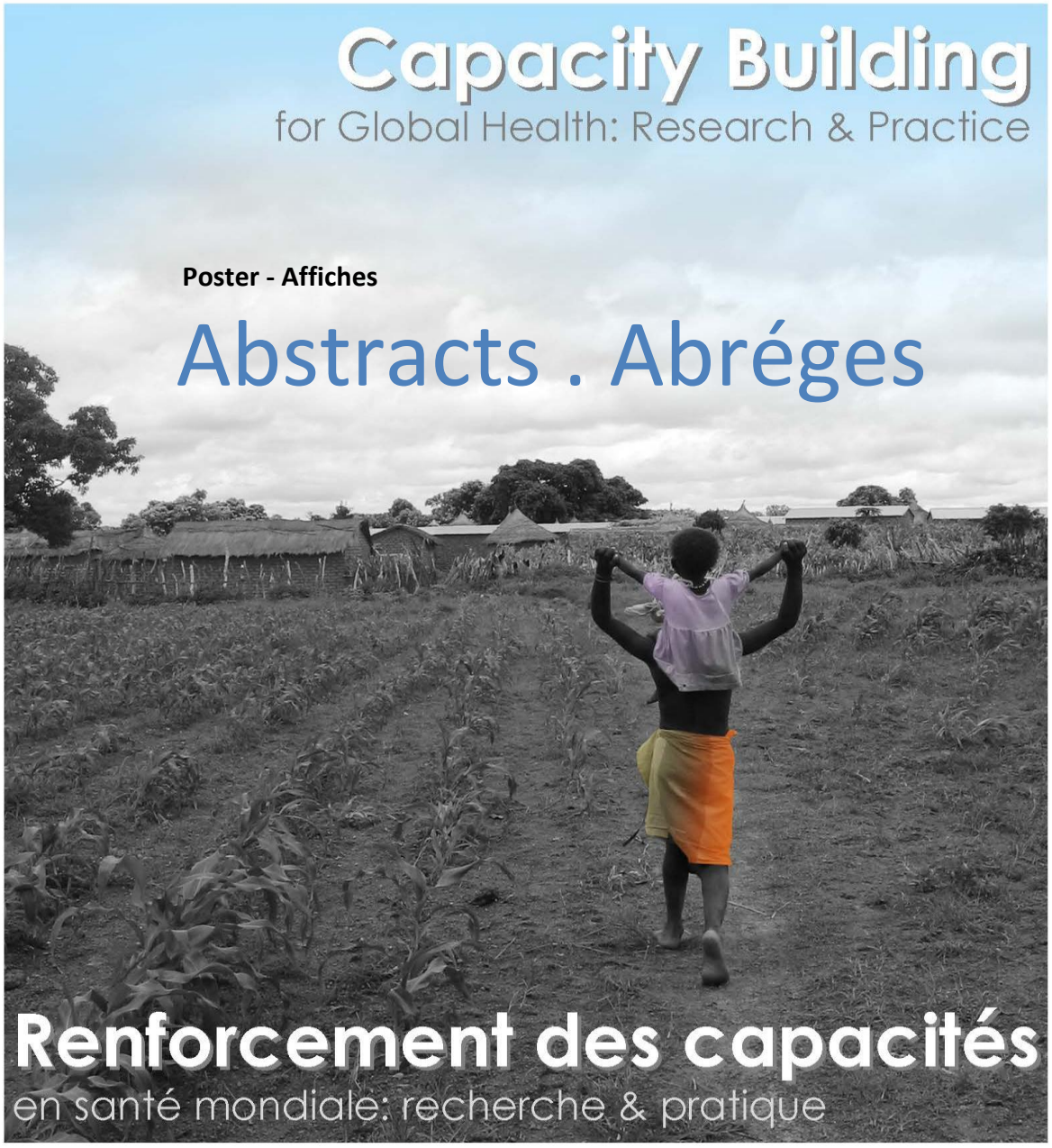

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CANADIAN SOCIETY FOR INTERNATIONAL HEALTH / LA SOCIETÉ CANADIENNE DE SANTÉ INTERNATIONALE

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Abbyad, Marc
Medic Mobile, United States
Co-authors: Bloom, Evan; Root Change; Niles, Kimberly; Child Fund

Strengthening child protection networks post-Ebola in Liberia: Designing and deploying mobile tools to connect vulnerable children to care

Rationale: During the Ebola outbreak in Liberia in 2015, Child Fund and other agencies were tracking and providing support to thousands of children who had become orphans after losing their caregivers to Ebola. Child Fund identified an immediate need to improve the registration and tracking of children in interim care centers (ICCs) and in the community who required access to health services and alternative care.

Objective: Child Fund, Root Change and Medic Mobile partnered to deploy mobile tools to improve efficiencies in the registration and tracking of children in need of alternative care in Liberia.

Methods: This project used human centered design to define the workflow needed to improve tracking and access to services for vulnerable children. Medic Mobile is a non-profit technology company that builds mobile and web tools for community agents in low resource settings. The Medic Mobile platform was configured to use SMS messages to transmit registration and tracking information to a web app that is cloud hosted and can be monitored by program staff. This platform also allows for alert messages to be targeted to community agents when they are advised to follow up with a specific case in their region. The mobile application mirrors registration forms that have been created by the Ministry of Gender, Children and Social Protection.

Results: The Medic Mobile platform has been deployed in one district of Liberia as an active pilot with 40 users. By the end of 2015, this program will scale to 300 users. Access to registration and tracking forms are now available to program staff in real time on the Medic Mobile web application, which allows for better informed response efforts.

Discussion: This project was designed during the Ebola outbreak and much of the workflow focused on the interim care centers to capture registration information on children. As the outbreak was contained, interim care centers were quickly closed and the partners needed to be responsive and redesign elements of the program. By focusing on providing tools directly to social workers and community welfare committees, it allowed the program to be better embedded in rebuilding efforts and plan for a sustainable community engagement post-Ebola.

Conclusion: Well-designed mobile tools, including basic phones with access to SMS, can provide access to meaningful data to improve coordination of alternative care for vulnerable children in Liberia.

Abou Malham, Sabina
Université de Montréal, Université de sherbrooke, Canada-Québec
Co-authors: Hatem Marie; Leduc Nicole Université de Montréal- École de Santé Publique

Influence du contexte sur l'atteinte des effets d'une intervention visant le renforcement du rôle de la sage-femme au Maroc

Objectif: Identifier les facteurs contextuels qui seraient des barrières potentielles au succès du Plan d'Action et qui sont susceptibles d'empêcher l'atteinte de ses effets.

Le cadre conceptuel adopté dérive du modèle de Hatem-Asmar (1997) concernant l'interaction entre les systèmes éducationnel, disciplinaire et socioculturel pour changer un rôle professionnel de la santé; et le cadre de Damschroder et al. (2009) pour l'analyse de l'implantation d'une intervention en santé. Méthodes: Une étude de cas unique avec trois niveaux d'analyse a été choisie. Les données ont été recueillies à partir de multiples sources de données : 11 entrevues individuelles semi-structurées, 20 groupes de discussion, observations d'activités éducatives et des milieux de formation et cliniques, analyse de documents.

Résultats: Sept barrières risquent de compromettre l'atteinte des effets désirés. Elles concernent : le cadre légal, les représentations sociales et le support médiatique au niveau du système socioculturel; le réseautage et les mécanismes de communication, les caractéristiques liées au rôle, à l'environnement de pratique, et le niveau de préparation du système disciplinaire en termes de ressources humaines, physiques.

Discussion: Notre recherche confirme qu'un changement visant le système éducationnel isolément représente une vision réductrice pour le renforcement du rôle des sages-femmes. Une combinaison des conditions contextuelles favorables au niveau des dimensions des trois systèmes est requise pour atteindre le but de la stratégie gouvernementale, soit fournir des sages-femmes qualifiées selon les normes globales de la Confédération Internationale des sages-femmes, capables d'offrir des soins de qualité en santé de la reproduction qui permettront de contribuer à réduire la mortalité maternelle et néonatale.

Conclusion : Un manque de prise en considération des barrières au niveau des systèmes socioculturel et disciplinaire pourra entraver la fourniture d'un professionnel de santé qualifié capable de contribuer à l'atteinte du but de la stratégie nationale de lutte contre la mortalité maternelle et néonatale.

Aboud, Frances
McGill University, Canada
Co-authors: Proulx, Kerrie; OISE. Apriatni, Mandri; University of Mataram

An impact evaluation of Plan Indonesia's early childhood program

Rationale: With most children entering primary school worldwide, low- and middle-income countries are concerned with preparing children for school. We now need to evaluate models of pre-primary education, to see which benefit children's cognitive development, health and nutrition.

Objective: To evaluate: 1) the quality of two Plan-supported models operating on two islands in East Nusa Tenggara, Indonesia, namely the community-based health post model (Paud) and the school-based kindergarten model (Tk); 2) the school readiness and cognitive development of Plan preschoolers in comparison to those attending government-supported preschools; 3) the literacy and math achievement of primary 1 graduates of these programs; and 4) the health and nutrition practices of parents. Comparisons were made between islands and with an evaluation conducted before implementing a literacy and numeracy curriculum.

Methods: A random selection of 30 preschools were observed by trained local research assistants and their qualities rated on 22 items from the Early Childhood Environment Rating Scales, in March 2015. Approximately 150 Plan preschoolers, 5 randomly selected from each preschool, and 150 children from adjacent villages attending government preschools were tested on a School Readiness test, a verbal reasoning test, and a non-verbal reasoning test. Approximately 150 graduates of Plan preschools, randomly selected from first grade classes, and 150 first graders from nearby villages were tested on a 61-item literacy and math achievement test. Mothers were interviewed about their child's recent illness, preventive health practices, and diet; the child's height was taken. Analyses of covariance adjusting for clustering were conducted.

Results: The quality of the kindergarten program was superior to the community program, with means of 4.33 and 3.11, respectively, on a 7-point scale. Both were superior to the government programs which scored well below 2.5. However, island differences were found as a result of a more systematic implementation of the new curriculum on one island. School readiness and cognitive test analyses yielded higher scores for Plan preschoolers on verbal and non-verbal subtests. Primary 1 test analyses showed higher scores for Plan graduates over comparison children (means of 70.9% vs 51.8%). Preschoolers and primary1 students from the higher quality preschools attained higher test scores. Plan's parenting program for parents of these children resulted in higher levels of hand-washing, and greater use of iodized salt and deworming medication.

Discussion: Program quality and implementation features are discussed.

Conclusion: Specific qualities of a preschool program enhance benefits to children.

Cowater International
Human Resources for Health Project in Bangladesh, Cowater International Inc., Bangladesh
Co-authors: Farhad, Nelofar, Directorate of Nursing Education & Services; Costa, Anthonia De, College of Nursing, Mohakhali, Dhaka ; Khatun, Salma, Directorate of Nursing Education & Services ; Khan, Shereen, Human Resources for Health Project in Bangladesh, Cowater International Inc.

An innovative approach for building and sustaining nursing leadership in Bangladesh

Rationale: Nurses in Bangladesh are marginalized on the basis of their gender and profession. They have little voice in policy and few hold leadership posts outside traditional structures. Early in the new millennium WHO and the government saw the need to improve the leadership capacity of nurses if they were to be effective in their workplace and beyond. Over 130 nurses participated in the International Council of Nurses (ICN) Leadership for Change (LFC) program. Since that time, however, little attention has focused on nursing leadership and no mechanisms are in place to support the graduates or to nurture new leaders. Working with the Ministry of Health and Family Welfare to enhance the capacity of the public nursing sector, the Canadian government- funded Human Resources for Health Project in Bangladesh undertook an innovative approach to rebuild the nursing leadership in Bangladesh.

Objective: To develop a national network of nurse leaders to build the capacity of the nursing leadership mechanism towards strengthening the voice of the nursing-midwifery community to uphold their professional image.

Method: Processes used to initiate the Network included survey of existing LFC graduates, two focus group discussion (FGD) with LFC graduates to determine interest in developing leadership support mechanisms, formation of a steering group with ten (10) LFC graduates and holding a number of consultation meetings.

Result: 137 LFC graduates identified out of who 60% responded to the survey. 28% found to be holding formal leadership posts. The focus group discussion led to ready endorsement on the need for a national network called "Bangladesh Nurse Leadership Network (BNLN)" to provide service in 3 priority areas including networking, information sharing and continuing education. The steering group developed the BNLN constitution, vision, mission, values, logo, content of a website and drafted a strategic plan.

Discussion: The most frequently cited areas the respondents were willing to contribute were sharing information, helping with policy, advocacy and mentoring, acting as trainers, working for committees and projects, and helping with image building. 6 Values of the network focused on transparency, accountability, confidence, commitment, trust and innovation. A national conference has been planned to launch the network.

Conclusion: Professional networks provide links among those with the same interest, fostering information exchange, knowledge generation, relationship building and serve as a resource for its members. Of key importance to Bangladesh is the idea that networks also help sustain motivation and generate champions for the profession.

Ahun, Marilyn N.
McGill University, Canada
Co-authors: Aboud, F.E & Marquis, G..; McGill University and Colecraft, E. & Aryeetey, R.; University of Ghana

Maternal and child health, nutrition and development in rural Ghana

Rationale: This study contributes to the small body of research on postpartum depression in Ghana, increasing awareness of its prevalence, risk factors and consequences for child development.

Objectives: The study had two objectives: (i) to determine the prevalence of maternal depression in the year after delivery in Ghana, identify its risk factors, and assess the relationship between postpartum depression and infant morbidity and nutrition and (ii) to extend and validate child development milestones measures by validating cognitive milestones in rural Ghana.

Methods: We conducted secondary analyses on baseline data from 1081 mothers and infants (0-12 months) collected for the Nutrition Links Project in Asesewa, Ghana. Local research assistants administered the survey consisting of the Self-Reporting Questionnaire (SRQ-20), a measure of anxiety and depressive symptoms, and health, nutrition, and demographic measures. For the second objective, we extended the Developmental Milestones Checklist (Prado et al., 2014) by adding cognitive milestones and validated the revised checklist in a subsample (n=330) of the same baseline population as the first study a year later when the children were 10-24 months old.

Results: The prevalence of mothers with depressive symptoms was 26.1%. Increased maternal age, fewer years of education, low dietary diversity, and time since delivery were identified as risk factors for depressive symptoms. Mothers experiencing more maternal depressive symptoms were more likely to have children with increased illnesses and low dietary diversity than mothers experiencing fewer symptoms. Children's cognitive, expressive and receptive language milestones were significantly correlated with their age, dietary diversity, and psychosocial stimulation in the home. The milestones were not significantly associated with weight-for-age and length-for-age. These results confirm the validation of the milestones checklist as an appropriate measure of child cognitive and language development in rural Ghana.

Discussion: These data suggest that mothers with fewer personal and social resources are more likely to experience depressive symptoms which can increase rather than decrease over the first year. Depressed mothers are less able to care for themselves and their children, thus negatively affecting the child's mental and physical development. This research highlights factors which potentially increase susceptibility to depression and can be used to develop interventions to help reduce the burden of postpartum depression.

Conclusion: Depression is detrimental to the health and functioning of mothers and is associated with poorer health and development of their children.

Ajuzieogu, Obinna
University of Nigeria Teaching Hospital, Enugu, Nigeria
Co-authors: Amucheazi Adaobi, Achi Joseph, Onyeka Tonia

Hand Hygiene Improvement following Ebola Viral Disease Campaign in a Nigerian Hospital

Background: In the face of the Ebola Viral Disease (EVD) threat, the infection control unit intensified campaign on hand hygiene in the hospital.

Objectives: To compare compliance with hand hygiene (HH) rules amongst anesthesiologists in the theater before and after the EBVD awareness.

Methods: This was a study between March to December 2014 in the University of Nigeria Teaching Hospital using the 'WHO SAVE LIVES' data form. Anesthesiologists were covertly observed at random from the preanesthetic preparation to patient handover for compliance to hand hygiene rules. Data collected was divided into a pre EVD and Post EVD periods. Compliance with the guidelines was calculated as: Compliance %= Actions/opportunities x 100%. Hand-Hygiene opportunities monitored were: (i) before patient contact, (ii) before clean procedure, (iii) after exposure to body fluid, (iv) after patient contact, (v) after contact with patients' surroundings. The results were subjected to statistical analysis.

Results: In the pre-EVD period, an average of 154±8 HH opportunities were observed per hour of anesthesia and an average of 150±10 HH opportunities were observed per hour of anesthesia in the latter period. The mean HH compliance rates were 2.5% in the initial phase and 45% in the later period.

Conclusion:

Compliance with guidelines was significantly poor in the pre-EVD period and improved in the latter period. It is hoped that this positive attitude will be sustained. We recommend regular hand hygiene awareness campaign in hospital

Ajuzieogu, Obinna
University of Nigeria Teaching Hospital, Enugu, Nigeria
Co-authors: Amucheazi Adaobi, Achi Joseph, Ezike HA

MEETING LOCAL NEEDS IN NEONATAL ANESTHESIA TO IMPROVE OUTCOME IN SURGERY

Background: Inadequate pediatric surgeons and anesthesiologists have been cited as reasons for poor surgical outcomes in Africa. Thus, basic neonatal surgical procedures are not carried out in many hospitals. Attempts to improve this situation have been hampered by poor socioeconomic conditions and government policies. Few available adult anesthesiologists anesthetized children, and indeed, neonates with results that are often not satisfactory. On this background, a dedicated pediatric anesthesiology unit was created in our hospital. Our aim was to provide safe pediatric anesthetic care in the hospital/region. This led to increased referrals of primary neonatal surgical cases to our hospital.

Aim: Comparative audit of complexities of neonatal surgery/anesthesia in the last five years compared to the previous.

Methods: We examined the theater records and outcome of all neonatal surgeries five years before (Period A) and five years after (Period B) specialization. Capacity building, local adaptation, funding, and sustainable development were studied.

Results: There were no demographic differences of the patients seen. Table 1 summarizes the results.

Conclusion: The formation of a local pediatric surgery team inclusive of specialization in pediatric anesthesiology, has improved the complexity and outcome of our neonatal surgeries. Period A Period B

Tracheoesophageal Atresia	2	5
Biliary Atresia	0	3
Cloacal Anomaly	0	2
Imperforate Anus	1	4
Hydrocephalus	0	20
Conjoint Twins	0	1
Pediatric Anesthesiologist	0	2
Pediatric monitors	nil	basic
Overseas Experience	nil	Yearly
Pediatric surgeons	2	4
Pediatric Anesthesiology funding	nil	Yearly budget

Alexandra, Liu
McMaster University, Canada
Co-authors: Ge, Yipeng; McMaster University, Liu, Alexandra; McMaster University, Shanbhag, Deepti; McMaster University; Downey, Bernice; Cancer Care Ontario, McMaster University; Hill, Karen; Juddah's Place, Jamieson, Elva; Juddah's Place, Martin-Hill, Dawn; McMaster University

Integrating Western biomedicine with traditional Indigenous healing practice: a literature review and development of a framework for culturally safe health care delivery

Significant health discrepancies persist between Indigenous and non-Indigenous populations, with Indigenous communities worldwide consistently experiencing comparatively worse health outcomes. These discrepancies can be partially explained by the lack of suitable, culturally-appropriate services and traditional care options in mainstream health institutions, which deters Indigenous patients from seeking timely care and generates negative experiences.

Objectives: The aim of this project is to determine the common themes and characteristics underlying current promising integrative care practices and to disseminate these principles of collaboration to inform institutions seeking to provide improved cross-cultural care. Methods: First, an extended literature review was conducted in order to establish a comprehensive list of promising practices at various levels (institutional, clinic, individual, etc.). This information was compiled as a compendium for reference for service providers, academics, and community members. Using the principles established by this brief review of the literature, a local co-operative clinical and traditional healing practice was then examined. This practice is led by Dr. Karen Hill and Elva Jamieson and is called Juddah’s Place, located in Ohsweken, Ontario, Canada within the Six Nations of the Grand River territory.

Results: The existing literature identifies certain key elements of the successful integration, including mutual respect, trust, and equalized power balance. The patient experiences and opinions at Juddah’s Place were collected and analyzed in order to build a stronger evidence base for practice protocols. Emerging themes in the integrative care model of Juddah’s Place has validated the characteristics identified in literature, which include: client autonomy, mutual respect, holism in health and wellbeing, non-hierarchical relationships, patient-centred care, and an active patient role.

Conclusion: Ultimately, recommendations for an improved framework to reduce conflict and improve the experience of all Indigenous patients, regardless of the system of medicine they desire, will be constructed and presented in the form of a practice guideline for physicians. This protocol will inform primary health care providers on how to work collaboratively with traditional healers in order to deliver a culturally-respectful health care experience for Indigenous patients that seek traditional medicines alongside Western biomedicine. By providing this educational resource for physicians, we hope to contribute to building a more culturally-safe landscape for Indigenous patients to access care within mainstream biomedicine.

Allen-Scott, Lisa
Alberta Health Services/University of Calgary, Canada
Co-authors: Allen-Scott, L.K., J.M. Hatfield, K. Orsel, F. van der Meer, M. Manyama and S. Bastien

'We are not going anywhere, we have no legs' - Using a systems thinking approach to build capacity for a soap making social enterprise in Tanzania.

Rationale: Social entrepreneurship involves sustainably addressing long-standing social problems and developing innovative solutions to do so. Whilst social enterprise has been proven effective at generating social change around the world, social, economic, political and physical influences must be considered to minimize unintended effects. Systems thinking is a mechanism for building capacity to understand the complexities of social enterprise and its associated unintended effects in four archetypes: underachievement, relative achievement, out of control and relative control. Here, we propose a novel method for building capacity to understand and minimize the unintended effects of social entrepreneurship.

Objective: To build capacity for minimization unintended effects of a soap making social enterprise in Tanzania.

Methods: Two 'think tanks' discussing the local soap making enterprise were conducted in May of 2015. The 'think tank' approach is an adapted version of the WHO Systems thinking for health systems strengthening framework, which proposes 4 essential steps: (1) recruitment of the transdisciplinary 'think tank'; (2) collective brainstorming; (3) unintended effect conceptual mapping; and (4) adaptation and redesign. 'Think Tank #1' included a local women's group central to the development of the local soap making social enterprise. 'Think Tank #2' included local traditional and government leadership as well as municipal business leaders. Corroboration between the Allen-Scott et al. (2014) Public Health Intervention Unintended Harm Typology and the Trivedi and Misra (2015) Social Entrepreneurship Archetypes were used to develop guiding questions for the 'think tank' process. Unintended effects and the underlying factors associated with a soap making social enterprise were analyzed using thematic analysis.

Results: Underlying factors that influence the unintended effects archetypes include: (1) limited resources; (2) inability to identify feasible market opportunities; (3) variability in the environment; (4) competition among entrepreneurs; and (5) political influences. Participants of Think Tank #1 identified a key underachievement bottleneck when attempting to move the skill of soap making into a soap making social enterprise.

