

**24th Canadian Conference on Global Health
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**Poster Abstracts
Résumés d'affiches**



**Fragile environments and Global Health: Examining drivers of change
Environnements fragiles et santé mondiale: Examiner des facteurs de
changement**

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Developing stakeholder engagement mechanisms to establish a safety and health committee in nigeria: implications for occupational safety and health

Issue/problem:

Background and Rationale: The National Occupational Safety and health Policy of Nigeria stipulates the formation of a Safety and Health Committee in the workplace to facilitate the implementation of its occupational safety and health programs (requirements). This has not been done in the stone crushing industry in Ebonyi State, Nigeria, despite being a major source of livelihood. Workers in the industry are exposed to various hazards, notably, respirable silica dust, and have no access to occupational health services.

Relation to sub-theme Number 5 is these workers constitute a voiceless vulnerable part of the population at risk

Settings: Umuoghara Stone Crushers Enterprise Zone, Ebonyi State, Nigeria

Timeframe: March, 2017- November, 2017

Objective: To develop mechanisms for stakeholder engagement in the establishment of a safety and health committee.

Methods: Exploratory research using participatory action research method, cross sectional descriptive survey with a semi structured questionnaire, participant observation, key informant interviews.

Global health significance of this topic: Health system strengthening crucial to SDG 3 realized in a functional safety and health committee.

Results: Fifteen nominated stone crusher owners among the seventy registered in their association and five senior government officials from the five relevant ministries, were enrolled into the safety and health committee. The mechanisms for engagement were entrepreneurship capacity building workshops for the owners and ministry representatives; separate committee set up for workers; African Institute of Health Policy Health Systems, Ebonyi State University providing a knowledge translation platform interface; stakeholder power analysis; repeated advocacy visits; trust building. 73.3% of the owners were male, 53.3% in the 31-40 year age group, 20% were aware of the policy. 67% felt that establishment of the committee was necessary a few months after their initial resistance. The workers were a mobile population and five in their committee.

Lessons to date: Interest generated by entrepreneurship capacity building workshops in addition to having separate committees facilitated implementation. The committees are presently engaged in walk through surveys and organisational policy drafting. Importance for other settings is usage of data generated for policy briefs in stakeholder meetings.

Main messages: The knowledge translation platform offering perceived profit yielding schemes and serving as brokers between stakeholders is a model for establishing safety and health committees .

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Successful elimination of malaria in Sri Lanka in a conflict setting

Issue: Sri Lanka is a model country for malaria elimination. Following a turbulent 20th century that saw malaria epidemics every three to five years, near elimination of malaria and a subsequent resurgence of the disease, Sri Lanka initiated revolutionary initiatives to target the Plasmodium vivax parasite and other malaria parasites that are spread through mosquitoes. Sri Lanka was declared malaria-free in September of 2016 by the World Health Organization (WHO).

Despite the fact that most malaria cases were occurring in conflict-affected districts such as Jaffna, incidence rates of malaria continued to decrease amid the civil war. It has been reported that the Liberation Tigers of Tamil Eelam (LTTE) were engaged with the Anti-Malaria Campaign (AMC) and assured support for malaria control measures in their regions; partly because their own soldiers were so severely affected. However, the logistics of this success are less clear. For example, there is very little information detailing how health services were maintained in conflict areas or how the cooperation between various stakeholders was fostered.

Objectives and Methods:

Using secondary sources and field interviews with key stakeholders, we aimed to understand the elimination of malaria during the conflict. Secondary sources included academic work, non-governmental publications, and newspaper articles. Interviews were conducted with governmental and non-governmental representatives. Our focus was in 1) understanding the logistics of elimination in hard-to-reach areas during the conflict and 2) identifying translatable lessons for other countries approaching malaria elimination.

Results: Preliminary results suggest that several strategies helped to reach populations affected by the conflict, including 1) active case detection, involving the screening asymptomatic high risk populations; 2) private-public partnerships, allowing for rapid service delivery; and 3) high commitment to elimination across groups, including opposing parties. There remains a gap in knowledge about the logistics of the delivery of services to people in conflict-affected regions, including the stakeholders present, the communications between the LTTE and the Sri Lankan government, and the effects of the war on supplies, staffing, and health infrastructure.

Lessons to Date: Political will and collaboration across groups contributed to the successful elimination of malaria in the country.

Main Messages: Many countries that are malaria endemic are also experiencing active conflict. If The Global Technical Strategy for Malaria of reducing the global incidence and mortality rate by at least 90% is to be achieved by 2030, these countries would benefit from the lessons learned in Sri Lanka.

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Barriers to the successful implementation of the integrated school health programme in Durban metropolises South Africa: policy makers and stakeholders' perspective

Globally, schools have been identified as the ideal setting for health promotion among children, adolescents and the wider school community. In South Africa, the integrated school health programme (ISHP), aims to address both the immediate health problems of learners and implement interventions that can promote their health and well-being during childhood and adulthood (Department of Health & Education, 2012).

This study explored the barriers faced by policy makers and stakeholders during the implementation of ISHP. **Methods:** A qualitative, explorative and descriptive study was conducted to identify the barriers faced by stakeholders during the implementation of ISHP. Data was collected through in-depth interviews with 30 participants involved in the implementation of ISHP and a review of documents related to ISHP, which were compiled from 2015 till 2016. A topic guide guided all interviews. Data was analyzed using the five steps of framework analysis.

Results: The study findings reveal that the participants faced numerous barriers during the implementation of ISHP. These included limited resources (human resources, funds, materials, and transport), insufficient time allocated to ISHP activities, lack of support from other stakeholders, cultural beliefs, poor communication between stakeholders, poor attendance of follow-up consultations by referred learners, poor follow-ups after referrals and too many school health programmes implemented by department of health.

Conclusion: This study makes an important contribution to the implementation of the ISHP and documenting the barriers faced during the implementation. Results of the study underscores the need for policy makers and relevant stakeholders to source more resources needed by ISHP including funds, increasing staff, vehicles for ISHP, increasing school health services offered by community based organizations, increasing mobile clinics in the communities, reviewing education curriculum to accommodate ISHP and integrating all school health programs into ISHP.

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Caregivers' experiences in accessing health care services for their school-going children participating in an integrated school health programme in low resource communities of South Africa

Background: Accessing quality health care services is critical to addressing the different health challenges confronting school-going children especially those in low resource communities. The school-based health care services provided through the integrated school health policy (ISHP) have been expanded since 2012 to meet the various health needs of school-going children. However, little is known about the experiences of caregivers in accessing health care services for their school going children. This study therefore explored caregivers' experiences in accessing health care services for their school-going children.

Methods: Qualitative interviews were conducted with 17 caregivers of school-going children in three low resource communities of KwaZulu-Natal province. Four of the participants were caregivers of children who were treated onsite (in school), 9 were caregivers of children who were referred for further treatment and have accessed health care services and the remaining four participants were caregivers of children who are yet to access health care services.

Results: The study shows that the school health programme enhances access to quality health care services for school-going children in low resource communities. Access is enhanced by the provision of school-based health services such as screening the children for various health conditions, immunization and treatment for minor ailments and referral of children in need of more comprehensive health care services to the appropriate health care sites. Despite the fact that the school-based health care services enhance access to health care for school-going children, the study reveals that certain factors constitute barriers to access. Factors such as caregivers' low health literacy, inadequate communication, financial constraints, distance and transportation to the referral sites, still impedes access. Inadequate health information dissemination system and transportation to the referral sites are the major issues of concern. The long waiting time due to long queues and the unwelcoming attitudes of some of the health professionals at the health facilities also constitute major barriers to access.

Conclusion: Although ISHP has expanded its coverage and the range of services provided, the study suggests that effort should be made to implement interventions that will adequately address these barriers to access. Specific attention needs to be paid to communicating with caregivers, providing financial support for transportation, improving the attitude of the clinic staff and providing follow-up services for children that are referred for further screening and treatment from school.

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Participatory action to facilitate community collaboration in safe birth planning: A case study from Nepal

Issue/problem: Nepal's progress in reducing maternal mortality is inconsistent in rural, remote and ethnically diverse areas. Challenges beyond difficult topography and poverty include policy and personnel issues, and lack of accountability. A new federal political structure promises increased local consultation but addressing specific local needs and challenges requires trust, commitment, and collaboration. We argue that advancing women and children's health must include community consultation and creative context specific problem solving in the process. In Nepal Auxiliary Nurse Midwives (ANMs) and Female Community Health Volunteers (FCHVs) are well placed to build collaboration but need capacity enhancement to be successful. Objectives include understanding locally nuanced challenges in safe birth preparedness; and building a collaborative community based approach to birth preparedness. We worked with local health providers, facilitators and decision-makers to explore and address issues around use of the birthing centre in an isolated, mountainous Indigenous community in Mugu District. We used participatory action research to engage community members and conducted interviews and focus groups to gather local insights into the drivers of successful safe birth promotion. Our results show the importance of identifying community specific challenges and building trust in health systems. Participants identified well known obstacles to birthing centre use in interviews. However, our participatory action approach demonstrated a cycle in which health workers feared staying in the poorly maintained staff quarters which fueled lack of trust in the health workers. During a priority setting exercise we presented findings to the local health management committee. The community took action to refurbish the quarters, facilitating stronger staff commitment to 24 hour care. As a result, community members reported increasing trust in the available health system. Also important to community members are long term commitments and local staff with cultural and language proficiency. While local ANMs and FCHVs from the community itself provide consistency and are trusted, they are the least supported in the broader national and regional system. Greater attention to pathways into health professions for people from marginalized communities is key to building collaboration. Lessons to date: Providing quality health services in culturally distinct and geographically isolated communities requires a collaborative approach. Our work highlights the impact of local consultation and community engagement for improving uptake of health services and building trust in marginalized communities.

Main messages: Community consultation, supporting pathway programs to increase local health care providers, and maintaining a stable, committed workforce will help ensure safe birth programs deliver.

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How Gender influences performance levels and retention rates among Community Health Workers in Mali

Issue: The Mali Red Cross (CRM) and Canadian Red Cross (CRC) is implementing a 2016-2020 project funded by Global Affairs Canada (GAC) to assist the Mali Ministry of Health (MOH) to deliver health services to rural communities to improve mother, newborn and child health. A key focus is to support 441 Community Health Workers (CHWs) across 6 districts to assess and treat children under 5 for diarrhea, malaria, pneumonia and malnutrition. Recognizing that gender inequality affects the ability to retain female CHWs a sustainable part of the health workforce strategy for the next decade (George, 2008).. Our research objective is to examine how gender inequality influences the performance and retention rates among CHWs in Mali.

According to the MOH policy, CHWs are routinely supervised 3-4 times per year. The knowledge quality and skills of each CHW is evaluated based on a review of the child intake forms and direct observation. this oral presentation will present results from an analysis of CHWs' performance indicators, describe trends observed and explore what mitigation strategies may need to be put in place.

Preliminary results demonstrated that females CHWs received higher performance scores compared to male CHWs in all areas: sign and symptoms reference, classification and medication administration.

Further data analysis seeks to identify trends in female and male CHW service provision related to three aspects:

- knowledge and competency barriers in which CHWs lack the skills and knowledge to provide services
- structural and contextual barriers in which systemic and environmental factors influence CHWs' ability to provide services
- motivational barriers in which social norms and attitudes that effect CHWs willingness to provide services.

Learnings from this analysis will be fed back to the program to support decision-making on how supervision can be more efficient and effective as it has been frequently cited in the literature, this gap in sex-disaggregated data as one of the key bottlenecks to the success of CHW programs.

Main messages: Identifying trends, from gender lens, to support programing decisions to achieve more effective CHW retention and performance and help MOH make decisions about how to have develop more strategic CHW selection and supervision. Furthermore, updating CHWs' knowledge plays important role in optimizing CHWs' performance.

References: George, A. (2008). Nurses, community health workers, and home carers: gendered human resources compensating for skewed health systems.

Antonipillai, Valentina

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A comparative analysis of refugee health policy changes in Canada and England

Issue:

Within the last two decades, Canada and England have implemented restrictive policies that limit access to healthcare for refugees and asylum-seekers and despite this, simultaneously have witnessed a marked increase in immigration. In Canada, these health policy retrenchments were reversed in 2016, while amendments to its National Health Service (NHS) policies on October 2017 continue to stringently regulate access to hospital care among asylum-seekers in England.

Objective and Methods:

To examine how the interplay of institutions, interests and ideas generate different approaches to refugee health policy development in Canada and England. Sources of data include academic articles, governmental documents, media sources, organizational reports and court proceedings about asylum health policies in Canada and England. The 3-I framework is used to examine and compare how the interplay of institutions, interests and ideas influence the development and implementation of asylum health policy decisions in Canada and England. Understanding how high-income host nations can expand their refugee health policies is of utmost importance following the persisting refugee health crisis.

Results:

In Canada, refugee health policy created a path dependent system in which resource and learning incentives were established for healthcare professionals and organizations. With coverage retrenchments in 2012, costs were incurred by physicians and hospitals that created concern and promoted collective action. Shifts in ideology were observed following the media attention to the casualties of the refugee crisis. In England, the NHS created a policy legacy in 1989 that distinguished the ordinarily resident from overseas visitors, which included refugees and asylum seekers. The lack of a reimbursement system and coverage confusion reduced avenues for advocacy by health professionals and the idea that refugees compete with residents for scarce NHS resources was amplified through Brexit and the rise of populism.

Lessons Learned:

A comparison of these two countries highlights how different factors associated with institutions, interests and ideas have led to divergent policy paths, resulting in the restriction and expansion of refugee health policies in England and Canada, respectively, two similar high-income host nations with liberal democratic welfare systems.

Main Messages: Restrictive refugee health policies continue to persist in England as a result of path-dependent policy legacies and divisive ideology that constrain interest group action. Expansions of refugee health policy in Canada have derived from negative feedback that inspired collective action of healthcare professionals and organizations, facilitated by previously implemented comprehensive health coverage policies for refugees.

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Understanding Tobacco Farmer's Decisions to Inform Supply Side Tobacco Control Interventions

Issue : There has been a marked shift in the burden of tobacco: an estimated 80% of tobacco consumption now occurs in low- and middle-income countries. Considerable attention has been paid to research on and the successful implementation of demand-reduction tobacco control measures. An increasing concern, one that has received less attention, is the deepening global tobacco leaf supply. Global tobacco leaf production increased from approximately 6.5 million tonnes in 2006 to 7.2 million tonnes in 2014. Many governments have adopted policies that encourage tobacco growing based on the narratives of economic prosperity neglecting the negative health and environmental effects. There is a need to understand and address the global tobacco leaf supply as a means of decreasing tobacco products in the market and improving farmers livelihoods. The aim of this study is to understand the reasons why farmers grow tobacco and identify factors that influence their reasons to continue growing tobacco to inform interventions that seek to provide sustainable alternative livelihoods for tobacco farmers.

Method: Primary survey data (N=1770) collected in Kenya, Malawi and Zambia in 2013-2014. Descriptive and multinomial logistical regression analysis were conducted.

Results: The majority of tobacco farmers started and are currently growing tobacco because they believe it is the only viable crop although there are important district/county differences where the majority of farmers in some districts indicated the existence of ready market or incentives from tobacco industry is the reason why they are currently growing tobacco. Of farmers who started growing tobacco because it was the only viable crop, 40% are currently growing tobacco because of the existence of a ready market, while 31% because they have grown accustomed to growing tobacco. Statistically significant factors that influence the reasons why a farmer is currently growing tobacco are educational level of the household head, size of land allocated to growing tobacco, outstanding debts, and age.

Lessons/Main Message

We observe significant differences amongst the districts/counties within each country in reasons why tobacco farmers start and continue growing tobacco. This implies a successful and sustainable one-size-fits all alternative livelihoods intervention is highly unlikely. Rather, there is the need to address the unique features of each district to increase successful uptake of alternative livelihoods to reduce tobacco leaf supply. A sustainable alternative livelihood amongst other things will need a well-established supply chain for alternative products at least somewhat comparable to tobacco leaf to encourage farmers to switch from tobacco growing.

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Family Planning in Khyber Pakhtunkhwa: A Site of Resistance

Issue: At present, Pakistan – with a population of 207 million – is the world’s sixth most populous country. The family planning program, however, has proven unable to sufficiently increase contraceptive use. We argue that contributing to the limited contraceptive uptake are suspicions of an ulterior motive underlying Western support for family planning. By placing these concerns in their larger geopolitical context characterized by foreign military intervention, local corruption, and an exclusionary political system, we investigated perceptions of the Pakistani Family Planning Program.

Objective and Methods: We conducted a critical ethnography in a village in Khyber Pakhtunkhwa, Pakistan. Between September 2013–April 2015, we collected 13 months of ethnographic data including 242 observations of daily life, 109 informal interviews and 197 in-depth interviews with 76 participants (41 women and 35 men). Data were analysed using latent content analysis.

Results: Our respondents viewed Western support for family planning as confirmation of their suspicions of the program’s hidden agenda. Western military intervention in the region complicated their beliefs about the potential altruistic nature of foreign support for the family planning program. Awareness of rampant corruption among Pakistani government officials had fractured our respondents’ trust in the state while contributing to their notion that the government was complicit with foreign interference. These considerations coupled with our respondents’ belief that the priorities of the Pakistani Family Planning Program did not align with their daily lives contributed to their skepticism of family planning. For our respondents, resisting family planning and its ideology was a means to resist the violence inflicted by the West and the complicity of the Pakistani government.

Lessons to Date: Our findings signal how geopolitics influence the use of health services. Through demonstrating the importance of embedding perceptions of health programs in their local and global contexts, our findings inspire potential areas for future research and exploration in global health.

Main Messages:

- The geopolitical context contributed to our respondents’ perception of the Pakistani Family Planning Program which was viewed as an extension of violence inflicted in the region
- Our respondents resisted family planning, ideologically and materially, as a means to resist Western intervention
- The priorities of the family planning program in Pakistan were misaligned with our respondents’ priorities

Bacon, Alix

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Civil Societies Role in Sustaining a Rapidly Expanded Health Work Force in South Sudan: Results and lessons learned from collaborative work with the South Sudan Nurse and Midwifery Association

South Sudan faces an extreme critical shortage of the human resources for health needed to combat their high maternal mortality rate, one of the highest in the world. Every effort is being made to quickly train midwives as one necessary cadre for effecting change in these statistics.

Considerable advancements have been made, the number of midwives in the country has risen from 8 in 2011 to over 600 today. Professional associations, such as nurse and midwifery associations, are important civil society actors playing a key role in increasing the capacity for absorption and support for this rapidly expanding workforce. They can act as advocates, providers of continuing professional development (CPD), and contributors to policy development and strengthening of governance capacity (including regulation). This is particularly urgent in fragile contexts where civil society is weak and human resources for health are severely lacking.

The Strengthening Midwifery in South Sudan Project, phase II (SMSII) addresses health system strengthening on many levels. One focus of the project is association strengthening with the South Sudanese Nurse and Midwifery Association (SSNAMA). The project is a joint initiative of the Governments of Canada and Sweden, and is led by UNFPA with partners including the Canadian Association of Midwives (CAM), SSNAMA, and AMREF.

This presentation will share the results and challenges of association strengthening work learned through the SMSII project, with a focus on capacity building, governance, and CPD. The presenter will speak to CAM's experience of peer-to-peer engagement model (working midwifery association to midwifery association).

Lessons learned:

- The peer-to-peer model of engagement with local civil society organizations in fragile states could provide unique opportunities for health systems strengthening, building resilience and motivating health workers.
- There are challenges in applying the peer-to-peer engagement approach in a bi-lateral context, and within a fragile state.
- Limitations and strategies of remote communication/capacity building in fragile states with poor communications infrastructure and low phone and internet penetration.
- Preliminary result: CPD activities are essential interventions to support increasing HR for health. Professional associations can help to develop, implement, and lead appropriate and sustainable CPD activities.

Main message: Professional Associations (as civil society actors) can play a key role in supporting and sustaining rapid increases in human resources for health in fragile contexts.

Professional associations could contribute to the utilization, retention, continuous professional development and performance of the available health workforce through collaborative partnerships and engagement models.

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Oral health related quality of life in rural Uganda - an observational study

The Republic of Uganda is one of the world's 30 poorest countries with a decentralized, under-financed healthcare system, which fails to provide minimum healthcare requirements to the public. Access to professional dental care is significantly limited in rural Uganda for patients suffering from dental pain and edentulism secondary to trauma, caries and periodontal diseases.

Bridge to Health Medical and Dental is a Toronto-based organization comprised of medical and dental professionals operating in underserved rural communities to provide medical and dental care and improve health care delivery systems. This organization also provides sustainable training and education to local health and dental care workers as well as the communities.

A survey was conducted to assess the effect of dental disease, edentulism and oral rehabilitation with removable prostheses on quality of life of rural Ugandan populations. This observational study was undertaken to obtain information on the oral health related quality of life from patients who had received dental treatment. The questions investigated access to care, quality of life as it relates to oral pain, function, esthetics, self-esteem and social function. The study population were from the rural Kabale region of Uganda and data was collected via clinical assessment and detailed questionnaires. A total of 53 patients were assessed, treated and quality of life data was collected pre- and post-treatment. At baseline the mean age of patients was 36.8 years (>60% male). Self-reported cause of tooth loss were trauma (47%) and caries (45%) and 25% of the patients reported being in pain. A total of 65 same-day removable prostheses were fabricated replacing a total of 249 teeth. In excess of 800 teeth were extracted and many topical fluoride applications, resin composite restorations and periodontal scaling procedures were performed together with provision of oral hygiene instructions. On a 6-month follow-up assessment on a scale of 1-10 (least to most satisfied), an average satisfaction score of 8.99 was reported. An improvement in oral hygiene was noted in 22% of the patients and all patients reported a positive impact of prosthodontic treatment on their everyday life, confidence level and self-esteem as well as social interaction.

Conclusions were drawn to aid in epidemiologic assessment of the population and better understanding of the psycho-social effects of oral health and disease. The information gathered will help determine the effects of community dental outreach on oral health and psycho-social status of patients.

