from providing PrEP despite great need in populations other than MSM.

Interpretation:

This is the first study in Paris to assess PrEP knowledge and attitudes of GPs following full prescriptive authority. Significant knowledge gaps indicated a need for comprehensive PrEP training for GPs with resources for counseling migrants, cisgender women, and those engaging in chemsex. Implementing diverse PrEP advertising targeted to all vulnerable groups could also improve awareness and interest in PrEP among patients and better facilitate conversations between GPs and those in need of PrEP.

Source of Funding:

This work was funded by the National Cancer Institute's Scholars in Oncology-Associated Research (NCI-SOAR) Grant #R25CA240134 and the France Chicago Center's François Furet Travel Grant