Discussion: Next steps include building capacity for business development and initiating equitable partnerships between the women's group and key stakeholders at different system levels. Building capacity to take local ownership of the soap making enterprise will involve a deep understanding of systems influences and individual-level capacity building.

Conclusion: Explicit use public health unintended harm and social entrepreneurship theory during development of social enterprise may assist in the minimization of harmful unintended effects.

Allison, Jill
Memorial University of Newfoundland, Canada
Co-authors: Dr. Shree Mulay

Things fall apart: Decision making for international training programs in the wake of disaster

Rationale: The InSIGHT program is a global health educational opportunity for pre-clerkship medical students. The situation surrounding InSIGHT 2015 in Kathmandu Nepal required rethinking and re-organization of the plan in collaboration with our partners. In the wake of changing environmental, political and social conditions, global health training programs must be prepared to make decisions about educational, logistic and safety issues while maintaining opportunities for learning and sustainability of programs and partnership.

Objective: The program introduces students to the social, cultural and political determinants of health in a flexible, grounded and responsive manner that incorporates humanities and arts in creative ways. In light of the earthquakes in April and May, we had to make decisions about whether or not to continue our program. This paper addresses the institutional, personal and collaborative processes involved in that process.

Methods: Through consultative meetings online with partners in Nepal, with university officials, Risk Managers and with students registered for the program, we devised an algorithm that would enable us to assess the positive and negative aspects of cancelling or going forward. This algorithm included safety, local resource capacity (material and human), respect for partners, learning and teaching potential, experiential risks and opportunities, local social conditions, costs and personal viewpoints.

Results: The algorithm provides an opportunity for many voices to be heard. It provides a flexible and ongoing assessment of a fluid circumstance in Nepal during the aftermath of the quake.

Discussion: Global Health Offices often make decisions about student electives and program opportunities after arrangements have been made. Decisions cannot be made lightly since completion requirements can be at stake and alternative training opportunities may not be available. Educational opportunities are possible in a changing situation and can be positives within a complex array of potential negatives. These need to be framed realistically. The algorithm can be applied to changing situations as a decision-making tool for global health offices. The tool can account for changing objectives without risking health and education or creating undue hardship for partners.

Conclusion: Changing social, environmental or political circumstances in a training site must be carefully assessed for the potential risks and benefits and safety and accountability must be factored into decisions when there is a known change in circumstances. However, the educational and partnership potential continues and programs can sometimes be re-organized to accommodate the change without being high risk or exploitive.

Anushree, Dave
McGill University, Canada
Co-authors: Pringle, John; McGill University, Hunt, Matthew; McGill University

Ethical Considerations Associated with the Use of Social Media in the Public Health Response to the 2014 Ebola Outbreak

Social media has played and continues to play a vital role in communication and response to the 2014 Ebola outbreak.

Rationale: There has been limited discussion about ethical considerations of using social media during the Ebola outbreak.

Objective: The objective of this research is to identify ethical considerations associated with the use of social media in the pubic health response to the Ebola outbreak, and analyze the potential ethical benefits and burdens associated with these technologies.

Methods: We reviewed the academic and gray literature on Information and Communication Technology (ICT) use during the Ebola response. Sources included blog posts, news articles and reports, YouTube videos, Twitter and Facebook profiles of organizations involved in Ebola response. We also reviewed literature related to technology ethics, focusing on discussion of ethical considerations related to ICTs. We analyzed the collected literature to identify ethical issues associated with the use of social media and related technologies during the outbreak response.

Results: The use of social media as a communication and response tool is associated with important benefits yet is also associated with ethical considerations. Identified benefits include the improved ability to communicate with previously marginalized or vulnerable people, new possibilities for advocacy and awareness raising, the capacity to reach more people with information about the disease than would be possible with more traditional communication mechanisms. Ethical considerations that were identified, however, include issues related to data privacy and security, concerns for the possibility and need for informed consent, the potential to undermine dignity or contribute to stigma, the spreading of fear and false information, and equity concerns where the most disadvantaged citizens have less access to social media and are therefore less likely to receive important public health messages.

Discussion: The results of our analysis suggest that while there are important benefits to using social media in a public health crisis, there are also important ethical considerations associated with using social media as part of the response to an outbreak that warrant careful attention. While harnessing the potential of social media for communication and awareness raising, policy makers and public health practitioners should seek to minimize ethical issues associated with these technologies.

Conclusion: The knowledge derived from this research can help to advance dialogue and critical analysis about ethics and social media use during infectious disease outbreaks leading to better informed and responsive ethical decision-making when using social media for epidemic responses in the future.

Antonipillai, Valentina
McMaster Univeristy, Canada
Co-authors: Supervisor: Baumann, Andrea; McMaster Univeristy; Thesis committee members: Hunter, Andrea; McMaster University & O'Shea, Tim; McMaster University

Impacts of the Interim Federal Health Program on healthcare access and provision for refugee claimants in Canada: A Stakeholder Analysis

Rationale:

Refugee claimants experience increased health needs upon arrival in Canada as a result of hardships and trauma associated with forced migration and the assignment of precarious legal status by the host country. Cuts to the Interim Federal Health program (IFHP) in 2012 greatly reduced healthcare access for refugee claimants, generating concerns among healthcare professionals and other stakeholders affected by the reforms. Therefore, in 2014 a new IFH program temporarily reinstated access to some health services, inadvertently introducing varying levels of coverage and possibly complex funding regulations. Moreover, there is little or no information regarding the current situation on the impacts of the recent IFHP reforms. Therefore, prior to the implementation of a permanent IFH program, it is essential to examine the views of all stakeholders affected by the IFHP reforms following the 2014 changes, which will serve to guide decision-makers through a consensus-building process.

Objective:

The intent of this study is to obtain the perceptions of key refugee health policy stakeholders using a stakeholder analysis to answer the research question: What is the impact of the recent changes to the IFHP on refugee claimant access to and provision of healthcare in Canada'

Methods:

A stakeholder analysis, following World Health Organization guidelines by Schmeer (1999), will be conducted to determine stakeholders' level of interest and position on the IFHP reforms. Data will be collected using in-person or telephone semi-structured key informant interviews and qualitatively analysed. The data collection period is May 2015 to August 2015.

Expected Results:

This stakeholder analysis will generate information on relevant actors to understand their behaviours, agendas, interests and influence on the IFHP policy decision-making process.

Conclusion:

As the 2014 IFHP reforms remain temporary, the government continues to pursue a formal appeal. Prior to the implementation of a permanent IFHP, this research will analyse stakeholder responses to promote effective collaboration with stakeholders and facilitate transparent implementation decisions or objectives from policy-makers.

Arena Ventura, Carla Aparecida
University of São Paulo at Ribeirão Preto College of Nursing, Brazil
Co-authors: Gazzotti, Juliana; Paqualin, Lívia de Oliveira; Siqueira, Leonardo Hernandes; University of São Paulo at Ribeirão College of Nursing

Capacity building in nursing: perception of undergraduate students about international exchange programs

In the 2010s, Brazilian government has consolidated a policy to strengthen capacity building of undergraduate students, offering fellowships for the development of internships abroad. As a consequence, the number of undergraduate students from the University of São Paulo at Ribeirão Preto College of Nursing participating in internships outside Brazil increased from 2010 to 2014, with a total of 67 fellowships in the period. In this scenario, this study describes the perception of Nursing undergraduate students who received fellowships in 2012/2013 about their study plan, the difficulties they faced and the benefits they had regarding their international experience. This is a descriptive research based on document analysis. Data were collected through the final evaluation reports of these students, using a structured guide developed by the authors. From 2012 to 2013, 17 students received fellowships and, among them, 15 responded the final evaluation report. The students developed the internship in Portugal (9), Canada (4) and Spain (2). With respect to their study plan, students needed to adapt it while abroad mainly regarding the courses they previously planned to attend and sometimes were not available. In addition, besides classes, all of them initially included participation in a research group in order to learn about the research developed at the host country regarding their topic of interest. However, only 6 of them were able to participate in a research group during their international experience. Regarding the difficulties they faced, students mentioned at first cultural adaptation issues. In addition, they faced the lack of opportunities for training experiences at health services at the host institutions, and needed to adapt to different teaching methods and norms. Some of them faced financial constraints, due to high cost of living at the host country. On the other hand, all of them believed this experience contributed to their professional growth, increasing their confidence to perform as nurses in the future. In sum, results also showed that this process led students to be more aware and sensitive to cultural diversity and open to new cross-cultural experiences. As recommendations, students emphasized the need to develop planning strategies to increase their knowledge about the operational and academic aspects of an international exchange program as well as to favor their previous communication and integration with their advisor abroad.

Arena Ventura, Carla Aparecida
University of São Paulo at Ribeirão Preto College of Nursing, Brazil
Co-authors: Paqualin, Lívia de Oliveira; Gazzotti, Juliana; Caliri, Maria Helena Larcher; Mendes, Isabel Amélia Costa; University of São Paulo at Ribeirão Preto College of Nursing, Brazil.

Global health mentorship strategies

The University of São Paulo at Ribeirão Preto College of Nursing is a WHO Collaborating Centre for Nursing Research Development since 1988 and this designation facilitates the development of international partnerships involving faculty, graduate and undergraduate students. Before 2010, the Collaborating Centres had a tradition to send graduate students and faculty to international experiences as well as to receive students and faculty from other countries. However, undergraduate students from the College faced several financial constraints to participate in international exchange programs, as fellowships were offered mainly to doctoral students. After 2010, Brazilian government implemented a policy to strengthen capacity building of undergraduate students, offering fellowships for the development of internships abroad. As a consequence, the number of undergraduate students from the Centre participating in internships outside Brazil increased from 2010 to 2014, with a total of 67 fellowships in the period. Considering the suggestions emerged from the evaluations of these students regarding the planning period of their international exchange programs, some mentoring strategies were developed. This paper aims to report the experience of developing strategies to offer elements for graduate and undergraduate students take the most advantage of their international exchange programs. Therefore, faculty responsible for the Collaborating Centre and members of the International Relations Committee developed a mentorship plan of work, which included: the conception and implementation of a Global Health Workshop, the organization of a Graduate Course on Global Health Diplomacy, the conception and development of a Guiding Book for Undergraduate Students travelling abroad, the conception and development of a Guiding Book for International Incoming Scholars at the College, the elaboration of an evaluation template for the undergraduate students who develop their internships abroad and the implementation of strategies to facilitate the exchange of experiences among the students who participated in international programs and the ones who did not in order to favor the 'internationalization at home'. From January 2014 to May 2015, these strategies were implemented. Among them, the workshop was offered for the first time in March 2015, with the participation of local faculty and two international professors. In addition, there was a significant increase in the involvement of students who went abroad in the development of these mentoring activities as a really positive outcome of this plan of work. In sum, considering that research on mentorship in nursing from a global perspective is still a recent development, this experience may contribute to this emerging area.

Arsenault, Catherine
McGill University, Canada
Co-authors: Arijit Nandi, Sam Harper, José M. Mendoza Rodríguez, Peter Hansen, Mira Johri

Monitoring social inequalities in immunization coverage across low and middle-income countries

Despite remarkable increases in immunization coverage over recent decades, one in five children worldwide still do not receive basic vaccines. Country-specific evidence suggests that suboptimal immunization coverage in low and middle-income countries (LMICs) is more common among children from socioeconomically disadvantaged households, which also often lack access to clean water and adequate nutrition, suggesting that this 'fifth child' might benefit most from immunization. Developing indicators to track progress in reaching these unimmunized children is needed. Extant approaches for measuring inequalities in immunization across countries have largely relied on country-specific wealth quintiles as the sole indicator, an approach with its limitation. In this study, we developed a framework for measuring social inequalities in vaccination coverage across countries and, using data from the Demographic and Health and Multiple Cluster Indicator Surveys, provide estimates of social inequalities in diphtheria-tetanus-pertussis (DTP) and measles vaccine coverage across 44 LMICs. Candidate indicators were selected from a literature review on the determinants of non-immunization and of child health inequities; these included, maternal education, nutritional status and the multidimensional poverty index, among others. In each country, we performed a series of bivariate analyses between each of the selected indicators and the two vaccine outcomes. The associations were estimated on both the absolute (risk difference, slope index of inequality) and relative scales (risk ratio, relative index of inequality). We also calculated pooled effect estimates for each indicator using random-effects meta-analyses. Heterogeneity in the magnitude of social inequalities across countries was explored using meta-regression. The results from these analyses could influence how international organizations monitor equity across LMICs in the post-2015 development era.

Ataguba, John
University of Cape Town, South Africa
Co-authors: Day, Candy (Health Systems Trust, Durban, South Africa); McIntyre, Di (University of Cape Town)

Social determinants of health inequality in South Africa: explaining sectoral contributions to health inequality

Rationale

It is widely acknowledged that an action on the Social Determinants of Health (SDH) is relevant for reducing health inequalities. However, there is dearth of studies that look at what intersectoral areas are crucial to focus in reducing health inequalities. In this context, South Africa (SA) presents as a classic example. SA has a very high level of income inequality and inequalities in health and health outcomes. Thus, there is a need to address these within the framework of the SDH and intersectoral action by providing evidence on the key SDH for reducing health inequalities in the SA.

Objective

The paper uses a framework developed by the WHO to assess health inequalities in SA and to explain the major factors (i.e., SDH and other individual level factors) that account for large disparities in health in SA. To enable action, the relative contribution of different SDH to health inequality is assessed.

Methods

A cross-sectional design is used. Data come from the third wave of the nationally representative National Income Dynamics Study. Using a subsample of adults (aged 18+ years), the main variable of interest is a dichotomised good self-assessed health (SAH). Income-related health inequality is assessed using the standard concentration index (CI). A positive CI means that the rich report better health than the poor. A negative value signifies the opposite. The CI is further decomposed, using standard methods, to identify the major contributing factors or sectors to health inequality in SA.

Results

Good SAH is significantly concentrated among the rich than among the poor (CI = 0.008; $p<0.01$). The decomposition results show that social protection and employment (contribution = 0.012; $p<0.01$), knowledge and education (0.005; $p<0.01$), and housing and infrastructure ('0.003; $p<0.01$) contribute significantly to the disparities in good SAH in SA. The contribution of income/poverty is negligible.

Discussions

Inequalities in good health are to the advantage of the rich in SA. Three major sectors or domains (knowledge and education, social protection and employment, and housing and infrastructure) account for significant disparities in good health in SA and are important for inter-sectoral action to reduce health inequalities.

Conclusions

Addressing health inequalities require inter alia an increased government commitment in terms of budgetary allocation to the key sectors; also paying attention to equity. The health sector also needs to ensure an increased uptake of promotive and preventive services to reduce the burden of disease.

Avery, Lisa
Centre for Global Public Health, University of Manitoba, Canada
Co-authors: Avery Lisa, Centre for Global Public Health, Depts of Community Health Sciences, Obstetrics, Gynecology and Reproductive Sciences and Medical Microbiology, University of Manitoba, Sankaran Deepa, Centre for Global Public Health, Dept of Community Health Sciences, University of Manitoba, DuPlessis Elsabe, Centre for Global Public Health, Dept of Community Health Sciences, University of Manitoba, Kayima Ruth, World Renew Kenya, Njoroge Peter, School of Public Health, University of Nairobi, Blanchard James, Centre for Global Public Health, Dept of Community Health Sciences, University of Manitoba and Crockett Maryanne, Centre for Global Public Health, Depts of Community Health Sciences, Medical Microbiology and Pediatrics and Child Health, University of Manitoba

Improving capacity and effectiveness of frontline workers to improve maternal, newborn and child health: experience from Kenya

Rationale: Human resource constraints within resource limited health systems have led to increased task shifting to frontline workers, such as community health volunteers (CHVs). In Kenya, CHVs' interactions with women and their families have focused on the collection of aggregate, anonymous data for health information systems and have not been equity focused. Tools that help CHVs monitor and track individuals most in need of critical maternal, newborn and child health (MNCH) services are lacking.

Objective: To determine if the introduction of a simple monitoring and tracking tool would enhance CHVs' capacity to utilize local monitoring data to: 1) plan their workloads and activities, 2) identify women, newborns and children most in need of accessing critical MNCH interventions and 3) improve key selected MNCH indicators.

Methods: The Maternal, Newborn and Child Tracking Tool (MMAT) was developed and piloted with CHVs in Taita and Taveta County, Kenya. Baseline (n=912) and endline (n=1143) quantitative household surveys that collected data on key MNCH indicators were conducted in all 4-sub counties using probability proportional to size sampling. Focus group discussions were held with the CHVs to ascertain their perspectives on the introduction and utilization of the MMAT.

Results: Qualitative findings revealed that the CHVs found the MMAT to be useful for planning their activities and prioritizing which women and children required more attention to ensure appropriate access to care. Data also enabled them to identify potential barriers to care that could then by addressed at both the community and health system levels. Improvements were also seen in key MNCH indicators: increased exclusive breastfeeding at 6 months (52.3% to 73.2%), increased antenatal care before 16 weeks gestation (42.9% to 95.8%) and increased postnatal care for mothers and newborns (10% to 75%).

Discussion: Our results demonstrate that simple tools can enhance CHVs' capacity to utilize local data to identify disparities in service delivery and health outcomes. This allows them to prioritize the health needs of the mothers, newborns and children using an equity lens. It also allows them to rapidly identify barriers to MNCH care at both the community and health system interfaces that can be used to improve program planning and resource allocation.

Conclusion: Improved interactions between frontline health workers and women and their families are critical to improving MNCH outcomes. Tools that enhance CHVs' ability to plan and prioritize women and children most in need improve CHVs' effectiveness and impact.

BAGNOA, Nazi Vincent
Institut de Recherche en Science de Santé (IRSS/Ouaga), Burkina Faso
Co-authors: Bado, Aristide; Institut de Recherche en Sciences de la Santé; Séni, Kouanda; Institut de Recherche en Sciences de la Santé

Morbidité et environnement socioéconomiques des personnes âgés au Burkina Faso : résultats d'une étude transversale sur le site du système de surveillance démographique et de santé de Kaya (Kaya HDSS)

Introduction

La transition démographique en cours dans les pays à revenus faible affecte la structure par âge de la population et se traduit par l'accroissement de la proportion des personnes âgées. Au regard de la prépondérance des maladies infectieuses qui touchent beaucoup les enfants de moins de 5 ans, peu d'attention a été portée jusque-là aux personnes âgées. La recherche sur les conditions de vie de ces personnes et leur comportement en matière de recours aux soins de santé permettra aux décideurs du ministère de la santé de planifier et à mettre en place une offre de soins adaptée aux besoins de cette population.

Objectifs de l'étude

Les objectifs de l'étude : i) identifier les principales maladies et le recours aux soins pour les personnes âgées et ; ii) Identifier les déterminants liés au recours à des services de santé par les personnes âgées.

Méthodologie

Les données utilisées proviennent d'une collecte de routines du système de surveillance démographique et de santé de Kaya. Les données ont été collectées à l'aide d'un questionnaire en face à face par un enquêteur au cours d'un round. L'analyse en composante principale a servi à la construction du gradient de niveau de vie et du proxy sur l'environnement socio-économique des ménages. Nous avons fait une analyse univariée et multivariée pour identifier les facteurs associés aux recours aux services de santé.

Résultats préliminaires

Les personnes âgées de plus 55 ans représentent un peu plus de 8 % de la population totale au cours de l'année 2011 soit 4110 personnes. Les principales causes de morbidité qui ressortent des entretiens sont le paludisme (19%) les maladies chroniques non transmissibles (HTA, Diabète) (10%) et les maux de ventre (9%). Un peu plus de 51% de ces personnes ont recours à de services de santé. Ceux qui vivent en milieu rural, dans un ménage pauvre, ayant un faible niveau d'ouverture à la modernité et dans des ménages de taille élevée recourent moins aux services de santé qualifiés.

Discussions

Ces résultats indiquent clairement que la prise en charge des maladies chroniques constitue un besoin de plus en plus important. Aussi il est important que les services adaptés soient mis en place par les services de santé.

Barker, Jessica
University of Cape Town, South Africa
Co-authors: Ashmore, John; Medecins Sans Frontieres South Africa and Lesotho

Civil Society's role in health system monitoring and strengthening: Evidence from Khayelitsha, South Africa

Rationale: Civil Society Organizations, including Treatment Action Campaign, have played a vital role in mobilizing people to campaign for the right to health and HIV treatment and access. Primary health care facilities in Khayelitsha, South Africa continue to face challenges to deliver care to individuals living within the sub-district. The high prevalence of diseases such as HIV and TB places constraints on an already overburdened public health system. This study centers on a partnership between Medecins Sans Frontieres and Treatment Action Campaign, and specifically considers the development and implementation process of a health system monitoring tool within nine primary health facilities in Khayelitsha.

Methods: Using an action research approach, the researcher engaged with the Treatment Action Campaign in the development and implementation of the monitoring tool. As part of this engagement, seventeen semi-structured qualitative interviews were conducted exploring: the understandings of various stakeholders about the tool, their interests or concerns, potential positions, power and influence on its implementation. Quantitative data allowed for the ability to track potential improvements in clinic performance in terms of operational research.

Results: Analysis of the stakeholders demonstrated how actors exerted their power in various ways to influence the development and implementation of the tool. Key actors at the local department of health management level expressed the desire to have been consulted more directly, over tool design and implementation processes. The actors implementing the tool appreciated being active participants in the process of design and implementation. Those actors directly involved in daily use of the tool, expressed an increased awareness and broadened engagement with patients, providers and facility managers, at the local level. There does seem to be some tentative examples of service delivery improvement.

Discussion: Results suggest there is a role for civil society in improving health system performance. Findings have highlighted the need for civil society monitoring tools to be not only methodologically sound but, more importantly, accepted by the activist.

Conclusion: This research can feed directly into further development and refinement of such health system strengthening and monitoring tools and potentially offer greater understanding of practices, such as increased civil society monitoring within PHC facilities. Such findings may have implications for further adaptations to the tool, potential scale-up by Treatment Action Campaign and for other low and middle income contexts.

Baron, Marie
Département de médecine sociale et préventive, Université Laval ; Axe Santé des populations et pratiques optimales en santé, Centre de recherche du CHU de Québec, Canada
Co-authors: Baron, Marie ; Département de médecine sociale et préventive, Université Laval ; Axe Santé des populations et pratiques optimales en santé, Centre de recherche du CHU de Québec ; Riva, Mylèn; ; Département de médecine sociale et préventive, Université Laval ; Axe Santé des populations et pratiques optimales en santé, Centre de recherche du CHU de Québec

État de santé autoévalué, mortalité et inégalités sociales chez les Inuit du Nunavik

Contexte : Dans les enquêtes de santé, les participants doivent souvent évaluer leur propre santé. Plusieurs études ont validé la valeur prédictive sur la mortalité de la santé autoévaluée, et ce parmi différents groupes culturels et socioéconomiques mais peu s'y sont intéressées dans la recherche en santé autochtone, et encore moins parmi différents groupes socio-économiques.