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Considerations for working with language interpreters in qualitative global health research

Issue/problem: Among policy makers in global health, there is a growing recognition for the integration of qualitative research findings to inform complex and intersectoral decision-making. Researchers increasingly engage with marginalized populations, with whom they may not share a common language. Language interpreters assisting with this research facilitate the translation and/or interpretation of meaning across languages and cultures, and shape how findings are derived. Cross-language research required to further the Sustainable Development Agenda is strengthened by developing and implementing viable cross-language research strategies.

Objective and methods: This study compares, between two researchers and over time, how researchers negotiated their epistemological position (stance towards the nature of knowledge creation) with realities of working with interpreters. Over three months, I explored the experiences of a qualitative, cross-language researcher with over 25 years of experience through a semi-structured interview, email exchanges and publications review. I became familiar with her varied experiences working with interpreters, and her evolving perspectives/positioning. As the second study participant, I internalized these learnings and applied them in my subsequent cross-language research in Ethiopia, detailed through fieldnotes. To analyze the data, I drew from a re-storying narrative approach, and identified prominent themes from the narratives.

Results: The two researchers both viewed language interpreters as co-creators of knowledge, and preferred an approach of higher interpreter autonomy and inclusion throughout the research process. Budget, time, and seniority were barriers to realizing this approach, especially at early career stages. Rita overcame these barriers at a later career stage, designing a study with a highly-autonomous, inclusive approach, which later prompted her to reconsider her epistemological positioning. During my experience in Ethiopia, where budget and time for engaging with interpreters were limited, I conducted exit interviews with interpreters, capturing their impressions and reflections.

Lessons to date: Exit interviews provided context for analysis and reporting activities. Ongoing reflexive contemplation was a key strategy to navigate the practical realities of working with interpreters. Early career researchers can learn from the experiences of others, but ultimately require their own field experience to self-discover their epistemological positioning and prepare them to have more seniority in subsequent cross-language research.

Main messages: The interpreter role in cross-language research warrants consideration by researchers when designing research studies and throughout the research process. Approaches to working with interpreters in global health research should be detailed in research reports to help research users gain a better understanding of the complexities inherent in cross-language qualitative research.

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Entrepreneurial innovation and advocacy incubation: promoting recovery and opportunity for individuals living with serious mental illness in low-middle income countries

Main messages: To promote collaborative, locally-viable solutions to address the global burden of mental illness, we have developed a program that pairs social-entrepreneurial innovation, psychosocial rehabilitation, and advocacy incubation. This poster provides an overview of the collaborative program development process and presents outcomes related to implementation of the program.

Issue: Not unlike other low and middle-income countries (LMIC), there is a lack of human resources available for treatment and support of serious mental illness (SMI) in Kenya. Additionally, misinformation and stigma serve as significant barriers to care. To address these challenges, we have collaborated with individuals with SMI in Machakos, Kenya to develop a unique program that provides opportunities for meaningful employment in a recovery-orientated workspace and opportunities to develop skills for mental health advocacy. This initiative builds upon the work of the international, transdisciplinary Community REcovery Achieved Through Entrepreneurism (CREATE) team.

Social-Entrepreneurial Innovation: A partnership with a local non-governmental organization has been developed to offer entrepreneurial skills training for individuals living SMI and access to start-up funds for small businesses. These individuals also receive psychosocial rehabilitation through their involvement in the skills training.

Advocacy Incubation: We have leveraged CREATE's work to develop an advocacy incubator, which is a safe, supportive space for people living with SMI to share their stories and ideas. Incubator members include people with SMI, their friends, their family, and other community members. Members meet regularly to receive information and materials that assist them in generating their own advocacy and awareness initiatives.

Results: Results are preliminary at this time. The development process has involved many individuals living with SMI, with 6 individuals expressing a desire in participating in the entrepreneurial skills training. These individuals have noted significant improvement in their wellbeing and function as a result of their previous involvement with CREATE's social business. Many of these individuals are also involved with the advocacy incubator, whose members have taken part in a number of awareness campaigns throughout their communities.

Lessons: For people living with SMI in Kenya, meaningful employment means increased income, quality of life, and community connection. Advocacy opportunities harness the power of the personal narrative to target misinformation and stigma. Together, these efforts target reductions in social inequalities, social isolation, and poverty, while promoting wellness and personal growth. This approach to recovery and advocacy can be harnessed in other resource-limited LMICs to address mental illness.

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Canadian mining in Latin America: A call to action

Issue/Problem: In recent decades, Latin America has experienced one of the largest mining booms in history, exacerbating environmental, political, and societal fragility and generating deleterious health consequences. Canada is a principal power in extractive imperialism in Latin America and beyond, yet the Canadian public health community has paid little attention to the country's role in propelling this mining bonanza and its negative impact on health and the environment.

Objectives and Methods: The conduct of mining TNCs and their subsidiaries is a transcendent global governance for health issue, one particularly salient to Canada, where over half of all mining firms are headquartered. This research illuminates the unhealthy effects of mining in Latin America and argues that Canada's public health community has an ethical responsibility to draw public attention to, pursue policy-relevant research on, and advocate for more stringent regulation of Canadian mining abroad. This research uses a critical political economy analysis of health consequences of Canadian mining in Latin America based on a multidisciplinary review of health and social sciences literature.

Results: Canada's intertwined corporate and foreign policy around mining contributes to ill health in Latin America, especially for Indigenous peoples, through environmental degradation, violence, loss of livelihoods via land dispossession and resource depletion, and income inequality. The Canadian government undergirds the mining industry by providing financial incentives, such as tax credits and subsidized equity financing –particularly for junior exploration firms– and lax securities laws. Buttressing these incentives is Canada's lenient governance and regulation of the industry's overseas activities, together with a judicial regime that, until recently, did not hear lawsuits against Canadian TNCs for abuses committed abroad. Canada further champions mining through official development and diplomatic channels, providing support for a nexus of undemocratic governance, (para)military intervention, and weak health/environmental standards.

Lessons: Typically, host countries are accountable for enforcing health standards around mining, but those countries where TNCs are based also bear responsibility. Canada's mining governance approach has proven ineffective at preventing mining's unhealthy consequences, instead enabling the heinous behavior of the industry as a whole, to little public (health) outcry. These lessons apply to other high-income countries with transnational mining sectors.

Messages: The Canadian public health community must mobilize to prevent the unhealthy impact of Canada-based mining companies in Latin America by using its legitimacy and public platform to: speak out, provide solidarity and support to civil society groups working on these issues, and pressure federal government policy reform.

Bruer, David

Inter Pares, Canada

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Food sovereignty for better health: a West Africa / India farmer to farmer exchange

Despite unique histories and landscapes, small farmers in West Africa and India experience similar challenges of fragile environments, including water scarcity, climate change and policies encouraging the cultivation of monocrops for export, such as Bt cotton. Farmers find it difficult to sustain biodiverse agricultural practices. Confronted with ecological degradation – falling water tables, declining yields, increased costs of seeds and other inputs – farm families experience poor nutrition, pesticide/herbicide exposures and despair from deepening debt.

Farmers are addressing environmental and health challenges by working collaboratively towards food sovereignty, the right of peoples to healthy and culturally appropriate food and to define their own food and agriculture systems. This poster describes and analyzes the impacts of four learning exchanges (2012 - 2017) engaging women farmers of the Deccan Development Society (DDS) in Telangana state, India and the Coalition pour la protection du patrimoine génétique africain (COPAGEN), a network of farmers, scientists, and civil society organizations (CSOs) in nine West African countries. The exchanges were supported and facilitated by Inter Pares, a Canadian feminist social justice organization, working with counterparts internationally and in Canada since 1975 to provide financial and organizational support, research and advocacy concerning women's equality, food sovereignty, health, migration, economic justice, peace and democracy.

Goals of the exchanges were to learn about agro-ecological practices; share knowledge and research methodologies to document impacts of Bt cotton; exchange strategies about political advocacy; and encourage women's leadership. The processes (e.g. field visits to observe crops; sharing personal stories) and results of each exchange were documented and evaluated by participants; feedback was incorporated into planning each subsequent exchange. Films and research reports were produced.

Farmer exchanges resulted in: new approaches to reclaim degraded lands, increased agricultural biodiversity through sharing seeds and promoting cultivation/consumption of local crops (cowpea, sesame, sorghum, millets, yams), thus improving subsistence diets; training 203 farmers to conduct research on Bt cotton; and changing patriarchal attitudes and practices among male COPAGEN farmers and community leaders who interacted with once-marginalized DDS dalit women, now successful farmers and entrepreneurs.

Lessons: Farmer exchanges focused on food sovereignty have potential to address environmental and health challenges through collaborative synergies.

Patriarchal attitudes can be mitigated through respectful cross-cultural exchanges between men and women farmers.

Messages: Small farmers in India and West Africa are addressing environmental and health challenges by working collaboratively towards food sovereignty.

Food sovereignty should be further explored as a pathway to better health.

Burgess, Raquel C.

Partners in Health Canada Spark (Education Team Lead), Canada

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Community health workers: A theoretical argument for their capacity to tackle the three-delays of maternal mortality in Haiti

Issue/problem: Geographic variations in maternal mortality are well-documented in academic literature, with the vast majority of the global burden concentrated in low- and middle-income countries (LMICs). Haitian women are particularly vulnerable due to the instability of their social, political and environmental context, resulting in the highest maternal mortality rates in the Western hemisphere. As much as 75% of these deaths result from infections, blood pressure abnormalities, severe bleeding, delivery complication, and unsafe abortions - complications which are manageable if basic health services are accessible. Previous research has used the three-delays framework to examine the socio-economic factors that prevent Haitian women from seeking timely care and have identified these as: financial constraints, unfamiliarity with pregnancy risks, and lack of trust in existing health facilities due to inadequate medicines or health provider inexpertise.

Objectives and Methods: Drawing on this research, the Partners in Health Canada (PIHC) Spark Education team undertook a literature review to further describe the nature of these delays and identify a feasible public health intervention that can adequately address them. Based on the findings, we provide a theoretical argument for the use of community health workers (CHWs) in facilitating access to care and improving health outcomes.

Results: Findings reveal numerous and complex barriers for Haitian women's access to maternal care that can be broadly categorized into the three delays. Recent evidence in Uganda demonstrated that CHWs are a highly effective resource in alleviating social challenges of healthcare access similar to those identified in the three-delays framework. This evidence sets precedence for the scaling-up of CHWs as a potentially effective response to improve Haitian mothers' access to maternal health.

Lessons to date: The reasons for Haitian women's lack of access to care can be broadly explained by the three-delays framework. CHWs are shown to be very effective in alleviating social barriers to maternal health and significantly reduce the burden of maternal mortality in resource-scarce settings.

Main messages: By bringing health services, education, and advanced care referral to women's homes, the scale-up of CHWs in Haiti may be a promising way to alleviate the three delays in Haitian women's access to maternal health services.

Chu, Alanna

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A heavy burden on young minds: The global prevalence of anxiety and depression symptomology among adolescents from 77 low- and middle-income countries

Issue: Mental and substance use disorders are the leading cause of disability in children and youth globally, accounting for one-fourth of all years lived with disability. Moreover, the disease burden attributable to mental illness among youth is predicted to increase in low- and middle-income countries (LMICs). However, there is currently a dearth of epidemiological research investigating the mental health of youth living in LMICs. This study addresses the sub-theme “advancement of women and children’s health and rights” by providing evidence of the burden of mental illness on youth globally; this provides an empirical base to guide culturally relevant policy responses to improve the mental health of young people.

Objectives: We quantified the prevalence of several mental health indicators among adolescents across 77 LMICs, and estimated the pooled regional prevalence of these indicators to assess the degree of heterogeneity within and across world regions. We also investigated gender differences in the prevalence of mental health indicators in resource-poor settings.

Methods: We used individual-level data from the most recent Global School-Based Student Health Survey. The study sample included 209,840 adolescents aged 12-15. Indicators for loneliness, anxiety, and sadness were measured through self-report questionnaires. We estimated the prevalence within each country overall and stratified by gender. DerSimonian-Laird random effect models were used to estimate pooled regional estimates according to the six WHO regions, as well as the extent of variation between countries and across regions.

Findings: The overall prevalence of loneliness and anxiety was 11.6% (95% CI: 10.5 – 12.7) and 10.0% (95% CI: 8.9-11.2) respectively, with the highest prevalence in the Eastern Mediterranean region and lowest in the European region. The overall prevalence of sadness was 29.3% (95% CI: 26.3 – 32.5), with the highest prevalence in the African region. On average, the burden of mental illness was higher in girls compared to boys; however there was substantial heterogeneity in the estimates both within and across world regions.

Lessons to Date: Globally, 10-30% of youth in LMICs endorsed symptoms of depression and anxiety.

Youth from LMICs in the Eastern Mediterranean and African regions reported the highest prevalence of anxiety and loneliness.

Main Message: This is the first study to systematically investigate the prevalence of mental health indicators in adolescents in LMICs using comparable nationally representative datasets, including over 200,000 ethnically diverse adolescents. Overall, the prevalence of depression and anxiety symptomology was high, with substantial heterogeneity within and across regions.

Danyluk, Ava

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The role of gender in the lives of smallholders – a scoping review

Issue/Problem: This project has addressed the problem of gender inequities among smallholder populations in Asia and Africa. This problem directly relates to subtheme one of the Canadian Conference on Global Health because gender inequities result in women subordination and negatively impact the lives of women and girls. There remains a gap in knowledge regarding how gender influences access to resources, decision making power, and health outcomes across different global communities. This project was conducted from September of 2017-April on 2018.

Objectives and Methods: This study aims to understand and synthesize the current knowledge regarding gender roles among smallholders (small herd farmers) in Asia and Africa to create a starting point for researchers working within these communities, and to provide additional insight into the perspectives of researchers on the gender roles of smallholders. The goal of this research is to promote thought provoking dialogue amongst researchers interacting with smallholder communities in Asia and Africa prior to the implementation of any intervention strategies. This study followed the six-step methodological framework for scoping reviews by Arksey and O'Malley (2002). A scoping review was conducted and supplemented by 5 semi-structured interviews with researchers. Review results were synthesized and reported. Interview results were transcribed verbatim and thematically analyzed using NVivo 11 software.

Results: A synthesis of the literature review and interviews with researchers revealed four overarching themes: gendered work allocation, gender as a social determinant of social standing and health, reliance on livestock, and the role of the researcher in gender equity.

Lessons to date: Our results support that policy should focus on elevating women smallholders out of their subordinated role as this has greater positive effects for the family and community than tailoring interventions to male smallholders. Additionally, gender reaches all aspects of women smallholder's lives. The researcher has a responsibility to conduct culturally competent data collection and to inform culturally competent policy to avoid negative, unintended consequences of policy for women and girls. These lessons extend to all research with minority groups. Researchers should always aim to be culturally competent when they come into a community as an outsider, for a limited amount of time.

Main messages:

1. The researcher has a responsibility to understand the cultures of the community they are working within.
2. The researcher has a responsibility to inform culturally competent policy which is supported by community-based research.

Dassah, Ebenezer

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The lived experience of persons with physical disabilities in accessing primary health care services in rural Ghana.

Issue/problem: Article 25 of the United Nations Convention on the Rights of Persons with Disabilities recognizes the rights of persons with disabilities' access to health care, including primary health care (PHC). However, growing evidence indicates that individuals in rural areas generally experience health access issues, and these issues are even worse for those with physical disabilities. Knowledge about such experiences is critical for policy design and clinical practice to promote PHC access for persons with physical disabilities in rural areas.

Objectives and Methods: The aim of the study was to explore the experiences of persons with physical disabilities in accessing PHC services in the predominantly rural Upper West Region of Ghana. We conducted semi-structured interviews with 18 participants living with physical disabilities, and used both deductive and inductive approaches to analyze the data.

Results: Participants shared experiences at three broad levels: the health system level, individual level and health-seeking behaviors level. Within the health system level, we identified three main categories: service availability (presence of health facilities, deficient drug supply and lack of providers), acceptability (positive and negative attitudes of providers and perceived high and low care quality) and accommodation (inaccessible health facilities and equipment). The experiences at the individual level included financial constraints and mobility to health care facilities. Health-seeking behaviors level related to how the individual reacted and responded to access barriers, which included searching for traditional healing, resorting to self-medication, making sacrifices in managing their conditions and relying on spiritual means.

Lessons to date: The information provided in this study is potentially important to policy makers and PHC providers as it presents evidence on the barriers and facilitators to PHC access in a rural setting. In particular, understanding individuals' experiences and how they develop health-seeking behaviors to overcome access barriers will be critical for policy design and patient-centered service delivery in rural Ghana and potentially other low- and middle-income countries.

Main messages

- Persons with physical disabilities face multiple barriers in accessing PHC in rural areas, and such barriers occur at both the individual and health care system levels of scale.
- Clients develop different health-seeking behaviors to overcome access barriers.
- Creating and maintaining positive relationships between providers and clients should be a priority issue in any health care system.

Ddumba, Isaac

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Citizens' outcry, a trigger to public health institutions responsiveness; exploring the roles of accountability mechanisms on local health system performance in Uganda.

Issue/problem: Health systems governance is recognized as a vital element in achieving resilient and functional health care systems as well as a panacea for Universal Health Coverage (UHC). Accountability mechanism ranks high on the global agenda especially in developing countries with fragile health systems. These mechanisms offer a platform to respond to feedback at various level of service delivery; within the different levels of health system (bureaucratic) or community (external accountability). This notwithstanding, existing oversight and accountability structures have not produced the desired results. In many instances, they have stopped at providing a voice with no power to influence implementation of desired innovations amidst understudied causes of suboptimal functionality. This study aimed to explore the roles of accountability mechanisms and how they affect performance of the local health system (LHS) in Uganda.

Methods: This was a single embedded case study design. Twenty four key informant interviews were conducted with political leaders, advocacy groups and district health team officials. In addition, 4 focused group discussion (FGDs) were conducted with residents in Mukono district. Analysis was undertaken following the thematic network analysis framework. This process was aided by the atlas.ti7 software for qualitative data analysis.

Results: Four themes emerged from this study: (1) Resource rationalization, (2) performance monitoring, (3) participatory planning and (4) bureaucratic reporting. Most participants revealed that, amidst merger resource allocation for health, accountability mechanism aid in rational allocation of resources, grants opportunities for community members' participation in planning, resource allocations and provide a check at different points of service delivery. Some participants highlighted existing formal reporting structures such as; community score cards and Barraza act as good platforms for evaluation of institutional performances. However, reporting was largely driven by formal set targets per different indices within LHS and its achievement majorly depended on the organizational culture.

Lesson learnt: In Low and Middle Income countries (LMICs) where accountability mechanisms are not well functional, citizen empowerment and active participation in health sector planning and monitoring is vital in realization of LHS which is responsive to the needs of the community.

Main message: Accountability mechanisms provides opportunities for strengthening the performance of LHS in low income countries. Additionally, existing strategies such as community score cards should be incorporated as part of the accountability tools in order to harmonize the gaps between bureaucratic and community accountability mechanisms.

Dimitris, Michelle
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How global is global health research? A preliminary analysis of the 2000 most-cited publications per year from 2000-2015.

ISSUE/PROBLEM: Global health research often describes studies conducted in or about low- and middle-income countries (LMICs). Because of its impact on interventions and governance in LMICs, many have called for greater inclusion of researchers from LMICs in global health research; however, their actual role in published research is unclear. Previous studies have been subject- or journal-specific, and estimates of how much research is led by or includes researchers from LMICs vary widely. We are unaware of any large-scale attempts to quantify the proportion of global health research authored by researchers affiliated with LMICs.

OBJECTIVE: We investigate the contribution of researchers affiliated with LMICs to published global health research, and examine whether this contribution differs over time; we report preliminary results among the 2000 most-cited publications per year. **METHODS:** We searched the title, abstract, and keywords for the names of countries ever classified as low income, lower-middle income, and/or upper-middle by the World Bank, as well as countries ever classified as low and/or medium by the Human Development Index from 1990-2015. We limited the search to items published from 2000-2015 and in journals indexed under a relevant health-related field. We further limited to the 2000 most-cited publications per year for this preliminary analysis. Finally, we searched authors' affiliations for the same countries indicated above, and calculated the proportion of publications with any, first, and last, author affiliated with a LMIC. Searches were conducted in Scopus, and metadata were analyzed in Stata.

RESULTS: This search yielded approximately 727,650 records. The number of publications with at least one LMIC in the title, abstract, and/or keywords steadily increased from 19,052 to 79,796 from 2000-2015. Among the 2000 most-cited publications per year, the proportion of authors affiliated with LMICs appeared to increase over time, and ranged from 62.3-79.8% for any author; 44.8-56.8% for first author; and 39.6-49.7% for last author. These results are preliminary, and we intend to conduct further analyses; in particular, we will disaggregate trends by precise income status (i.e. low, lower-middle, and upper-middle income).

LESSONS TO DATE/MAIN MESSAGE: Among the 2000 most-cited publications per year pertaining to LMICs between 2000-2015, the proportion authored by researchers affiliated with LMICs modestly increased over time; while most included at least one author affiliated with a LMIC, only slightly more than half were led by such authors. However, trends must be further disaggregated by income status and examined among all publications before definitive conclusions are drawn.

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Ready-to-use Therapeutic Food versus Supplementary Food to treat acute child malnutrition in the Philippines. Long-term outcomes from a Natural Experiment.

Protocols for community-based treatment of acute child malnutrition have been under development over recent years. In the Philippines, ready-to-use therapeutic food (RUTF) was accepted as the sole product for treatment in 2015, resulting in necessary protocol changes for organizations with ongoing interventions. International Care Ministries (ICM), is one such organization that used a supplementary food (SF) to treat severe and moderate acute wasting in children under 5 years old. As a result, all children treated prior to 2016, when ICM was able to purchase RUTF, received SF, while subsequent children received RUTF. What is unclear are the long-term effects of each food. SF require guardians to cook and typically assist during feeding, whereas RUTF can be consumed by a child without cooking and with minimal supervision. Do these, and other differences between products lead to differential outcomes?

The abrupt change in product for treatment in 2016 creates a natural experiment, allowing long-term outcomes in severe acute malnourished children from similar geographies, socio-economic position, household characteristics to be compared. Children who were discharged from the program between 2015 and 2017 will be followed-up in June and July 2018 for height and weight assessments. Households will also be surveyed to understand nutritional knowledge, status, and attitudes.

Preliminary results show that the cure rate for RUTF was 80.7% compared to 70.6% by SF when treated severe acute malnutrition (SAM). Rate of weight gain was also different, 3.67 g/initial kg/day when treated by SF, and 4.94 g/initial kg/day when treated by RUTF. These differences seem to show that RUTF outperforms SF. The results from long-term follow up measures and surveys are currently being collected.

While RUTF appears to perform better than SF in key treatment metrics, the acceptability and long-term education impacts are unclear. It will be important to also consider the sustainability of outcomes when comparing products. Other organizations in similar settings could use this result in deciding how to design their children malnutrition alleviation programs. Governments dealing with similar issue could also learn from this case in the Philippines.

Following up with past malnourished children will help us understand if both SF and RUTF had lasting long-term effect, malnutrition cured. It would also be valuable to hear participants' experience in consuming them to see which is more adaptable in resource limited settings.

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Parent-targeted postnatal educational interventions in low and middle-income countries: A scoping review

Problem: The postnatal period (the first six weeks of life) is particularly critical for infants, yet many newborns do not receive sufficient postnatal care in low and middle-income countries (LMICs). Despite the potential positive impact of parent provided care during the postnatal period, there has been limited synthesis of current educational interventions targeting parents during the postnatal period and their impact on maternal and newborn outcomes in LMICs. Therefore, we conducted a scoping review to identify the current evidence on postnatal educational interventions targeting parents in LMICs on maternal outcomes and newborn health outcomes. Using scoping review methodology, MedLine, CINAHL, and SCOPUS were searched in October 2017. All studies published after 2000 reporting on educational interventions that targeted parents from the period of birth to 6 weeks postnatally in LMICs were included. Studies were excluded if they targeted healthcare professionals or were community interventions that spanned antenatal to postnatal care.

Results: We identified 9,284 articles with 77 articles included after title/abstract and full-text screening. Most of the studies were quantitative (94%) with over half being published after 2014. Most studies (61%) targeted a single newborn care education intervention (of which 75% targeted breastfeeding) with interventions using on average three different methods of implementation (e.g., verbal, written information, counselling). Interventions were provided in the hospital (76%), at home (23%), at a clinic/hospital (8%), and/or virtually through an eHealth intervention, including phone or text messages (12%). Reported maternal outcomes included knowledge, self-efficacy, anxiety, support, and attachment while newborn outcomes primarily included exclusive breastfeeding, infant weight at follow-up, and neonatal morbidities. Significant positive changes were found to occur for reported maternal outcomes (89%) and newborn outcomes (56%).

Lessons to Date: Parent-targeted education varied in terms of educational topics covered, method and location provided, and outcomes examined. The most effective strategies of providing postnatal education interventions to parents in LMICs is yet to be determined with varied outcomes examined through mostly non-standardized measures.

Main Messages:

- There is an opportunity for educating parents during the postnatal period in LMICs through targeted interventions.
- Current postnatal interventions varied in terms of educational topics covered, method and location of intervention, and outcomes examined.
- Many studies targeted specific behaviour (e.g., breastfeeding) rather than general newborn care.

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Income Generating Initiatives to close the financial gap for health coverage in Burundi

Burundi's health system is fragmented into three major sectors: for-profit private sector, non-for-profit private sector (Mutual Funds) and public sector. For the low middle class and people living in poverty, their options are either the Mutual Funds or the public coverage. However, in both cases, the price of either health insurances remains an obstacle for the communities. The most vulnerable people often live without any means of subsistence and depend on local charity or solidarity programs. Some organizations, such as Red Cross Burundi, Memisa or the National Mutual Health Fund (MUNASA), have developed programs of Income Generating Initiatives (IGI) in order to develop sustainable sources of income for the population and therefore closing the gap of financial access to health.

The research follows the Participatory Action Research and Theory of Change cycles. 1182 persons entered the program in the province of Muramvya for a period of three years. After a situation analysis, the Income Generating Initiatives are designed and developed by each community, defining together the form this initiative should take, with technical assistance from local experts. Trainings and capacity building sessions are also organized in each community. The evolution of the initiatives is closely followed and corrective actions are organized when needed. The results are complemented by a qualitative approach, consisting on participant observation and interviews with the stakeholders and recipients.

In three years, 63.3% of participants are now independent, have a sustainable source of income through agriculture initiatives and have access to public health coverage. Without additional funding, the number of persons in this initiative has doubled, creating a ripple effect in the community. The qualitative analysis showed that the income generating initiative also strengthens the communities and develops capacity building and solidarity among inhabitants.

The IGI are sustainable, locally accepted approaches, allowing individuals to emerge from extreme poverty into independence. With an initial influx of resources, the ripple effect allows the initiatives to expand inside the community. The experience and the results obtained show signs of internal and external validity. Nevertheless, participants remain vulnerable even if declared "independent" by the national criteria and their access to quality healthcare is still limited by the lack of offer. The correlation between the IGI and an improved access to health still needs to be verified in the long term.

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Rethinking diversity in medical education, pilot testing of a practical tool

Throughout their undergraduate education, medical students may encounter thousands of clinical vignettes aimed at helping them build their competencies as future health-care professionals. These vignettes often underrepresent the growing cultural diversity that students will encounter in their future practice. Medical schools have a social responsibility to ensure that the educational vignettes they use reflect their populations' diversity, but no clear consensus exists regarding how to do this. Emerging literature suggests that a centralized approach to identifying gaps is necessary. However, tools used to identify the representativeness of the populations served have not been well described.

Objectives and Method: A working group consisting of public health, pedagogical and medical experts was formed in order to develop a diversity mapping tool and pilot test its use on existing vignettes. Following literature review and discussion, four elements were used to guide its development:

1. Cultural diversity characteristics were selected according to available local and provincial statistics to ensure population representativeness.
2. Contexts potentially contributing to vulnerability were added (ex. rural context, no insurance coverage etc.).
3. A specific coding system was developed to highlight vulnerable populations that are often underrepresented in available statistics.
4. The tool was constructed to be adaptable to changing populations.

The tool was pilot-tested on existing vignettes in our year 1 and 2 undergraduate curriculum.

Results: Several vignettes were reviewed using this tool. Preliminary results suggest that middle-aged white men and students are often overrepresented in our program. Few data related to context, such as socio-economic and immigration status, are included in current vignettes. Hospital context is often dominant with few references to community settings or rural contexts.

Lessons learned: Use of a diversity tool based on local and provincial statistics may help educators identify diversity characteristics reflected in their programs. Although in this pilot we used the tool retroactively, it could also be used when creating new vignettes so that they better mirror the types of populations served. Other medical and health sciences faculties in Canada and abroad could adapt this tool to identify gaps related to their own populations' diversity and apply it to their curricula.

Main Message: Social responsibility in medical schools implies that students have to be exposed to the types of diversity seen in the populations they will work with.

A tool that uses statistics, diversity characteristics and contexts may help program designers to achieve this task.

Groux, Gaëlle

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The Mystery of the Missing Doha Declaration in South Africa

In the early 2000s, South Africa was one of the most influential voices in pushing for more flexibilities for public health measures in TRIPS (the Agreement on Trade-Related Aspects of Intellectual Property Right). In particular, South Africa pushed for the Doha Declaration on the TRIPS Agreement and Public Health). This declaration affirms the public health measures and flexibilities that may be taken in accordance with the TRIPS agreement. In particular, paragraph six of the declaration allows countries to issue compulsory licenses to patent owners for the purpose of exporting them to other countries. The TRIPS agreement allows compulsory licenses, whereby a state mandates patent owners to license their patent to another producer for generic manufacturing.

South Africa had been vocal in its support for TRIPS flexibilities, because their use of TRIPS flexibilities had been challenged when it enacted laws to increase access to HIV/AIDS medicines. This was at a time where South Africa had some of the highest rates of HIV infections in the world. Yet South Africa has not yet implemented the paragraph six solution in its domestic legislation. In contrast, about 51 WTO members had enacted legislation to implement the Doha Declaration by 2015. It has only recently suggested incorporating the Doha Declaration into its laws, in a 2017 draft intellectual property (IP) policy. In this way, South Africa's governance of IP at a domestic level has greatly diverged from its role in international governance of IP.

What are the reasons for which South Africa has waited so long to amend IP laws to reflect an international law for which it fought so successfully? This presentation will explore the reasons that have motivated the South African government not to implement the Doha Declaration so far. There are numerous factors that have affected South Africa's decision: legal, political and economic. Preliminary findings point to the possibility that international political pressures from the US trade office may be one factor that pushed South Africa not to implement the legislation. In addition, paragraph six solution has only been used once, between Rwanda and Canada: their experiences may have discouraged South Africa's use of the solution. On the other hand civil society have long pushed the South African government to adopt the Doha declaration, while a budding generic domestic pharmaceutical industry may also increase incentives to adopt the declaration.

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What are the prioritized incentives for retaining mother and child's human healthcare resources in remote and difficult areas: the case of Benin, Burkina Faso, Senegal?

Issue/Problem

Effective retention and equitable distribution of the health workforce is part of the Agenda for Global Action strategies endorsed by the Kampala declaration, the following global strategies and the Sustainable Development Goals (SSD). These goals recognize the need to scale up the health services in cases such as mother and child's mortality. Through the 2010 Muskoka French Funds Initiative 2, targeting the MDGs 4 and 5 in Sub-Saharan African countries, the UNICEF launched an operational research program to strengthen the human resources for mother, newborn and child healthcare (HRMNCH); the present study was conducted through this program in the Benin, Burkina Faso and Senegal.

Objective and Methods: The study aimed at identifying the strategies³ (training, financial, regulatory, support) that have the best potential to help retaining the HRMNCH in difficult areas and making the adequate recommendations to the stakeholders of the participating countries.

A multiple case study design (a country, a case) with embedded levels of analysis (central, intermediate, peripheral health system levels) was applied. It comprised a desk analysis and a cross-sectional field study in different healthcare zones selected in different provinces of each country.

Different categories of individuals/groups - managers of health and training institutions, HRMNCH, beneficiaries, women/men, community health workers and leaders, students - were selected purposively, depending on their involvement in the retention strategies. The data collecting (2015-16) methods recourse to i) questionnaires adapted to the variety of participants through individual or group interviews; and, 2) observation tools for the analysis of the clinical practice of the participating HRMNCH (pre, per, post-natal care) and for the appreciation of the quality of the health institutions' resources and functioning.

Results: Our findings include: 1) a description of the HRMNCH participants profile; and, 2) a comparison of several results (e.g. quality of care, job satisfaction) by professional category whether or not having benefited from a retention strategy, through regression analyzes. The cross sectional analysis reveals the factors enabling/limiting the effect of these strategies within HRMNCH categories;

Lessons/Main messages: The results are discussed through the literature covering the retention of HRMNCH in similar countries and globally. Recommendations for improving the retention of HRMNCH and adapting strategies to their needs are presented. The ultimate goal is to improve maternal and newborn's health in remote areas and to draw lessons to countries facing similar challenges

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Characterizing the demographics of patients and risk factors associated with completion of rabies post-exposure prophylaxis in Shinyanga, Tanzania

Issue/Problem: Rural agro-pastoralists in the Shinyanga region of northern Tanzania often keep dogs for protection. Interaction with dogs, owned and feral, leads to increased risk for rabies, a zoonosis primarily transmitted to humans through dog bites. Although rabies can be mitigated through pre (PrEP) and post-exposure prophylaxis (PEP), the disease is responsible for over 1500 human deaths annually in Tanzania.

Objectives/Methods: This project aimed to i) identify the demographics of individuals presenting at the Shinyanga regional hospital with dog bites that required PEP and ii) describe current PEP practices. The vaccination nurse was interviewed to gain information about current PEP costs, protocols and vaccine availability. Medical records were analysed for all bite cases reported to the hospital between May 2016-2018. These records included patient demographics, timing of PEP doses, and method of payment.

Results: Of the 187 patients seeking treatment, 48% were under 18y of age and 67% under 30y of age. PEP is only available at one hospital in the Shinyanga region. 30% of patients travelled over 100km from their residence to reach the hospital. The PEP protocol included vaccination with inactivated vaccine on day 0, 7, and 28. Costs of PEP dose was US\$15 with an additional US\$5 doctor's fee. When the vaccine was not available, patients procured PEP from pharmacies for US\$17.50. Only 45% (n=82) of patients received all three recommended PEP doses, and lack of health insurance significantly reduced the number of doses the patients received ($p=0.01$).

Lessons to Date: Children and young adults represented a large proportion of those seeking hospital care following dog bites. Children may be a population at increased risk for rabies as they interact more with dogs. There was poor compliance in completing the recommended PEP according to protocol. This may have been influenced by economic barriers, including out-of-pocket expenses for hospital care, costs for travelling to a centralized location, and loss of labor productivity. Notably, the protocol administered is the manufacturer's recommended PrEP protocol, whereas PEP should include 5 doses: at day 0,3,7,14, and 21. However, increased PEP vaccination frequency could reduce compliance even further. Future interventions in Shinyanga and other LMIC settings may seek to address economic barriers to PEP access. Public health strategies, such as dog vaccinations, may reduce reliance on individual health-seeking behaviour.

Main Messages: In Shinyanga, many patients seeking rabies PEP are young and few complete recommended dosing. Travel distances and costs may be important factors.

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SASCOC and South African Sport: Governance, corruption and accountability

Issue/Problem: Sport, physical activity and recreation (SPAR) are important aspects of health and have been shown to reduce the burden of disease. Sport can empower development and social change but fair and equal access to SPAR is often met with institutional and structural barriers. Within this context, we examined the role of the South African Sports Confederation and Olympic Committee (SASCOC) and its power over South African (SA) sports organisations and grassroots programs. SASCOC has made some great strides towards its policy of sport for all, however, recently it has been marred in controversy, corruption, mishandling and misappropriation of funds and other illicit activities. SASCOC is the highest governing entity of sport in SA and it acts as the gatekeeper to athletes, organisations and programs through development and allocation of funds.

Objectives and Methods: Through a historiographic methodology and aspects of feminist theory, an analysis of race, gender and sport as social processes that inform each other and guide policy-making and the governance culture. The objective of this study is to define and critically analyse SASCOC's policies, governance, acts of corruption and mismanagement and their impacts in the promotion of physical activity and improving access to SPAR opportunities in SA which ultimately have an impact on health.

Results: The release of the White Paper in 2012 outlined the government's policies, targets and guidelines for SPAR in SA including goals for development and transformation and a proposed model for financial support. Financial support is one of the largest barriers to participation and SASCOC is tasked with developing sport and recreation. where 64% of its total budget (R628 million) is spent on its mass participation goal and eradication of past inequalities. Further, only 7.6% was distributed to school sport and recreation programs. However, this has yet to translate to competitive and international successful. Finally, R2.5 million earmarked for youth development in basketball went missing, effectively ending the programs. These are clear demonstrations of the negative consequences of corruption and poor governance on the access to opportunities.

Lessons to Date: This study highlights the lack of accountability of SASCOC and demands further investigation on the mechanisms allowing such misuse of funding, as well as governance solutions to prevent it. We have to look beyond individual factors for barriers to participation and instead to look at the organisations responsible for promoting SPAR. A critical analysis of the long term social and health impacts of corruption and mismanagement is also crucial to achieving the proposed goals and targets listed in the 2012 White Paper.

Main Message: Poor governance at the highest echelons of sport has a trickledown effect that impacts SPAR directly and indirectly. High levels of corruption and mismanagement of funds limit growth of grassroots programs, effectively reducing programs aimed at improving health and social mobility.

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A case study: Applying Lasker's principles to volunteer short-term experiences in global health (STEGH) in Nepal.

Issue/problem: Over the past several years, globally, there has been an increase in natural disasters, and mass migration of refugees, resulting in catastrophic disruptions in the health of those affected. This has led to increasing volunteer humanitarian efforts worldwide. While these global health volunteer efforts are well-intentioned for doing good, they can, often not be aligned with the host countries preferences, and focused on downstream care with the potential to have unintended and harmful consequences for the host countries. As a result, there has been increasing awareness of the importance for improved preparation for global health volunteers participating in Short-term Experiences in Global Health (STEGH) trips, in order to ensure, for example, mutual bi-directional learning was achieved to address the myriad of global health challenges within the context of the structures in these countries.

Objectives and Method: A case study between volunteer faith-based NGOs in Canada, United States, and Nepal describes the strengths and weaknesses for addressing the global health challenges, such as inequitable access to healthcare for rural communities in Nepal. Through this case study, Lasker's (2016) Principles for Maximizing the Benefits for Volunteer Health Trips were applied and evaluated alongside the resulting global health challenges assessed between the visiting volunteers and the host country.

Results: The application of Lasker's principles are the foundation for a future study critically exploring preparation of interprofessional global health volunteering in STEGH.

Lessons to date: The lessons learned from this case study highlighted the importance for using a framework or a guideline to foster mutuality between the visiting volunteers and host-country, maintaining continuity of programming, host-country involvement in what is required, building capacity, and volunteer preparation, in order to have a positive global health volunteer trip. Main messages: In conclusion, Lasker's principles applied to a STEGH in Nepal provide additional insights and understanding of how to approach these volunteer global health trips, with the potential for fostering mutual learning towards the attainment of the sustainable development goals (SDGs).

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Knowledge Translation to increase Retinoblastoma survival rates among affected families in Kenya

Issue/Problem: Retinoblastoma (RB), a highly treatable childhood cancer, has a survival rate of 96% in developed nations. However, in some African countries, the survival rate is estimated to be less than 10%, largely due to late diagnosis and lack of access to available therapies. By educating families in Kenya about RB, including the genetic basis of the illness and treatment options, families will be able to make informed decisions and seek care earlier to increase chances of survival. This relates to the sub-theme of SDG's and intersectoral collaboration for health, as an educational tool is being developed to improve health outcomes in the country.

Objectives and Methods: The objective of this project is to develop an effective and appropriate RB educational tool with the guidance of key informants such as clinicians and survivors. Scholarly literature, and qualitative data collected from informants in Nairobi and Eldoret will be triangulated, and translated into a refined educational booklet that addresses various gaps in knowledge. Furthermore, the tool will be developed for affected families in a culturally sensitive manner.

Results: The project is currently underway in Nairobi, Kenya. The tool will be completed by mid-August, and the evaluation will take place in June 2019. This tool and the data collected from this study are preliminary at the moment.

Lessons to date: General cancer information booklets do not cover the complexities of heritable and non-heritable RB, or treatment options, like enucleation. Many affected families need more general, lay information; and clinicians agree that a tool of this kind is necessary. The tool will also help affected families disseminate their gained knowledge to the broader community including family members, who may be at risk for other cancers if the RB is heritable.

Main Messages: RB is a highly treatable disease, and survival rates are expected to increase with greater community knowledge on the topic. It is hypothesized that with an increased understanding of the genetic biology of RB, families will be able to seek diagnosis earlier, and healthcare before symptoms arise. A culturally sensitive informational booklet addressing the main gaps in knowledge concerning RB diagnosis, treatment, and strategies for support from clinicians and support groups may be a first step to increase survival outcomes for the illness in Kenya.

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Prevalence and determinants of intimate partner violence among married women in Egypt

Issue/problem: Intimate partner violence (IPV) among women of childbearing age can significantly enhance their risk of adverse health and pregnancy outcomes such as injury and disability, depression and anxiety, unwanted pregnancies, premature labour, complications with delivery, and perinatal and neonatal mortality. Identifying individual and societal level factors associated with IPV in Egypt can facilitate targeted interventions in the country, and help to advance women's health and rights in the future.

Objectives and Methods: To determine the prevalence and determinants of IPV among currently married women in Egypt. Cross-sectional data on 12,205 currently married women between the ages of 15-49 were collected and analyzed from the 2005 and 2014 Egypt Demographic and Health Survey (EDHS). Self-reported responses on IPV by husbands were classified into physical, emotional, and sexual violence. Determinants of IPV were quantified using logistic regression methods. Interventions recommended as a result of the findings may be generalizable to other Middle Eastern countries facing the same issue.

Results: The prevalence of experiencing any form of violence was 29.4%. Overall, 26.7% of women reported ever experiencing physical violence; and 17.8% and 4.6% reported experiencing emotional and sexual violence, respectively. Several individual and socio-demographic factors were found to be associated with an increased likelihood of experiencing IPV, such as being in the age group of 25-29 [OR=1.539], residing in rural regions [OR=1.149], having only a primary level of education [OR=1.756], and having uneducated husbands [OR=1.422]. Interestingly, being in a male-headed household was found to be a protective factor against IPV.

Lessons to Date: Interventions to tackle IPV in Egypt must focus on empowering girls and women. A significant barrier to alleviating IPV in Egypt, are the attitudes of women and society at large who justify and accept domestic abuse. EDHS data must also include more questions about emotional violence from the WHO Core questionnaire to develop a clearer understanding of what this entails. Furthermore, programs must consider a citizen engagement approach to educate communities about the consequences of IPV, and provide support for those suffering from it. Intersectoral collaboration among government and civil society are recommended to increase advocacy on this topic and measures for sustainable change.

Main messages: Nearly one-third of women of childbearing age are exposed to IPV of any form in Egypt. Collaborative IPV interventions should target socioeconomically vulnerable women in the population, and promote educational status among men and women to curb the occurrence of IPV.

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**An analytic review of the literature on Female Genital Circumcision/Mutilation/Cutting (FGC):
The Möbius Strip of Body and Society for Women with FGC**

This analytical literature review addresses the issue of advancing women's health and rights, particularly for women with FGC. Starting with the theoretical view that the corporeal body is in constant interchange with the social and with other bodies—a Möbius strip of body and society—we re-view selected literature on FGC. This review was conducted thematically rather than by discipline in order to bring a synthesizing lens to what is understood about the practice from both social and biomedical perspectives in the countries around the globe in which women with FGC were born (natal) and countries to which they tend to immigrate (diaspora). Four key themes

reveal different biomedical and socio-cultural findings between the natal countries and the diasporic locations as well as a separation of the meaning of the practice of FGC from its biomedical assessments: (1) gender, (2) intimate relations, (3) health, and (4) culture change. The corporeal body is seen as moving from one location to another, changing according to context. This means that it may not be possible for evidence gleaned in one context to be applicable to another and that as bodies change locations upon immigration, the health outcomes and effects of any body modification need to be studied and understood as particular to the location in which the body resides. While the categories of natal country and diaspora are crude organizers, it emerged that even in the natal countries there are outside influences (e.g., colonizers, missionaries, and laws) and in diaspora, inside influences (e.g. mothers, aunts, and one's own upbringing). Nonetheless, in terms of bodily health and the meaning of the practice, what is the case in the natal countries may not be the case in the diaspora as the corporealities of women with FGC change in relation to context. This suggests not only that the conflation of both locations' biomedical findings will result in inaccuracies in health care for women with FGC but also that the separation of social and biomedical literature separates the meaning of the practice from its outcomes.