Objectifs : Afin de mieux documenter la pertinence d'utiliser l'état de santé autoévaluée dans la recherche en santé autochtone, et notamment en contexte Inuit, notre étude poursuit deux objectifs : 1) évaluer si la mesure de l'état de santé autoévaluée prédit la mortalité et 2) identifier les variations de la mortalité en fonction des caractéristiques socioéconomiques des Inuit du Nunavik (Nunavimmiut).

Méthode : Les données pour 853 individus âgés de 18 ans et plus proviennent de l'enquête « Qanuippitaa' How are we' Nunavik Inuit Health Survey (2004) ». Ces données ont été collectées à l'aide de questionnaires, d'évaluations cliniques, et d'un suivi de dossiers médicaux entre 2005 et 2011. La mortalité, pour toutes causes, est définie comme un décès survenu entre 2005 et 2011. La mesure de santé autoévaluée a été dichotomisée en opposant les répondants se déclarant en excellente, très bonne ou bonne santé à ceux se déclarant en moyenne ou mauvaise santé. L'association entre la mortalité et la santé autoévaluée a été mesurée avec des modèles de régressions de poisson ajustés pour des caractéristiques des participants mesurées en 2004 telles : le sexe, l'âge, l'éducation, le revenu, le tabagisme, et la présence de maladies chroniques (p.ex. maladies cardiovasculaires, tour de taille).

Résultats : Entre 2004 et 2011, 89 individus sont décédés. Le risque de décès entre 2005-2011 était significativement plus élevé chez les individus se percevant en mauvaise santé en 2004, indépendamment des caractéristiques socioéconomiques et cliniques. Le statut socio-économique mesuré en 2004 était associé avec la survenue d'un décès entre 2005 et 2011.

Discussion : La mesure de santé autoévaluée semble être un bon prédicteur de la mortalité au Nunavik. Nos résultats semblent indiquer certaines inégalités sociales spécifiques pour la mortalité parmi les Nunavimmiut. Des analyses supplémentaires parmi d'autres populations Inuit et des Premières Nations au Canada permettraient de généraliser ces résultats. Nos résultats alimentent la recherche portant sur la validité de la mesure de santé auto-évaluée pour les populations autochtones et apportent de nouveaux éclairages sur la nature transculturelle de cette mesure.

Beinempaka, Florence
Dalhousie University, IWK Health Centre, Canada
Co-authors: Beinempaka, Florence, Department of Nursing Mbarara University of Science and Technology, Mbarara, Uganda; Tibanyendera, Basil, Department of Education Mbarara University of Science and Technology, Mbarara, Uganda; Atwine, Fortunate, Department of Nursing Mbarara University of Science and Technology, Mbarara, Uganda; Kyomuhangi, Teddy, Maternal Newborn and Child Health Institute, Mbarara University of Science and Technology, Mbarara, Uganda; Kabakyenga, Maternal Newborn and Child Health Institute, Mbarara University of Science and Technology, Mbarara, Uganda; MacDonald, Noni, MicroResearch Canada and Department of Paediatrics, Dalhousie University, Halifax, Canada.

Traditional rituals and customs for pregnant women in selected villages in southwest Uganda

Rational: In Uganda maternal mortality is still a problem and 2015 Millenium Development Goal 5A will not be achieved. In Ankole sub region many mothers are cared for and deliver in their rural villages with traditional birth attendants; only traveling to hospital for complications. The purpose of this study was to determine potentially harmful and helpful Ankole traditional pregnancy and birth rituals in order to support development of culturally acceptable prevention and intervention strategies to improve outcomes.

Methods: In each of 10 randomly selected villages in the sub-region, 8 to 12 discussants with maternal /newborn care roles (traditional birth attendants, mothers, fathers, grandmothers, herbalists and village child specialists) were purposively selected with help from the Village Health Team(VHTs) to participate in qualitative focus group discussions(FGD). Participation was voluntary and consent was obtained. Each FGD used Runyankole (vernacular language), was recorded, transcribed verbatim, translated to English and analyzed qualitatively for study themes.

Study was approved by MUST Ethical Review Committee, funded by Save the Children Uganda and Healthy Child Uganda and mentored by MicroResearch.

Results:
67 women, 37 men participated. Of 11 traditional rituals reported,

4 Positive: a) avoid staying seated while eating so baby to cry easily at birth (term okugundiira), b) husband no sex with other women during the pregnancy even if co- wife., resumption sex prohibited for 1 month after delivery (okwita akagyere). c) husband may help hold the wife in labour, indicating male involvement in the birth process d) post-delivery, mother spends 4 days indoors with baby (ekiriri)

3 Neutral: a) planting potatoes prohibited as frequent bending encourages cord around neck, b) avoid negative sights e.g. dead person or animal; burning house etc as necessary for maternal/infant health c) placenta regarded as another baby, formally buried.

4 Harmful: a) herbs vaginally inserted through to term as cleanses unborn baby, b) home delivery preferred even for young adolescent mothers as traditional birth attendant, traditional practices and customs are much trusted, c) only if serious complications is referral to the local hospital done; usually mother, baby or both die, d) trust more in VHTs than in health care workers/formal health care system.

Conclusion: At least 4 Ankole maternal traditional pregnancy/ birth customs run contrary to World Health Organizations recommended practices. VHTs and health care practitioners need a deeper understanding of these rituals so harmful ones can be modified in order to improve maternal outcomes.

Berti, Peter
HealthBridge, Canada
Co-authors: Araujo Cossio, Heber; El Centro de Comunicación y Desarrollo Andino (CENDA)

Small animal husbandry for improved nutrition in highland Bolivia

Rationale:

The diet throughout the rural Andes is characterized by very low intakes of dietary fat, and deficiencies of numerous micronutrients. Most of these deficiencies could be addressed through increasing the consumption of animal-source foods: meat, milk and eggs. There is increasing interest from many donors, governments and practitioners in linking agriculture and nutrition, so that agriculture interventions do not merely improve production, but also improve the health and nutrition of participating households. However, there are sparse data on how such interventions should be implemented.

Objectives:

To test the effectiveness of an integrated nutrition-agriculture intervention focused on improved sheep husbandry, and poultry rearing, in order to improve household nutrition.

Methods:

Communities located in the mountain valleys were provided with training and starter supplies for chicken rearing. Communities in the high plains were provided with materials for improved sheep corrals and training on pest management. Nutrition education programs were carried out in all communities.

Dietary data were collected with 24-hour dietary recalls in March 2013 (n=214), 2014 (n=239) and 2015 (n=407). The implementation of the intervention was staggered, so that baseline levels for late-starting communities served as control groups for early-starting communities.

Results:

Approximately 500 households in 27 communities participated in the intervention (‘425 households with poultry and 75 with sheep). Egg consumption at baseline in 2013 and in control households in 2015 was approximately 5 grams/person/day. In households which adopted the poultry intervention egg consumption in 2015 was approximately 30 grams/person/day. Similarly, in households which adopted the sheep intervention, meat consumption increased from approximately 80 to 220 grams/person/day.

Discussion:

The increase in egg and meat consumption is expected to have important nutrition and health benefits. Key ingredients in the success of the interventions include: (a) the interventions had very broad appeal, and the recommended behaviours (eating more meat and eggs) were willingly embraced; (b) in the early stages a frequent presence in the community by the program team; (c) all team members, not just the nutritionists, repeated the key nutrition messages at every opportunity; (d) freely distributed starter kits (e.g. 10 chickens, materials for building chicken coop) allowed the families to adopt the intervention without incurring personal financial risk.

Conclusion:

Improved small animal husbandry can lead to improved diets in highland Bolivia.

Birch, Hillary
McGill University, Canada
Co-authors:

Moving the state: practicing citizenship through the experience of illness in South Africa

The arrival of majority rule in South Africa saw the country undergo a dual transition; one political, one economic. The establishment of multiparty elections, a Constitution and an independent judiciary heralded democratization. South Africa's economic transition saw growing poverty and inequality, matched by a sidelining of state intervention to deliver essential services. It was in this context that AIDS emerged with force in the population. South African society mobilized to demand a better response from the national government through the Treatment Action Campaign (TAC). This culminated in the realization of the 2003 Operational Plan that saw the government for the first time provide universal access to anti-retroviral therapy for citizens. As explored in this paper, the TAC offers an important example of society interacting with the state to co-produce social policy in an era of neoliberal reform. Crucial to the TAC's success was its ability to link the disease to macro political and economic circumstances and the individual's lived experiences of the illness, 'politicizing' HIV/AIDS and the policy prescriptions of the state. Creating what can be understood as an 'embodied-health movement,' the TAC worked to teach individuals about living with HIV infection, while educating them about their rights and the corresponding obligations of the state in the new democratic South Africa. By focusing on grassroots participation and mobilization, whether explicitly aimed at a political end or simply in an effort to better the lives of those infected, the TAC opened new arenas of citizen action. First providing a literature review of social movement theory, this paper goes on to demonstrate through qualitative analysis of primary and secondary sources how, with the TAC's rights-based civic education, the experience of marginalization and exclusion manifested as ill health pushed forward new discourses of citizenship in the country. This generated a call for a different contract between provider (the state) and recipient (the citizen) of health care services. By recasting illness as a responsibility of the state and educating citizens on their own political capabilities, the TAC shifted health concerns, long pushed to the margins of politics, to the political centre stage of the new South Africa, highlighting the potentials for society to shape social policy in an era of neoliberal reform.

Boateng, Rhonda
Bishop's University, Canada
Co-authors: Dr. Mendrek, Adrianna, Bishop's University

Breast cancer and mental health in Sub-Saharan African women: review of common risk factors and current mental health systems

Being diagnosed with breast cancer is a life-altering experience that can trigger clinical depression or anxiety. In the Western world, researchers have found that high psychological distress is a strong predictor of cancer recurrence and lower chances of survival. It can also contribute to the development of cancer. Further, evidence indicates that impoverished women with chronic conditions are more likely to suffer from depression than men. However, due to limited resources and infrastructure, shortage of psychiatrists and other trained mental health providers, mental health is not a priority in Africa. Hence, there is scant research into the impact of mental health problems on breast cancer.

In the present review, we examined the results of twenty-seven articles on breast cancer, depression and anxiety in sub-Saharan African women published between 1995 and 2015. The purpose of this review is to identify the common physical, psychological, socio-demographic and environmental risk factors in women with breast cancer and/or depression/anxiety in sub-Saharan Africa. Moreover, the current state of the African mental health system as well as the latest innovations, major players and the common barriers to treatment are discussed.

Addressing these risk factors and establishing an efficient mental health system could improve the condition of sub-Saharan African female cancer patients who have mental health issues. Targeting these factors for treatment and further study may contribute to preventing the development of physical problems in psychiatric patients and vice versa. With the 85% increase in cancer burden expected in sub-Saharan Africa by 2030, the integration of behavioural therapies in cancer treatment may lead to better outcomes for those living with breast cancer. Overall, mental health disorders are strong predictors of the development of communicable and non-communicable disease; therefore, treatment of mental health conditions will likely improve the global health of a population.

Keywords: Africa, breast cancer, mental health, treatment, depression, anxiety

Bourgeault, Ivy
University of Ottawa, Canada
Co-authors: Vivien Runnels, Corinne Packer, Nicola Yeates and Ronald Labonté

Knowledge and effects of the WHO Global Code of Practice on the International Recruitment of Health Personnel on health worker migration

Objectives: Our presentation analyzes the state of knowledge of source country informants and international policy actors on the WHO Global Code of Practice on the International Recruitment of Health Personnel (Code) and its effects on health worker migration. Our findings are applied to the context of international instruments and bilateral agreements.

Approach: Our CIHR-funded study "Source' Country Perspectives on the Migration of Highly Trained Health Personnel" studied the causes, consequences and policy responses to the migration of health workers from the Philippines, South Africa, Jamaica and India, including questions regarding the WHO Code. In addition to scoping reviews of the literature and policy documents, the international and country-based teams conducted interviews with key informants; surveys of targeted professions; consultations with key international agencies; a multi-country workshop to share findings and lessons learned; and within-country policy dialogues. Our findings were analyzed in-country to provide local perspectives, and collectively reviewed and discussed by team members.

Results: The migration of highly trained health personnel from source to destination countries can contribute to shortages of workers in source countries, sometimes to devastating effect on health and health equity. Although the Code is intended to assist in protecting the integrity of a state's health systems with respect to health workers, to protect health workers themselves and provide recruitment guidance to public and private sector employers, knowledge of the WHO Code was minimal for source country informants. Any direct effects of the Code on the migration of HHR were difficult to assess. Interviews with international policy actors unsurprisingly showed awareness of the Code, but stressed a need for better shared responsibility and international cooperation on migration policy and development, including bilateral and trade agreements.

Conclusion: While the Code has raised awareness of the problems of migration and staff shortages in source countries, knowledge of the Code is variable across levels of governance. As policy, its impacts on health worker migration are difficult to assess and it may need enhancing to contribute towards building sustainable health systems.

Bruni, Alison
McMaster University, Canada
Co-authors: Bruni, Alison; McMaster University. Kazmi, Kescha; McMaster University. Bailey, Karen; McMaster University. Rambaran, Navindranauth; Georgetown Public Hospital Corporation. Rambaran, Madan; Georgetown Public Hospital Corporation. Cameron, Brian; McMaster University. Pemberton, Julia; McMaster University.

A qualitative assessment of trauma team performance at Georgetown Public Hospital Corporation in Guyana

Rationale: In 2006, McMaster University and the Canadian Network of International Surgery (CNIS) introduced Trauma Team Training (TTT) at Georgetown Public Hospital Corporation (GPHC) in Guyana in order to standardize training in trauma care. Despite the number of TTT courses being conducted in Guyana, there has been no qualitative assessment of local trauma team members' subjective performance to date.

Objective: The purpose of this study was to gain qualitative feedback on trauma team performance at Georgetown Public Hospital Corporation (GPHC) in Guyana. Awareness of participants' self-identified strengths, weakness, and areas for improvement in trauma care can guide future trauma team training programs and local interventions.

Methods: This was a qualitative study. Ten health professionals working in trauma care at GPHC participated voluntarily. Participants filled out an anonymous questionnaire using the components of SWOT (strengths, weaknesses, opportunities and threats) analysis, and took part in a focus group discussion. Two researchers reviewed the qualitative data individually. Reduction and agreed upon coding occurred.

Results: The SWOT questionnaires identified a lack of material and human resources as barriers to optimal care during trauma scenarios. The focus group discussion identified weaknesses in team communication, cooperation, organization, and training. Participants acknowledged the need to address hierarchies and pre-existing attitudes between different health professionals. They agreed that to maintain consistency in performance and patient care, the Trauma Team Training (TTT) course or an equivalent should be mandatory for all staff involved in trauma care.

Discussion: Although participants noted a lack of material and human resources as a threat to optimal patient care, the most significant barrier identified during the focus group discussion was poor inter-professional communication and teamwork. These factors would be challenging to resolve by simply increasing funding or improving access to equipment. Instead, future trauma team training (or equivalent interventions) may require a more significant focus on inter-professional team building exercises.

Conclusions: Qualitative feedback from trauma team members revealed that poor inter-professional communication and limited teamwork skills are considered the major barriers to optimal team performance in trauma scenarios at GPHC. In addition to making a team training course mandatory for all trauma staff, an additional focus on communication skills and inter-professional collegiality may address participants' self-identified limitations in trauma care.

Carducci, Bianca
Sick Kids Hospital,
Co-authors: Khan, Amira

Innovative capacity building for health care professionals in public health nutrition

With the objective of increasing access to training for healthcare providers worldwide, as well as enhancing the capacity of health systems in public health nutrition (PHN) through innovation, The Hospital for Sick Children's (SickKids) Centre for Global Child Health is developing a first of its kind, open source online public health nutrition course. The SickKids Online Public Health Nutrition (SOPHNC) course is designed primarily for health care professionals (physicians, nurses, dietitians, researchers, educators, health and nutrition managers) as a means of responding to nutrition challenges faced by vulnerable populations, especially women and children in low-middle income countries. By leveraging the expertise and global networks of SickKids, the course will provide participants with exposure to key issues in PHN through multiple teaching pedagogies, including translational and transformative learning. Supported by evidence-based research, key public health nutrition topics are taught in 7 interactive modules, where each module contains 3-7 sessions. Overarching modular topics range from micronutrient deficiencies and nutrition across the lifecycle to nutritional assessment and cost-effective nutrition interventions. A practicum component of the SOPHNC has also been developed to enhance user techniques in anthropometric assessments, as well as programmatic planning and management of nutrition related projects. As means of providing an interactive course, a variety of leading global experts in Maternal Newborn Child Health and Nutrition are also highlighted through short video vignettes as part of the course's lecture series. Through a workshop, facilitators will guide participants through the overall structure of the course and selected sessions while identifying key content, features and future capabilities. Importantly, the workshop will include an interactive component around course assessments and case studies aimed to encourage participant learning and feedback. Showcasing sessions of this state-of-the-art course will allow for engagement and discussion with global primary health care stakeholders on content, functionality and access, as well as, potential distribution approaches.

Casey, Regina
Douglas College, Canada
Co-authors: Casey, Regina; Douglas College. Krupa, Terry; Queen's University. Lysaght, Rosemary; Queen's University. MacDougall, Arlene; University of Western Ontario - Department of Psychiatry. Jayaraman, Varsha; Queen's University. Little, Jessamyn; University of Western Ontario - Department of Psychiatry

CREATE: community action to promote health, well-being and employment success with and for people with mental illness in Kenya

Rationale: Strong evidence exists from resource rich countries for recovery-oriented psychosocial rehabilitation interventions enhancing health, well-being and community participation for people who live with mental illness. However, less clarity exists regarding the efficacy of these interventions and how they might best translate to low resource countries such as Kenya.

Objective: This poster describes the development and content of a low-cost culturally sensitive, evidence-informed toolkit designed for use by people with mental illness who are working in a Social Business initiative. Requiring few resources to administer, it is intended be a powerful self-help tool for people with mental illness in recovery and a needed resource for local community health workers (CHWs). The toolkit is designed to enhance individuals' workplace well-being, promote sustained employment and build leadership and a sense of community among peers. Ultimately, the aim is to show proof of concept and then to offer the toolkit free of charge to different settings within and outside of Kenya.

Methods: In the spirit of an emancipatory action research approach, stakeholders engaged early in the project with the goal of building a sense of community and ownership in the actions and outcomes of the project. Following initial information sessions 31 people with lived experience (PWLE), family members, disability advocates and practitioners were consulted regarding their needs in relation to the content, and dissemination of the toolkit.

Results: Our process of consultation allowed us to shape the toolkit content to local needs in a culturally sensitive way. Focus group participants identified a need for education about various illnesses and medication concordance, understanding personal triggers and identifying what constitutes a good life for individuals. We also heard about the need to link rehabilitation interventions with employment. A specific need to help family members involve PWLE in daily activities was also identified.

Discussion: Engaging in the process of collaboratively designing, developing and evaluating a new toolkit based on local strengths, needs and capacities offers a unique opportunity to create successful and easily translatable evidence informed and culturally relevant recovery-oriented interventions. Challenges emerge however regarding copyright restrictions and potential costs associated with drawing from and adding existing complimentary tools that could enhance the toolkit.

Conclusion: Engaging the community in the development, application and evaluation of a toolkit for well-being and employment success offers promise as both a means to, and resource for, employment success and social inclusion.

Chacon, Violeta
Institute of Nutrition of Central America and Panama, Guatemala
Co-authors: Monzon, Diego; Institute of Nutrition of Central America and Panama. Barnoya, Joaquin; Washington University in St. Louis

Increasing chronic disease research capacity in Guatemala through a regional training program

Rationale: Guatemala is undergoing an epidemiological transition, increasing non-communicable diseases (NCDs) coupled with high prevalence of infectious diseases. Investment in research and human research capacity building to support NCDs prevention efforts are low. In addition, universities and the healthcare system lack an environment that fosters research careers and generates knowledge to implement evidence-based public health policies.

Objective: To describe the research capacity building outcomes of the 'Chronic Disease Control Research Training Program' in Central America.

Methods: Based in Guatemala, this 4-year Training Program aims to build research capacity in recent medical, nutrition, and anthropology graduates and postgraduate scholars to support the development of NCDs research. Each year, two one-year fellows are recruited in Guatemala. In addition, three postgraduate scholars enrolled in a Master in Public Health program at any Central American country are provided funding to conduct their thesis. Research topics must be NCDs related and policy-relevant. Trainees are expected to write, implement, and disseminate their research protocol. Throughout the Program, fellows and scholars must develop a mentor-mentee relationship as a capacity building strategy. Fellows have a mentor in Guatemala and Scholars chose a local mentor in their home country and are assigned a more experienced one in Guatemala (long distance mentoring).

Results: The Program has generated data to support implementation of NCDs control strategies (tobacco, physical activity and obesity). Currently on year 3, six fellows and scholars have been recruited. Fellows' project results have been disseminated through local media and stakeholders, and international conferences. Scholars' projects have been disseminated through local media. Fellows have gained a research and career understanding through mentoring and are also engaged in peer-to-peer mentoring. Regarding scholars' outcomes and outputs, they have been less consistent and the mentoring less effective. International experts have collaborated in fellows' projects leading to a research network.

Discussion: Even though mentoring has proven effective with fellows in Guatemala, this has not been the case in the other Central American countries. This might result from a combination of the academic environment of Master programs, different mentoring styles, and long distance mentoring.

Conclusion: A training program with emphasis on mentoring can improve research capacity. However, long-distance mentoring and influence of the environment in which mentoring takes place can largely influence the outcomes and outputs of a training program.

Chanoine, Jean-Pierre
Global Pediatric Endocrinology and Diabetes (GPED) and University of British Columbia (UBC), Canada
Co-authors: - Zacharin, Margaret; Department of Endocrinology, Royal Children's Hospital, Victoria, Australia. - Armstrong, Kate; CLAN (Caring & Living As Neighbours) and Flinders University, NSW, Australia

Promoting Sustainable Access to Essential Medicines for Pediatric Endocrine Conditions in Low and Middle Income Countries

1. Rationale: Global Pediatric Endocrinology and Diabetes (GPED, www.globalpedendo.org) is an international non-profit organisation that aims at improving clinical care of children with endocrine conditions (included in the non-communicable diseases group (NCDs)) that affect thousands of children in LMICs. Their clinical presentation is often confused with more common conditions and their prevalence is likely grossly underestimated.

2. Objective: To promote sustainable access to essential medicines for children with endocrine conditions in LMICs through a person-centered approach.