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Inclusive access for vulnerable groups: agricultural migrant workers navigating the South African health system

Issue/problem: Within the Southern African Development Community countries, South Africa has the largest influx of migrants. While the Constitution and the National Health Act guarantees free primary healthcare for all, its interpretation and implementation is less inclusive in practice. Migrants face challenges accessing care, and existing healthcare responses have not engaged adequately with migration.

This study examined how agricultural migrants in the now drought stricken Cape Winelands District of Western Cape Province navigated the healthcare system including securing continuity of care, in particular the role of CHWs in this process, to inform policy and practice.

Objectives and Methods:

1. Document existing health sector policies/mechanisms to support access and continuity of care for mobile populations in South Africa, relative to international good practice.
2. Explore how agricultural rural migrants in Cape Winelands District secure ongoing access/continuity of care across jurisdictions.
3. Explore CHWs' roles in facilitating access to healthcare services by agricultural migrant workers within the district, and continuity of care across jurisdictions.

Qualitative data were collected from Feb-May 2016: 53 individual interviews, 31 focus group discussions, 6 care trajectory interviews, with a purposive sample of agricultural migrants, Community Health Workers, facility staff and managers, and non-participant observations (3) through accompanying CHWs while they work. Thematic analysis and descriptive statistics were the core analytic methods.

Results: The barriers to access for De Doorn's migrant population were related to the health system. Provider-related barriers included language barriers and requirement of legal documents. While CHWs supported migrants and "locals" to access care, in order to meet the needs of the growing population in De Doorns, more CHWs will have to be employed, trained and supported. The three pervasive cross-cutting issues with both direct and indirect impacts on access were: a) discrimination and xenophobic attitudes b) high levels of community violence c) poverty and precarious livelihoods.

Lessons and Main messages: Three conclusions resulted from this research. First, the details of access (or non-access) in a specific context matter, and these specific barriers and facilitators must each be addressed. Second, these distinctive factors, some of which are specific to the De Doorns context, but many of which have been reported in other contexts in South Africa and globally, cannot be understood or addressed individually and from determinants of health outside the control of migrants, health workers, or the health sector. Third, migrants face barriers similar to and distinct from those faced by the local population.

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Training needs of Community-Based Rehabilitation (CBR) workers for the effective implementation of CBR Programmes

Issue/problem: The World Health Organization (WHO) introduced Community-Based Rehabilitation (CBR) to promote equal opportunities and social inclusion for persons with disabilities specifically in low and middle-income countries, where 80% of persons with disability live and are significantly more disadvantaged due to a general lack of governmental support. Human resources are fundamental to the successful implementation of CBR in providing quality support services to persons with disabilities and their communities and promoting social and economic inclusion. However, CBR workers require adequate training and support to be able to provide these services effectively.

Objectives and Methods: This scoping review investigates the training needs of CBR workers to effectively facilitate CBR programmes. Online databases were searched (Medline, Embase, Cinahl, PsycInfo, Global Health) with a combination of keywords related to CBR, personnel, and training. Hand searches of reference lists and the DCID journal were also conducted. Grey literature from the WHO, CBR Regional Networks and organisations affiliated with CBR related to training were included as secondary data. Thirty-three articles and thirty-five sources from the grey literature were included. Emphasis was placed on identifying: (a) skills that CBR workers require, (b) current available training, and (c) gaps in current training.

Results: CBR workers represent a diverse group requiring a broad range of skills. Current training varies widely depending on context, and there is no standardized training for CBR workers. CBR workers require further training in various clinical, social, management, communication, and cultural competence skills across the spectrum of the CBR matrix. Specifically, they need training in empowering persons with disabilities, facilitating community development, as well as developing critical reasoning, creativity, and compassion.

Lessons: A global deficit in rehabilitation professionals coupled with the training and retention costs of such workers means that a new cadre of well-trained mid-level workers is necessary to effectively implement the CBR guidelines particularly in low and middle-income countries. However, they require further training to adequately support inclusion and participation of persons with disabilities in their communities.

Main messages: A standardized approach to training CBR workers globally would be beneficial to ensure minimal standards and quality services, to allow meaningful comparison and evaluation across contexts, to recognize the role of mid-level CBR workers, and to strengthen the workforce so that they can be effective drivers of change. Further research is required to determine minimal competencies, define the roles of various CBR workers, and evaluate the effectiveness of current training.

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The experiences of nurse-midwives and obstetricians delivering postpartum care with limited resources in Dar es Salaam, Tanzania

Issue : The postpartum period extends from immediately following birth up to 6 weeks, with the first 48 hours being an extremely vulnerable time. In Tanzania, only 34% of women access postpartum care services within the recommended 48 hours after giving birth. This figure is concerning as evidence shows that almost 50% of maternal deaths occur within the first 24 hours of birth. With high maternal mortality, the need to understand postpartum care provision in Tanzania is an urgent matter. Nurse-midwives and obstetricians are the main healthcare providers for mothers, in Tanzania therefore, exploring their experiences facilitates understanding how postpartum care may influence morbidity and mortality.

Objective and Methods: The objective of this study was to explore the experiences of nurse-midwives and obstetricians in the provision of postpartum care in Dar es Salaam, Tanzania. Feminist poststructuralism was used to guide this study. Interviews were conducted with 10 nurse-midwives and three obstetricians in Kiswahili. The interviews were audio-recorded, transcribed and translated to English prior to analysis. Discourse analysis was used to analyze the data by deconstructing how the values, beliefs, and practices of nurse-midwives and obstetricians constructed social and institutional discourses.

Results: The analysis revealed four overarching themes with additional sub-themes, providing an in-depth understanding of the nurse-midwives' and obstetricians' experiences of providing postpartum care in Tanzania. This presentation will discuss the theme of limited resources and the four associated subthemes; space, equipment, staffing and government responsibility.

Lessons to Date: Nurse-midwives and obstetricians experienced challenges in providing postpartum care to mothers in Tanzania. Limited resources made providing education challenging as they felt urgency to impart as much information as possible prior to mothers being discharged. Conducting comprehensive assessments was another challenge that left nurse-midwives and obstetricians feeling helpless. Limited resources and the incongruence between information from government and staff challenged trust and made it difficult for nurse-midwives and obstetricians to establish relationships with mothers and their families.

Main Messages: In Tanzania, postpartum care provision is an urgent matter, which is challenged by limited resources. Nurse-midwives and obstetricians struggle to provide holistic care and education to mothers and their families before premature discharge. This study highlights opportunities for health care providers, policy makers, and decision makers to address the challenges of resource accessibility in the delivery of postpartum services in Tanzania. Findings from this research can be used to inform the delivery of postpartum care services in Tanzania and other low-resource countries.

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Promotion of knowledge transfer and culture of evidence use for health systems strengthening in West African sub region

Context: The West African Health Organisation (WAHO) is a health specialised institution of ECOWAS, with the mission “the attainment of the highest possible standard and protect on of health of the peoples in the sub-region through the harmonization of the policies of the Member States, pooling of resources, and cooperation with one another and with others for a collective and strategic combat against the health problems of the sub-region”. Thereby, WAHO can promote a use of evidence in health policies and programmes formulation and implementation for health system strengthening within the Economic Organisation of West Africa States (ECOWAS) members’ states.

This study aimed to describe the process of culture of evidence use in the West African health Organisation (WAHO) to become a centre of promotion of knowledge exchange for health.

Methods: A grey literature review and a survey was conducted. Individual interviews with professional staff and a focus group in each department was also done. A SWOT analysis was done. Interventions was developed to address the challenges identified.

Results: Two main results were found.

R1: WAHO capacities to play a role of centre of promotion of knowledge transfer and culture of evidence use was assessed. Strengths as politic mandate, access to high level health authorities, organisation of annual Assembly of Ministries of Health and regular animation of many thematic fora and networks was identified. Some weakness to be improved as capacities in Knowledge Transfer (KT), decision based in experts’ opinion and lack of disposition of systematic use of evidence in policies and programme formulation and implementation.

R2: A framework of sub regional platform of promotion of knowledge exchange for heath was developed. The interventions focused on individuals, organisational and institutional levels and targeted WAHO staffs, the Ministries of Health of ECOWAS countries and researchers. The interventions at individual level was capacity building in KT, evidence-based decision making, at organisational level, the interventions was advocacy for creation of knowledge management unit in the Ministries of Health. The Assembly of Ministries of Health of ECOWAS adopted the resolution on “the use of Evidence in Developing Health Care Policies, Plans, Standards and Protocols in the ECOWAS region”.

Conclusion: Interventions developed to establish the culture of knowledge transfer and evidence use in identification of health interventions prioritisation, planning, implementation and evaluation, within WAHO can contribute to reinforce the sustainability of health systems in West Africa.

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Integrating Gender, Mining and Governance in Zambia and Canada

Issue: Increasingly, mining projects are shifting to low- and middle-income countries that hope to use mining to improve their economic outlook. Yet community concerns, including human rights and health impacts, may go unaddressed, resulting in deepening inequities.

Northwestern Province, Zambia has undergone significant transformation through large-scale mining development, growing from a rural community of 10,000 to 300,000 in just fifteen years. It was hoped the mines would create jobs and economic growth to support development priorities; however, there are barriers to achieving these outcomes. Within these spaces women face many challenges, yet their concerns are often overlooked. Opportunities to address these concerns are being created in novel spaces, including Canada's Feminist International Assistance Policy and Zambia's Ministry of Gender.

Methods: Set within the global political and economic context, this ethnographic-informed study explores how concerns around women's health and wellbeing are being considered in the Canadian-mined region of Northwestern Province, Zambia. The research explores how women's health and wellbeing are changed through engagements with and between the mining sector, government, and community. Methods include participant observation, document review and interviews with women in the region, and government, community-based organization and mining company representatives.

Results: Preliminary results from fieldwork document the ways in which mining development alters the lives of women. Effects are socially stratified, entrenching existing disparities and creating new forms of difference, especially notable given the HIV rate has reached 56% among sex workers, a profession to which women may turn in the gendered mining landscape. For women who are new to the region impacts are even more pronounced. Anxiety surrounds their presence resulting in stigma, making it more difficult to access programs and services. Women's ability to participate in community decision-making is also affected.

Lessons to date: Mining development that benefits the global economy has local effects that profoundly disrupt women's economic and social environment. Mediated through both distal and proximate determinants, mining development influences women's health and wellbeing. Health systems strengthening and integrating considerations of determinants must be addressed in policy.

Main messages: While there may be economic benefits from mining, these are not equally distributed and negative impacts are more likely to affect women. It is hoped this study will reveal connections useful to the community, company and the Zambian and Canadian governments to create more informed responses that address the impacts of mining on women's health and well-being.

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Status and drivers of maternal, newborn, child and adolescent health in the Islamic World: a comparative analysis

Issue/Problem: The Millennium Development Goal (MDG) period saw dramatic gains in health goals MDG4 and MDG5 for improving child and maternal health. However, many Muslim majority countries (MMCs) in fragile states lagged behind. A comprehensive analysis of the status, progress, and determinants of reproductive, maternal, newborn, child and adolescent health (RMNCAH) focused on MMCs was undertaken. The objectives were to understand the status and progress in RMNACH in all MMCs and the determinants of child survival; and explore differences in these outcomes and the contextual determinants of health between MMCs and non-MMCs. We examined data between 1990 and 2015 from multiple publicly available data repositories. We assessed 47 MMCs globally, of these, 26 were Countdown MMCs and were compared with 48 non-Muslim Countdown countries. We estimated child and maternal mortality, stillbirths, and the causes of death, essential interventions coverage, and contextual determinants for all MMCs and comparative groups. We also did a hierarchical multivariable analysis of determinants of under-5 mortality (U5MR) and newborn mortality (NMR) in MMCs.

Results: Despite notable reductions between 1990 and 2015, compared with global estimates and non-MMCs, MMCs had higher mortality rates. Coverage of essential interventions across the continuum of care was lower among MMCs, especially for indicators of reproductive health, prenatal care, labour/delivery, and childhood vaccines. Structural and contextual factors, especially state governance, conflict, and women and girl's empowerment indicators were significantly worse in MMCs compared with non-MMCs, and were strongly associated with U5MR and NMR within MMCs. In adjusted hierarchical models, U5MR in MMCs increased with more refugees originating from a country, and decreased with better political stability or absence of terrorism, greater political rights or government effectiveness, higher female adult literacy, and greater female-to-male enrolment in secondary school.

Lessons/Findings: Focus on reducing inequities both within and between MMCs is vital. Strategies for addressing adolescent health and nutrition as well as sexual and reproductive health among young women are key. Approaches including delaying age at marriage and first pregnancy among adolescents, and increasing female education may require innovative solutions given cultural and religious views. The cyclical deterioration of governance that exists in several MMCs requires dramatic governance reform and grass roots democratization of health and accountability. Solutions for tackling insecurity, conflict and population displacement must emerge from within Muslim countries, and could be accomplished through addressing social deprivation, investments in promotion of equity, as well as promoting stability through peace building, tolerance and reconciliation.

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using different lenses to explore the association between a nutrition intervention and symptoms of infectious diseases among children in rural Ghana

The Sustainable Development Goal on child mortality aims to reduce by 25% deaths caused by preventable diseases. This analysis examined the association between participation in an integrated agriculture-nutrition randomized trial (Nutrition Links [NL]) to improve child nutrition and symptoms of infectious diseases in infants and young children living in Upper Manya Krobo District (UMKD), Ghana. We also examined associations between illness and modifiable maternal and child factors.

This mixed-methods study followed a sequential strategy. A quantitative secondary data analysis of a district-wide survey identified plausible predictors of diarrhea and respiratory illness symptoms (RIS; fever, cough, cough with difficulty breathing) among children under two years. Results were used to develop themes for qualitative data collection. Through in-depth interviews and focus group discussions, data were gathered from community members and UMKD institutional staff on beliefs about prevention of diarrhea and RIS, including the influence of diet. Then, we used quantitative analyses (binary logistic regression with clustered standard errors) to examine associations between NL participation and other factors and childhood diarrhea and RIS.

Health staff expressed concern about caregivers' ignorance of symptoms of infectious diseases. They believed caregivers sought treatment from traditionalists and herbalists as a first step for disease prevention. Community members discussed concerns about food insecurity when talking about feeding children appropriate diets for disease prevention. Members of NL intervention communities expressed less worry about food insecurity than those living in control communities. The former found solutions to improve diets, such as substituting inaccessible foods (meat, market vegetables) with local foods promoted by NL (eggs, home garden vegetables).

Nutrition Links participation was not associated with diarrhea or RIS. However, higher maternal depression scores were positively associated with diarrhea, fever, and cough (aOR per unit:1.1-1.2). The odds of having diarrhea were lower with a diverse maternal diet (aOR: 0.3, 95%CI: 0.1, 0.8). Children who experienced earlier illnesses (fever, cough) were more likely to have these symptoms at endline. The odds of having fever was lower with higher hemoglobin levels. There was a lower odds of experiencing coughing with breathing difficulties among normal height children (aOR: 0.3, 95%CI: 0.2, 0.8).

Integrated rural interventions have the potential for behavior change to improve diets; better nutritional status contributes to child health. Integrating community health services with agriculture interventions may enhance knowledge transfer and improve both health staff and caregivers' understanding of diverse types of interventions that may help to reduce child infectious diseases.

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Challenges faced by mothers when seeking care for presumed malaria in young children in rural and remote Uganda

Issue/problem: Malaria remains an important public health challenge for children under five years of age in sub-Saharan Africa. While national initiatives have increased the availability of ACT from public health facilities (PHF) and the private sector, Uganda remains below the national target to have 90% of malaria cases receive diagnosis and treatment within 24-hours of fever onset. Understanding local perspectives and experiences related to the management of acute episodes of fever in very young children is critical to developing relevant public health interventions in Uganda and countries of similar context.

Objectives and Methods: Given that children are dependent on their caregivers for appropriate care, minimizing factors that hinder caregivers' ability to access timely and appropriate care is necessary to improve health outcomes in young children. This qualitative study explores the challenges faced by mothers when seeking care for presumed malaria for their young children in the District of Butaleja. Six focus groups (FGs) were held with mothers from five sub-counties located across the district. FGs were recorded, translated, and transcribed, and the data analyzed using acceptable qualitative research protocols.

Results: The study identified four major areas of difficulties: (1) challenges with home storage of medicines; (2) challenges with accessing PHF; (3) challenges with receiving quality care once at the PHF; and (4) challenges with accessing care at private drug shops.

Lessons to date: This study proposes that inadequate household resources and a weak formal and informal health system are important factors limiting timely access to affordable and appropriate care in young children in the District of Butaleja. While current initiatives to increase ACT market shares in the formal private sector are important steps in regions where the formal private sector is abundant and household income is high, findings from this study suggest that a multi-level system strengthening approach is necessary to improve health outcomes in rural and remote regions. This includes targeting all stakeholders and factors at the individual, household, community, and environmental levels.

Main messages:

- 1) Inadequate household resources and a weak public health system are key factors limiting timely access to medically necessary services that are free of cost and discrimination in rural and remote Uganda.
- 2) Future public health interventions need to engage all health providers (formal and unlicensed) in training and certification programs, as well as improve caregivers' capacity to take the best actions to manage presumed malaria in young children.

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Intersectional inequalities on the uptake of institutional delivery among women in Nepal: a test of multiple jeopardy-advantages hypotheses.

Issues/problem:

Institutional delivery assisted by skilled-birth attendants is key to reducing maternal and newborn deaths globally. In Nepal, only 58% of deliveries occur at health institutions, with a stark difference observed by socioeconomic status, maternal education and ethnicity. Less is known, however, the effect of multiple socioeconomic disadvantage or advantages on the uptake of institutional births.

Objectives and Methods: This study aims to identify levels of institutional delivery among women with multiple jeopardies (disadvantages) or advantages. Data for this study were derived from the 2016 Nepal Demographic and Health Survey. A total of 1978 married woman aged 15-49 years who gave birth two years preceding the survey were included in the analysis. The outcome variable was institutional delivery, and explanatory variables were socioeconomic factors such as wealth status, ethnicity, maternal education, and multiple disadvantages or advantages (three disadvantages: all three of lower wealth status, ethnic minority groups, and illiterate; two disadvantages; one disadvantage; and three advantages- rich and advantaged ethnicity and literate). Binomial logistic regression was used to identify an association between outcome and explanatory variables adjusting for maternal age and birth order. P value was set <0.05.

Results (effects/changes): The uptake of institutional delivery among women of low wealth rank (lower 40%) was 3-fold lower odds (adjusted Odds Ratio (aOR)=0.32: 95% CI: 0.24, 0.43) compared to; 1.75-fold lower odds (aOR=0.57: 95% CI: 0.42, 0.76) among disadvantaged ethnicity, and 1.72-fold lower odds (aOR= 0.58: 95% CI: 0.44, 0.75) among illiterate women compared to women with higher wealth status (upper 60%), women from advantaged ethnicity, and literate women respectively. Similarly, the uptake of institutional delivery was 11-fold lower odds (aOR= 0.09; CI: 0.04, 0.17) among triple disadvantaged women; 11-fold lower (aOR= 0.10: 95% CI: 0.05, 0.17) among at least double disadvantaged women and 4-fold lower odds (aOR=0.23: 95% CI: 0.13, 0.40) among women with one disadvantage compared to triple advantaged (rich and literate and advantaged ethnicity) women.

Lesson to date: There was a high disparity in the uptake of institutional delivery by socioeconomic status. Women with more than one disadvantage had a lower uptake of institutional delivery than those with multiple advantages.

Key message: An intersectional inequality on the uptake of maternal health services is neglected issue in globally and in Nepal. Targeted policies and programs need to be designed focussing on multiple disadvantaged women to reduce the current inequity in the utilisation of institutional delivery.

Kim, Hani

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Dissecting the political origins of inequity in global health: Applying a critical realist approach.

PROBLEM: The interventions targeting individual-level biomedical and risk factors of disease have contributed to reducing deaths due to infectious causes globally towards the Millenium Development Goals (MDG), but are limited in meeting the predicted future health inequity challenges associated with climate change, forcibly displaced persons. There is an urgent need to critically reflect on the dominant approach to reducing global health inequity, and seek alternatives to dissect the political origins of health inequity, in order to promote health and health inequity in a sustainable manner.

OBJECTIVES: 1) To critically appraise the biomedical reductionist approach to reducing inequity in global health, 2) To illustrate ways in which insights from sociology can guide health equity research in global health.

METHODS: Literature review was conducted with keywords: “MDG”, “social determinants of health”, “health equity”, and “political origins”. Based on the search results, further search was conducted with refined terms: “critical realism”, “health for all policy”, “Context-mechanism-outcome”.

RESULTS: Targeted interventions (e.g immunization, insecticide treated bed-nets, antibiotics, anti-retroviral therapy) have significantly reduced deaths due to malaria, TB, AIDS, and vaccine-preventable diseases towards the MDGs. However, distribution of health gains has been uneven, with persistent or increased inequalities within or between countries (e.g. disproportionate burden HIV infection among young women in sub-Saharan Africa, immunization gaps, child malnutrition). Social science research highlights the value of the critical realist approach in interrogating the role of hidden social processes and social relations in generating health inequity (e.g. social class, employment condition, social exclusion, exploitation, domination, stigma).

LESSONS TO DATE: Meeting the future health equity challenges requires contesting the dominant narratives that depoliticize the discourse on health inequity in global health, emphasize the individualized view of etiology of ill health, and limit the scope of programmes and policies to the domain of market-delivered services and products at the individual level. Applying the critical realist approach through collaborations between biomedical and social sciences can aid in generating mechanism-based hypotheses that can interrogate biomedical and hidden social processes, and identify areas of methodological gaps to enable mechanistic investigations into the root causes of inequity in global health.