3. Methods: GPED is working in partnership with a wide range of stakeholders to implement a multi-step strategic plan utilizing the rights-based, community development framework developed by CLAN (Caring & Living as Neighbours, www.clanchildhealth.org/):

i. Contact and engage pediatric endocrinologists in LMICS in Africa and in Central/South America to identify medicine status and most pressing humanitarian needs;

ii. Establish family support groups for children with selected pediatric endocrine conditions and provide culturally and language-appropriate information;

iii. Provide short-term supply of selected essential medicines for these communities until sustainable access is successfully achieved;

iv. Empower families and health professionals through education (using translated materials) and research;

v. Work with local Pediatric Endocrinologists and local Health Authorities to understand and streamline a distribution process for medicines and support sustainable access to essential medicines.

4. Results: This process was initiated in 2015. The following countries have expressed interest in participating: Algeria, Ghana, Nigeria, Ecuador, Honduras, El Salvador. The status of Pediatric endocrine medicines markedly differs from country to country. Fludrocortisone and hydrocortisone (for the management of congenital adrenal hyperplasia) have emerged as a consistent primary need. A generic pharmaceutical company interested in supplying LMICs markets has been identified. Barriers to sustainable supply include: lack of registration, lack of interest from the pharmaceutical industry for small markets, administrative barriers, cost of importing medicines, absence of a structured distribution process, excessive margins by distributors/pharmacists, low priority at the ministry of health level.

5. Discussion and Conclusion: The management of most pediatric endocrine conditions is affordable and is routinely available in HICs. Increasing capacity in pediatric endocrinology has led to the recognition of an increasing number of children with pediatric endocrine conditions in LMICs but the availability of cheap, well known, life-saving medicines remains poor. Sustainable and equitable access to essential medicines is an important next step. Identification of the specific needs in each country and NCD Community is essential to ensure a process that meets the local requirements.

Chanthavilay, Phetsavanh
Laval university, Canada
Co-authors: 1. Chanthavilay, Phetsavanh ; Department of Social and Preventive Medicine, Faculty of Medicine, Laval University. Quebec, Canada. 2. Mayxay, Mayfong; Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit (LOMWRU), Microbiology Laboratory, Mahosot Hospital, Vientiane, Lao PDR. 3. Phongsavan, Keokedthong; Gynecologic Oncology Unit, Setthathirath Hospital, Vientiane, Lao PDR. 4. Marsden, Donald Eric; Gynecologic Oncology Unit, Setthathirath Hospital, Vientiane, Lao PDR. 5. White, Lisa Jane; Centre for Clinical Vaccinology and Tropical Medicine, Nuffield Department of Clinical Medicine, University of Oxford, Churchill Hospital, Oxford, United Kingdom. 6. Moore, Lynne ; Department of Social and Preventive Medicine, Faculty of Medicine, Laval University. Quebec, Canada. 7. Reinharz, Daniel; Department of Social and Preventive Medicine, Faculty of Medicine, Laval University. Quebec, Canada

Accuracy of the combined vsual inspection with acetic acid and cervical cytology testing as a primary screening tool for cervical cancer: a systematic review and meta-analysis

Background: The performance of combined testing visual inspection with acetic acid (VIA) and cervical cytology tests might differ from one setting to another. The average estimate of the testing accuracy across studies is informative, but no meta-analysis has been carried out to assess this combined method.

Objective: The objective of this study was to estimate the average sensitivity and specificity of the combined VIA and cervical cytology tests for the detection of cervical precancerous lesions.

Methodology: We conducted a systematic review and a meta-analysis. We considered two cases. In the either-positive result case, a positive result implies positivity in at least one of the tests. In the both-positive case, a positive result implies having both tests positive. Eligible studies were identified using Pubmed, Embase, Website of Science, CINHAL and COCRANE databases. True positive, false positive, false negative and true negative values were extracted. Estimates of sensitivity and specificity, and diagnostic odds ratios (DOR) were pooled using a hierarchical random effect model. Hierarchical summary receiver operating characteristics (HSROC) were generated and heterogeneity was verified through covariates potentially influencing the diagnostic odds ratio.

Findings: Nine studies fulfilled inclusion criteria and were included in the analysis. Pooled estimates of the sensitivities of the combined tests in either-positive and both-positive cases were 0.87 (95% CI: 0.83-0.90) and 0.38 (95% CI: 0.29-0.48), respectively. Corresponding specificities were 0.79 (95% CI: 0.63-0.89) and 0.98 (95% CI: 0.96-0.99) respectively. The DORs of the combined tests in either-positive or both-positive result cases were 27.7 (95% CI: 12.5-61.5) and 52 (95% CI: 22.1-122.2), respectively. When including only articles without partial verification bias and also a high-grade cervical intraepithelial neoplasia as a threshold of the disease, DOR of combined test in both-positive result cases remained the highest. However, DORs decreased to 12.1 (95% CI: 6.05-24.1) and 13.8 (95% CI: 7.92-23.9) in studies without partial verification bias for the combined tests in the either-positive and both-positive result cases, respectively. The screener, the place of study and the size of the population significantly influenced the DOR of combined tests in the both-positive result case in restriction analyses that considered only articles with CIN2+ as disease threshold.

Conclusion: The combined test in the either-positive result case has a high sensitivity, but a low specificity. These results suggest that the combined test should be considered in developing countries as a primary screening test if facilities exist to confirm, through colposcopy and biopsy, a positive result.

Charchuk, Rhianna
University of Alberta, Canada
Co-authors: Katsuva, Jean Paul; Institut Supérieur des Techniques Médicales de Kisangani, DRC; Masumbuko, Claude L; HEAL Africa, DRC; Kibendelwa, Zacharie T; Université de Goma, DRC; Hawkes, Michael; University of Alberta

Population displacement and malaria among children in the Democratic Republic of Congo

Rationale: Despite eradication efforts, malaria has remained a leading cause of death in children under five in the developing world. This issue is compounded in the Democratic Republic of the Congo (DRC), where armed conflict and civil war have disrupted all levels of society and has forced around 2.7 million people from their homes to live in internal displacement camps. These internally displaced people (IDPs) suffer from poor mental, physical and emotional health. Furthermore, poor living conditions drastically increase the risk of malaria in IDPs, especially children. Specifically, the lack of stable shelter or mosquito nets, results in an increased exposure to the Anopheles mosquito that transmit malaria. Objectives: Determine if population displacement is a risk factor for malaria (carriage and acute febrile illness) in the DRC.

Methods: Two cross-sectional studies were conducted. (1) Malaria carriage: cross-sectional community-based survey of 200 households within and surrounding the Bilobilo IDP camp in eastern DRC. (2) Acute febrile illness: convenience sample of 100 children presenting to the clinic from Bilobilo IDP camp and 100 from Mubi village. All participants were tested for malaria using HRP2-based rapid diagnostic test and a brief survey was administered to the parent/guardian. Results: (1) The point-prevalence of malaria in the community survey was 19% (IDPs) vs 9.5% (controls) [relative risk 2.3 (95%CI 1.3-4.1), p=0.0095). Household bednet ownership was 34% (IDPs) vs 68% (controls) [p<0.001], and bednet use by the index child the previous night was 25% (IDP) vs 56% (controls) [p<0.001]. (2) The point-prevalence of malaria among children presenting to the health clinic with acute febrile illness was 78% (IDPs) vs 39% (controls) [relative risk 2.0 (95%CI 1.5-2.6), p<0.001]. For the clinic survey: bednet ownership was 21% (IDPs) vs 75% (controls) (p<0.001), and bednet use by the index child the previous night was 16% (IDPs) vs 65% (controls) [p<0.001].

Discussion: These results indicate that asymptomatic malaria carriage and febrile illness is significantly higher among children living in IDP camps compared to children in a surrounding village. Furthermore the bednet ownership and use is higher among children in the village which suggests the bednets have a protective effect on preventing malaria among children under 5.

Conclusion: This study is among the first that evaluates malaria among children in an IDP camp. These results also indicate that IDPs represent a high risk group for malaria and targeted control measures may reduce the burden of malaria in this vulnerable group.

Charette, Margot
McGill University, Canada
Co-authors: Berrang Ford, Lea; McGill University

Climatic and socioeconomic drivers of dengue in Ucayali, 2004-2014

Increasing temperatures worldwide threaten to exacerbate the global burden of vector-borne diseases as vectors' range expand to previously unaffected zones. In the case of dengue, higher temperatures are also known to foster virus transmission through a reduced extrinsic incubation period and higher biting rates. While environmental conditions are key predictors for dengue prevalence, human behavior and socioeconomic status sometimes act as mediators in the climate-dengue relationship.

This research identifies the determinants of dengue transmission in Ucayali, Peru. More precisely, it seeks to analyze the interactions and relative strengths of meteorological and socioeconomic drivers on virus transmission at the local level. The problem of dengue re-emergence in Peru and worldwide as control efforts increase is a demonstration of the fact that we do not understand the whole problem, thus aren't able to target prevention most effectively.

This research addresses a critical knowledge gap in local dengue transmission patterns. As changing climatic conditions threaten to foster dengue resurgence in tropical countries, such research is most needed to inform present and future prevention campaigns.

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McGill University, Canada
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CHICUMBE, SERGIO
NATIONAL INSTITUTE OF HEALTH (INSTITUTO NACIONAL DE SAÚDE), MOZAMBIQUE
Co-authors: CHICUMBE, SERGIO;Health System Research Cluster, Instituto Nacional de Saúde (INS), Mozambique; TEMBE, SHEILA; Health System Research Cluster, Instituto Nacional de Saúde (INS), Mozambique

Dimensions of factors related to exclusive breastfeeding at Mavalane health district, Mozambique, 2012

Rationale: Exclusively breastfeeding during the first 6 months of life have been largely benefitial to mother and child in low-income countries. Exclusive breastfeeding decreases the risk of child dying from diarrhoea and respiratory infectious diseases. Despite the high prevalence of breast-feeding (97%) in Mozambique, exclusive breastfeeding prevalence in first six months is < 26 % as reported by demographic in 2011..

Objective: to explore the components of factors correlated to frequencies of exclusive breastfeeding among primary health care clients

Methodology: a survey was conducted in a peripheral hospital in Maputo, between January and February 2012. Women-child dyads (n=268) were systematically sampled and interviewed. The questionnaire design was informed by prevailing measurable factors related to exclusive breastfeeding, grouped into social, demographic, economic and clinical. Components of factors were explored by categorical principal component analysis in SPSS version 20.0.

Results: The median of age was 24 years; 43% were domestic, 76% were married, 46% had 7th grade of schooling or more. Eleven percent of children had postnatal admission for health care and 21% had or were in exclusive breastfeeding. Five factors dimensions were identified: i) maternity exposure; ii) economic; iii) clinical - mother; iv) social and marital and v) clinical -newborn, explaining 52% of the breastfeeding variance.

Discussion: In Mozambique, dimensions of factors related to breastfeeding can be quantifiable through inequities analysis approach. Plans to modify such factors can thereby be directed to dimensions with major weight and most likely to have short term impact. Determinants related to "exposure to maternity" for example, explaining about 20% of variance of exclusive breastfeeding, is dependent upon health promotions programs, which need to be strengthened and evidence informed.

Conclusion: frequency of exclusive breastfeeding was considerably low. Some factors related to it were identified. However, theoretically only 52% of variance could be impacted through acting up on the identified factors. Further studies in search of more modifiable factors are needed.

Chu, Charlene
Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Canada
Co-authors: Dainton, Christopher; Grand River Hospital Kitchener, ON

The use of gerontological clinical guidelines in primary care global health experiences in Latin America and the Caribbean: An integrative review

Objective: This integrative review explores the use and evaluation of clinical guidelines related to gerontology during MSTs.

Methods: MEDLINE and LILACs were searched using 18 keywords, including 'medical brigades', 'Latin America' and 'primary health care'. Abstracts reviewed were published between 2000 and 2015, in any language, and included qualitative and quantitative study designs. We also hand searched the references of the full-text articles, and screened for the presence of gerontological guidelines.

Results: 391 abstracts were screened, of which 9 studies used clinical guidelines. No articles used or mentioned guidelines relating to gerontology or geriatrics. Five studies were qualitative, of which 2 studies only referred to evidence to guide treatment (e.g. parasite, and hypertension treatment) and 3 studies that described clinician experiences using non-evidence based guidelines (e.g. expert opinion on treatment). Four quantitative studies applied the American Family Physician guidelines to UTI management. Articles described the epidemiology of conditions, but none of these studies reported the prevalence of basic risk factors in the older adult population (baseline cognitive impairment, baseline functional impairment, and impaired mobility).

Discussion: Given the global aging population, the use of clinical guidelines is essential to standardize and strengthen the provision of primary care in various settings. Guidelines may not be have been utilized given the differences in resources, culture and context from the North American gerontological guidelines. Although there was a lack of evidence reporting the prevalence of risk factors, this could be because they were reported as symptoms of other conditions. There is an overall paucity of research concerning geriatric care and MSTs. We recommend future work focus on the development and evaluation of culturally sensitive, evidence-based guidelines for the care of geriatric patients serviced by MSTs.

Conclusions: There has been no development, implementation and evaluation of clinical guidelines related to geriatrics on MSTs in LA. More research is warranted to guide the clinical practice of clinicians who volunteer on MSTs when caring for the older adult population.

Cowater International,
Human Resources for Health Project in Bangladesh, Cowater International Inc., Bangladesh
Co-authors: Begum, Shuriya, Bangladesh Nursing Council; Dey, Sandhya Rani, Human Resources for Health Project in Bangladesh; Crosby, Kristine, Canadian Association of Schools of Nursing; Baker, Cynthia, Canadian Association of Schools of Nursing; Ahmed, Lubana, Human Resources for Health Project in Bangladesh, Social Development Group, Cowater International Inc.

Strengthening nursing education in Bangladesh through entry-to-practice competency development

Rationale: In the past, curriculum was a defined set of instructions. Competency-based education instead of teaching a prescribed set of standards, focuses on the current health needs of the population and developing learning outcomes so that health professionals will be able to meet these needs. The Lancet Commission Report emphasized the importance of competency based health professional education for transforming education and strengthening health systems. As part of this broader initiative, the Bangladesh Nursing Council (BNC), supported by the Canadian Association of Schools of Nursing (CASN) through the Human Resources for Health Project in Bangladesh funded by the Department of Foreign Affairs, Trade and Development (DFATD) Canada, developed a national, consensus based, entry-to-practice competencies for registered nurse-midwives in Bangladesh.

Objective: To create competencies that would be 1) adapted to the local context, 2) determined by Bangladesh stakeholders, while 3) simultaneously reflecting international standards and global knowledge.

Methods: The process included five overlapping stages to develop a set of competencies which involved i) Creation of a group of experts; ii) Review of key literature; iii) Iterative process to draft the competencies; iv) building national consensus and iv) formal approval by the BNC.

Results: Group formed in March 2013, chaired by the BNC Registrar met six times to develop draft competencies statements reviewing international entry to practice competencies. In March 2014, 72 stakeholders from relevant health sector reviewed the draft competencies. The final version Entry to Practice Competencies for Nurse-Midwives in Bangladesh was formally approved by the BNC's Executive Committee in June 2014. 50,000 copies printed and disseminated to the Nursing Institutes.

Discussion: Bangladesh with 156.5 million populations has a very low health worker to population ratio i.e. 0.2 nurses per 1,000 population and 0.4 nurses per physician compared to the international standard of approximately 3 nurses per physician. The competency- based education focusing on the nursing process, the fundamentals of nursing care, general nursing care, communication, and nursing professionalism and leadership has potential to define the scope of practice of nurse-midwives as per existing health needs of the population.

Conclusion: In recent years, a key strategy adopted by the Government of Bangladesh to improve the health of the population, has been to strengthen the position, role, number, and education of nurse-midwives. This entry-to-practice development initiative for capacity building of Nurse-midwives in Bangladesh will contribute significantly to strengthening the quality of care and health system in Bangladesh.

Cowater International,
Human Resources for Health Project in Bangladesh, Cowater International Inc., Bangladesh
Co-authors: Sarkar, Goutam Aich - Nursing Wing, Ministry of Health & Family Welfare; Hasan, Sajedul, Human Resource Management Unit, Ministry of Health and Family Welfare; Farhad, Nelofar, Directorate of Nursing Edication & Services; Jahangir, ABM, Human Resources for Health in Bangladesh, Cowater International Inc.; Khan, Shereen, Human Resources for Health Project in Bangladesh, Cowater International Inc.

Increasing the status of the Government Nursing Directorate in Bangladesh.

Rationale: In Bangladesh the Directorate of Nursing Services (DNS) is the central hub of Nursing and Midwifery education and services of the country employing more than 21,020 nurses in the public sector. However it is understaffed; the Director changes every 3 years or more often; and the majority of their time is spent in deployment, transfers and responding to Ministry demands. The current condition of DNS, together with the general low status and image of nursing in the country, leaves the Directorate weak, and undercuts any influence it might have. Moreover, there is overlap of roles and responsibilities with more senior non-nurse civil servants such as the Joint Secretary, (Nursing & Hospital), which limits the initiative and authority of the DNS Director. Upgrading DNS to Directorate General status is seen as a key strategy in strengthening nursing and midwifery services. The Prime Minister of Bangladesh is supportive of nursing and the government has agreed to proceed.

Objective: To change the status, develop capacity in terms of job responsibility, numbers, roles, uplifting the nursing professional image and enable influence of the nurses in policy planning and decision making for the nurse-midwives.

Methods: This initiative included drafting of a proposal for DGNMs by the DNS in close collaboration with the Hospital and Nursing Wing and the Human Resource Management Unit, MOHFW; sharing the draft proposal in a stakeholder's consultation held in 2014.

Results: The DGNMS proposal has been restructured and submitted to the Ministry of Public Administration for consideration and to accelerate the approval process. The DGNMS structure focuses on increasing manpower, creating new posts for nurses to improve the doctor-nurse ratio as per international standard (1:3), monitoring and quality control of nursing-midwifery service delivery.

Discussion: Upgrading DNS to Director General status with required senior management positions has been considered as an essential organizational reform and restructuring. The DG will carry the rank of Joint Secretary. Challenges remain with bureaucracy slow decisions and the transition period. Question remains if the DG is going to be a nurse.

Conclusion: Nursing has its full impact on the quality and costs of care for the populations' health ' when the discipline is well led and well positioned within the health care hierarchy at both facility and government levels. Placing nursing within the senior echelons of government helps empower the profession, supports women's advancement ensuring nursing advice is available for health care policy, planning and care delivery.

CUERVO-DIAZ, DIANA
DOCTORADO SALUD PUBLICA UNIVERSIDAD NACIONAL DE COLOMBIA, COLOMBIA
Co-authors: MARISOL MORENO ANGARITA PROFESORA TITULAR DOCTORADO SALUD PUBLICA UNIVERSIDAD NACIONAL DE COLOMBIA

PREVENCIÓN Y MANEJO DE LA DISCAPACIDAD PARA TRABAJAR : UN ANÁLISIS DEL SISTEMA DE RIESGOS LABORALES COLOMBIANO

El planteamiento del problema parte de asumir la crítica al modelo actual de aseguramiento en riesgos laborales de Colombia, en relación con su ineficacia para garantizar la inclusión laboral de las personas que han sufrido accidente de trabajo o enfermedad laboral, visto desde el punto de vista de los trabajadores como ausencia de acompañamiento para el reintegro; desconocimiento de los médicos tratantes de los conceptos de discapacidad, rehabilitación y reintegro; la tendencia de la justicia en el país a otorgar el fuero de estabilidad laboral reforzada; y la imposibilidad de los empleadores de efectuar la reincorporación por desconocimiento, rechazo o imposibilidad.

En este contexto se plantean las siguientes preguntas de investigación: ¿Cuáles serían los ajustes conceptuales, procedimentales y legales que deberían hacerse al modelo de atención en riesgos laborales en Colombia, para favorecer la prevención y manejo de la discapacidad para trabajar, logrando integración laboral de personas con discapacidad permanente, secundaria a lesiones producidas por el trabajo'. ¿Qué ajustes procedimentales, jurídicos o estructurales, deberían hacerse en el sistema de riesgos laborales en Colombia, para favorecer una relación equilibrada entre la compensación económica y la inclusión laboral, como forma de protección al trabajador'.

Se esta desarrollando un proyecto enmarcado dentro de la metodología de métodos mixtos , con énfasis en la investigación cualitativa; en donde a partir de revisión documental se pretende consolidar el estado de la situación actual de los modelos de atención en riesgos laborales, a la luz de los referentes legislativos y jurisprudenciales en Colombia y en países que han desarrollado enfoques basados en la prevención y manejo de la discapacidad para laborar, en lesiones producidas por el trabajo; para posteriormente contrastar el modelo de atención Colombiano, reconstruido mediante entrevistas a los actores del sistema de riesgos laborales. Lo anterior con el fin de generar una propuesta conceptual que permita sugerir ajustes, jurídicos, estructurales, procedimentales en el Sistema de Riesgos laborales en Colombia, para favorecer la inclusión laboral efectiva y lograr una relación equilibrada entre la compensación económica y el reintegro laboral de personas que sufren accidente de trabajo o enfermedad laboral; contribuyendo así a la organización y articulación de un Sistema de Riesgos Laborales más efectivo, equitativo y justo.

Cunha, Thiago
Pontifical Catholic University of Paraná, Brazil
Co-authors: Lorenzo, Claudio; University of Brasilia

Health in the "Post-2015 Agenda": analysis and perspectives from critical bioethics

Rationale: The post-2015 development agenda involves a series of reports published since 2011, when the United Nations began discussions to replace the Millennium Development Goals. Since then, some sectors have been arguing that health should be positioned as one of the main topics in the post-2015 agenda.

Objective: To analyze the process of inclusion of health issues in the post-2015 agenda from bioethical perspective.

Methods: Was used the dialectical method of documentary research and the theoretical reference from critical bioethics to analyze the following documents: "Health in the post-2015 UN development agenda - Thematic Think Piece (2012) "; Realizing the future we want for all: Report to the Secretary-General (2012); "Rio + 20 outcome document: The future we want" (2012); "Health in the Post-2015 agenda: Report of the Global Thematic Consultation on Health" (2013); "The new global partnership: eradicate poverty and transform Economies through sustainable development" (2013).

Results: Despite slight differences related to the nature of the discussion, the documents analyzed show that the initial proposals for inclusion of health in the post-2015 agenda are characterized by: 1) instrumentalize the health as a means to promote economic development; 2) legitimate the health as a commodity; 3) restrict access to basic package of health services for the poor and vulnerable populations.

Discussion: The proposes on health in the post-2015 agenda reproduced an restricted view of the right to health that endorses the division of citizens of planet into two groups: an economically privileged with unlimited access to health goods and services offered by the market and other economically disadvantaged with access to limited health services provide by national systems private or public-private of health coverage or by international NGOs and philanthropic corporations.