MAIN MESSAGES:

Individual-level biomedical causes and risk factors continue to depoliticize and dominate the discourse in global health research; The critical realist approach represents an alternative framework to dissect the political origins of health inequity, and should be actively explored through collaborations between biomedical and social scientists.

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Using Baseline Results to Refine Programming: A Case Study of a MNCH project in Kigoma, Tanzania

Issue/Problem: Baseline surveys for international development projects are typically conducted after program activities have already been determined. Baseline data is primarily gathered for project evaluation. However, baselines also provide a critical opportunity to refine programming based on current and population specific information. The use of baseline results in program development improves the relevance of activities that are designed to advance maternal, newborn and child health.

Objectives and Methods: This case study aims to demonstrate how baseline data can be used to adapt and target programming and present how these practices can be improved. A baseline household survey was undertaken in 2017 as part of the World Vision led SUSTAIN II project in Kigoma, Tanzania, funded by Global Affairs Canada. The baseline used a standard two-stage cluster design with Primary Sampling Units, census enumeration areas, selected through Probability Proportional to Size.

Results: The baseline findings identified additional priority areas for the project. Female adolescents aged 15-19, were found to have modest contraceptive knowledge (64.7%, 95%CI: 58.3%–70.7%) and, amid those married or in a union, had particularly low contraceptive uptake (5.4%, 95%CI: 0.8%–29.0%). Additionally, men aged 15-54 had little knowledge of danger signs throughout the RMNH continuum of care; only 9.7% (95%CI 5.5%–16.4%) could identify at least two dangers signs in each period of the RMNH continuum of care.

Lessons Learnt: The project team adapted components of their programming to target the areas that were identified from the baseline as in need of additional support. The project decided to target youth groups, in particular youth out-of-school, to increase the uptake of contraceptives. The project is also using a cascading Train-the-Trainer model to educate men on the RMNH continuum of care using the Men Care Model. The project originally planned to train 50 trainers but has increased that number to 150, due to the findings of the baseline survey. The project team had to develop practical strategies for negotiating changes with the donor, gathering support from the communities, integrating new project models and aligning the changes with the project budget.

Main messages: Well designed and representative baselines can complement needs assessments in providing current and comprehensive population and subpopulation level data. Baseline results are not only a tool for project evaluation but provide a good opportunity to identify needs and adapt project activities. Projects should be encouraged to refine program activities based on the findings of baseline surveys.

Laxton, Samantha

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Barriers to the usability of standards intended to prepare healthcare organizations and their communities to remain resilient in emergencies and disasters

In addition to increasing globalization, urbanization, and rapid population growth, cities and communities around the world are also faced with increasing environmental instability and infrastructure challenges. In these conditions, jurisdictions recognize that a well-prepared healthcare system, particularly in the face of emergencies and disasters, is critical to ensuring their communities remain resilient, safe, and sustainable. While standards for emergency and disaster preparedness do exist, there are challenges with their usability across various regional settings and healthcare contexts.

In response to these challenges, HSO is revising its existing Emergency and Disaster Preparedness (EDP) standard into a global health standard and wanted to understand factors that influence the usability of its current standard from a user's perspective. The objective of this study is to identify facilitators and barriers to the usability of the EDP standard for healthcare organizations across various regional settings.

A pilot study was conducted to assess the feasibility for the planning and designing of larger studies while analyzing emerging themes and recommendations. An exploratory, qualitative study design with semi-structured interviews was used to gather rich data on experiences and recommendations from the user's perspective on the usability of the EDP standard. A purposive sampling strategy was used to recruit users from various regional health settings to ensure the user-centered analysis addressed high, low and middle-income contexts.

Results indicate barriers to the usability of the EDP standard include: the terminology used within the EDP standard can be interpreted differently across settings and contexts (e.g. use of the terms "community" and "team"); an "all-hazards plan" is used as opposed to an "all hazards approach" so the standard is not comprehensive of all possible disasters that occur globally; and the cost of allocating, implementing and maintaining the resources required to meet the EDP criteria is the most common barrier experienced by users.

A user-centered design approach in HSO's standard revision process is feasible, scalable and critical to understanding the opportunities, challenges, and recommendations of the usability of the EDP standard as perceived by direct users across varied contexts. The terminology used in the EDP standard should be clearly defined to avoid misinterpretation. An "all-hazards approach" should be used to ensure EDP criteria addresses all types of emergencies and disasters faced by different regions. Criteria should consider potential cost and not be too prescriptive or restrictive to the resources required so all regions are able to meet EDP criteria despite economic status

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Understanding the journey to care for Ugandan children with rare surgical diseases

Main Issue and Introduction: Rare diseases by definition affect only a minor subset of the patient population. However, when taken as a collective, rare diseases represent a global health concern with an expansive reach that affects approximately 350 million people worldwide with 50% being pediatric patients. Canada has a population of just greater than 35 million and 17% are under the age of 15. Uganda has a population of 41 million and 50% are under the age of 15. However, Canada has over 70 pediatric surgeons whereas Uganda has four.

Purpose: To understand and describe the current state of the referral system for children with rare surgical diseases at two referral hospitals in Uganda.

Methods: This study in Uganda was completed at two hospitals: Mulago National Referral Hospital and Soroti Regional Referral Hospital from April to June 2017. The two arms of the study were: patient questionnaires and focus group discussions concerning referral and care for these children. The list of rare surgical diseases considered for this study have incidences of less than five per 10,000 live births and was compiled by pediatric surgeons experienced in the Uganda setting.

Results: A total of 70 patient families (55 from Kampala, 15 from Soroti) and 24 health care professionals (9 from Kampala, 15 from Soroti) participated in the study. From the patient questionnaire, the two most commonly reported diagnoses were anorectal malformation and Hirschsprung's disease. The median time elapsed between the presentation of the first symptom and final diagnosis ranged from zero to 120 days. Furthermore, about 93% of diagnoses were delivered in person with the majority being well-delivered and accompanied by psychological support. The majority of the respondents (77.1%) reported receiving psychological support from a general practitioner. Although both hospitals in this study are government hospitals and theoretically provide general health care for free, 70% of study respondents at both hospitals paid out of pocket for diagnostic medical tests. The focus groups were comprised of health care professionals who have experience caring for pediatric patients with rare diseases. The focus group responses at both hospitals suggest that the greatest challenges in referring patients with rare surgical diseases are transportation and financial constraints. The greatest challenge in receiving referrals is lack of supportive manpower.

Main Message and Conclusion: While the majority of respondents received a well-delivered in-person diagnosis, financial barriers present significant hardships for patients and families within government hospital care settings.

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Experiential Learning for Public Health Professionals: an evaluation of educational value

Background:

Traditional pedagogical methods are teacher-centric, often leading to disengaged learners. The 'flipped-classroom' inverts this traditional method, focusing on problem-solving and application of knowledge. Simulation learning presents one technique for engaging learners in complex global health topics and offers an innovative opportunity for global health professionals to develop skills in negotiation, problem-solving and strategy design, in a safe and sustainable way.

Objectives:

The objective of our study is to assess simulation learning as an educational approach to global health.

Methods:

Using a mixed-methods evaluation design, we described the topic, content and evaluation results from simulations facilitated by Global Health Sim between August 2016 and May 2018. Simulations took place in-person in 3 continents and online for participants from 5 continents.

We assessed the quantitative measures of content knowledge of the global health topic before and after participating in the simulation and conducted a qualitative thematic analysis of the experience and lessons learned reported by participants.

Results:

A total of 26 exercises were facilitated for 210 participants, covering 8 different global health topics, including infectious disease outbreaks in low- and middle-income countries, mental health policy in a post-conflict setting and environmental disaster response. Self-reported knowledge of the topic increased an average of 3.4 points (10-point scale), from 3.7 to 7.1. Participants rated the educational value of the experience an average of 4.1 (5-point Likert scale). Thematic analysis revealed an increased understanding of the complexity of global health problems and strategies for effectively responding to global health issues in a multi-disciplinary manner.

Lessons: Lessons learned from this research project demonstrate the great educational value of using simulation learning to gain experience with complex global health issues. This style of 'flipped-classroom' can be used across different educational settings and countries to build capacity in the global health field by preparing global health professionals to contribute to future global health research, policy and practice.

Main Messages: Overall, simulations were of great educational value to participants. Simulations can be used to teach about complex global health events, policies and programs. Participants learn strategies for responding to global health issues that can be applied to their future careers. Further research is required to assess the long-term educational impact of simulations in global health.

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Capacité des distributeurs communautaires à accomplir leurs tâches dans le cadre de la chimioprévention du paludisme saisonnier au Burkina Faso.

Enjeu : Le Burkina Faso a lancé un vaste programme de chimioprévention saisonnière (CPS) du paludisme ciblant les enfants de moins de 5 ans. Les distributeurs communautaires (DC) sont des membres de la communauté recrutés pour se rendre dans les ménages et administrer les médicaments aux enfants. Ils sont une pièce centrale du dispositif. Les tâches qui leur sont confiées sont exigeantes. Les DC sont formés et encadrés par le personnel de santé.

Objectifs et méthode : L'étude vise à : (1) évaluer la capacité des distributeurs communautaires à mettre en œuvre la CPS au décours de la formation initiale effectuée au début de la campagne de la CPS; et (2) identifier les facteurs associés à leur niveau de performance. Elle a été conduite en 2017 et inclus tous les DC (n=424) des 23 centres de santé et de promotion sociale (CSPS) d'un district sanitaire. La capacité des distributeurs communautaires a été évaluée sur la base d'un questionnaire construit et validé à partir des objectifs d'apprentissage de la formation dont ils ont bénéficié. Un score agrégé de compétences a été dérivé à partir des 9 groupes de compétences explorées. L'association entre la performance et les caractéristiques contextuelles et individuelles des DC a fait appel à des modèles d'analyse statistique multiniveaux.

Résultats : La majorité (88%) des compétences cibles sont maîtrisées par les DC après la formation initiale, mais les acquis sont hétérogènes, variant selon les sites de formation (79% à 96%). Les compétences les plus maîtrisées relèvent des conseils à donner aux parents (100%) et du marquage de la concession (96%). Celles qui le sont moins, portent sur des tâches plus techniques en lien avec la sélection des enfants éligibles (68%) et la référence de ceux qui doivent l'être (78%). Les régressions suggèrent l'existence d'un lien statistiquement significatif entre l'âge, le sexe, le niveau d'instruction, le nombre d'années d'expérience en tant que DC et la complétude de la formation par les responsables du programme.

Leçons tirées : Cette étude montre que les DC affichent globalement une maîtrise des pratiques de la CPS, mais certaines compétences plus techniques, le sont moins. La maîtrise des compétences dépend également du profil des DC et des facteurs contextuels du centre de santé.

Principaux messages : Cet travail met en exergue les compétences où les DC éprouvent des difficultés au début de la campagne CPS et le profil des DC nécessitant une action destinée à renforcer leur capacité.

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Pre-departure training: An opportunity to improve knowledge of global health core competencies

Issue: There has been an increase in the prevalence of global health electives (GHEs) in medical education over the past two decades. GHEs have been shown to provide participants with numerous benefits, including improvement of medical knowledge and physical examination skills, improved cultural competence, and increased professional development. Despite these benefits, concerns exist regarding visiting students from high-income countries (HICs) participating in GHEs in low- and middle-income countries (LMICs). Recent studies examining the perspective of LMIC host institutions have also described multiple concerns of working with HIC visiting students.

Pre-departure training (PDT) provides an ideal time to educate students and set expectations prior to departure; yet only 59% of US medical schools use a formal curriculum. Nevertheless, global health PDT has been widely acknowledged as beneficial for visiting students participating in abroad electives, as it reinforces and emphasizes the intersectoral and collaborative nature of GHEs.

Objectives:

- (1) To update the PDT at the Perelman School of Medicine (PSOM)
- (2) To assess if PDT affected knowledge of global health core competencies via an observational, cross-sectional study of fourth year medical students at PSOM

We developed a pre-departure training course at PSOM based on two existing frameworks: the Consortium of Universities for Global Health (CUGH) interprofessional core competencies and the Working Group on Ethics Guidelines for Global Health Training (WEIGHT) ethics and best practice guidelines. We aimed to incorporate the CUGH Global Citizen Level competencies as well as the WEIGHT recommendations specific to trainees. PSOM PDT core topics include: culture competence, safety and ethical challenges abroad, global burden of disease, globalization, and social determinants of health. Pre-course (before PDT), post-course (after PDT), and post-elective (after GHE) surveys are offered.

Results: Preliminary data suggest an improvement in the mean scores for each of the CUGH interprofessional core competency domains when comparing pre- and post-course data.

Lessons: Our data supports that PDT can augment knowledge of global health core competencies as defined by CUGH and WEIGHT and may better prepare students for the host of unique challenges experienced during a GHE.

Main Messages:

- PDT is widely acknowledged as beneficial and necessary for students interested in participating in GHEs.
- There is a need for a standardized and evidenced-based global health education framework to guide institutions in developing or updating PDT.
- Results from pre- and post-assessments at PSOM show that PDT can improve global health core competencies as defined by CUGH and WEIGHT.

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Patient empowerment in the management of chronic non-communicable diseases in sub-saharan Africa: a systematic review

Since the Alma-Ata conference in 1978, the empowerment of patients has evolved as one of the health promotion strategies in the Ottawa Charter of 1986, and nowadays as one of the general principles of the World Health Organization Global Plan of Action for global prevention and control of Chronic non-communicable diseases (CNCD). However, despite these many contributions to the improvement of the quality of healthcare, little evidences exist in Sub-Saharan African countries (SSA), especially for the elderly who are the most affected. From 63% of rate of global mortality due to CNCD, 80% come from low and middle-income countries, with a higher growth rate in SSA compared to the rest of the world. What constitutes a real obstacle to the social and economic development of these countries.

The purpose of the communication is to present how the existing interventions within the health system of the SSA countries contribute to patient empowerment.

A systematic review of published articles until 31 december 2017 from the model « PRISMA-P 2015 » was made. A combination of the keywords and MeSH terms was used to carry out the documentary search in six databases: PubMed, Medline, Embase, Web of science and Global Health.

The results reveal that several interventions targeting patient empowerment were implemented since the beginning of the years 2000, to control and prevent CNCD, based only on the micro level. This is mainly clinically based interventions (80%), which targets case management, in an individual approach. They mainly targeted cardiovascular diseases (42%), diabetes (23%), cancers (15%), respiratory diseases (9%) and others (11%). All these interventions define patient empowerment as a process that allows them to have better control over their own health, which goes through learning, control and meaning. However, no study evaluated the three levels, only learning (80%) and control (50%) were considered in these interventions, but none of them covered all the dimensions.

Interventions should not only target the empowerment of patients at the micro level, but they must involve patients in the decision-making process at the organizational (meso) and systemic level (macro) as identified in several health systems of developed countries.

The health care system in SSA remains highly paternalistic, and the different approaches that promote the development of patient empowerment are very poorly evaluated (patient-centered) or non-existent (patient-partner).

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Impact of individual and community-level factors on utilization of maternal health care services in Ghana

Issue/Problem: Utilization of maternal health care services is key to reducing the number of perinatal deaths and postnatal complications among pregnant women in sub-Saharan Africa (SSA). With a few exceptions, majority of the studies that examine the use of maternal health care services in SSA have focused largely on individual-level explanations and have ignored the importance of contextual and community-level explanations. In Ghana, progress has been made in reducing maternal mortality ratio (MMR) from 740/100,000 in the late 1990s to 319/100,000 in 2015 but these rates are still high. Our study focuses on impact of individual and community level-factors on maternal outcomes with the hope that it will inform public policy in Ghana. This approach highlights latent or unacknowledged aspects of fragility within health systems designed to improve maternal health and opportunities for improving uptake of services.

Objectives and Methods: Using the 2014 Ghana Demographic and Health Survey, we extracted data on 4,141 women nested within 427 clusters across Ghana to examine the effects of individual and community-level factors on antenatal care (ANC), facility-based delivery (FBD), and postnatal care (PNC); utilization of these services is very strongly associated with better outcomes during pregnancy. Multilevel logistic regression models were used to examine the effects of individual and community-level factors on ANC, FBD, and PNC. Factors considered at the individual-level were marital status, education, religion, and ethnicity whereas that of the community included access to healthcare, community education, employment status, and residence.

Results: Our analysis revealed that overall utilization of all three types of services (89.2% for ANC, 74.2 % for FBD and & 73.3% for PNC) was substantial across the board; however, both individual and community-level factors were significant predictors of these maternal health outcomes. Some distinctive findings in our study indicate that wealthier women and those with higher education were more likely to use ANC and FBD but not PNC. In contract, poor and uneducated women were more likely to ANC and PNC but not FBD. Such findings point to areas where services can be better tailored to meet community-specific needs. Additionally, use of National Health Insurance Scheme (NHIS) was statistically associated with the utilization of maternal health services.

Main messages: Policy makers must consider factors such as educational levels and economic security at both individual and community-levels that shape women's preferences and uptake maternal health care in Ghana. Greater support for NHIS, which aligns with SDGs, must be included.

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“How can we leave the norms of our Baap-dada?”– Exploring Socio-cultural Understandings of Menstrual Hygiene Management Practices in Pakistan

Menstruation is a part of complex changes that occur during girls’ transition to young adulthood. An emerging body of literature has identified poor WASH infrastructure in schools, and local socio-culturally embedded menstrual hygiene management (MHM) practices as detrimental for girls’ school attendance and subsequent educational attainment. Few empirical studies, however, have explored the reasons behind such practices.

Objectives and Methods: While adolescent health has received significant interest, little attention has been paid to the relationship between menstruation and MHM on school absenteeism in countries characterized by low levels of girls’ schooling. Sustainable Development Goals 4 and 5 focus on the provision of quality education, and achieving gender equality, respectively. There is need to first understand how traditional socio-cultural practices impede girls’ ability to attend school. The aim of our study was to explore how traditional sociocultural beliefs surrounding menstruation and menstrual hygiene management translate into practises which negatively impact girls’ educational attainment.

A qualitative study was conducted in the three provinces of Pakistan - Punjab, Baluchistan and Sindh - between February 2015 and March 2017. Three data collection methods were used: (1) Participatory activities with 498 adolescent girls aged 10-16 years, both in and out-of-school. A series of activities (writing their experiences, drawing an ideal washroom) were used to collect data around their menarche experiences; (2) Observations of 6 School WASH facilities and (3) Key informant in-depth interviews (N=65).

Results: Our findings revealed three key themes: (1) WASH infrastructure in schools was inadequate, poorly maintained and gender insensitive; (2) common MHM practices including the avoidance of water during menstruation, and use of dirty rag-pads, were unhygienic; (3) traditional practices of disposal of menstruation-related products in a running body of water were environmentally unfriendly. All three practices were entrenched in deeply rooted socio-cultural belief systems, including the devaluation of the role of the toilet cleaner, beliefs that menstruation was impure and dirty, secrecy surrounding menstruation and the fear of black magic.

Lessons: Our findings revealed in order to promote healthy menstrual hygiene practices and create high quality, gender sensitive WASH infrastructure, predominant socio-cultural beliefs of menstruation need to be addressed.

Main messages: Poor quality WASH infrastructure in schools, the prevalence of unhygienic MHM practices and environmentally unfriendly disposal practices are deeply rooted in socio-cultural beliefs. These beliefs include devaluation of the role of the toilet cleaner, belief of menstruation as dirty, secrecy surrounding menstruation and the fear of black magic.

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Sexual, reproductive health and neonatal health interventions in conflict settings: a systematic review

Issue/problem: As of 2016, there were 65.6 million forcibly displaced people worldwide, with conflict accounting for the majority of this displacement. Women and children are especially vulnerable to humanitarian crises and make up 80% of this forcibly displaced population. The risk of morbidity and mortality among neonates, children and pregnant women are particularly higher due to various factors such as unavailability of services, susceptibility to infectious diseases, and malnutrition among others.

Objectives and Methods: Through this systematic review, we aimed to synthesize evidence on the delivery strategies of interventions aimed at targeting women's sexual and reproductive health, and neonatal health. We searched multiple databases including PubMed, CINAHL, Embase and PsychINFO. We included any article which had an intervention targeting a conflict-affected population in a low or middle-income country, and was published between January 1990 and March 2018. By identifying the interventions implemented, and comparing the barriers and facilitators to their scaling up, we aim to identify priority areas of action, and ultimately collate evidence to improve guidelines for their implementation in conflict settings.

Results: We identified 34,905 articles through our search, of which 250 met our criteria. The majority were observational studies, and 3 were randomized controlled trials. 100 articles (40%) assessed maternal health interventions, 34 (13%) neonatal health interventions, and 19 (7.6%) targeted adolescents. The interventions found in the literature target phases throughout the continuum of care such as the provision of family planning, antenatal clinic visits, neonatal resuscitation, initiation of breastfeeding, to packages of interventions such as the delivery of the Minimum Initial Service Package (MISP).

Lessons to date: Our preliminary results show us that the barriers which are seen in stable conditions, apply even more in conflict settings. With only 21% of articles targeting adolescents and newborns, they are still overlooked in service delivery, compared to mothers. These results emphasize the need to identify which types of interventions are delivered, increase those that specifically target adolescents and newborns, and scale up the existing maternal health interventions.

Furthermore, identifying the interventions delivered will help us compare them to the ones which are usually recommended by WHO, and identify which gaps need to be addressed.

Key messages:

With the world experiencing the highest rates in history of forcible displacement, it is important to understand the best ways to deliver interventions especially to more vulnerable populations such as women and newborns, and this systematic review will help us in identifying these.

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Integrated services for better women and children's health: gestational diabetes and type 2 diabetes management using PMTCT lessons in South Africa

Background: Gestational diabetes (GDM) is glucose intolerance recognised for the first time during pregnancy. It increases risk for type 2 diabetes (T2D) for women and their babies. GDM prevalence increases from its current estimation of greater than 15% in South Africa and hurts the country's efforts to improve women and children's health. PMTCT, a programme that has been successfully integrated and influenced other maternal and child health services at primary health care (PHC) level in South Africa, may offer lessons about integration of care for multiple conditions, including diabetes and improving women and children's health.

Objectives:

1. Document how PMTCT integration was perceived by stakeholders
2. Examine how GDM screening is integrated into routine antenatal care (ANC) and postnatal care (PNC) to potentially prevent or delay T2D
3. Explore how the PMTCT experience could bridge gaps in managing GDM and T2D for women and their exposed babies.

Methods: Mixed methods were used. Quantitative analysis of 2012-2017 PMTCT data for Western Cape province, was complemented by analysis of two policy documents on PMTCT and PNC and qualitative interviews with 15 national and local key informants, 27 nurses in disadvantaged facilities and 10 HIV-infected women diagnosed with GDM in Cape Town. We also conducted 6 focus group discussions (FGDs): 4 with community health workers (CHWs) and 2 with GDM women. All semi-structured interviews (N=52) and FGDs (N=6, with a total number of 50 participants), were in person, audio-recorded and transcribed. Atlas.ti software was used to assist thematic analysis.

Results: Both policy documents emphasised comprehensively integrated ANC and PNC including HIV counselling, testing and treatment initiation. However, GDM care and T2D prevention and other important non-communicable diseases (NCDs), were not adequately included, neither in ANC nor in PNC policies. All participants underlined the importance and successes of integrated PMTCT, through which women who tested positive reached 84064 (235% increase) between 2014-2017, while those who delivered under PMTCT increased by 13% and MTCT reduced by 16% between 2012-2017 in Western Cape. GDM screening and subsequent interventions to prevent or delay T2D were not included in PMTCT services. Most key informants (12/15), clinic staff (23/27) and CHWs through FGDs said that GDM and T2D integration could be feasible with more staff, adequate training, managerial support and infrastructure expansion.

Conclusion: Integrating PMTCT, ANC and PNC services can improve women and children's health and is possible but it has to be a priority of department of health.

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High neurodevelopmental disability among infants in limited resource settings: A population based study

Problem/Issue: Neurodevelopmental disability (NDD) among infants is increasingly acknowledged as one of the important cause of burden of disease in developing countries. However, there is a dearth of data on the burden and its determinants in these settings.

Objective: We aimed to establish the prevalence of NDD and associated factors among infants in eastern Uganda.

Methods: A cross sectional survey was conducted in December 2017 in Iganga-Mayuge Health Demographic Surveillance Site (HDSS) in Eastern Uganda. A team of nurses conducted neurodevelopmental assessments of 487 infants 9-12 months old using the Malawi Developmental Assessment Tool. The tool has four domains: Gross motor, Fine motor, Language and Social behaviour. Infants were scored as passed or failed a domain. An infant failed a domain if he/she failed more than two parameters of the expected at his/her age. In addition, using paper based questionnaires, information was obtained from the mothers on factors that could potentially influence the infants' neurodevelopment outcomes during pregnancy, intra-partum and postnatal period as well as the socio-demographic characteristics. Data were analysed using STATA version 14. Odds ratios and 95% confidence intervals were used for statistical significance for factors associated with NDD.

Results: Out of the 487 infants, 12.7% (62) had a NDD in at least one of the domains. The most affected domain was the social behaviour where 10.7% (52) infants had a NDD. Severe impairment was seen among 1.85% (9) infants where NDD was in either three or four domains.

The factors that were independently associated with NDD included: having ever given birth to more than three children (OR=1.87, CI: 1.09-3.21), delivering outside hospital (OR=1.84, CI: 1.06-3.18), failure to cry at birth (OR=3.27, CI: 1.42-7.5), postneonatal complications (OR=3.5, CI: 1.08-11.79) and having got sick more than three times since birth (OR=2.36, CI=1.28-4.38). Low birth weight (<2.5kg) and breast feeding were not significantly associated with NDD.

Lessons up to date: It is possible to identify NDD in infancy which is important for early interventions

Main messages: We found a high NDD burden among infants in the area particularly in social behavioural domain even when the survival of high risk neonates is low. There is need to improve access to and quality of hospital care in this region. In addition, there is need for programs to educate families on how to stimulate infants for optimal development.

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Utilisation des universités, écoles professionnelles et autres sites à forte concentration pour le dépistage du VIH chez les jeunes femmes et hommes au Mali

Issue/Problem:

In Mali, the HIV prevalence is respectively 1.1% and 0.8% for 15-49 and 15-24 years old population . While Mali embraced the 90-90-90 strategy, only one out of five students knows their status. Knowing their status is the first step leading to accessing treatment and decreasing viral load. To address this gap, Plan International Mali led in 2017 a testing campaign in university, vocational school and other high concentration sites with funding from the Global Fund. This intervention highlights the use of other sectors platforms to concur to the national health strategy.

Objectives and methods: The intervention aimed to determine the rate of HIV infection, detect socio-demographic differences and extend access to care.

Social mobilization activities were organized to increase awareness and promote the testing campaign. Teams comprised of health and counselor technicians were moved to the sites and provided voluntary testing and referral for cares.

Results: A total of 14,304 students in 48 vocational institutions and universities and 4,523 young people in 27 other locations were tested for HIV. The overall rate of infection was 0.4 % for women and 0.3 % for men. The rate is (0.9%) for people aged ≥ 25 ; 0.2 % for 15-24 years old and zero for the under-15. The rate is higher in out- of- school sites (1.09) versus school sites (0.08 %). It is significantly higher in mining sites (2.1%). The rate is also consistently higher for young women compared to men in school (0.12vs 0.04) and other sites (1.36vs0.90).

Lessons: The test was highly accepted. The rate of infection is lower among the youth tested versus the national prevalence. It increases with age probably related to the age of sexual maturity. Mine sites that concentrate economic activity in a context of poverty may create situations of power inequality that favor risky behaviors as we observed an HIV infection rate significantly higher compared to national prevalence in youth and general population.

Main messages: A successful HIV testing campaign in Mali reinforces the acceptability of HIV testing among the youth as well as the importance of interventions tackling the social determinants of health in HIV programming as supported by the higher rate of HIV infection observed in young women versus men, in out of school settings versus school and in sites where commercial sex is highly prevalent.

Innovative approaches to expand testing and cares outside of health structures are relevant

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The applicability of Canadian clinical practice guidelines to elderly patients with multimorbidities

Issue/Problem: There is a global shift towards increased life expectancy and a higher prevalence of individuals living with multiple chronic diseases. Notably, the prevalence of multimorbidity in older persons has been estimated to be 55-98% among cohorts of older individuals in various studies. While the elderly have been identified as a vulnerable population, the current healthcare system inefficiently addresses their health concerns, including multimorbidity which has been correlated to poorer health outcomes, higher costs of care, and higher mortality.

Global Health Significance & Objectives: Despite ongoing global efforts to develop clinical practice guidelines (CPGs) on a local level, no established forum to communicate internationally has been created. A global burden exists on resources and time as multiple countries concurrently develop CPGs. Locally, there is a lack of consensus among healthcare providers and organizations.

Through this analysis, we aim to identify any gaps in how current healthcare practices address the needs of the aging population and encourage the adoption of consistent CPGs in order to raise the standards of clinical care in the elderly. In particular, we examined the applicability of the Canadian CPGs to elderly patients with comorbidities.

Methods: CPGs were selected on 2 rationales: 1) main diagnoses by services rendered for age 65+, and 2) most-prescribed medications in the elderly. We combined the top 10 common problems with the top 10 prescriptions, resulting in 14 conditions. All CPGs were identified from the Canadian Medical Association Infobase. We included all relevant English-transcribed CPGs in the past 10 years (2008-2018) for content analysis and evaluated them based on 5 key indicators with any mention of: the elderly; multimorbidities or drug-drug interactions; time needed to treat or quality of life; barriers to implementation; and quality of evidence discussion.

Results: Most common conditions in the Canadian elderly population were identified to be anxiety, arthritis, cardiovascular disease, COPD, dementia, diabetes, gastric cancer, hypertension, pain, renal cancer, thyroid cancer and urinary tract infection. In all 48 CPGs reviewed, 26 (55%) mentioned treatment of the elderly, 43 (90%) mentioned people with multimorbidities, 39 (82%) indicated the time needed to treat or quality of life, 26 (55%) discussed barriers to implementation, and 43 (90%) discussed quality of evidence.

Lessons & Main Message: Our study shows that management of elderly patients is inadequately addressed in clinical guidelines. Given the global shift in our population demographic, this urges guideline developers to make CPGs more patient-centered rather than disease-driven.

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Les déterminants de la pérennisation et de la mise à l'échelle des innovations en santé mondiale : une proposition de cadre conceptuel

Enjeu: Dans les pays d'Afrique subsaharienne confrontés à des situations de fragilités environnementales (social, politique, économique, physique) beaucoup d'innovations en santé maternelle, néonatale et infantile (SMNI) peinent à être durables ou à être intégrées dans les communautés et les organisations à l'échelle nationale. Les phases de pérennisation et de mise à l'échelle n'arrivent souvent qu'à la fin du processus d'innovation et elles sont réduites aux aspects financiers, au détriment de l'efficacité, de la durabilité ou de l'ampleur du problème de santé à résoudre.

Objectifs et méthodes : Cette présentation se propose de synthétiser les déterminants de la pérennisation et de la mise à l'échelle des innovations en SMNI et de proposer un cadre conceptuel permettant l'analyse de ces deux notions dans ce domaine en Afrique subsaharienne dans une perspective systémique. La recherche des écrits a été menée dans quatre bases de données (Pubmed, Embase, Cinahl, Web of science) et dans la littérature grise. La période couverte est de 2000 à 2018. Nous avons sélectionné les articles publiés en anglais et en français et ils n'ont pas été discriminés selon la méthodologie.

Résultats : Les résultats de la revue mettent en jeu différents déterminants internes et externes à l'innovation qui influencent la pérennisation et la mise à l'échelle. Concernant l'environnement interne, deux éléments principaux sont à considérer : (1) les caractéristiques de l'innovation (efficacité et effectivité – testabilité – degré de complexité – réputation – mécanismes de suivi et évaluation) et (2) les caractéristiques des organisations qui initient et mettent en œuvre l'innovation (leadership – gouvernance – culture et valeur – objectifs – capacités et viabilité). Les éléments de l'environnement externe sont liés aux contextes social, politique, économique, institutionnel et mondial.

Leçons : Le cadre d'analyse qui découle de ces résultats permet d'appréhender le caractère dynamique et complexe des processus de pérennisation et de mise à l'échelle qui, interconnectés entre eux et avec le reste des événements de l'innovation, se manifestent dans le temps et dans l'espace dépendamment de l'évolution de l'innovation. Ce cadre pourrait être utilisé dans les pays émergents, car il ouvre vers une grande considération des contextes.

Principaux messages : Cette présentation permettra de mieux comprendre la pérennisation et la mise à l'échelle, pas uniquement comme des étapes déterminées linéairement dans une innovation, mais comme un ensemble d'actions qui se manifeste à différents niveaux (local, régional et national) et à différents moments de la vie d'une innovation.

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Childhood mortality, intra-household bargaining power and fertility preferences in Ghana among women in Ghana

Issue/problem

Ghana's fertility rate was about 3.02 in 2005 but increased to 4.00 in 2017. Existing theories predict that women who face higher child mortality risks are likely to prefer more children for replacement while others use more children as insurance against these risks. Against this backdrop, understanding women's fertility behaviors and the effect of child mortality risks is crucial. We also hypothesized that a woman's influence (bargaining power) in the household could be relevant in reproductive health choices and family planning decisions. Our research questions were therefore two-fold; (1) How does child mortality risks influence women's preference for children? (2) Does this relationship differ for women with different bargaining power in the household? The current study focuses on Ghana with secondary data from the latest Ghana Demographic and Health Survey (DHS). We created variables on women's exposure to and experience of child mortality risks. Three different indicators of women's bargaining power in the household were also used. Probit and ordinary least square (OLS) techniques were used in estimation, where appropriate.

Results

In general, the results suggest that child mortality has a positive association with higher fertility preference. Also, child mortality risks and woman's bargaining power play important roles in a woman's fertility choices in Ghana. We found that, in general, women with lower intra-household bargaining power were likely to prefer more children. Also, women with higher bargaining power were likely to prefer fewer children in the face of child mortality risks, compared to women with lower bargaining power.

Lessons

In addition to public sensitization campaigns on the dangers of high fertility and use of contraceptives, the findings of this study emphasize the need to focus on reducing child mortality in developing countries. Global targets on child health, like the SDGs, may have population growth relevance if achieved. In addition to these, policies to promote women empowerment should also be encouraged.

Main message

Rising fertility rates and population growth pose significant challenges to developing countries. While policies have focused on contraceptive use, the potential impact of child health outcomes and women empowerment has not received much attention. We showed that women are more likely to have more children if they face high risk of child mortality. This effect is however lower for women with higher bargaining power in the household.

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Access to rehabilitation services for children with disabilities: a scoping review

Issue/problem: According to the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities, all children with and without disabilities have the right to the highest attainable standard of health. Children with disabilities, however, continue to experience barriers in accessing rehabilitation services. There is growing empirical evidence with diverse and sometimes contradictory findings about access to rehabilitation services for children with disabilities globally. Understanding this evidence is important as such knowledge may inform health policies, clinical practices, and future research.

Objectives and Methods: The aim of this review was to map the range and scope of empirical evidence regarding access to rehabilitation services for children with disabilities. We conducted a scoping review by searching articles on four data bases (e.g. AMED, CINAHL, EMBASE and MEDLINE). We used search terms related to “rehabilitation” and “child with disability” and combined these terms with free text and MeSH terms. We synthesized articles deductively into the major dimensions of access including availability, accessibility, acceptability, affordability, accommodation and awareness.

Results: A total of 34 articles met the eligibility criteria. A majority (n = 27) of the studies were conducted in high-income countries. The articles primarily highlighted barriers experienced by children with disabilities and caregivers in accessing rehabilitation services. In particular, barriers related to accommodation (e.g. long wait time), affordability (e.g. high cost of care), acceptability (e.g. negative attitudes of providers) and awareness (e.g. limited knowledge about therapy services) hampered timely access to rehabilitation services. The articles also highlighted that this delay in accessing services had further negative consequences such as deterioration of health conditions of the child with disability and caregivers’ low satisfaction with the services.

Lessons to date: While access dimensions were portrayed as discrete, we found interconnections among these dimensions. Changes in one dimension may have direct or indirect impact on other dimensions. As such, policies that aim to improve access in rehabilitation services for children with disabilities need to consider all dimensions together. Practitioners need training on communication etiquette while providing services to children with disabilities. Future studies need to explore context specific interventions that can address access barriers.

Main messages

- Children with disabilities in general experience barriers in accessing rehabilitation services.
- These barriers occur at different levels such as individual and systemic levels.
- Access barriers are interrelated and as such policies addressing barriers should consider them together.

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“It is just an ordinary cough, no need to worry yourself”: understandings of cough and Implications for TB control in Nigeria

Background:

Despite free DRTB services since 2011, Nigeria has one of the lowest case detections of tuberculosis (TB) in the world. Delay in TB treatment increases the risk of transmission and mortality, critically so in cases of drug-resistance. Data from low resource and high burden settings on the relationship between patient socio-demographic characteristic and timely DRTB diagnosis and treatment is limited. This study explores patient perceptions that could impede care-seeking behavior in Nigeria.

Methods:

This qualitative case study of 3 states in Nigeria was part of a sequential mixed method study including a retrospective cohort analysis. Ten focus group discussions and 45 key informant interviews were conducted with patients, treatment supporters, patient relatives, community members, healthcare workers and program managers. Data were analyzed with SPSS and Quirkos software.

Results:

Thematic analysis of the interviews revealed that, without prior knowledge of TB symptoms and services, patients were very unlikely to seek TB care for an ‘ordinary’ cough, which was sometimes attributed to an “evil eye” from a neighbor or relative. They were more likely to seek spiritual remedies, visit local herbalists or patent medicine vendors than go to a hospital in the early months of cough. They would only make their way to a hospital when complications, like bloody cough or prolonged cough (longer than 6 months) or wasting arose. Parents, spouses and other significant others around the patients were also known to discourage the patient from seeking care, unless they had prior knowledge of TB.

Conclusions:

This study has identified proper knowledge of TB as a necessary precursor for timeliness in patient health-seeking behaviors. Patient education and TB program engagement with communities and providers of alternate TB care- traditional healers, prayer houses, patent medicine vendors, are critical to reducing delayed access to DRTB services.

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The experiences of teachers of children with intellectual and developmental disabilities in inclusive schools in accra,ghana

Issue/Problem: Inclusive education is projected as the best form of education for all children including those with disabilities. However due to the unique challenges they often present, children with intellectual and developmental disabilities are often excluded from inclusive schools in developing contexts such as Ghana. Given the recognition of including persons with disabilities found the Sustainable Development Goals (SDGs), it is important to understand teachers' experiences with children with intellectual and developmental disabilities. As teachers are perceived the biggest stakeholders in inclusion, their experiences may inform strategies that influence their access to systemic support (e.g. professional development trainings, material and human resource) leading to more effective inclusive systems for children with intellectual and developmental disabilities. Access to quality education is critical as it can influence better health outcomes and overall well-being of children with intellectual and developmental disabilities.

Objectives/Method: The aim of this study was to understand the lived experiences of teachers of children with intellectual and developmental disabilities in inclusive schools in Accra, Ghana. A qualitative descriptive approach was utilized with 15 regular and two special educators. Data were collected using semi-structured interviews. Qualitative data were analysed to identify themes as they emerged.

Results: Teachers have positive and negative experiences in inclusion. Teachers' negative experiences includes challenges with children problem behaviors', support services and parents of children with intellectual and developmental disabilities. Teachers' main positive experience is the satisfaction felt when children with intellectual and developmental disabilities show progress in inclusion. Teachers shared their perspectives of strategies that might facilitate inclusion of children with intellectual and developmental disabilities in Ghana in the future.

Lessons: Insights from teacher experiences may influence practices leading to systemic support for inclusive educators, and effective specific and appropriate strategies that are tailored to the unique characteristics of children with intellectual and developmental disabilities. This may facilitate inclusive environments that accommodate diversity and embrace children with intellectual and developmental disabilities in Ghana, and across the globe.

Main messages: Teachers experience great challenges in their efforts to include children with intellectual and developmental disabilities due to lack of human and material resources. A commitment to address teacher challenges in inclusion would be an important step towards the full and successful inclusion of children with intellectual and developmental disabilities also, influencing better health outcomes for these children in Ghana.

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Hypertension prevalence and risk factors in rural and urban Zambian adults in Western Province: A cross-sectional study

Problem: Hypertension is a longstanding problem in Zambia, yet little is known about its prevalence and risk factors, particularly in rural and urban settings. Identifying geographical variations in hypertension is important to enhance the health of adult Zambians regardless of where they live. As one of the conference sub-themes aims to discuss populations at risk, the differences between rural and urban lifestyles, risk factors, and associated perceptions related to hypertension diagnosis and management must be further explored. This study aimed to compare the prevalence of hypertension and related risk factors between rural (n=130) and urban (n=131) communities in Western Province, Zambia. Data collection occurred from March to April 2017.

Methods: This cross-sectional study included urban and rural adult Zambians attending health checks who completed a modified World Health Organization (WHO) survey, and had blood pressure and anthropometric measurements completed. Descriptive and inferential statistics were used to summarize demographic and risk factor variables. This is significant in relation to mapping and understanding the unique issues related to non-communicable disease prevalence in rural vs. urban environments in sub-Saharan Africa.

Results: The prevalence of hypertension in rural Zambians was double (46.9%) that of urban Zambians (22.9%). Increasing age, not engaging in walking/biking, and alcohol intake within the last 30 days were associated with an increased likelihood of hypertension in rural Zambians while eating vegetables more days during the week was associated with a decreased likelihood of hypertension in rural Zambians. Body Mass Index (BMI) was significantly associated with an increased likelihood of hypertension in urban Zambians.

Lessons to date: Modifiable risk factors (such as BMI, dietary intake, and physical activity) are associated with hypertension prevalence in this population, indicating opportunities for screening and other prevention measures. Targeted approaches for health education, screening, and diagnosis must be specifically developed for rural and urban areas.

Main messages:

- The prevalence of hypertension in rural Zambians was double (46.9%) that of urban Zambians (22.9%).
- In rural Zambians, increased age, lack of leisure physical activity, and alcohol intake within the last 30 days were associated with an increased likelihood of hypertension while eating vegetables more days during the week was associated with a decreased likelihood of hypertension.
- In urban Zambians, increased BMI was significantly associated with an increased likelihood of hypertension.

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Building a sustainable model and evaluation plan for psychosocial rehabilitation in Kenya: An implementation research study

Issue/problem: Training, expertise and uptake of psychosocial rehabilitation (PSR) approaches is limited in Kenya for people with serious mental illness (PWSMI). Through the development of the “PSR Toolkit”, the CREATE Kenya initiative is striving to address this need for evidence-based and cost-effective community-based rehabilitation for PWSMI in Kenya and other low resource settings. Since 2015, the PSR Toolkit has been tested in various Kenyan settings (i.e., social enterprise, mental healthcare) with promising results. However, it is not clear how the PSR Toolkit can and will be sustained locally in Kenya after initial research is complete.

Objectives: This study aims to develop a robust and engaging implementation and evaluation strategy for the PSR Toolkit, and to improve the outcomes for PWSMI and their loved ones in Kenya.

Methods: This mixed methods study is guided by current literature in implementation science. Using focus groups, different stakeholders (e.g., primary beneficiaries of the PSR Toolkit, community members, local policy makers etc.) will be consulted regarding their needs, interest, readiness to engage with the Toolkit delivery and how it may be further adapted to the local setting. Stakeholder groups will also be involved in developing an implementation strategy that identifies their needs and ability to contribute to this step. Finally, we will consider how best to develop an ongoing evaluation process that could improve future applications. In keeping with community-based research, we will collaborate to identify and engage stakeholders and seek to better understand system complexities.

Potential Impact: Using these findings, we will collaborate with the key local stakeholders to (i) refine how the PSR Toolkit is implemented to better fit with the local context needs and resources, (ii) develop a sustainable plan to evaluate the PSR Toolkit’s ongoing use, adaptation and the ways in which it impacts the lives of PWSMI in Kenya.

Results: The expected completion date of data collection is September 2018. We expect to report on the findings related to the PSR Toolkit training, delivery and evaluation.

Lessons to date: Community input and support are essential in ensuring the sustainability and success of community-based rehabilitation.

Main Messages: The CREATE PSR Toolkit has been piloted in different Kenyan settings. This study focuses on conducting an evaluation of the implementation of the PSR Toolkit to understand the issues that impede and facilitate this intervention’s effective implementation.