Conclusion: Proposals for the health sector in the post-2015 agenda denied the moral value of health as a 'good in itself' and as a Universal Human Right. The inadequacy of this approach becomes most problematic if one considers a broad perspective on the health-disease process that includes its social and economic determinants. This study points to the need for closer monitoring of the post-2015 agenda of the bioethics discipline in order to try to intervene in public spaces of deliberation on global health in defense of human rights, real freedom and dignity for all.

Curiel, Arturo
Universidad de Guadalajara, México
Co-authors:

La salud global y la necesaria educación en el contexto de la salud de los ecosistemas

El concepto de salud definido por Aldo Leopold, hace referencia a la capacidad que tiene un organismo o sistema de auto regenerarse.

Para mantener la salud global, se requiere que los ecosistemas no pierdan esa capacidad de regenerarse y contar con una calidad ambiental necesaria para nuestra salud física y mental con aprovisionamiento de aire, agua, alimentos, paisaje y coberturas protectoras para disminuir riesgos a desastres.

En la maestría en ciencias de la salud ambiental de la Universidad de Guadalajara, en sus 20 años de existencia, se ha estudiado el vínculo indivisible entre la salud de ecosistemas y la salud de las poblaciones humanas, por lo que en base a esta experiencia se planteó el objetivo de distinguir indicadores de salud de ecosistemas vinculados a la salud global.

La metodología utilizada parte del paradigma interpretativo e inició con una sistematización de información alrededor de la definición de salud global y salud de los ecosistemas. Un segundo paso, fue la identificación de indicadores relacionados a la salud de los ecosistemas en el contexto de la salud global para priorizar ecosistemas críticos, considerando como marco de referencia las diez categorías de ecosistemas utilizados en la Evaluación de Ecosistemas del Milenio.

Los resultados encontrados es que los ecosistemas más críticos son los urbanos, donde se han rebasado la capacidad de autodepuración de las cuencas atmosféricas e hidrológicas ante la carga de contaminantes, con mayor frecuencia en épocas de calor.

El segundo ecosistema que ha disminuido su capacidad auto regenerativa, son los agrícolas, donde se ha degradado el suelo por acidez resultante del excesivo uso fertilizantes nitrogenados, o por erosión por la pérdida de cobertura sobre el suelo.

La tercera categoría es la forestal, que ha estado perdiendo su capacidad de autoregeneración por una degradación biológica que afecta el flujo energético, los niveles tróficos, los ciclos biogeoquímicos, los nichos ecológicos, el equilibrio ecológico y la resiliencia.

En resumen, donde se concentra la mayor población de seres humanos, es donde se ha abatido la capacidad auto regeneradora de la naturaleza, y eso tiene que cambiar.

En términos educativos resulta necesario asumir la tarea de reconocer la importancia de mantener la capacidad auto regeneradora de los ecosistemas, regresando la salud a los suelos como punto de partida, asegurando con ello tener la base para restaurar la biodiversidad de los ecosistemas y aprender a dar tiempo y lugar para que la vida siga fluyendo en estos sistemas.

Curry, Shauna
CAWST, Canada

Water, sanitation and hygiene and maternal, newborn, and child health

Rationale: Diarrhoeal disease is the second largest killer of children between the ages of 1 month and 5 years of age. Unsafe drinking water, inadequate sanitation, and poor hygiene are responsible for 58% of diarrhoeal disease and are estimated to result in 1000 child deaths each day. However, this only provides a partial picture of the impact of water, sanitation, and hygiene (WASH) in maternal, newborn, and child health (MNCH).

Objective: The objective of this study was to explore the impact of inadequate WASH on MNCH beyond diarrheal disease mortality.

Methods: A comprehensive review of the literature was performed on key water-related infections as they relate to MNCH.

Results: Several preventable water-related diseases were identified as being of particular concern for maternal, newborn and child health. For example, although Hepatitis E has a relatively low mortality rate for the general public, the general mortality rate for pregnant women in their second or third trimester is 20%, rising higher than 40% in some regions, with 45% of fetuses of infected women born prematurely. Hepatitis E is primarily transmitted through fecally contaminated drinking water.

Water-related illnesses can cause malabsorption of nutrients, leading to consequences such as iron deficiency anemia and malnutrition. Up to 65% of pregnant women infected with schistosomiasis, for example, are anemic, leading to 45% of their babies being born with low birth weight. Approximately 50% of global malnutrition, and 25% of stunting, is related to waterborne disease. This can lead to long-tern cognitive defects in children. In addition, several studies in low-resource settings have found a link between chronic diarrhea and frequency and severity of pneumonia infection, the leading cause of death for children between the ages of one month and five years.

Discussion: Although water and sanitation interventions are often classified under the auspices of the environment, adequate WASH is critical for health, and most especially for MNCH. As a result of this research, the Centre for Affordable Water and Sanitation Technology (CAWST) is developing training materials for WASH implementers on the importance of MNCH and for health practitioners on simple WASH interventions they can incorporate into community health promotion projects.

Conclusion: Simple interventions, such as household water treatment, basic sanitation, and improved hygiene, can play a large role in reducing maternal and child mortality and morbidity, and lead directly to improved child growth and development.

Curry, Shauna
CAWST, Canada
Co-authors: Clarke Foster, Taryn Meyers, Lisa Mitchell

Sustainable water, sanitation and hygiene services: community health promoters in Ndola, Zambia

Rationale: Seeds of Hope (SHIP)'s community health promotor (CHP) program in Ndola, Zambia was developed in partnership with the Centre for Affordable Water and Sanitation Technology (CAWST) in 2010. The program consists of an initial community-wide workshop introducing the importance of water, sanitation, and hygiene (WASH) for health. Community members with further interest are encouraged to become volunteer community health promotors (CHPs). These volunteers participate in a three-day workshop about water-related disease transmission, volunteerism, and giving guidance on working with households. After one month the volunteers participate in a second three-day workshop addressing any questions or concerns the participants have, further information on safe water and sanitation, and skills to assist in their role.

Objective: The goal of this study was to evaluate the project to assist with identifying areas for improvement.

Methods: Interviews were conducted by CAWST staff with SHIP and with active CHP groups. CHPs were surveyed either in person or by phone.

Results: Of the 1400 CHPs trained in the previous five years, 900 were estimated by SHIP staff to still be active, of whom 710 were able to be reached and confirmed active. Together the 710 CHPs reported having trained 27 000 community members over the previous five years.

Several challenges to the program were identified including knowledge dilution and maintaining motivation. The relationship that CHPs felt they had with the SHIP staff was found to be the key motivator for continuing to volunteer.

A secondary issue that arose was the unanticipated effect of incentives offered by other NGOs. It was noted that some active CHPs later discontinued the program after other projects in the community introduced the expectation that volunteers should receive some form of compensation for this type of work.

Discussion: The key question for the program moving forward is how SHIP should allocate its limited resources between expanding the program to reach new communities and retaining volunteers through ensuring that they feel that they have close relationships with staff, in order to achieve the greatest overall impact to health in the region. In June 2015, CAWST and SHIP will begin piloting a mobile phone project for maintaining connection with CHPs remotely.

Conclusion: By training volunteer groups to reach out to their communities, a small number of trainers were able to reach a very large number of beneficiaries. Project success depends heavily on cultivating and maintaining relationships with the volunteer CHPs.

Curry, Shauna
CAWST, Canada
Co-authors: Clarke Foster, Taryn Meyers, Lisa Mitchell

Improving the sustainability of WASH capacity building through mobile technologies

Introduction: The Centre of Affordable Water and Sanitation Technology (CAWST) and Seeds of Hope International (SHIP) partnered together in Zambia to create a community health promoter (CHP) training and volunteer program in 2010. SHIP offers a one-day workshop introducing to water, sanitation, and hygiene (iWASH) from which interested participants are identified and given the opportunity to continue their training with the three-day course, followed one month later with a second three-day course. Since then this program has spread to other countries in which CAWST is working. A recent evaluation of the program in Zambia surveyed 710 CHPs. Together, the survey respondents had reached 27 000 community members since 2010.

One finding of the evaluation was that a key threat to the program is the reduction of motivation over time for volunteer CHPs. It was determined that keeping a close relationship with trainers was critical to sustaining the program. However, due to resource limitations there is a great difficulty in maintaining contact with past trainees while attempting to expand the program.

Methods: CAWST and SHIP have worked together to develop a strategy for maintaining contact with CHPs using mobile technologies. The strategy consists of sending automated messages every four months to CHPs. The messages will request information from the CHPs, such as how many households they have visited over the previous period, and whether they need any additional support from SHIP at that time.

The goal of this project is for CHPs to feel remembered and connected to SHIP and the program, and thus to maintain the motivation of CHPs. An additional benefit will be to assist SHIP and CAWST in monitoring the effectiveness of the CHP program by keeping track of CHP activities.

In June 2015 CAWST and SHIP will pilot the mobile project by sending out automated messages to all CHPs on file, then again in October. The number of CHP responses, their activities, and the time required for staff to respond to requests generated by the project will be monitored.

Results: Results from the first and second outreach will be presented.

Conclusions: With the spread of mobile phones throughout the world, mobile technologies are a promising way to increase follow-up and contact with past trainees to ensure that they receive the support that they need.

DENGO-BALOI, LILIANA
NATIONAL INSTITUTE OF HEALTH - MOZAMBIQUE, MOZAMBIQUE
Co-authors: LANGA, José Paulo ; CHICUMBE, Sérgio; SEMA BALTAZAR, Cynthia National Institute of Health - Ministry of Health - Mozambique

Antibiotics susceptibility pattern of Vibrio cholerae O1 Ogawa, isolated during cholera outbreak investigation in mozambique from 2014 to 2015

Rational

Mozambique have recorded cyclically epidemic outbreaks of cholera. Antibiotic therapy is recommended in specific situations for management and control of cholera outbreaks. However, an increase in the rates of resistance to antibiotics by Vibrio cholerae has been reported in several epidemic outbreaks worldwide. On the other hand, there are few recent records of continuous surveillance of antibiotics susceptibility pattern of Vibrio cholerae in Mozambique.

Goals

The purpose of this study was to evaluate the antibiotics susceptibility pattern of Vibrio cholerae O1 Ogawa isolated in cholera outbreaks in Mozambique to commonly used antibiotics.

Methodology

In the context of surveillance and response to Cholera outbreaks, cholera treatment centers of Lichinga districts, Metangula, Memba, Tete City, Moatize, Morrumbala, City of Quelimane and Nampula City sent to the National Microbiology Laboratory of Reference from the National Institute of Health of Mozambique, samples suspected of cholera in the period 2014 to 2015. Samples were processed for the isolation of Vibrio cholerae by culture and oxidase reaction; serotypes were determined by antisera agglutination reaction in the blade and antibiotics susceptibility pattern by the disk diffusion method Kirby Bauer. The antibiotic susceptibility results were interpreted by following recommendations of CLSI (Clinical and Laboratory Standards Institute) 2014.

Results

Among isolates from Vibrio cholerae O1 Ogawa we found resistance of 100% (53/53) to trimethoprim-sulfamethoxazole, 100% (54/54) ampicillin, 99% (73/74) for Nalidixic Acid, 97% (64/66) to Chloramphenicol, 95% (42/44) for nitrofurantoin, 82% (80/97) Tetracycline, 56% (39/70) Azithromycin and 0% (0/101) for ciprofloxacin.

Discussion

Although V. cholerae infections in Mozambique generally are not treated with antibiotics, our work shows that the strains of the bacteria have a high frequency of resistance to available antibiotics.

Conclusion

Since the appearance of this resistance can influence cholera control strategies, continuous monitoring of epidemic strains is crucial.

Keywords: Susceptibility Pattern Vibrio cholerae, Resistance, Antibiotics

Denison, Jacqueline
University of British Columbia- Okanagan Campus, Canada
Co-authors: Barker, Jessica; University of British Columbia- Okanagan Campus and Chibanje, Pelina, Lewanika School of Nursing

'You are welcome.' Mutually beneficial partnerships: Lessons learned from implementing a global health nursing practicum in Western Province, Zambia

Rationale: There is a growing body of evidence highlighting the positive learning outcomes for nursing students embarking on a global health practicum (GHP). Often these practicum sites are located within low and middle income countries, as these areas offer consolidation and hands on learning on topics such as infectious disease and tropical medicine. However, the literature reflects experiences narrated mostly from a global Northern perspective. Lacking is a voice from the global South perspective and there is little evidence indicating the impact on lower income countries.

Objective: A GHP was developed through a partnership between the University of British Columbia- Okanagan and the University of Zambia, as well as multiple partners within the Western Province of Zambia. Specific objectives of this presentation include disseminating what both partners have learned through experiences of coordinating and supervising an annual GHP in Western Province over the past six years. Our objectives are to uncover what student gain from a global health nursing practicum, and the key elements that make up a mutually beneficial collaboration between global North-South partners.

Methods: As part of the GHP, Canadian students and faculty participated in a weekly reflective blog to highlight their experiences. The authors used narrative data from the blog, to gain insight into student experiences. Other forms of 'data' included Small focused groups and field notes taken during in-country interactions. Zambian and Canadian partners involved in the implementation of the GHP analyzed the narrative data. Data was first analyzed individually, then further refined, and analysed collectively. Subthemes were also developed throughout the analysis process.

Results: Our findings confirm that GHP are a valuable means to enhancing students nursing education. Similarly, GHP are valuable to Zambian partners. Key themes identified from student learning experiences included: personal and professional growth, an enhanced understanding of cultural competence and tropical medicine; and confidence working within healthcare systems in a limited resourced setting.

Discussion: The authors recognized a number of 'lessons learned' or recommendations for other institutions looking to organize a global partnership. Successful GHPs depend on local partners providing ongoing guidance and support. Creating a partnership that is mutual and collaborative requires a concentrated effort on the ground- namely building trusting relationships between partners.

Conclusion: Global North-South partnerships provide several benefits for student learning in nursing, however working in another country or community requires careful attention to relationship building and mutuality. As partners key in implementing international practicums, the global South voice is an important consideration in achieving a truly collaborative partnership.

Descoteaux, Nancy
McGill University, Canada
Co-authors: Chagnon, Valérie; MSc PT, Di Dong, Xin; MSC PT(c), Ellemo, Eric; MSc PT, Hamelin, Alessandra; MSc OT, Juste, Evans; MSc(c) PT, Laplante, Xavier; MSC PT(c), Miron, Alison; MSc OT(c), Morency, Phillipe; MSc PT, Samuel, Katherine; MSc OT, Descoteaux, Nancy; PT, David Charles; PT, Hunt, Matthew R.; PT, PhD.

Investigation of the employment trajectory and work profile of graduates from three rehabilitation technician training programs in Haiti

Rationale: Several programs have been established to train rehabilitation technicians in Haiti with the goal of filling the important human resource gap that exists in the rehabilitation sector. Little was known about the process of seeking employment, current work context, or career plans of recently graduated rehabilitation technicians.

Objectives: The objectives of this research were to create a detailed portrait of the employment trajectory and work profiles of graduates from three rehabilitation technician programs in Haiti, and to better understand their experiences and plans related to employment and career progression.

Methods: A mixed methods design was used including surveys and in-depth interviews with graduates. Survey data included work profiles and perceptions of their preparation for professional practice. Semi-structured interviews were analyzed using constant comparative techniques and a qualitative descriptive approach to better understand graduates' experiences of finding employment, their work as rehabilitation technicians, and their plans for career development.

Results: In the first cohorts of graduates, 73.5% of those surveyed were working as rehabilitation technicians (68% of whom worked in the region of Port-au-Prince) and providing care to patients with a wide range of clinical conditions, with neurological conditions being the most common. 80% of these graduate reported being supervised by a physiotherapist. Qualitative analysis of interviews yielded five themes related to the employment trajectory and experiences of participants: motivation for joining the rehabilitation field, reflections on their training program, the road towards finding a job, current employment, and vision for the future.

Discussion: The study findings illuminate the contexts and experiences of employment for rehabilitation technicians. Most graduates found work within six months of graduation and are contributing to the provision of care for individuals with disabilities in Haiti. However there are concerns about increasing competition for paid employment due to the number of graduates, availability of adequate supervision, and reliance on non-governmental organizations as employers of almost all graduates. Achieving formal recognition of the training from governmental authorities is also an important objective that has yet to be completed.

Conclusion: Rehabilitation technicians play key roles in the provision of services to individuals with a range of neurological and musculoskeletal conditions. Further efforts are needed to ensure the sustainability and enhance the impact of these contributions within the rehabilitation sector.

Diarra, Aïssa
Laboratoire d'études et recherches sur les dynamiques sociales et le développement local (LASDEL), Niger
Co-authors:

Les stratégies des agents de première ligne en contexte de gratuité au Niger

Introduction

Au Niger, avec l'introduction de la gratuité à l'endroit des enfants de moins cinq ans les agents de première ligne n'ont pas été consultés au préalable et divers obstacles ont lourdement grevé la mise en 'uvre de la politique. Cette communication rend compte des stratégies des soignants face à cette situation.

Objectif

Contribuer à documenter les dysfonctionnements de la mise en 'uvre des mesures de gratuité pour une meilleure approche du processus vers la couverture universelle aux soins et services de santé

Méthode

Des études monographiques ont été réalisées dans quatre districts sanitaires de 2009 à 2011 avec une durée moyenne de deux mois par site. Des observations ont été faites au sein des formations sanitaires avec des entretiens semi-directifs auprès de plusieurs groupes stratégiques. Les documents consultés ont concernés divers outils de gestion. Une analyse thématique a été utilisée pour le traitement des matériaux recueillis.

Résultats

Deux types de stratégies sont développés par les agents de santé. Le premier est d'adaptation pour faire face aux défaillances de mise en 'uvre de la politique. Les stratégies ont d'abord concernées le travail de tâtonnement puis d'ajustement dans les outils de gestion, le stockage des médicaments et dans la cohabitation des systèmes de gratuité et de recouvrement des coûts. Elles sont ensuite apparues dans l'approvisionnement en médicaments, notamment par des facilités de commandes auprès des firmes privées. Face à la pénurie de certains produits pédiatriques, la prise en charge des enfants a été gérée à coup de prescriptions palliatives. Le second type de stratégies développé à partir des dysfonctionnements structurels du système de santé, est d'ordre clientéliste, de contournement des règles de gestion et de détournement des ressources. Des effets pervers résultant du système et des pratiques des agents de santé sont aussi apparus : l'accentuation d'une gestion commerciale des patients, les plus « couteux » se retrouvant confrontés parfois à un refus de soins ; errance des patients en quête de médicaments ; baisse de la qualité des traitements proposés.

Conclusion

Les réformes ont plus de chance de réussir si elles sont au préalable mûrement discutées avec les agents de première ligne, par rapport à leur formulation et leur mise en 'uvre. De même les leçons apprises des expériences pilotes doivent être prises en compte.

DJOUDA FEUDJIO, Yves Bertrand
Ecole de Santé Publique de l'Université de Montréal, Cameroun (pays de nationalité)
Co-authors: Marie HATEM, Ph.D Professeure UdeM/École de Santé Publique/DMSP

Profils de formation, pratiques et compétences des acteurs offrant les soins sages-femmes en zones sanitaires rurales au Cameroun : Une analyse situationnelle

1- Contexte et justification : Au Cameroun, les décennies (80-90) de récession économique ont été marquées par le recul de l'Etat face à ses fonctions régaliennes. Dans le champ de la santé, jusqu'en 2012, les autorités avaient suspendu (depuis 20 ans) la formation directe à la profession sage-femme, ce qui a eu pour conséquence, une pénurie dramatique des ressources humaines (RH) de qualité pour les services de maternité. Avec seulement 140 gynécologues obstétriciens et 129 Sages-femmes (SF) inégalement repartis dans 174 districts de santé, les services de maternité doivent couvrir un besoin exigeant la disponibilité de 5400 SF (FNUAP, 2013). Comme bien de pays du Sud, le Cameroun est confronté à un déficit quantitatif et qualitatif des SF. Dans ce contexte de crise des RH, divers infirmiers/aides soignants et matrones, dans les zones rurales, ont appris à offrir ou à « bricoler » des soins SF alors que leurs pratiques et compétences ne sont pas structurées par des cadres réglementaires et institutionnels rigoureux. Cette crise des RH et cet opportunisme des acteurs s'inscrivent parmi les facteurs qui déterminent les mauvais indicateurs de santé maternelle au Cameroun (782/100 000 naissances vivantes, EDS, 2011).

2- Objectif : Cette communication fait une analyse situationnelle de la profession Sage-femme au Cameroun et décrypte spécifiquement les profils de formation/compétence, la qualité technique, non technique et organisationnelle des pratiques dispensées par les acteurs offrant les soins SF, notamment dans les zones rurales où la pénurie des RH en santé maternelle est très criarde.

3- Méthodologie : Cette recherche est qualitative. Les données de littérature et les premiers résultats disponibles vont être enrichis par des observations et entretiens approfondis auprès des informateurs clés des zones rurales Batcham et Bitsogman. Sur le plan théorique, l'analyse des données mobilise la sociologie compréhensive, le cadre de Tanahashi et l'approche de la qualité de Contandriopoulos.

4- Résultats attendus : Disponibilité des analyses sur la situation de la profession Sage-femme au Cameroun et spécifiquement sur les profils de formation/compétence, sur la qualité technique et organisationnelle des pratiques obstétricales observées chez les acteurs en zones sanitaires rurales.

5- Discussion et conclusion : Le capital humain est aujourd'hui valorisé par l'OMS comme un pilier essentiel d'un système de santé performant. La présente analyse des profils et compétences des acteurs offrant les services SF en zones rurales permet de formuler des recommandations opérationnelles pouvant améliorer le renforcement des capacités chez les acteurs au Cameroun.

Dogbey, Brenda
University of Ottawa, Canada
Co-authors: Bourgeault, Ivy Lynn; University of Ottawa; Labonte, Ron; University of Ottawa

Promising solutions to migration of health professionals: clinical officers in the context of Kenya

RATIONALE
Mid-level cadres have long had an integral role in context of health systems globally. Clinical officers have played a key role in the Kenyan health system since the early 1900s. Today, over 70% of the population is rural, and yet 70% of the medical doctors are located in urban areas; there is a need for a health cadre that would be able to serve the needs of the rural population.

OBJECTIVES

1. What are the attitudes of key stakeholders and health professionals to scaling up the role of clinical officers in the context of Kenya'

2. What are the barriers and facilitators in scaling-up clinical officers'

METHODS
In-depth interviews were conducted with 22 key health system stakeholders and 22 health professionals between August 2012 and February 2013, and analysed using Nvivo software. A SWOT analysis was used to understand the strengths, weaknesses, opportunities and threats to scaling-up clinical officers.

RESULTS
Strengths: Training of clinical officers is shorter compared to doctors; they are integrated into the health system and are less likely to migrate due to a lack of transferability of their skills in an international job market.

Weaknesses: Medical doctors argued that a clinical officer cannot replace a doctor. There is a lack of career progression opportunities for clinical officers. There are more clinical officers than the government can currently absorb both a weakness and an opportunity.