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Analyzing sex differences in receiving treatment of musculoskeletal injuries among orthopaedic trauma patients across 17 low and middle income countries

Issue/Problem: Worldwide injuries are a leading cause of death, and account for over 5 million fatalities, more than HIV, malaria and tuberculosis combined. A majority of injuries are of a musculoskeletal nature (e.g. fractures), and cause mortality and long-term disability. Consequently, musculoskeletal injuries exacerbate poverty, especially in low and middle income countries (LMICs) where healthcare can be inaccessible and is thus a priority of the sustainable development goals. Women across LMICs often possess reduced agency to make healthcare decisions due to gender inequality, and have longer waiting periods to receive healthcare. Hence, women represent a fragile population. Ensuring women receive care for musculoskeletal injuries directly pertains to the advancement of their health, rights, and participation within society. We hypothesized that women experienced greater delays in receiving care for musculoskeletal injuries when compared to men.

Objectives and Methods:

Primary objective: Analyzing sex differences in the time to receiving treatment following an musculoskeletal injury.

Secondary Objective: Analyzing sex differences in reasons for delay in trauma patients.

Using data collected from the International Orthopaedic Multicentre Study (INORMUS), a global observational study, we analyzed 27,000 musculoskeletal injury patients from 17 LMICs across Asia, Africa, and Latin America. Data was collected using a case report form covering demographics, pre-operative patient, and injury characteristics.

Results: We identified women were at greater odds of being delayed by 24 hours or more in reaching the hospital (OR 1.349 [1.274, 1.428], $p < 10^{-25}$) and this corresponds to a delay of 0.6 days (2.2 days men vs. 2.8 days women, $p < 10^{-41}$). However, controlling for demographic and injury confounds in multivariable analysis, sex did not predict delay (OR 0.965 [0.9, 1.035], $p=0.32$). Injury characteristics, such as open fractures were significant predictors of non-delay (high grade open fracture: OR: 0.441 [0.371, 0.524], $p<10^{-20}$). Women disproportionately reported believing their injuries would heal without treatment as a prevalent reason for delay (18.5% men vs. 33% women, $p<10^{-16}$).

Lessons: We conclude that women are delayed in seeking treatment following a musculoskeletal injury. However, female enriched factors, but not sex alone, were major determinants of hospital delay. This multi-country analysis highlights the need to ensure women globally receive equitable care.

Main Message: Across 17 LMICs women were delayed in receiving treatment following a musculoskeletal injury. Yet, rather than sex alone, female enriched socioeconomic and injury factors explain this delay. Moreover, women were susceptible to discounting the need to seek treatment for their injuries.

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Association between food insecurity and glycemic control among youth with type 1 diabetes in Haiti

Issue/problem:

Food insecurity may challenge optimal pediatric diabetes management, especially in low-income countries where pre-mixed NPH/Regular insulin regimen prevail.

Objectives and Methods:

We evaluated the relationship between food insecurity and hemoglobin A1c (A1c) in Haitian youth with type 1 diabetes (T1D) in Haiti. Cross-sectional study from 07-12/2017 of youth aged 0-27 years with T1D at one pediatric chronic disease clinic in Haiti where medical care, insulin and supplies are provided free of charge. We used the World Food Program-Haiti questionnaire to calculate a Food Consumption Score (FCS). Recent A1c values were retrieved from the medical record. We used linear regression to examine the relationship between FCS and A1c.

Results (effects/changes):

68 patients (33% male; mean age 17.5 ± 4.8 y; mean diabetes duration 3.2 ± 3.1 y; mean BMI z-score -0.83 ± 1.1 ; 32% rural residence) were included. 15 (22%) patients had poor or borderline FCS. Carbohydrates were not consumed daily by 42%, although over 90% consumed fat daily, and 47% ate sugar on three days a week or more. Low consumption (<3 days per week) of vegetables and meat was reported in one third, and of dairies and fruit in more than two thirds. Mean recent A1c was $11.1 \pm 2.6\%$ and only 13 (19%) had A1c values <8% while 28 (40%) had values >12%. A1c was not predicted by FCS ($p=0.60$). Instead, higher BMI z-score ($p=0.04$) and older age ($p=0.003$) predicted lower A1c. In a model adjusted for age ($p=0.001$), sex ($p=0.11$) and diabetes duration ($p=0.33$), BMI z-score remained marginally significant ($p=0.08$).

Lessons to date:

Prospective studies should evaluate food insecurity in light of social determinants (poverty, stress, stigma, education) as predictors of glycemic control.

Main messages:

In this cohort of Haitian youth with diabetes, food insecurity and poor food composition are common. Glycemic control is very poor but is not predicted by FCS. Higher BMI as a possible marker of adequate nutrition and insulin adherence associates with improved glycemic control.

Ramsaran, Kalinda
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Establishing the Ponseti Method for Clubfoot Treatment in Sub-Saharan Africa

Issue/Problem: Each year more than 150,000 babies are born with clubfoot, a common congenital deformity.¹ Approximately 80% of these babies are born in low and middle income countries (LMICs) such as those in Sub-Saharan Africa.² The Ponseti method is widely accepted as the most effective and least expensive treatment of clubfoot.³ It is a manipulative technique that corrects clubfoot without invasive surgery, making it ideal for LMICs. Unfortunately, a large majority of children are either left untreated or receive substandard care because they lack access to appropriate medical care.⁴ Clubfoot can lead to physical, emotional, social and economic burdens on individuals, families and communities.⁴

Objectives/Method: Mercy Ships is a global charity that works in partnership with LMICs to offer free specialized surgical services and capacity building. The Medical Capacity-Building (MCB) program aims to enhance the standards of care within the surgical ecosystem of partner healthcare institutions. The MCB Ponseti Program is a multidisciplinary, ten month mentoring program that provides teaching and training while treating patients with clubfeet. Doctors and healthcare workers are mentored in the Ponseti method and are empowered to transform the lives of children with clubfoot.

Results: Program commenced in 2010. Results presented from the last three years.

2014 – 2016 | Madagascar. 3 conferences (69 attendees). 8 health workers trained. 30 children treated (46 feet)

2016 – 2017 | Benin. 2 conferences (12 attendees). 7 health workers trained. 20 children treated (30 feet)

2017 – 2018 | Cameroon. 2 conferences (21 attendees). 8 health workers trained. 25 children treated (38 feet)

Respective governments and non-governmental organizations have recognized Mercy Ships' work leading to the establishment of sustainable clubfoot programs after Mercy Ships' departure.

Lessons to Date: Challenges faced whilst running Mercy Ships' Ponseti Program have included language and cultural barriers; environmental and transportation issues; poor clinic organizational structure; and deficient theoretical knowledge of the health workers. These challenges were met through being culturally sensitive; patient; flexible; improvising; faith and hard work. Liaising with the Ministry of Health and other non-governmental organizations has proved essential for program sustainability and reinforcement of training.

Main Messages: Approximately 80% of babies born with clubfoot lack access to treatment.² The Ponseti Method is an effective and inexpensive treatment of clubfoot.³ Mercy Ships Ponseti Program helps children living with clubfeet while providing thorough and excellent training for local healthcare workers. By working with governments and NGOs a lasting impact is possible.

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Knowledge, practice, and beliefs about the management of childhood malaria in rural and remote Uganda: Comparing gender differences within households

Issue/Problem: Despite national strategies to improve diagnosis and treatment in Uganda, malaria continues to be a leading cause of morbidity and mortality in children 5 years and under.

Objectives and Methods: This study explores differences between mothers' and male heads of households' (HHs) knowledge, attitudes, and beliefs about malaria management in children 5 years and under in the rural and remote District of Butaleja, Uganda. Focus groups (FGs) were held with mothers and HHs from across the district. FGs were recorded, translated, and transcribed, and the data analyzed using acceptable qualitative research protocols.

Results: FG data identified three main differences with respect to managing fever presumed to be malaria in young children:

- (1) Mothers tended to be more knowledgeable about Western antimalarial medicines than HHs;
- (2) Although mothers are the main caregivers within households, treatment-seeking decisions are commonly made by HHs; and
- (3) Mothers reported more obstacles to seeking treatment from trained health professionals and greater reliance on traditional and home-stock medicines.

Lessons: The findings highlighted two key lessons:

(1) In Butaleja District, mothers tend to be more knowledgeable than HHs about Western antimalarial medicines. Mothers were more familiar with names of Western medicines, and they were more likely to name artemisinin-combination therapy (ACT) as the best antimalarial medicine. In contrast, HHs frequently named medicines other than antimalarials as best Western medicine for the treatment of malaria in young children.

(2) In Uganda, mothers are generally the main caregivers of young children and, therefore, the first to recognize a child's illness. Despite this, HHs often influence treatment seeking patterns due to traditional customs which recognize men to be the breadwinner and financial decision-maker within the home. Inequality in decision making is also influenced by gender stereotypes, with men perceiving women to be easily overwhelmed and incapable of making rational choices for their children. Within this context, mothers routinely rely on traditional medicines and less effective home-stock medicines to treat acute febrile episodes presumed to be malaria.

Main Messages:

- Treatment-seeking decisions within Butaleja families are commonly made by HHs rather than the main caregivers of young children.
- Despite demonstrating better knowledge about childhood malaria management, the role of mothers in decision-making is undermined by traditional customs and gender stereotypes.
- Future public health initiatives should focus on gender inequality and initiate programs that support mothers in their quest to seek timely and appropriate care for their young children

Robinson, Jamie

Canadian Association of Midwives, Canada

Research Approaches for Health System Strengthening in South Sudan: Building Local Capacity for Research

There is a dramatic need to increase the evidence base for best practices for interventions in fragile/crisis states. In context, such as South Sudan, where international donors and projects play a major role in health systems, project implementers must continually innovate to assess results, plan effectively, and contribute to the knowledge and evidence base. Alongside this, local capacity to direct and conduct research must be respected and expanded.

Conducting innovative research to inform better program delivery and assess impact accurately must go hand in hand with building local capacity in research. In the context of South Sudan many academics and faculty members in health training institutes are accomplished clinicians with little experience in research. Through collaborative research processes and research capacity building workshops, the SMSII project seeks to better inform development practice while increasing the capacity of local actors to direct and conduct research.

The Strengthening Midwifery in South Sudan Project, phase II (SMSII) seeks to strengthen local capacity and health system strengthening on many levels. The project conducts ongoing innovative operations research and supports and increases local capacity in research. Operations research includes piloting strategies for health worker/new graduate tracing in volatile context with high migration and barriers to employment using SMS technology, and assessing training methods through comparative studies. The project is a joint initiative of the Governments of Canada and Sweden, and is led by UNFPA with partners including the Canadian Association of Midwives (CAM), SSNAMA, and AMREF.

This poster will overview the approaches to research support piloted within the project. This includes government, international and local research centers, NGO partners, and health faculty from South Sudan's Health Science Institutes. This work is taking place in the time frame March-October 2018, results will be preliminary, and the poster will focus on sharing about the approach taking and the lessons learned to date by Sept. 2018

Main Messages:

Different methods for building research capacity, networks, and evidence base in fragile contexts should be shared while the research is in process to gain insight from others in the field and to share best practices and lessons learned.

Rosenkrantz, Leah

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Trauma registry implementation in low- and middle-income countries

The implementation of trauma registries is a critical component for improving safety and trauma care world-wide. Trauma registries also play a key role in reducing injury-related mortality rates. However, there are relatively few trauma registries in low-and middle-income countries (LMICs) where the burden of injury is highest— largely due to financial and human resource barriers. Substantial discrepancy exists in accessing quality trauma care for patients living in these countries compared to those in higher-income nations. In recent years however, there has been a bottom-up movement of trauma registry development in LMICs that has leap-frogged many of the inefficiencies that plagued trauma registries in higher-income nations. Notably, this includes the development of electronic trauma registries using pared-down datasets to collect only the most necessary patient information to measure key outcomes. Yet, dissemination of these strategies is still fragmented and other hospitals looking to develop their own trauma registries lack the information necessary to make important design and implementation decisions. The primary objective of this scoping review was to examine the most common strategies used in the development and implementation of trauma registries in LMICs, including an assessment of the most frequent fields collected and outcomes measured. The review was carried out using the five-stage framework put forth by Arksey and O'Malley for scoping reviews. Preliminary results indicate that trauma registries in LMICs show substantial overlap of several fields used most commonly in the assessment of key outcomes, thus indicating a potential for the establishment of a common minimum dataset to be used in other low-resource contexts. Such a dataset would be beneficial for other hospitals in developing their own TRs in the future, and ultimately help improve access to higher quality trauma care in more LMICs globally.

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The impact of multiple rounds of indoor residual spraying on malaria incidence and hemoglobin levels in a cohort of Ugandan children

Problem: Malaria is the leading cause of morbidity and mortality in Uganda, with some of the highest levels of malaria transmission intensity in the world. Indoor residual spraying of insecticide (IRS) is an important control intervention used in targeted areas in Uganda. The objective of this study was to estimate the effect of IRS activity, including the longevity of its effect, on malaria incidence and hemoglobin levels in a cohort of children in Nagongera sub-county, Uganda. A dynamic cohort of children was enrolled in Nagongera, Uganda starting in 2011. Households were randomly selected from enumeration surveys and all eligible children aged 0.5–10 years enrolled from 107 households. Malaria was diagnosed using passive surveillance and defined as a fever and the detection of parasites by microscopy. The first 3 rounds of IRS utilized a carbamate (bendiocarb) approximately every 6 months and a fourth round utilized an organophosphate (pirimphos-methyl) with plans to administer every 12 months. The analysis included data through June 20, 2017 and Poisson generalized linear model with a log link function.

Results: There were 384 children with 2,874 incident episodes of malaria and an average of 2.0 episodes per year per person over the entire study period. The number of incident malaria episodes per person year after the implementation of IRS was reduced by 79% with the age at first episode of malaria increasing to 6 years old from 4.8 years pre-IRS. Hemoglobin levels significantly increased by 11% by IRS round 4 and by over 1 g/dL, when compared to pre-IRS levels. The largest reductions in malaria occurred within the first two to seven weeks of IRS implementation, coinciding with high household coverage. A rebounding of cases occurred several weeks after the spraying round finished, with large variation between the rounds. We also found that larger households were associated with a larger reduction following IRS compared to smaller households.

Lessons: Our study supports the policy recommendation of IRS usage in a stable and perennial transmission area to rapidly reduce the transmission and also that the most significant reductions in incidence were observed when high household coverage was obtained.

Main messages: Our study demonstrated that repeated IRS activity in a high transmission setting in Uganda with high insecticide treated net coverage, had a significant impact on malaria incidence and haemoglobin levels in children, with 79% reductions in incidence and 11% increase in haemoglobin.

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The associations between malaria, interventions, and the environment: a systematic review

Issue: Malaria is the most prevalent vector-borne disease and particularly vulnerable to climate. Impacts of climate change on malaria is a source of controversy given the complex and multifaceted connections between malaria transmission, socioeconomic conditions, climate, and other environmental determinants. Understanding the relationship between malaria burden and the various determinants of risk is needed to further inform the relationship between climate change and malaria. Furthermore, malaria mainly affects the poorest areas of the world, with generally dramatic consequences for children under five. It hinders growth and economic development and perpetuates the spiral of poverty.

Objective: A systematic review was conducted to evaluate the associations between malaria risk, environmental factors, and interventions. Five electronic databases (CAB Abstracts, EMBASE, Global Health, MEDLINE and ProQuest Dissertations & Theses) were searched for studies that included both the effects of the environment and interventions on malaria within the same statistical model. Studies were restricted to quantitative analyses and health outcomes of malaria mortality or morbidity, outbreaks, or transmission suitability.

Results: A very limited number of studies have simultaneously evaluated both environmental and interventional effects on malaria risk (11 out of 2,248 articles). In general, environmental effects on malaria, while controlling for the effect of interventions, were variable and showed no particular pattern while bed nets ownership had a significant protective effect while controlling for environmental variables.

Lessons to date: Poor statistical reporting and a lack of common metrics were important challenges for this review, which must be addressed to ensure reproducibility and quality research. A comprehensive or inclusive approach to identifying malaria determinants using standardized indicators would allow for a better understanding of its epidemiology and relationship to climate change, which is crucial to improve future malaria risk estimations.

Main messages: More comprehensive research is needed, when examining the determinants of malaria and should include interventions, environmental factors, and socio-demographics, which would allow a better understanding of malaria epidemiology, including its relationship to climate change.

Standardization of indicators would ensure improved comparability between studies as well as a common approach to reporting the results, which should minimally consist of effect measures and associated confidence intervals for all variables included in a model. This will allow for the pooling of data and future work should also include clear descriptions of variables and categorizations, considerations of timescale, units of measurement, and lagged effects.

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Campylobacter jejuni infection and household-level factors are associated with childhood growth in Mirpur, Bangladesh: An analysis of the MAL-ED Study

The dual burden of enteropathogen infection and childhood malnutrition continues to be a global health concern and a leading cause of morbidity and death among children. *C. jejuni* infection, in particular, continues to be highly prevalent in low and middle income countries, including Bangladesh. Understanding the etiologic agents of enteric infection and the factors associated with transmission and growth provides a critical step towards addressing this problem.

We examine longitudinal data to evaluate the trajectories of change in child growth, and identify the association with *C. jejuni* infection and household-level factors. The study analyzed data from 265 children participating in the Etiology, Risk Factors, and Interaction of Enteric Infections and Malnutrition and Consequences for Child Health (MAL-ED) Study in the densely populated site of Mirpur, Dhaka, Bangladesh. We applied latent growth curve modelling to evaluate the trajectories of change in height, as measured by height-for-age z-score (HAZ), amongst children 0-24 months of age. Household-level risk factors were included in the model as time-invariant covariates. Asymptomatic and symptomatic *C. jejuni* infections were included as lagged time-varying covariates. An inverse association was found between increasing age and HAZ. Greater maternal education, improved water source, and treatment of water were positively associated with HAZ. *C. jejuni* infection was more prevalent with increasing age, with over 70% of children 18-24 months of age testing positive for infection. A positive episode of infection in the preceding three-month interval was associated with decreased HAZ at 12, 15, and 18 months of age. The results indicate that maternal education and household-level factors have a positive effect on child growth trajectory while *C. jejuni* infection has a negative effect on HAZ at specific age intervals. Further analyses will explore the relationships between the household-level factors and *C. jejuni* infection, particularly how maternal education moderates the effect of household factors on HAZ.

Main message: *Campylobacter* infection is increasingly prevalent in children in the first 24 months of life; however, its negative impact on growth is more significant before 18 months of age. WASH factors have a negative effect on child growth, while maternal education has a positive effect on child growth and may also moderate the negative effect of some of the factors on growth. The models developed can be applied to other countries and regions, particularly urban settings, to determine whether the same effects are seen, which will ultimately guide public health interventions.

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La sécurité alimentaire des ménages et la diversité alimentaire en Haïti

Les Nations Unies ont souligné l'importance d'atteindre Zéro faim dans les objectifs de développement durable. Pour atteindre cet objectif, il est nécessaire de comprendre comment la sécurité alimentaire et la qualité de l'alimentation interagissent lorsque les disponibilités alimentaires nationales sont adéquates et insuffisantes. Cependant, les niveaux de sécurité et de qualité alimentaire des Haïtiens (un des pays les plus pauvres au monde) durant la période de soudure et de post-récolte, sont peu documentés, malgré leur lien avec la santé.

Notre étude vise à mesurer le niveau de la sécurité alimentaire (pour les ménages) et de la diversité alimentaire des mères et des enfants (de 6 à 23 mois) entre la période de soudure et la saison des récoltes.

Pour mesurer les différences saisonnières dans la diversité alimentaire et la sécurité alimentaire, deux collectes de données ont été réalisées; la première au printemps 2017 (du 7 mars au 12 mai: période de soudure) et la deuxième à l'été 2017 (du 3 juillet au 30 août: saison des récoltes). Les données ont été récoltées à l'aide d'entretiens quantitatifs auprès des mères d'enfants de moins de 5 ans. Le questionnaire de l'entretien comprenait des questions sur le statut socioéconomique du ménage, un rappel alimentaire de 24 heures non quantitatif pour les mères et les enfants de moins de deux ans pour déterminer la Diversité alimentaire minimale de la femme (DAM-F) et la Diversité alimentaire minimale de l'enfant (DAM-E) et les questions de l'Indice domestique de la faim (IDF) utilisés pour évaluer l'insécurité alimentaire.

Les résultats indiquent que les taux d'insécurité alimentaire sont élevés et la qualité alimentaire problématique. Dans cette étude, 37.7% des ménages durant le printemps et 31.1% durant l'été présentaient une faim sévère. L'ensemble des mères ayant une DAM-F était de 22.3% durant le printemps et 20.5% durant l'été. Pour les enfants, 21.7% et 21% respectivement avaient une DAM-E.

Des analyses plus poussées ont permis de déterminer des associations entre certaines variables sociodémographiques (la région de l'étude, le niveau d'étude de la mère, la possession de bétail) avec le niveau de sécurité alimentaire et de diversité alimentaire pour les deux saisons de l'année.

Les résultats de cette étude approfondiront notre compréhension des facteurs associés à l'insécurité alimentaire, fourniront des enseignements pertinents sur la lutte contre la faim et permettront de préparer des pistes de programmation pour l'amélioration de l'accès à une alimentation suffisante et de qualité.

Selvanandan, Vamini

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Community action toolkit for reducing child marriage and teen pregnancy

Issue: Zambia has one of the highest rates of child marriage and teen pregnancy in the world with nearly one in three girls (31%) becoming a bride by age 18 and a similar proportion (29%) becoming pregnant by age 18. Child marriage can have profound physical, intellectual, psychological and emotional effects on children and has been linked to decreased opportunity for education, isolation from family, friends and peers, as well as the lack of freedom and participation in community activities. Adolescent pregnancy is associated with poor maternal and child outcomes as well as girls dropping out of school, having fewer economic opportunities and being subject to domestic violence. Community organization and action is a means of bringing people together to address problematic social or health conditions. Communities who take ownership and control of their own affairs are empowered, resilient and self-reliant.