Opportunities: Clinical officers are much more willing to work in rural areas compared to doctors; there are steps to create a Bachelor of Science program to increase the competencies and skills of clinical officers; the surplus of clinical officers could be an opportunity for scale-up.

Threats: Protectionism of medical doctors to the clinical careboth by policy makers and practitioners; investments into the health system target large hospital institutions rather than smaller dispensaries where clinical officers tend to work.

DISCUSSION
There was general support for the scale up of clinical officers however there were limitations as to how to operationalize this. That there is a surplus of clinical officers and that they are less likely to migrate presents an opportunity for addressing current human resources for health shortages not only in Kenya but globally.

CONCLUSION
A great potential lies in the mid-level cadre of clinical officers. Sufficient political and professional will is required to invest in and scale up this cadre within the context of a holistic, well-coordinated approach to health system planning.

Dogbey, Brenda
Public Health Agency of Canada, Canada

Identifying equity-sensitive interventions on the Canadian Best Practices Portal

RATIONALE: The Canadian Best Practices Portal (Portal) is a web platform developed and maintained by the Public Health Agency of Canada (Agency). Launched in 2006, the Portal provides a comprehensive repository of community and population health interventions, strategies, guidance, systematic reviews and evidence relevant to chronic disease prevention and health promotion.

In 2012, the Rio Political Declaration on the Social Determinants of Health called upon states to measure, understand and reduce health inequities through action on the social determinants of health. To contribute to that effort, in 2014 the Agency collaborated with key partners in public health to develop criteria to identify best or promising population health interventions that demonstrate positive impacts on health equity through action on the social determinants of health for dissemination through the Portal.

LEARNING OBJECTIVES: By the end of this workshop, participants will:

1. Have an orientation to the Canadian Best Practices Portal

2. Know how to search for equity-sensitive interventions on the Portal, through a live demonstration of the Portal online

3. Learn about real-life Canadian examples of equity-sensitive interventions in two priority topic areas: mental health promotion and healthy weights.

METHODS: Through an interactive process that includes a live demonstration of the Portal, the facilitators will provide participants with tools and information on the Portal with particular emphasis on the equity-sensitive best and promising practices currently featured on the Portal.

Equity-sensitive interventions meet the following criteria:

- people living in conditions of disadvantage are an explicit target population of the intervention or
- intervention approaches that take into account the underlying conditions of disadvantage to reach diverse groups of people were used and
- positive outcomes were reported for people living in conditions of disadvantage only or
- positive outcomes reported compared people living in conditions of disadvantage to people living in more advantaged condition

These are particularly pertinent in the global health context when considering the design of effective interventions and evidence-based policy making.

CONCLUSION: A central Portal for identifying and disseminating best and promising practices can close the research-practice gap and facilitate the knowledge exchange process in the prevention of chronic disease. Identifying interventions which are equity-sensitive now provides an invaluable resource for policy makers, decision makers, program developers and researchers.

D'Ovidio, Tommaso
Canadian Society for International Health - MentorNet, Canada
Co-authors: Dhawan, Shweta; Canadian Society for International Health (CSIH) - MentorNet; Frain, Amanda; CSIH - MentorNet; Jackson, Caity; CSIH - MentorNet; Patenaude, Lyndsay; CSIH - MentorNet; Sunley, Shanna; CSIH - MentorNet; Kocsis, Emily; CSIH - MentorNet; Yimbesalu, Joannes Paulus; CSIH - MentorNet

Exploring application of module-based curriculum for mentoring students and young professionals in global health

Rationale:
In 2011, the Canadian Society of International Health (CSIH) created MentorNet, a national global health mentorship program, to address the need for connecting students and young professionals (SYPs) with experts in fields relevant to global health.

Objective:
The program aims to help develop the next generation of leaders in the field by facilitating knowledge transfer between SYPs studying and working in global health, with experienced global health experts in Canada and abroad. As the program continues to grow, we aim explore and evaluate the application of module-based mentorship curriculum on training students and young professionals in the field.

Methods:
MentorNet is run by a volunteer Steering Committee of eight young global health students and professionals from across Canada. The Committee members manage all aspects of the program, including recruitment, selection and matching of SYPs with mentors. SYP admission is competitive and successful applicants are matched with a mentor based on their interests. Committee members also liaise SYP-mentor relationships, providing tailored monthly modules that prompt pairs to critically engage in discussions on global health issues, reflect on career goals and expand their professional networks. Mid- and post-program evaluation questionnaires are administered online.

Results:
There were a total of 185 SYP (vs. 140 in 2011, 70 in 2012 and 156 in 2013) and 40 mentor (vs. 30 in 2011, 22 in 2012 and 40 in 2013) applications in Year 4 (2014). Program capacity adapted in 2014 to match increased applicant demand. Applicants were divided into two cohorts ‘ 29 pairs were matched for ten months (cohort 1) and another 8 pairs were matched for 8 months (cohort 2). Participants were primarily concentrated in Ontario, Canada. Mid and post program evaluation results indicate that participants were highly satisfied with the program, with the majority of SYPs reporting improved understanding of global health issues, expanded professional networks and increased interest in pursuing a career in global health.

Discussion & Conclusion:
After three years, MentorNet has proven to be valuable in supporting SYP leadership development. Some limitations include small sample size and the need for an improved approach to pre- and post-test assessment. Future goals include expanding capacity to account for the increasing number of mentorship pairs and to better match SYPs and mentors within the same geographic area. Additionally, we plan to create an alumni network by recruiting former SYPs and mentors in a ‘pay-it-forward mentorship’ approach to build a sustainable program.

Doyle-Baker, Doug
University of Calgary/ Cumming School of Medicine, Canada
Co-authors: Doyle-Baker Douglas University of Calgary; Antipachius Msomi Sokoine University of Agriculture; Friedt Heather University of Calgary; Graves Katie University of Calgary; Hatfield Jennifer University of Calgary; Orsel Karin University of Calgary; Shamanch Justin Sokoine University of Agriculture; Wink Becca University of Calgary; van der Meer Frank University of Calgary.

Livestock species of importance to Maasai in Tanzania; Helminthic infection and anthelminthic drug resistance in sheep and goats

Rationale: The pastoralist Maasai community in the Ngorongoro Conservation Area (NCA) Tanzania depends completely on their cattle, sheep and goat for income and food security. Community members in the NCA have identified helminthic infections in their animals as a significant health problem causing illness and death. An exploratory study on the abundance of worms in the area in 2013 indicated high numbers of the abomasal worm Haemonchus contortus, which prompted the development of community education workshops on proper treatment of sheep and goats with anthelminthic drugs. Up till now, worm infections continue to be a problem, perhaps indicating the presence of anthelminthic resistance in the worm population as is reported in many countries in the world. Thus, we sought to learn whether anthelminthic drug resistance plays a role in the presence of helminthic infections in Maasai farmers' sheep and goats.

Objective: The primary objectives of the project were to: 1) Determine the presence of helminthic infections in sheep and goats in Maasai herds, and 2) Determine the presence of anthelminthic drug resistance in sheep and goats in five herds. Methods: We targeted farms that possessed at least 60 sheep or goats who were not treated with anthelminthics within the previous six weeks. On the first visit we collected a fecal sample (n=60), then all small ruminants were treated with the correct dose of albendazole based on weight. The fecal samples were analyzed using the McMaster microscopy technique to determine the number of eggs per gram (EPG). Five farms with the highest EPG were re-examined approximately 10 days post-treatment to determine the percent reduction in the EPG.

Results: Preliminary results show that none of the re-examined farms reached a 95% reduction in EPG of feces following treatment, suggesting that resistance to the anthelminthic albendazole is present in the worm population.

Discussion: This is the first study on the presence of anthelminthic resistance in worms affecting sheep and goats in the NCA. The results suggest that helminths infecting sheep and goats may be resistant to the anthelmitic albendazole, which can be one of the explanations for the continued infection of small ruminants despite treatment.

Conclusion: The results were shared with the local farmers and alternative drugs and treatment strategies were discussed to better protect their animals and in turn their income and livelihood. Further training opportunities will be explored to expand the knowledge level in the community.

Elsabé du Plessis, Centre for Global Public Health, University of Manitoba
Co-authors: Sankaran, Deepa; University of Manitoba Njoroge, Peter; University of Nairobi Kadzo, Maureen; Anglican Development Services Pwani Kayima, Ruth; World Renew Kenya Makau, Naomi; World Renew Kenya Munga, James; Anglican Development Services Pwani Crockett, Maryanne; University of Manitoba Avery, Lisa; University of Manitoba

Who benefits? Providing inputs in a global maternal, newborn and child health project

Rationale: What constitutes a 'fair benefit' to participants in global health research? This question has generated considerable discussion and ethical debates. Questions arise not only about the nature of 'fair benefits' but also about its distribution to those participating. Participants' view of benefits is not well understood. These discussions are of great importance to projects distributing tangible inputs as part of project activities as it has ethical implications and could influence willingness to participate.

Objective: To better understand participants?'perception of the benefits they receive as part of a global health project. Specifically, their perceptions of a) what constitutes a 'fair' benefit and b) how these benefits can best be distributed.

Methods: We explore these questions within the context of a maternal, newborn and child health (MNCH) program in Taita Taveta County, Kenya. The project provided health and nutrition counselling to pregnant women and women with children under 5. Guided by an equity framework, a subset of women also received agricultural inputs to improve access to micronutrient rich foods. These inputs included vegetable seedlings, fruit trees and small livestock. During the project evaluation, twenty focus group discussions were conducted: 12 focus groups with beneficiaries and eight with community health volunteers (CHVs). Discussions elicited participants? perceptions of the benefit they derived from participating in the project and the selection of beneficiaries for the food security component. Data was analysed through a combination of content and interpretive analysis.

Results: The increased knowledge women gained as a result of the health and nutrition counselling was considered an advantage to participation. However, the majority of the respondents did not feel that counselling alone provided them with the same benefit as receiving tangible inputs. Although the distribution of agricultural inputs was based on assessments of need, participants questioned the criteria used to select those who received the agriculture inputs which led to tension within the communities. These tensions created barriers for CHVs, seen as the conduits of benefits, to reach participants.

Discussion: Our results highlight the challenges inherent in implementing programs that aim to benefit individuals? health in the long term through knowledge and behaviour change in situations where beneficiaries have more immediate needs and want tangible inputs.

Faour, Elizabeth
Memorial University Faculty of Medicine, Canada
Co-authors: Hughes, Mariah; Powell, Maria. Memorial University Faculty of Medicine

Field observations on women's health and gender equality status in post-earthquake Kathmandu, Nepal: A medical student perspective

Rationale: Kathmandu, Nepal and its surrounding regions were subject to two severe earthquakes in April and May of 2015. These natural disasters affected not only the environmental landscape of the country, but also the social determinants of health of its residents, including women's health and gender equality. Research has shown that women and girls may be negatively impacted by such events despite outpouring of international humanitarian aid. In addition, some studies report inequitable distribution of humanitarian resources which may not optimally benefit those affected. Studies conducted through the lens of field observations and experiential learning in a medical student perspective are currently lacking in this area.

Objective: To subjectively discuss the impact of the April 2015 earthquakes on women's health and gender equality in Kathmandu, Nepal and surrounding areas. In addition, this study will add to the body of literature pertaining to humanitarian aid and women's health and gender equality in the post-disaster context.

Methods: A preliminary literature review will be completed to inform our perspective prior to departure in July 2015. Direct observation, photography, and insight gained through experiential learning in the Memorial University Faculty of Medicine International Summer Institute in Global Health Training (InSIGHT) will guide reflection on the challenges specific to women's health and gender equality addressed by and in spite of humanitarian aid on-site.

Results: Field observations of the evident challenges and triumphs of women's health and gender equality in post-earthquake Nepal will be compiled to create an informed perspective to share with Canadian and international colleagues.

Discussion: We will discuss the challenges and successes in women's health post-disaster in Kathmandu, Nepal that became evident in our field observations. This may reflect the current body of literature on humanitarian aid and the social determinants of health, or highlight needs in the global population that are not being met.

Conclusion: Experiential learning allows medical students to form an informed perspective on women's health and gender equality as a social determinant of health in pre- and post- earthquake Nepal.

Friebe, Erika
University of Calgary, Canada
Co-authors: Hetherington, Erin; University of Calgary, Allen-Scott, Lisa; University of Calgary, Hatfield, Jennifer; University of Calgary, van der Meer, Frank; University of Calgary, Manyama Mange; Catholic University of Health and Allied Sciences, Charles, Elias; Catholic University of Health and Allied Sciences, Bastien, Sheri; University of Calgary

Motivation for the integration of social entrepreneurship in secondary schools to enhance sanitation and hygiene: an experience from rural Tanzania

Rationale: Comprehending the aspirations and capacity to initiate social entrepreneurship (SE) activities within the school setting requires an understanding of the barriers and enablers facing both young people and their teachers. Recognizing youth as a fulcrum in leveraging social change in a rural and remote pastoralist community in northern Tanzania, Project SHINE (Sanitation and Hygiene INnovation in Education) uses participatory, arts-based methods to foster engagement in the development of locally relevant health promotion strategies. Youth-led social entrepreneurship (YLSE), has the potential to catalyze collective action and provide a platform to improve community health and diversify livelihood options. Despite a growing evidence for the potential of SE in low and middle-income countries, there is need to develop innovative engagement strategies for youth specific initiatives.

Objective: To develop an understanding of the context and the potential for YLSE in a rural and remote Tanzanian setting, using a suite of participatory, arts-based methods.

Methods: Teachers, stakeholders and community members were engaged through interactive teacher workshops, think-tank events and group discussions. Qualitative data was collected from secondary school students through digital story telling, time capsule activities, and a school-based community SHINE event.

Results: Teachers were familiar with, and currently teach basic entrepreneurial principles, but awareness of SE was limited. Following workshop sessions, teachers highlighted the value of cross-curricular integration of SE into secondary education. Students perceived themselves as social actors and change agents. They emphasized their role as ambassadors and leaders in innovating and sharing hygiene and sanitation knowledge with their community. YLSE activities such as tippy taps, soap making, sanitary pads, and bio-gas, were considered promising for health promotion and income generation. Governmental constraints, and obtaining initial capital and materials for business creation, were identified challenges of YLSE.

Discussion: Results suggest that SE curricular development is relevant in this context. Participatory SE lessons, with clear entry points in the current Tanzanian secondary curricula, could support an educational environment conducive to YLSE. Concurrent with Project SHINE, YLSE has the potential to build youth capacity in the development of hygiene and sanitation promotion strategies. YLSE also provides the opportunity for youth to diversify their livelihood aspirations, and actively contribute to social change. Moving forward, it is important to understand the interaction of socio-cultural, economic and political factors that influence YLSE in the local context.

Conclusion: The participatory arts-based methods used in this study demonstrate the potential for curricular development of YLSE in a rural and remote pastoralist community in northern Tanzania.

Gautier, Lara
Ecole de Santé Publique de l'Université de Montréal ; Institut de Recherche en Santé Publique de l'Université de Montréal ; CESSMA / UMR 235 Université Paris-Diderot
Co-authors: N/A

Country-ownership of universal health coverage in West Africa: a scoping review

Rationale

Over the past few years, universal health coverage (UHC) has generated a wide consensus at the international level. In view of achieving UHC in West Africa, new financing policies, principally aiming at widening access to health services have been promoted and implemented. These financing strategies were presented by donors as relevant instruments for achieving UHC. Today's global health decision-making primarily involves a wide variety of donors, leaving little space for developing nations' voice. Yet country ownership has obvious implications for the success of global health policies. It seems relevant to examine whether and how the Western-constructed concepts and rhetoric behind the implementation of UHC policies affect recipient countries' buy-in.

Objective

The objectives are three-fold. First, we aim at identifying the theoretical and empirical literature addressing country ownership of UHC in West Africa. Second, we discuss the findings in light of the rhetoric used by bilateral, multilateral, and non-state donors and the potential impact of these constructed narratives on West African governments buy-in of UHC. Finally, we offer recommendations for a better accounting of local needs in health policies, thereby contributing to the field of global health policy-making.

Methods

We performed a scoping review of the literature in English and French on country ownership of UHC in West Africa. We analyzed the results using a framework reflecting the multiple facets of rhetoric of UHC (and its related financing strategies) that has been used by donors.

Results

The scientific literature tells us that the policies undertaken to achieve UHC have generated mixed results in terms of country ownership. This may be attributable to their 'top-down' nature, reflecting the possibility that donor-driven policies do not necessarily fit local contexts.

Discussion

This review highlights the limitations of 'global' health policies at the local level and the lack of adaptation to contexts in which they are implemented. UHC policies have generated mixed results, due to their 'top-down' nature, as shown in the results of this scoping review. It is highly suggested to better take into account local needs when designing and implementing health financing policies.

Conclusion

The Western construction of UHC narratives has affected country ownership. If the international community wants to improve health outcomes in West Africa, it is of upmost importance to find strategies to increase country buy-in of future health policies.

Ghannem, Hassen
Department of Epidemiology, University Hospital Farhat Hached, sousse, Tunisia, Tunisia
Co-authors:

Capacity building for the prevention of non communicable disease risk factors in Sousse, Tunisia: The learning by doing community interventions

Rationale: Tunisia is going through an epidemiologic transition with rising of life expectancy and adoption of new lifestyles that lead to Non communicable diseases (NCDs). The need for capacity building to undertake comprehensive interventions to reduce their risk factors is urgent.

Objective: to evaluate the feasibility (learning by doing) and effectiveness of a 3 years community based intervention to prevent NCDs risk factors.

Methods: The study design was quasi experimental with pre post assessment and control group. The intervention group including different settings (schools, workplaces, households) was located in the delegations of Sousse Jawhara and Erriadh. The control group with the same settings was located in the delegation of Msaken.

Sample size calculation in the different settings was based on a significance level of ‘=0.05%, power of test ‘=20%, two sided test of hypothesis and 6% change in risk factors levels (smoking, unhealthy diet and physical inactivity) giving a total sample needed of 4000 schoolchildren, 2000 workers and 2000 adults from households. We used biometric measures (weight, height, blood pressure) and pretested questionnaire to evaluate knowledge of, attitudes towards and beliefs on the three risk factors for NCDs.

Results: In schools, fruits and vegetables consumption improved in intervention group but not in control group. In fact, the proportion of schoolchildren consuming vegetables daily increased from 28.4% to 32.4% (p=0.008) and consumption of fruits daily from 55.9% to 59.3% (p=0.03). We noticed a decrease of tobacco use in intervention group but not in control group. Physical activity didn’t increase in the two groups. In workplaces, tobacco use decreased but not significantly both in intervention and control group. Consumption of five fruits and vegetables daily and practice of recommended level of physical activity increased significantly in the two groups. Prevalence of hypertension decreased significantly from 16% to 12.3% (p=0.02) in intervention group but increased in control group from 14.2% to 22.5%. In the community, there was an increase in fruits and vegetables consumption and in physical activity in both the intervention and control group. There was a decrease in tobacco consumption in intervention group (52.9% to 45.6%) with an increase in control group (46.9% to 50.4%) among men.

Discussion: Targeting behavioral changes only through educative approach without environmental actions and community mobilization that facilitate healthy choices is not enough.

Conclusion: More structural changes through multisectoral intervention are needed to improve the adoption of healthy lifestyle habits and reduce the burden on individuals.

Ghannem, Hassen
Department of Epidemiology, University Hospital Farhat Hached, Sousse, Tunisia, Tunisia
Co-authors:

Building capacity in health research through bibliometry in Tunisia

Rationale: An effective scientific research system forms the basis for the shift from a natural resources based economy towards an economy based on knowledge and expertise. In the context of health research, the most important outcomes of developing national health research capacity can be expected in the following domains:

1. scientific - new knowledge designed to solve health problems, whether local or global;

2. economic - research itself becomes an economic instrument through close cooperation with private or public enterprise;

3. political - evidence will help realize national objectives with respect to health systems, health care access and delivery, development and health equity;

4. educational - transforming knowledge into practice and expertise to be taught in universities and colleges; and

5. cultural - diffusion and use of research results in ways that respect and strengthen the cultural context of communities in which research is being done.

Bibliometry which is the analysis of scientific publications in the health field is an adequate tool to assess the current situation of health research in Tunisia in terms of productivity and social relevance of health research.

Objective: to describe the outputs of health research in terms of scientific publications and analyze the productivity of the national health research system.

Methods: It is a descriptive bibliometric study of the whole Tunisian medical publications indexed in Medline from the year 2000 to 2014.

We retained the publications whose author's address was a Tunisian health structure and the publication whose first and / or last author was Tunisian author.

Results: The number of publications increased from 155 in the year 2000 to 900 in the year 2014. The mode of publications was observed in the year 2009 with 1113 publications and then we observed a slight and continuous decrease. In the same time investment in health research increased in a similar way. We analysed the productivity and its national cartography (specialities, structures and authors, languages and reviews) to monitor the social relevance and transparency of research production that was presented in a dynamic searchable website: http://www.epidemiologie-sousse.org/recherche.php

Discussion: Investment in health research and in training of human resources is an efficient way to guarantee capacity building, which is the abilty to continue to produce a health research system able to overcome and solve the health problems of the community in an efficient and transparent way.

Conclusion: Bibliometry is an easy way for decision makers to monitor scientific productivity and social relevance of research.

Gleeson, Judy
Mount Royal University, Canada
Co-authors: Underwood, Margot; Mount Royal University; Salyers, Vince; Mount Royal University; Wong, Kate; Alberta Health Services; Pena, Pedro; Ministerio de Salud Publico; Valerio, Bautista; Colegio Bayacanes.

Operationalizing a conceptual model for partnership and collaboration in global health field schools

Rationale: This research is important because it was the first to use a conceptual model to 1) guide the design, implementation and evaluation of a global health nursing field school, and 2) ensure that the partnership was collaborative and reciprocal.

Objective: The purpose of this research was to integrate and evaluate Leffers and Mitchell's (2010) conceptual model for partnership and sustainability in global health with nursing students, global partners and peer mentors participating in the 2014 and 2015 Dominican Republic (D.R.) community health field schools. The results were used to evaluate the preparation of nursing students for their D.R. field school guided by the host partner feedback and the processes of partnership (e.g.: engagement, cultural bridging, and collaboration).

Methods: A mixed methods research approach gathered quantitative (questionnaires) and qualitative (focus groups) data during 2014 and 2015 from Canadian (20 students, 5 peer mentors) and D.R. partners (25 partners).

Results: Data identified the value of socio-cultural and language preparation, along with the importance of a cultural broker, culturally safe practices, appreciative approaches, humility, and trusting relationships in field schools.

Discussion: The results have impacted all phases of the field school experience to ensure that the Dominican-Canadian partnership is mutual. The conceptual framework provided a foundation for open discourse and trust regarding how to best collaborate in global health field schools.