Objective and Methods: The objective was to create a toolkit that can be used to plan community level action on reducing child marriage and teen pregnancy in Zambia. The toolkit was developed through a process of stakeholder consultation, review of evidence-based practices and using a framework for community action. Key components of the toolkit include: finding a home for the initiative, framing the problem and identifying root causes, understanding the issue using community-level data, engaging the right stakeholders, tailoring evidence-based interventions to the local context and measuring and communicating progress towards reducing early marriage and teen pregnancy. This toolkit is intended for use in the Zambian context but can be easily modified for use in other countries. An existing community group can work through the toolkit with minimal facilitation, or it can be used by a governmental or non-governmental organization to facilitate community involvement in planning actions to reduce child marriage and teen pregnancy.

Results: Not applicable given the practice nature of this abstract.

Lessons learned: The importance of creating a tool based on health promotion principles that is applicable for use in a wide variety of communities while being adaptable to local variations in context, culture and values.

Key Messages: The community is an important level for action on key health issues affecting children and adolescents. An easy-to-use toolkit can help communities build action plans that are based on local-level data, evidence-supported interventions and locally identified pathways of change.

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Determinants of sustainability: a case study of a RBF project in Burkina Faso

Many sub-Saharan countries are reforming their health system through results-based financing (RBF) programs, aiming for more and better services. Pilot projects are therefore implemented to set the basis of these reforms. In Burkina Faso, such a pilot was implemented in 15 health districts across 3 regions, involving more than 550 health centres (first or second line facilities). However, after more than 3 years of implementation, this pilot's sustainability is still not guaranteed.

The objective of this study is therefore to assess the level of sustainability of this project by identifying the presence/absence of the different determinants of sustainability. Much resource is often put into such pilot projects worldwide, while too few concerns are given towards their sustainability (through the maintenance of its core elements or its institutionalisation at the policy level). To attain this objective, a case study was conducted. It involved in-depth interviews with a variety of actors (n=37): implementers, decision-makers, health practitioners or external experts from primary health care centres, district/regional hospitals or government agencies and directions. Data was managed and analysed through the QDA Miner © software. A thematic analysis based on a conceptual framework was conducted, as well as a more inductive analysis.

The results show that the RBF project's sustainability level was weak according to an unequal presence of sustainability's determinants; activities are being maintained officially but not fully routinized. Discrepancies between the project's values and those at the individual, organisational or governmental levels were noted to be an important barrier towards sustainability. Project's ownership by key stakeholders also seemed superficial despite the implementers' leadership and actions towards the project's success. The project's objective aiming for greater autonomy for health centres was also in direct confrontation with the Burkinabe's hierarchical health system.

RBF's motivational theory (ex.: primes, supervision) need to be put back into the different contexts where it has been implemented. Many arguments about its inefficiency are already identified (primes are already due, they bring more work or are linked to the national development) and can undermined the project's core mechanisms. Therefore, a more contextual "motivational cocktail" should be elaborated to facilitate the project's sustainability. These lessons should thus be applied to other contexts such as in sub-Saharan countries, maybe more specifically in West-African countries.

Too many health interventions are implemented without taking sustainability into account.

Sustainability goes further than financial aspects and must account for other determinants such as stakeholders' ownership and motivation.

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Findings from a multi-country quantitative survey on reproductive health measures in Central Asia

The Central Asia Health Systems Strengthening (CAHSS) was a five-year project implemented in Afghanistan, Pakistan, Kyrgyz Republic and Tajikistan by the Aga Khan Foundation Canada. A poster highlighting key findings from a 2017 multi-country household survey is being proposed with the objective of illustrating the current situation of family planning and sexual and reproductive health in these challenging contexts. The survey utilized a semi-panel methodology, drawing on a multi-cluster sampling strategy, with a sample size of 1,100 households in each of the four countries. Standard DHS modules were used.

As per the WHO, approximately 214 million women of reproductive age in developing countries who want to avoid pregnancy are not using modern contraceptive methods. This situation is more critical in Central Asian countries where pervasive cultural and religious beliefs contributes to the slower uptake of modern contraception use, and fragile contexts such as Afghanistan where mobility is only one of several hindering factors in accessing family planning. The findings show that the range of married women currently using modern contraception methods in targeted regions is between 29.4 percent and 43.4 percent, although over 82 percent of women can cite at least two methods, with the proportion of women 20-49 years with this knowledge being relatively higher than 15-19 year olds. While changes are not statistically significant since 2014 in contraception prevalence, progress towards knowledge on available options and decision making on the use of contraception is increasing, illustrating a continued need for work on family planning in the region. Additionally, based on contingency analysis (Chi Square tests), variables such as age, education level and type of household (female or male headed) are highly associated with knowledge on contraception methods in Afghanistan, while education level is highly associated in both Afghanistan and Tajikistan. Core lesson from the survey include the need for alternative methodologies and sampling strategies to reach adolescent population in household coverage surveys, as adolescent data in many cases were suppressed due to insufficient cases. The lessons learned from this survey are applicable for replication in other regions of the CAHSS countries and in any other fragile context.

The poster will also present indicators such as availability of contraception without cost, informed choice and payment, information received by health workers on options, teenage pregnancy, and decision-making by women on the use of family planning methods. This poster presentation is aligned with sub-themes 1 and 5 of the conference.

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The evolution, challenges, success and sustainability of dental outreach in Uganda

Background: The Republic of Uganda is a land-locked East Central African country with a population of over 35 million. It is one of the world's 30 poorest countries with a life expectancy of 54 years for males and 55 years for females. Civil unrest has caused disarray in oral health systems, decline in economic, governance, and health indices with all sectors requiring major reform. Economically the entire GDP of Uganda is one tenth of Canada's annual expenditure on healthcare alone. Major barriers to economic growth currently are slow development of infrastructure, inappropriate urban development and low levels of productivity in agricultural and non-agricultural sectors.

The health sector is under financed and is unable to deliver minimum health care requirements to all Ugandans. Communicable diseases such as malaria, HIV and TB impose major burdens of disease and prevalence of hypertension and diabetes is reported to be increasing. Insufficient financial and human resources, poor access to health services, nutrition, sanitation and hygiene make primary health care difficult to access and of inconsistent quality with most obstacles existing in remote and rural areas.

Oral disease is also prevalent in the country with tooth loss due to caries being most prevalent followed by periodontal disease. In addition to this, conditions such as oral cancers, NOMA, and manifestations of HIV/AIDS are also present. The major deficiencies in infrastructure, education, and professional training are the main barriers to optimal provision of oral health care.

Bridge to Health Medical and Dental (BTH) is a Toronto-based organization, aiming to build partnerships with not-for-profit healthcare organizations in under-served regions of the world, to provide high quality medical and dental care, educate local healthcare practitioners and to develop sustainable healthcare systems. BTH operates alongside Kigezi Healthcare Foundation (KIHEFO); a local not-for-profit, non-governmental organization operating in the southwestern region of Uganda to provide sustainable healthcare in a cost-effective manner in the underserved rural communities. Their oral health program provides residents with much needed dental care focusing on elimination of infection and dental pain, which affects nutrition, function, comfort, esthetics and overall well-being and quality of life. It also provides the rural residents with a community-based oral hygiene prevention program.

Dental volunteers provide a wide range of dental services including but not limited to oral hygiene instructions, topical fluoride applications, restorative work, extractions and production of single-day fabricated removable prostheses. The aim is to control dental disease by provision of care and empowering local individuals by educating the public and the local dental officers.

Main Messages:

Being ranked one of the poorest countries in the world, Uganda is deprived of sufficient and often basic necessities. Access to adequate dental and medical care is no exception. Attributed mainly to poverty, deficiencies in infrastructure, lack of education and shortage of trained dental health care providers, Ugandan communities suffer from wide spread, yet often preventable, dental disease, oral pain and infections resulting in tooth loss and negative effects on overall health.

Tasic, Hana

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Prevalence and determinants of antenatal depression in Senegal

Issue/Problem: Antenatal depression is a mood disorder that occurs during pregnancy. It is associated with adverse health outcomes for the mother and infant, including elevated risks of peripartum and postpartum complications, stillbirth, and poor childhood development outcomes. To our knowledge, antenatal depression has not been studied in Senegal, though estimates from other low and middle income countries (LMICs) show that it affects one in four pregnant women. Senegalese women face numerous well-established risk factors for antenatal depression including early childbearing, low education levels, and poverty. The study of antenatal depression in Senegal advances women's and children's health and rights, as it provides evidence of an unaddressed health issue, and a rationale for the integration of mental health interventions into maternal and child health services.

Objectives and Methods: This paper estimates the prevalence and determinants of antenatal depression among pregnant women in Senegal. Data is drawn from baseline surveys from a larger study on group antenatal care in 6 health posts in Senegal's Kaolack district. Participants were 328 pregnant women between the ages of 15 and 45 who answered questions about demographics, empowerment, self-efficacy and completed the Edinburgh Postnatal Depression Scale (EPDS). EPDS scores of 13 and over estimated antenatal depression. Associations with potential risk factors were analyzed using modified Poisson regression to identify relative risks.

Results: The prevalence of antenatal depression among pregnant women attending antenatal care was 28 percent. Risk factors that were significantly associated with antenatal depression include higher parity and lower age, minority ethnicity, and low self-efficacy. Antenatal depression was not significantly associated with age, marriage age, employment, marital status, education level, health-related decision-making, pregnancy-related empowerment, or partner communication.

Lessons to date: Findings suggest that the prevalence of antenatal depression in Senegal is similar to what has been found in other LMICs. Further evidence is necessary to determine how best to address this issue in the Senegalese context, though interventions in other countries have shown that screening and treatment of depression during pregnancy can be done in resource-poor settings with favourable outcomes to both mothers and their children.

Main messages:

1. Prevalence of antenatal depression in the studied sample of Senegalese women was found to be 28 percent, which is similar to what has been found in other LMICs.
2. Risk factors that were found to be significantly associated with antenatal depression were age and parity, ethnicity, and self-efficacy.

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Santé mentale au Mali : Développement d'outils d'évaluation culturellement adaptés et portrait préliminaire de la situation

Enjeu : Au Mali, il n'y a pas de véritable formation en santé mentale (SM) pour les agents de santé (AS) avec pour résultat que peu de personnes reçoivent des soins appropriés. Pourtant, des entretiens menés auprès de ces AS montrent une présence importante de troubles somatiques médicalement inexpliqués, de dépression post-partum et de troubles de stress post-traumatique.

Objectifs : Le projet a pour objectif de développer des outils culturellement adaptés afin de mieux prendre en compte les problèmes de santé mentale : 1) une formation sur l'évaluation des problèmes de SM, 2) un outil de dépistage des principaux troubles de SM et 3) des arbres décisionnels sous forme d'affiches permettant de prendre en compte les problèmes de SM. Le projet vise également à évaluer l'impact de la formation sur la capacité des AS de diagnostiquer les principaux troubles de SM.

Méthode : Les activités réalisées ont été pensées dans une visée de co-construction des savoirs et d'adaptation culturelle des outils. Elles s'inscrivent dans un processus de recherche-action visant à dresser un portrait de la situation actuelle concernant la SM. Premièrement, trois groupes de discussion ont été menés auprès des AS et des tradi-thérapeutes afin d'échanger sur la souffrance psychique et ses manifestations. Deuxièmement, une formation à l'évaluation de la SM d'une personne a été effectuée. Troisièmement, deux recensements systématiques des troubles de SM, d'une durée d'une semaine, ont été réalisés en milieu urbain et rural.

Résultats : Des outils culturellement adaptés ont été développés : 1) une formation sur l'évaluation de la SM d'une personne, 2) Un outil de dépistage des principaux troubles de SM et 3) Trois arbres décisionnels facilitant l'évaluation des troubles de SM en période périnatale ainsi que chez les enfants, les adolescents et les adultes. Vingt-six AS ont été formés à l'évaluation de la SM (médecins, résidents en médecine, infirmiers). Les résultats des recensements indiquent que les AS ont tendance à identifier des symptômes isolés plutôt que des troubles de SM. Toutefois, le nombre des symptômes identifiés augmente graduellement au fur et à mesure qu'ils sont sensibilisés à la souffrance psychique.

Leçons tirées à ce jour : D'autres activités de prévention et de formation sont nécessaires afin de sensibiliser les AS et la population aux problèmes de SM.

Principaux messages : Les problèmes de SM nécessitent d'être abordés systématiquement lors des consultations en première ligne.

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Global incidence and prevalence of violence against doctors and nurses: a systematic review and meta-analysis of gender inequality

Problem: Workplace violence (WPV) against healthcare workers (HCW), rapidly increased in healthcare facilities. Women inequality as a global problem and in light of the paucity of systematic reviews on this common issue, we aimed to assess the prevalence of these incidents and any gender-related pattern, to focus light on its solutions for fear of its consequences.

Methods: In this systematic review and meta-analysis (SR/MA), we searched five databases including PubMed, Scopus, ISI, Science Direct, and EMBASE, for reports of violence in hospitals from 1/1/2006 to 31/12/2016. Studies of cross-sectional and cohort designs, reporting the prevalence of WPV, were included in the analyses. Heterogeneity was tested by subgroup analysis. Quality assessment (QA) was performed using NIH risk of bias tool.

Results: With 5277 studies initially found, 195 were eligible for qualitative analysis and 179 for quantitative analysis. The overall estimate for female event rate was 0.448 (95% CI 0.423-0.553). Eastern Mediterranean region had the highest prevalence of 53.3%. Female HCW had 48.8% higher risk with statistically significant (OR=1.145, p-value=0.031). Portugal was the lowest showing only 13.1% of overall violence rate. Prevalence has declined since 2011 from 0.531 to 0.464. Network meta-analysis (NMA) indicated that highest incidence of violence was for verbal abuse. According to the quality of papers, significant risk of bias was found using Egger's regression test with P-values of (0.006).

Lessons: The validity of our analysis is supported by three factors. First, we have confidently and properly identified all relevant articles through the rigorous and extensive literature search. Second, most of the studies included in our analyses were of low risk of bias, assessed by National Institution of Health (NIH) assessment tool for observational studies. Third, choosing the network analysis approach to put different kinds of perpetration in a ranked order resulted in applying evidence to a wider range of individuals giving more reliable results. Finally, the big sample size of a large number of identified and analyzed studies made our findings highly reliable compared to previous meta-analyses.

Conclusion: In Africa (Ethiopia), females had triple the risk of violence than males. Eastern Mediterranean region had the highest prevalence, followed by European, African and American Regions. Portugal had the lowest prevalence rate, while Slovakia and Lebanon had the highest prevalence. Verbal abuse was the top-ranked type of violence against women.

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Citizen voice and action (CVA) as a local level advocacy methodology for the advancement of women and children's health and rights in rural Tanzania

Background: Kigoma Region has 6 Administrative Districts, 8 Councils with an area of 45,066 Sq kms which is 4.8% of total land mass. According to government records, there are 278 health facilities in the region. 246 of these facilities offer reproductive child health services. 23 facilities provide comprehensive emergency obstetric newborn services (CEmONC)-(6 Hospitals and 17 Health centres). The coverage of coverage of CEmONC services in Health centers stands at 53.1% (17/32) with 9 facilities undergoing an upgrade to provide CEmONC services by June 2018. The region is currently facing a challenge of inadequate human resources for health (68%), inadequate health infrastructure (buildings, staff houses, power and water). Most of the interventions are funded by partners which would pose a challenge of sustainability of actions.

This poster is an attempt to explain how the SUSTAIN Kigoma project is attempting to address key challenges through the citizens voice and action (CVA) local level advocacy methodology. Supporting Systems to Achieve Improved Maternal, Newborn, and Child Health (SUSTAIN) Kigoma is a four-year (December 9, 2016 – December 31, 2020) project to support Maternal Newborn and Child Health (MNCH) in Tanzania. The project is implemented in six rural districts of Kigoma Region – Kigoma Rural, Buhigwe, Kasulu, Kibondo, Kakonko and Uvinza Districts.

The Enhancing Nutrition Services to Improve Maternal and Child Health in Africa and Asia (ENRICH) is a multi-year, multi-country program funded by Global Affairs Canada that aims to improve the health and nutrition status of mothers, newborns and children in select regions of Bangladesh, Kenya, Myanmar, Pakistan and Tanzania. ENRICH is implemented by World Vision Canada (WVC) and The Micro-nutrient Initiative (MI), with WVC as the consortium lead. This consortium works closely with other Canadian and international partners including HarvestPlus (H+), the Canadian Society for International Health (CSIH), and the University of Toronto's Dalla Lana School of Public Health (UofT).

Main messages:

1. Governments should be accountable to their people particularly children and their families in the most disadvantaged and vulnerable communities.
2. Governments and other stakeholders should create pathways for citizens to monitor performance of services.
3. Greater efforts will be needed, especially at the community level, in order to empower and equip citizens effectively to ensure accountability

Conclusions: Citizen Voice and Action includes a number of aspects of social accountability bringing together a number of complementary and world recognized practices

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Haitian perceptions of transactional sex with peacekeepers: A cross-sectional mixed methods analysis

Issue/Problem: The United Nations (UN) sanctioned 6 peace operations in Haiti between 1995 and 2017 to address the political instability that characterizes failed states. Allegations of peacekeeper sexual exploitation/abuse (SEA) have gained media attention. Women and children are disproportionately affected by transactional sex-the exchange of goods and services for sexual activity. The UN maintains a zero-tolerance policy on the SEA of civilians. However, do Haitian perceptions of transactional sex align with the UN's zero tolerance policy?

Objective: To analyze gender differences within community-level perceptions of civilian-peacekeeper sexual interactions during the United Nations Stabilization Mission in Haiti (MINUSTAH: 2004-2017). This study nuances the understanding of transactional sex according to community-level perceptions, thereby strengthening evidence-based advocacy for SEA survivors.

Methods: Using Cognitive Edge's SenseMaker®, cross-sectional qualitative and quantitative data were collected by Haitian research assistants over an 8-week period (June - August 2017). The study was implemented by two Haitian partners and interviews were conducted around 6 UN bases. In total, 583 participants shared narratives related to civilian-peacekeeper sexual interactions. The participants then interpreted their narratives by marking their perceptions on a variety of questions. The self-coded perceptions were analyzed quantitatively to determine patterns in perceptions; a phenomenological analysis of the narratives complemented the quantitative results.

Results: Preliminary results indicate gender variations among perceptions of civilian-peacekeeper sexual interactions. Females were more likely to perceive sexual interactions as relationships whereas males more often perceived them as friendly. Also, females were more likely to report a desire to engage with MINUSTAH compared to males. Furthermore, females were more likely to perceive the peacekeeper as supportive whereas males conceptualized the peacekeeper as authoritative. Both males and females perceived MINUSTAH peacekeepers as initiators of sexual interaction who maintained disproportionate power/control.

Lessons to date: Male and female Haitian civilians both perceive MINUSTAH peacekeepers as powerful initiators of sexual interactions suggesting there is no gender variation among perceptions of non-consensual sexual activity. However, there is evidence that females are more invested in engaging with MINUSTAH given that sexual interactions are conceptualized as relationships with supportive partners. Gender stratified analysis of peacekeeping data is beneficial to understanding why women and girls engage in transactional sex.

Main Messages: Gender differences within perceptions of peacekeeper-civilian sexual interactions exist despite the common perception that peacekeepers maintained disproportionate power and control. This study is an empirical steppingstone to understanding how transactional sex impacts the lifespan of women and children during peace operations.

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Community-led problem identification in slum communities

Issue/Problem: The state government of Odisha, India, introduced legislation to provide approximately 1.2 million slum dwellers with security of land tenure in August 2017. Land rights encourage public and private investment in housing infrastructure. Investment in slum infrastructure is currently lacking because slum dwellers fear eviction and displacement. Additionally, public authorities refuse to develop infrastructure in settlements that are classified as illegal. A lack of infrastructure results in poor-quality housing, overcrowding, and inadequate water sanitation and waste disposal. These factors intertwine with the social determinants of health to influence disease and illness incidence and prevalence in slum communities.

Objectives and Methods: This cross-sectional, qualitative study will take a participatory action approach to identify unique health problems in the Sai Baba Sahi community in Gopalpur, Odisha. Participants will be recruited through snowball sampling and data collection will occur through semi-structured interviews in group settings. A thematic analysis will be conducted to extract core themes related to health and land rights (i.e., behavioural practices, water sanitation, infrastructure development, and monsoon season protocols). To ensure accurate transcription of interviews, translators from the research team and from the community will be involved.

Results: Data collection is currently on-going. Preliminary results from rapport building activities and pilot interviews suggest that land rights are associated with positive health outcomes due to greater investment in housing and community infrastructure. Several community members have indicated that the foremost health-related problems in the slum stem from the lack of hygiene practices (i.e., toilet use and hand-washing).

Lessons: This study is part of a larger scale project that aims to provide the government of Odisha with an array of interdisciplinary strategies to transform legal slums into livable habitats. Therefore, the health-related problems identified by this study will be used to guide slum development and rehabilitation at the state level. Although the generalizability of this study is low, the identification of unique slum problems will reinforce the need for community-led slum rehabilitation and participatory action research in other municipalities.

Main message:

- 1) Slum development and rehabilitation can only occur in legal slum areas designated by the state government.
- 2) Collaboration between the government, non-government organizations, and slum community associations is occurring to ensure the sustainability, efficacy, and cultural-receptiveness of slum rehabilitation.

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The causes of low access to diagnostic imaging facilities in Nigeria

Diagnostic Imaging is an integral part of healthcare because it plays a major role in the diagnosis and treatment of several medical conditions. Access to imaging facilities could save numerous lives in emergency situations, reduce the mortality rates of diseases like pneumonia and breast cancer, improve preventative healthcare, and monitor the recovery and progression of certain illnesses.

The purpose of this research paper is to identify the causes of low access to Diagnostic Imaging facilities in Nigeria. The people most affected by this lack of access are poor and uneducated citizens, most of whom live below \$1.25 a day and are uninsured. This paper conducts a comprehensive literature review identifying the reasons for low access, and possible solutions to these problems. The major factors impeding access to Diagnostic Imaging in Nigeria are poverty, low level of education, unavailability of radiologists and technologists, and the poor state of machines.

Possible solutions include reducing the number of uninsured citizens, improving the educational system, increasing the government's spending on healthcare, increasing the wages of Diagnostic Imaging professionals, encouraging patients to go in for routine exams and check-ups, and creating incentives to attract facilities and professionals to the rural areas.