Conclusion: Partnerships approaches are essential in global health and using a conceptual model can strengthen international field school collaborations

Gollock, Aboubakry
Université Montréal (UDEM-ESPUM) et Université Cheikh Anta Diop (UCAD), Sénégal-Canada
Co-authors:

Étude comparative des performances les mutuelles de santé au Sénégal : quels enseignements pour l'extension de la couverture maladie universelle'

Justification
Au Sénégal, seulement 20% de la population bénéficie d'une assurance maladie. Il s'agit principalement des travailleurs du secteur formel et de leurs ayants droit. Le paiement au point de dispensation des soins reste un obstacle majeur à l'utilisation des services santé des acteurs du secteur informel et du monde rural qui représentent près de 80 % de la population. C'est pourquoi, l'un des axes prioritaires d'extension de la couverture maladie repose sur le développement des mutuelles de santé (MS) qui ciblent principalement cette clientèle. L'objectif du Ministère de la santé et l'action social (MSAS) est faire passer le taux couverture de ces organisations de 13,6% en 2012 à 65,5% en 2017. La politique est soutenue par l'USAID qui finance, depuis 2012, le Projet de démonstration de l'extension de l'assurance maladie à travers les MS dans le cadre de la décentralisation (DECAM). La phase pilote couvre certains départements du pays.

Objectifs
L'objectif de cette étude est comparer les performances des MS soutenues par le projet DECAM et les autres MS qui ne bénéficient pas de l'intervention en termes de taux de pénétration auprès des populations cibles et d'enrôlement des indigents, de recouvrement des cotisations, gouvernance, ratio dépenses de prise en charge sanitaires sur dépenses de fonctionnement, contribution au financement de l'offre et d'accès des populations ciblées aux soins de santé.

Méthodes
Les données quantitatives seront tirées des bases de données d'une enquête nationale réalisée en 2015, de collectes routinières qu'effectue la firme Abt Associates et les responsables de DECAM et d'autres sources secondaires. Un échantillonnage représentatif des deux catégories de MS sera réalisé.

Les données qualitatives proviennent des entrevues et focus groups avec les responsables et membres des MS, indigents enrôlés bénéficiaires des subventions pour le paiement des cotisations et des responsables des structures de santé et sont issues de l'enquête nationale.

Le traitement des données quantitatives se fera avec le logiciel SPSS et celui des données des données qualitatives avec QDA-Miner.

Résultats
L'étude des MS dans une perspective comparative va permettre d'avoir une connaissance les performances des deux catégories de MS et d'évaluer la capacité du DECAM à contribuer de manière significative à l'atteinte des objectifs de la stratégie sénégalaise d'extension de la couverture maladie.

Discussion
Les résultats de l'étude permettra aux décideurs de disposer de données probantes pour l'aide à la décision pour une opérationnalisation efficace et efficiente de l'extension la couverture maladie en s'appuyant sur les mutuelles de santé.

Gollock, Aboubakry
Université Montréal (UDEM-ESPUM) et Université Cheikh Anta Diop (UCAD), Sénégal
Co-authors:

Enjeux et contraintes de l'opérationnalisation des collaborations et prises de décisions basées sur des évidences scientifiques en santé en Afrique

L'initiative ouest-africaine de renforcement des capacités au moyen de la recherche sur les systèmes de santé a été mise en place en 2013 par le CRDI en collaboration avec l'Organisation ouest Africaine de la Santé (OOAS). Quatre équipes de recherche du Burkina-Faso, Sénégal, Nigéria et Sierra Léon ont été financées sur 3 ans.

C'est une initiative novatrice à plusieurs égards. Elle : 1- dédie ses financements à des équipes basées en Afrique de l'ouest; 2- favorise l'intégration des praticiens professionnels dans les équipes de recherche; 3- s'appuie sur des comités de pilotage impliqués dans le suivi des projets pour une meilleure prise en compte des préoccupations des acteurs de terrain; 4- a fait de l'implication des décideurs et utilisateurs des résultats de recherche l'une de ses priorités, dès le début des projets. 5- s'adosse sur le leadeurship politique de l'OOAS pour assurer le plaidoyer auprès des plus hautes autorités sanitaires des pays concernés. L'objectif ultime étant de renforcer les capacités, décloisonner les milieux de la recherche et ceux des décideurs et favoriser l'instauration d'une véritable culture de prise de décisions basée sur des évidences scientifiques.

Objectifs

Répondre à la question de savoir : comment cette vision a été opérationnalisée dans les différents pays où se déroulent les recherches des équipes financées dans le cadre de l'initiative ' quels enjeux et contraintes '

Méthodes

La recherche est basée sur la théorie du changement. C'est une étude de cas multiples. Les données qualitatives seront collectées auprès des équipes de recherche (universitaires, professionnels impliqués, étudiants), de membres des comités de pilotage, des décideurs et des gestionnaires du programme grâce à des entretiens individuels ou focus- groups. Des données secondaires recueillies auprès des équipes, des gestionnaires du programme.

Résultats

Les résultats de nos premières analyses montrent les difficultés à instaurer un partenariat propice au renforcement des capacités et à l'instauration d'un dialogue permanent entre les différentes parties et l'absence d'une culture de partenariat recherche-extérieur vice-versa autant chez les universitaires que les membres des comités de pilotage. Il y a des différences perceptions différentes du rôle de chacun des acteurs.

Discussion :

Approfondir les connaissances sur les enjeux, contraintes et des résultats de la mise en place de dispositifs visant à susciter la collaboration entre les milieux de la recherche et les praticiens et les défis à l'instauration de mécanisme de prise de décisions basées sur des évidences scientifiques dans des environnements où cette culture est peu ancrée.

Grand'Maison, Paul
Faculté de médecine et des sciences de la santé (FMSS), Université de Sherbrooke, Canada
Co-authors: Prof. Carol Valois, MD, CCFPC, FCFPC / Mrs. Véronique Foley, OTR, M.PH, PhD(c) / Mrs. Johanne Dumont, B. Comm., Faculté de médecines et sciences de la santé, Université de Sherbrooke

The continuum of global health education: a comprehensive vision at the Université de Sherbrooke

Rationale:

Globalization and changing needs of society are forcing health professionals education programs to rethink global health training through the whole continnum, from initial bacherlor's degree to graduate studies and continuing education. The process must offer educational approaches to ensure that students and practicing health professionals develop core competencies responding to society's global health needs. It must also offer more in-depth and advanced approaches to develop future leaders and experts in global health. There is a need for a comprehensive vision in order to integrate these approaches in a continuum.

Objective:

Present the comprehensive vision of the continuum of global health education developed at the Faculty of Medicine and Health Sciences at the Université de Sherbrooke. Share the guiding principles that support this vision and its derived impact on health professionals education programs.

Methods:

In Spring 2013, a 3-year initiative was launched at Université de Sherbrooke to develop a collaborative and interdisciplinary project to enrich medicine, nursing sciences, physical therapy and occupational therapy initial programs regarding global health. It became quite clear for the interdisciplinary coordinating committee that a comprehensive vision of the educational continuum was necessary to link its work with higher levels of education and continuing professional development. The aim is to ensure complementarity and development of progressive levels of global health competencies. Through an iterative process, leaders at all levels of education worked together to draw out this vision.

Results:

The vision was translated into a diagram that maps out the connections between programs and the different levels of competency development. It is now being used as a roadmap to guide current activities and future developments in global health education in Sherbrooke.

Discussion:

Programs can no longer work in silos. Program leaders must share their developments in global health education at the various levels within their discipline and across disciplines. The continuum will have to be considered in the evaluation of the Faculty's engagement in global health as an aspect of its social accountability.

Conclusion:

To have a true impact on healthcare professionals' performance with vulnerable populations, here and abroad, the development of global health competencies cannot be limited to only one level of education. All levels of education must be considered through a coherent and comprehensive vision.

Haiek, Laura N.
Ministère de la Santé et des Services sociaux, Direction générale de la santé publique, Canada
Co-authors: The members of the Nordic and Quebec Working Group are: Kerstin Hedberg Nyqvist, RN, PhD & Elisabeth Kylberg, nutritionist, PhD, IBCLC (Sweden); Anna-Pia Häggkvist, RN, MSc, IBCLC & Mette Ness Hansen, RN, Midwife, IBCLC, MPH (Norway); Ragnhild Måstrup, RN, IBCLC, PhD & Annemi Lyng Frandsen, RN, IBCLC, MSA (Denmark); Leena Hannula, RN, Midwife, PhD & Aino Ezeonodo, RN, CEN, PN, CNICN, MHC (Finland) and Laura N. Haiek, MD, MSc (Québec, Canada)

Expansion of the Baby-Friendly Hospital Initiative to neonatal wards or Neo-BFHI: a global health initiative targeting preterm and ill infants.

Rationale: Exclusive breastfeeding for the first 6 months of life is a powerful health-promoting behavior that improves maternal-infant health in both developing and developed countries and promoting it may be cost-effective. Since 1991, the WHO/UNICEF Baby-Friendly Hospital Initiative (BFHI) has proposed in its Ten Steps to Successful Breastfeeding (Ten Steps) breastfeeding-related evidence-based standards for maternity wards. But, although an estimated 15 million babies are born every year preterm (before 37 weeks of gestation) and preterm birth complications are the leading cause of death in infancy, global breastfeeding initiatives targeting this vulnerable group have been slow to occur. Furthermore, inequalities in survival rates are pronounced: infants born prematurely in low-income settings are more likely to die due to a lack of feasible, cost-effective care such as breastfeeding support and Kangaroo Mother Care (KMC) than those born in high-income countries.

Objective: To expand the BFHI to neonatal wards.

Methods: The Nordic and Quebec Working Group was formed in 2009 with experts from Sweden, Norway, Denmark, Finland and Quebec, Canada and has produced a Neo-BFHI package containing a Core document with recommended standards and criteria, educational material for decision-makers and staff, a Self-Appraisal tool and an External Evaluation tool for designation purposes. An international consultation with participants from 27 countries took place in Sweden in 2011 followed by pilot-testing of the expanded materials in 20 countries. The group has published two peer-reviewed articles describing the expansion.

Results: New or adapted standards cover aspects of neonatal care not addressed in the original Ten Steps. Examples of these standards include: parents are encouraged to provide skin-to-skin contact/KMC continuously or for as long as they are able and willing to, without unjustified restrictions (step 4); infant stability should be the only criterion for initiation of feeding at the breast (Step 5); practical opportunities are provided for parents' unrestricted presence in the ward to avoid unnecessary separation (Step 7), and the first nutritive sucking experience should be at the breast (Step 9). Three Guiding principles were added to ensure that the recommended practices focuses on respect to mothers, a family-centered approach, and continuity of care.

Conclusion: The Neo-BFHI package was launched in an international conference in Sweden in May 2015 and the group continues to explore strategies to ensure global dissemination. As with the original initiative, the Neo-BFHI aims at becoming a global effort to protect, promote and support breastfeeding for those infants born sick or too soon.

Hall, Emily
University of California, San Francisco, United States
Co-authors: Brown, Evan; University of California, San Francisco. Charles, Cynthia; Hopital St. Therese, Hinche, Haiti. Finkmoore, Brooke; University of California, San Francisco. Rose, Sharon; University of California, San Francisco.

Dual-purpose nurse rounding: an experience from rural Haiti

Rationale: Nurses provide the majority of clinical care worldwide, yet they struggle to fully integrate into medical teams. Disconnection between providers can contribute to poor patient outcomes and restrict professional development. In limited resources settings, integration is inhibited by educational and system barriers: a majority of nurses are generalists who may not have the skills or knowledge to effectively communicate with specialized physicians; and systems supporting interprofessional communication are weak. On-the-job training activities that interrupt work flow are poorly received in settings with health care worker shortages. Interventions aimed at increasing the integration of nursing and medical teams must support professional development without removing nurses from the clinical space.

Objectives: To initiate an inservice activity that provides structured bed-side education to nurses and facilitates communication with the medical team in a referral hospital in rural Haiti. The aim is to improve collaboration and, ultimately, patient care.

Methods: Our project implemented nurse rounds as a forum for education and communication. Inpatient nurses are invited to participate in 30-minute sessions which occur several times weekly. Cases are presented using the SOAP format and were followed by a discussion about presenting symptoms, diagnosis, hospital evolution, and treatment plan. The discussion highlights issues to be communicated to the medical team and priorities for nursing care. Nurse rounds were formalized through a consistent implementation calendar and structured format. Nurse presenters receive assistance in their preparations from nursing leadership in consultations with the physician.

Results: The nurse round pilot showed positive feasibilty and acceptability results: attendance to rounds increased over time; senior nurses prepared presentations and lead discussions; and all levels of hospital leadership showed support for education without taking nurses out of the clinical space. Outcomes of the intervention included increased knowledge among nurses, patients and their families; and increased awareness among all participants of the gap in systems to support consistent interprofessional communication.

Discussion: Close follow-up is required to support the aims of this activity. A dedicated member of the nursing team is recommended to circulate in the clinical area after rounds to connect the discussion to practice and to model interprofessional communication. At a systems level, nurse education must be linked with quality improvement interventions in order to promote tangible changes in nurse responsibilities.

Conclusion: In resource limited settings, nursing rounds can serve a dual purpose: providing a structured format for nurse education in the clinical space and increasing interprofessional communication.

Hall, Emily
University of California, San Francisco, United States
Co-authors: Rose, Sharon; University of California. Scarr, Ellen; University of California

Global health training for advance practice nurses

Rationale: Global health training opportunities for graduate advanced practice nurses through academic organizations are limited. This is in spite of the need for educational and clinical support for nurses working in resource poor settings. This need stems from the wide range of roles nurses assume in settings where human resources are limited. Additionally, educational models restrict the flow of new knowledge and skills to bedside practitioners for similar reasons. US educated advance practice nurses have the potential to fill these gaps. As providers with patient and population level training, these nurses have the capacity to problem solving on a systems level while supporting individual nurses in task oriented teaching.

Objective: To provide a one year post-graduate training opportunity to advance practice nurses in global health, focusing on capacity building, program management and partnership development.

Method: In partnership with a non-governmental organization, two nurse practitioners complete a one year fellowship in rural Haiti. Each spent seven months in the field, working alongside nurse colleagues on programs aimed at providing bedside education in the clinical space. During three months in the US, fellows accessed faculty development opportunities, provided classroom teaching, as well as received clinical mentorship in the care of vulnerable populations. Support was provided to the fellows by Haitian nurse and physician leadership as well as faculty at their home institution. Self-assessments of global health competencies were used to guide learning objectives and tailor experiences to learning needs.

Results: During a pilot year, nurse fellows focused on building strong working relationships and developing structures within the partner organization which support the program's aims. Partner leaders at all levels were engaged in the development of training activities to incorporate the organization's objectives as well. One main challenge was the lack of a clear nurse partner with whom to develop and implement programming. Over the course of this year, fellows became more confident in their communication and problem solving skills, leading to greater productivity.

Discussion: Creating a productive partnership for a nurse training collaboration requires a detailed understanding of the local health system. The need exists and nurse fellows have the potential to contribute significantly to educational needs, but require a local expert to implement new programming.

Conclusion: Global health training programs for advance practice nurses are building blocks for the need for trained professionals to support global health delivery in resource poor settings.

Hanson, Lori
University of Saskatchewan, Canada
Co-authors: Alano Ali, Abraham; Hawassa University (Ethiopia). Hanson, Lori; University of Saskatchewan

'I got peace and stability': Women's perceptions of contraceptive use in Sidama, SNNPR, Ethiopia

Rationale: Most studies of the documented benefits of contraceptive service in Sub-Saharan Africa lack in-depth exploration of the lived experiences of service users. This study of contraceptive users in the Sidama Zone, Southern Region, Ethiopia aimed to improve understanding of contraceptive use toward empowerment from women's own perspectives. Such knowledge further enables alignment of contraceptive service provision with the International Conference on Population Development declaration of the importance of a rights based approach.

Study Objectives: The study's main objective was to elucidate rural women's perceptions and experiences of contraceptive utilization in Sidama Zone, Ethiopia

Methods: The study employed an interpretive phenomenological design guided by an African feminist theoretical approach. Data were collected using key informant interviews with health service providers, managers and health ministry officials. Rural women participated through focus group discussions and individual in-depth interviews. Research Assistants helped with translation from local languages to Sidama and then the PI translated to English with extensive back-checking on meaning. Data were analyzed using an interpretive phenomenological analysis with hermeneutic circle approach. The qualitative data was complemented by quantitative data on contraceptive use and trends in the study area.

Results: Women's experiences regarding the benefits of contraceptive use are encouraging. Women explicated that contraceptive service is an emancipatory and transformative experience for them as it enables them to control their bodies, reproduction and fertility by averting unwanted pregnancy thereby engaging in various socio-economic, religious, and political affairs. Controlled fertility gave them more time to plan their livelihoods. The study's title, a participant quote, captures the sentiment well: 'I got peace and stability'. The study also examined the perspectives of health service providers and managers working in reproductive health from local to national levels, finding problematic the continued use of a demographic rationale rather than rights-based approach particularly at lower levels of the system.

Discussion/Conclusion: Women's experiences of contraceptive use towards their empowerment and health are encouraging and they find the service emancipatory and transformative. However support from men and dominant community members such as elders remains wanting, and there is observed disconnect in conceptualizing and practicing contraceptive service provision from a broader human rights premises among health care workers across the service delivery hierarchy.

Haq, Farzana
Queen's University, Canada
Co-authors: Haq, Farzana; Queen's University, Pickett, William; Queen's University, Davison, Colleen; Queen's University

What roles do parents and teachers play in the alleviation of child hunger in Canada?

Rationale: Hunger is known to adversely affect child health and development. Child hunger is not just a concern in low- and middle-income countries. For example, in 2013, Food Banks Canada reported it served more than 830,000 different people and among them 300,000 were children in families. Previous studies among adults established that social support through family, peer, school and neighbourhood networks can help alleviate hunger. We wished to characterize the specific role parents and teachers play in the alleviation of child hunger in Canada.

Objectives: This study aimed to determine associations between reports of hunger among Canadian young people and their social support from parents and teachers. This was a capacity development opportunity within the Child Health 2.0 research program done in partnership by a global child health researcher and an international Masters student in Epidemiology.

Methods: The Health Behaviour in School-aged Children (HBSC) survey is a population-based study administered in Canadian schools every four-years for grades 6-10. The survey asks students whether and how often, they go to school or bed hungry because there is not enough food at home. It also contains a comprehensive set of questions related to social support from parents and teachers as well as sociodemographic and other possible risk factors. Adjusted Poisson regression models were constructed to determine the relative risk of hunger for those who had supportive parents or teachers versus those who did not.

Results: The 2010 Canadian HBSC sample was 25, 912 students. Hunger was experienced often or always by 3.8% of participants. Adolescents who reported that they had supportive parents (69%) were 56% less likely to experience hunger as those without support (RR= 0.44, CI 0.36-0.56), after adjusting for all other risk factors. Those who reported having supportive teachers (87%) were 29% less likely to experience hunger than those without teacher support, even after controlling for parental influence and other risk factors (RR= 0.71, CI 0.57-0.89).

Discussion: Our findings reinforce current literature on the importance of social support in hunger alleviation, and for children, highlights the importance of parental influence. It also highlights the significant contributions teachers can make, particularly with young people who may not have strong support at home.

Conclusion: We must continue to address child hunger internationally and in our Canadian context. This study affirms family- and school-based nutrition and food security initiatives and emphasizes the important and unique role of parents and teachers in hunger alleviation.

Harris, Sarah Lauren
Charité - Universitätsmedizin Berlin, Institute of Tropical Medicine and International Health, Germany | Canada
Co-authors: Abel, Katharina; Leipzig University, Department of Pediatric Oncology, Hematology and Hemostaseology

Implementation of information and communication technologies at mid-level health training institutions in Ghana

Rationale: Ghana maintains a shortage of human resources within the health sector. As per the 2007-2011 Human Resource Policies and Strategies for the Health Sector, health training institutions granting mid-level qualifications are receiving increasing numbers of students. This has not coincided with improvements in educational infrastructure, particularly at institutions in rural areas. The use of information and communication technologies (ICT) by tutors for teaching purposes has been suggested as a possible method to improve quality of mid-level health education. Tutor capacity in ICT, however, has not been properly assessed.

Objective: To understand the extent of and barriers to ICT use by tutors at mid-level health training institutions in Ghana.

Methods: This study used a mixed-methods approach. Qualitative data collection involved focus group discussions with tutors (n=11) for the purposes of piloting the quantitative questionnaire. Following revisions, the questionnaire was distributed at 12 mid-level health training institutions across Ghana; a total of 115 questionnaires were valid for use in analysis. Data were analysed using STATA 13.0 and SPSS 20.0.

Results: 47% of all participants were female with a mean age of 38.02 years. On average tutors had a mean of 6.28 years of teaching experience (SD=5.15); 8.49 years of computer use (SD=4.10) and an ICT confidence rating of 7.44 (SD=2.78; range 1-10). More than 87% of tutors used the computer at least once a day and over 73% used the Internet at least once a day. There was a significant positive correlation between ICT confidence and perceived benefits for teaching quality (rs=.283), as well as students' education (rs=.218). Most common applications of ICT were encouraging students to research using the Internet, and conducting Internet research and creating PowerPoint presentations for class. Major barriers to applying ICT were inconsistent electricity and Internet connection, and limited ICT resources, such as projectors. Tutors expressed interest in improving skills in general computing, Internet research, and e-Learning module development.

Discussion: When sufficiently trained and confident in use, tutors at mid-level health training institutions apply ICT and acknowledge its benefit for their teaching quality and their students' education. Insufficient skillsets, poor infrastructure, especially Internet reliability, and limited ICT resources pose great barriers to its implementation.

Conclusion: Tutors are eager to use ICT. Supporting tutor professional development of ICT skills, in addition to improving infrastructure and increasing ICT resources can improve the likelihood of ICT application in teaching and benefit students' education.

Hatem, Marie
Université de Montréal, École de Santé Publique-Département de médecine sociale et préventive, Canada
Co-authors: Halabi-Nassif-Hana, Abou-Malham Sabina

Élaboration d'une vision commune nationale de la formation de base des Infirmières et des accoucheuses en République Démocratique du Congo

Justificatif
L'élaboration de la vision commune nationale de la formation des professionnels de santé, des niveaux secondaire et supérieur, constitue un pilier important des activités du Projet d'Appui au Développement des Ressources Humaines à la Santé, soutenu par l'Agence Japonaise de Coopération Internationale au Congo. Afin de développer cette vision, une démarche en quatre étapes a été entamée; une enquête au Bas Congo en constituait la 3ème étape.

Objectif
Décrire le profil - infirmier et infirmier-accoucheur - pratiquant sur le terrain et identifier le profil souhaité de ces deux métiers pour offrir des soins de qualité à la population congolaise.

Méthodes
Une étude de cas unique à niveaux d'analyse multiples a été adoptée. Différentes méthodes de collecte des données au sujet des 2 « métiers » ciblés dans la région du Bas-Congo sont utilisées : 1) entrevues auprès de directeurs provinciaux et des milieux clinique et éducationnel ; 2) observations des prestataires en en milieu clinique ; et 3) foci groupes auprès de plusieurs acteurs (ex. soignants, leaders communautaires).

Résultats
Les données montrent que le profil réel du personnel infirmier, indépendamment de son niveau de formation, ne remplit ni son rôle ni ses tâches selon les standards internationaux; ses soins s'avèrent très restreints. Des limites sont rapportées relativement aux compétences requises pour assumer la responsabilité des services de santé qui relève supposément du profil de poste.

Quant au profil des infirmiers-accoucheurs, le manque de reconnaissance et d'application des étapes de prise de décision clinique a fait l'unanimité. Leurs capacités disciplinaires se sont révélées incomplètes, souvent non appliquées. Enfin, les participants ont reconnu à l'unanimité que les compétences transversales (ex. rigueur scientifique, professionnalisme) ne sont pas appliquées. Des attentes ont été exprimées quant à l'application d'un profil unique, pour chacun des métiers, pour assurer la formation de la relève et la formation continue du personnel.

Discussion
Afin d'améliorer la santé de la population congolaise, contribuer à réduire la morbidité et la mortalité maternelle et infantile, il semble crucial de proposer un projet de profil de sortie - d'un programme axé sur les compétences ou référentiel de métier - couplé des compétences à développer chez les candidats pour atteindre les profils infirmier et infirmier accoucheur qualifiés selon les standards internationaux.

Conclusion
L'ébauche d'une feuille de route basée sur des fondements conceptuels est proposée pour garantir la mise en place les professions d'infirmer et de sage-femme dont a besoin la RDC.

Henao, Daniel E
Fundación Con Ciencia, Universidad Tecnológica de Pereira, Colombia
Co-authors:

VICTIMS OF THE COLOMBIAN POLITICAL CONFLICT: WHAT ARE THEIR BARRIERS TO ACCESS TO HEALTH CARE'

Introduction: Colombia has been scenario for a long, complex and terrible armed conflict. Since 2011, a legal act, the law 1448, created social and institutional capacities to holistically repair the victims of it. Effective access to health care is one of the cornerstones of the strategies to attend these victims. Nonetheless, this has been resulted in a huge tension for the health system as the number of victims is estimated to be around 200.000.

Methods: We first perform a survey to empirically assess the barriers and quality of care. Furthermore, a qualitative research method was performed to obtain the perception of the legally recognized victims about the barriers to access to effective health care and its quality. This perception was established using a standardized method. The theoretical background that was used in this research is given by the grounded theory. The sample of the victims was randomly obtained from the official records.

Results: We obtained data from 1243 victims. Our sample was representative for the 26 departments affected by the conflict. 78% of the victims mentioned that they have experienced at least 1 of any of the 4 barriers included in the survey to access health care. The barriers identified were: geographical (32%); financial (24%); administrative (24%) and cultural (20&). According to the categories that emerged from our 62 interviews we could establish that the victims perceived that discrimination was the cause that underlie to these barriers. They also perceive that the health care professionals are not adequately trained to attend their demands. Out-pocket expenditures, some linguistic and administrative barriers were also identified as hindrances.

Discussion: Colombia is now facing an historical challenge: the current dialogue between the government and the guerrillas and the economic prosperity experienced in the last decade has been globally celebrated. Albeit this enthusiasm the victims are not feeling that well.

Conclusion: The victims are not feeling well repaired by the Colombian health care system. The causes of this could be related to their condition as victims.

Ho, Charissa
University of Alberta, Faculty of Medicine & Dentistry, Canada
Co-authors: Konkin, Jill; University of Alberta, Faculty of Medicine & Dentistry

Putting theory into practice: how health professional schools are meeting society's needs

Rationale: This systematic review examines how health professional schools around the world are meeting the social accountability mandate defined by the World Health Organization in 1995. Social accountability is increasingly important for medical schools; particularly, as communities demand more accountability from institutions to meet their health needs. Currently, there is no such review that provides a succinct summary for schools to identify effective steps to increase social accountability.

Objective: This systematic review examined literature from around the world on various strategies health professional schools have implemented to increase their social accountability. The review will identify initiatives that other schools can use to become more socially accountable.

Methods: A systematic review was performed, searching through MEDLINE, EMBASE, ERIC, and ISI Web of Science Core Collection databases for relevant articles published from 1995 to present for articles relating to health professional schools and social accountability. The research team created inclusion/exclusion criteria, reviewed 2474 titles and 457 abstracts, resulting in 273 articles selected for full article review. Articles were categorized as: 1) Theory, Principles and Policies; 2) Organizational; 3) Programmatic; and 4) Editorials, Commentaries and Opinions. For this presentation, articles categorized as ‘Theory, Principles and Policies’ and ‘Organizational’ were analyzed in detail to examine how theories and policies on social accountability have been applied at an institutional level.

Results: Analysis of articles in the "Theory, Principles, and Policies" revealed that health professional school policies were established based on a theoretical framework, as well as community needs. Analysis of the "Organizational" articles found that schools use a mix of strategies to meet the social accountability mandate. There are schools that followed policies set forth by governing bodies, while others followed the example of schools that demonstrate success in social accountability. Key themes identified in the Organizational category include: meeting community needs, partnerships, outcome-based education, and responsive governance.

Discussion: Whether driven by standards set by others or examples from other institutions, schools have varying success in achieving social accountability. It would seem prudent for schools to adopt a theoretical framework and then examine initiatives within the common themes identified above that best fit their local context.

Conclusions: The social accountability literature identifies common successful themes that increase social accountability which can be used by medical schools throughout the world to increase their social accountability.

Homenauth, Esha
University of Ottawa, Canada
Co-authors: Kajeguka, Debora; Kilimanjaro Christian Medical University College, Tanzania; Kaaya, Robert; Kilimanjaro Christian Medical University College, Tanzania, Pan-African Malaria Vector Research Consortium (PAMVERC), Tanzania; Protopopoff, Natacha; Kilimanjaro Christian Medical University College, Tanzania, London School of Hygiene & Tropical Medicine, UK; Mosha, Franklin W.; Kilimanjaro Christian Medical University College, Tanzania, Pan-African Malaria Vector Research Consortium (PAMVERC), Tanzania; Desrochers, Rachelle E.; HealthBridge, Canada; Kulkarni, Manisha; School of Epidemiology, Public Health and Preventative Medicine

Improving diagnosis of febrile illness - the role of malaria and arboviruses in fever prevalence in regions of Tanzania

Rationale: Febrile illness is commonly reported in resource-limited settings and is a relevant cause for concern due to the diversity of potential etiological agents. In sub-Saharan Africa, where malaria prevalence is highest, viral aetiologies of fever - specifically arthropod-borne viruses like dengue and chikungunya - are often over-looked due to presumptive malarial treatment and limited awareness among clinicians and policymakers. Current literature suggests that malaria prevalence is declining in Tanzania; however, global expansion of arboviruses and their associated disease burden suggests that can an increased focus needs to be placed on these viral causes.

Objectives: The objectives of this study are: (i) to describe the spatial epidemiology of malaria and non-malarial fevers in the Muleba and Moshi regions of Tanzania; (ii) to explore spatial patterns of both Anopheles and Aedes vectors and (iii) to develop a risk factor model for febrile infections in these regions.

Methods: In Muleba, information regarding diagnosed malaria cases and fevers in children were obtained from 2 cross-sectional surveys conducted over an 18 month period. Additionally, diagnosed malaria, dengue and chikungunya cases in all age groups were collected from 2 cross-sectional surveys in Hai and Machame districts in the Kilimanjaro region. Entomological data including trap density of Anopheles and Aedes mosquitos were also collected in both regions. Spatial clustering analysis will be performed using a discrete Poisson model in SaTScan to identify clusters of malarial and arboviral fevers. These clusters will then be related to environmental covariates such as temperature and precipitation retrieved through satellite remote sensing using ArcGIS. These methods together with spatial autocorrelation will be employed to examine the spatial patterns of malaria, dengue and chikungunya vectors in order to determine vector density using R studio. Regression analysis will also be conducted to assess for risk factors using a prospective questionnaire created to collect household level malaria risk factor data.

Results and Discussion: We anticipate that the spatial and seasonal differences in fever prevalence will be related to factors that define vector ecology, owing to the differences in vector species. This has implications for the targeting of control interventions and potentially allowing for differential diagnosis of febrile illnesses. Through the development of vector distribution maps, targeting of entomological control activities and surveillance can also be improved in Tanzania.

Conclusion: Entomological and epidemiological studies combined with spatial analysis can help to inform prevention and case management of vector-borne diseases in resource-poor settings.

Hongoh, Valerie
Université de Montréal, Canada
Co-authors: Michel, Pascal ; Public Health Agency of Canada; Gosselin, Pierre ; Institut National de Santé Publique du Québec ; Samoura, Karim ; Université Aube Nouvelle, Ouagadougou ; Waaub, Jean-Philippe ; Université de Québec à Montréal ; Ravel, André ; Université de Montréal

Beyond cost-effectiveness analysis ' multicriteria decision aid for improved prioritization of infectious disease resources

Rationale: Infectious diseases such as Malaria cause considerable morbidity and mortality in developing countries. While progress has been made, emerging diseases such as Ebola threaten to overwhelm health services struggling to meet existing demand. In all countries, but particularly so when basic public health services and capacity are challenged, choices must be made with respect to allocation of limited financial and health care resources. Cost effectiveness analysis (CEA) of interventions and DALYs are frequently used by international organizations to prioritize diseases of concern, but how different might prioritization results be if they were done using criteria identified by local stakeholders'

Objective: This study had a two-fold objective: first, to identify criteria for the construction of a multicriteria decision aid (MCDA) model for prioritization of the prevention and control of infectious disease in Burkina Faso with local stakeholders experienced in infectious disease management and secondly, to compare and contrast criteria identified in a developing versus a developed country.

Methods: Consultation sessions were held with stakeholders in Burkina Faso and Canada as part of a MCDA process to discuss criteria for prioritization of infectious diseases. Stakeholders subsequently weighted the criteria in order to translate their value system into numerical weights. Criteria choices and weights were compared between the two countries.

Results: Similarities and differences between the two contexts were assessed. A majority of identified decision criteria were found to be common to both contexts yet a number of contextual explanations between the various actors were required to clarify criteria identified in one context versus another and certain criteria, such as the international perception of a disease, were found to be context specific.

Discussion: The presence of consistent criteria, such as the severity of a disease and risk perception, suggests that universal dimensions may exist with respect to disease prioritization. However, adjustments made from one context to the other reveal important details with respect to resource availability, capacity and concerns that should be considered when discussing prioritization of infectious diseases.

Conclusion: While CEA and DALYs are important, they answer only part of the question. The MCDA process provides an opportunity for rich knowledge exchange and problem structuring between stakeholders on the numerous dimensions surrounding infectious disease prioritization. Furthermore, given the vast number of actors in developing settings, multi-sector collaborations across NGOs, local government and community are important and formal mechanisms such as MCDA provide means to foster consensus, shared awareness and collaboration.

Huda, Tanvir
School of Public Health, University of Sydney and International Centre for Diarrhoeal Disease Research, Bangladesh (icddrb), Bangladesh
Co-authors: Tahsina, Tazeen; International Centre for Diarrhoeal Disease Research, Bangladesh. Chowdhury, Suman; International Centre for Diarrhoeal Disease Research, Bangladesh. EL Arifeen, Shams; International Centre for Diarrhoeal Disease Research, Bangladesh

Social determinants of health influencing equity in universal health coverage: assessing the programmatic feasibility in Bangladesh country context

Rationale: Despite significant progress in Bangladesh in the health sector, inequity in different health outcomes remains a major concern. Thus it is important that the Ministry of Health regularly monitors the social determinants of health and engages in inter sectoral actions in order to improve health equity.

Objective: The overall goal of this study is to examine the key social determinants of health that have a strong association with universal health coverage as depicted by the World Health Organization (WHO) in their social determinants of health (SDH) framework and assess their programmatic feasibility and policy relevance.

Methods: We organized a focus group discussion with different policy makers and stakeholders of the country. We invited participants from the Ministry of Health and Family Welfare, Directorate General of Health Services, non-governmental organizations and media. All recordings from the FGD were transcribed and analyzed according to different domains of the SDH framework of WHO.

Results: The FGD revealed that policy makers in the country strongly agree that income/poverty, knowledge, education, housing, infrastructure, travel time, gender norms, social protection, employment and infrastructure are important social determinants of health and have a strong association with health status in Bangladesh. The policy makers felt that current policy initiatives for early child development were adequate but would require much stronger implementation. For other social determinants like participation in the health system, registration, accountability and discrimination, the participants felt that despite their overall importance they were not very relevant to Bangladesh.

Discussion: The policy makers affirmed the importance of monitoring indicators of SDH, and reiterated the importance of inter sectorial action. The participants in the FGD agreed that most proposed domains in the WHO SDH framework are highly relevant in terms of policy and programmatic importance of the country. However they felt that some of the indicators in the framwork would need some modification in order to make it relevant to the country context. They also put special emphasis on the importance of information system and urge to strengthen the routine health information systems so that all required information for proper monitoring of SDH are readily available.

Conclusion: Over all the country would need to carefully plan, invest and monitor the determinants of health and the barriers they cause in access and use of the full continuum of health services. Strong inter-sectoral action will be needed in order to achieve meaningful progress towards equity oriented universal health coverage.

Hughsam, Matthew
McMaster University, Canada
Co-authors: DeMaio, Peter; McMaster University, Chiu, Ruth; McMaster University, Driedger, Matthew; McMaster University, Hughsam, Matthew; McMaster University

Prospective considerations for global health research network spaces within Institutional Repositories (IR)

Rationale
Barriers to access to information hinder the influence and applications of global health research. Open-access networks such as institutional repositories (IRs) have the potential to make global health research more accessible to all who can benefit, facilitating opportunities to expand and corroborate work. There is limited research evidence on the use of IRs to promote access and use of global health research.

Objectives
This project describes the development and implementation of a research network space within the McMaster IR cataloguing work done by Canadian Coalition for Global Health Research (CCGHR) members. It evaluates: (1) institutional support among faculty members and administrators, and (2) the long-term sustainably and future direction of IRs cataloguing global health research at McMaster University and other institutions.

Methods
Literature searches, input from experts, and consultation of existing global health-related repositories informed the design of the CCGHR IR and the taxonomy for categorizing articles. The taxonomy was pilot-tested on 30 global health articles by three pairs of independent reviewers who reconciled discrepancies and achieved consensus with the team. Semi-structured interviews and online surveys were used to gather the perspective of researchers, faculty, and other stakeholders on strategies for the development and implementation of the IR.

Results
This repository is housed on MacSphere, McMaster's IR, where documents are organized into three sub-communities (Medical Research, Education, Policy). All documents are further categorized through a global health keyword taxonomy to optimize users' abilities to retrieve relevant documents. Results from the interviews and surveys revealed the need for researcher and institutional buy-in and the importance of integrating self-archiving into existing research activities, such as grant or tenure applications.

Discussion
Our work demonstrates key themes in how to develop sustainable repositories that facilitate research capacity by prioritizing usability and benefits for users and researchers alike. These learnings will provide a model for the development of similar other repositories across Canada to facilitate collaboration and knowledge-sharing between other institutions, disciplines, and nations. This project also serves as a guide for other institutions to more effectively integrate their own research communities into a network of global health publications.

Conclusion
Making research more available to stakeholders beyond the research sphere can spur demand and support for locally relevant health research that can be translated to policy and practice. Organizing and presenting research in open access repositories can be expected to build research system capacities of high-income and low-income countries alike.

Islam, Mohammad Mainul
University of Dhaka, Bangladesh
Co-authors: Gagnon, Anita J.; McGill University

Child marriage in Bangladesh: A cross-sectional examination of related policies and reproductive health

Rationale: A recent UN resolution acknowledges child marriage (below age 18 years) as a human rights violation. Moreover, there is, widespread recognition of both the under-fulfillment and inadequacy of policy goals in addressing sexual and reproductive health and rights (SRHR). Marriage below 18 is practiced in developing countries amidst policies to diminish this practice.

Objectives: We sought to examine: the policies to diminish the practice of child marriage and age at marriage; socio-demographic characteristics and child marriage; and child marriage and 'grand multiparity' (gave birth five or more) and 'pregnancy termination' in Bangladesh.

Methods: Cross-sectional data for Bangladesh (1993-2011) were plotted against years corresponding to policies to diminish child marriage and tested for trends. Women (n = 17,842) above and below 18 who had responded to the 2011 Bangladesh Demographic Health Survey were analyzed to compare: their characteristics, grand multiparity, and pregnancy termination. For that we performed cross tabulations to compare the socio-demographic characteristics of women married as children vs those married as adults and logistic regression to examine child marriage and grand multiparty, and pregnancy termination.

Results and discussion: Most (77.7%) were married before 18. Although child marriage declined over time, nearly one fifth (17.2%) of respondents 15-19 years were married at 15 in 2011. Factors associated with child marriage included: being Muslim, in the poorest wealth index, uneducated and unemployed, living in a rural area, having more children, and preferring more children or undecided fertility. Child brides were more likely to: be grand multiparous and experience pregnancy termination.

Conclusions: Child marriage in Bangladesh has decreased but remains high. The use of law as a means of regulating child marriage is not sufficient although policies appear to have had some effect. Child marriage in Bangladesh has decreased but remains high. The use of law as a means of regulating child marriage is not sufficient, although policies such as the adoption of the International Conference on Population and Development program of action (1994) and the Birth and Death Registration Act (2004) seems to have some effect. Additional strategies to address child marriage include: furthering law reform, communicating through religious leaders, improving women's economic status, promoting female education, providing more employment opportunities to women, and ensuring access to information in rural areas.

Islam, Mohammad Mainul
University of Dhaka, Bangladesh
Co-authors: Gagnon, Anita J.; McGill University

Use of reproductive health care services among urban migrant women in Bangladesh

Rationale: Recent internal migration flows from rural to urban pose challenges to women using reproductive health care services in their migratory destinations. No studies were found which examined the relationship between migration, migration-associated indicators and reproductive health care services in Bangladesh.

Objectives: We sought to answer the questions: (1) What is the relationship between migration (internal migrant/non-migrant) and Bangladeshi urban women's use of reproductive health care services [modern contraceptive use, antenatal care (ANC), modern facilities used for birth, medical exam post-birth, Vitamin A post-birth and STI treatment]' (2) What is the relationship between migration indicators (place of birth, length of time living in current place of residence, reasons for migration) and use of these services among internal migrant women in urban Bangladesh'

Methods: We analyzed the 2006 Bangladesh Urban Health Survey (data made publically available in June 2013) of 14,191 ever-married women aged 10-59 years. Cross tabulations and logistic regression were conducted for selected reproductive health care services.

Results and discussion: Migrants and non-migrants did not differ significantly in their use of modern contraceptives and treatment for STI but were less likely to receive ANC (29.3% vs 15.1%, p=.000) even after controlling for a range of variables [OR=0.48(0.14, 0.56)]. Compared to non-migrants, more migrants had home births (75.8% vs 63.5%, p=.000), did not take vitamin A after delivery (71% vs 57.9%, p=.000), and had no medical exam post-birth (70.3% vs 57.9%, p=.000). Migrant women being village-born (rather than urban-born) were associated with risk of diminished: use of ANC [OR 0.73 (0.57, 0.93)]; treatment for STI [OR 0.75 (0.63, 0.93)]; receiving a medical exam post-birth [OR 0.65 (0.53, 0.81)]; and receiving vitamin A post-birth [OR 0.70 (0.57, 0.85)]. Migrating for work or education (rather than other reasons) was associated with risk of diminished: use of ANC [OR 0.83 (0.69, 0.99)]; use of modern facilities for birth [OR 0.75 (0.59, 0.95)]; and receiving a medical exam post-birth [OR 0.67 (0.54, 0.82)]. Each additional year lived in urban areas was associated with a greater likelihood of receiving ANC [OR 1.04 (1.03, 1.06)].

Conclusions: Bangladeshi women who migrated to urban areas in Bangladesh were significantly less likely than non-migrants to use reproductive health care services related to pregnancy care. Pro-actively identifying urban migrant women, especially those who originated from villages or migrated for work or education may be warranted to ensure optimal use of pregnancy-related services in their new urban locations.

Iyer, Aditi
Gender and Health Equity Project, Indian Institute of Management Bangalore, India
Co-authors: V., Srinidhi; Sreevathsa, Anuradha; Shankar, Mridula; Iyer, Aditi; Gender and Health Equity Project

Deconstructing and building obstetric knowledge among doctors and staff nurses: Evidence and practice from a low-income setting

RATIONALE
Maternal mortality is declining in India, but the contribution of institutional deliveries to this reduction is not significant. Research from different parts of India indicates that institutions do not uniformly assure quality and safety. Verbal autopsies by the Gender and Health Equity (GHE) Project in rural south India reveal that the capacity of doctors and staff nurses to identify obstetric risks is a greater problem than is generally acknowledged.

OBJECTIVES
(1) To assess the knowledge of obstetric risks and complications among rural doctors and staff nurses in government-run Primary and Community Health Centres. (2) To develop resource material to help strengthen their knowledge.

METHODS
The assessment took place in Koppal district, Karnataka, India. It included all doctors (practitioners of allopathy and the Indian systems of medicine; n=72) and a random sample of staff nurses (25 trained in skilled birth attendance and 25 untrained), who worked in Primary and Community Health Centres. Using mixed methods, the study analysed their responses to five medical vignettes pertaining to postpartum haemorrhage, maternal anaemia, pre-eclampsia, cortical venous thrombosis and normal labour.

RESULTS
The doctors and staff nurses' approach to diagnostic decision-making was unsystematic and, at times, incomplete with no clear logic in their line of questioning. Instead of considering symptoms in clusters (along with signs and test results), they elicited information and interpreted symptoms and signs inconsistently. While they considered breathlessness and swelling in a multiparous woman as symptoms of anaemia; they treated recurring headaches and abdominal pain in the third trimester as symptoms of separate, uncorrelated conditions.

The GHE Project's response was to develop a handbook to strengthen the identification of 15 obstetric and 12 co-morbid conditions through a case-based approach. The handbook consists of a basic course and a section of real life cases that uniquely allows a reader to apply the principles and processes of risk identification to atypical and complex clinical presentations.

DISCUSSION
Our assessment into the processes and outcomes of a doctor and staff nurse's differential diagnoses can help design interventions to improve their capacity to deliver obstetric care. The GHE Project's handbook on maternal risks is a small contribution in this regard. It can help bring doctors and staff nurses on par, even though their basic training sets them apart.

CONCLUSION
Obstetric competence must be strengthened if institutional deliveries in India are to assure maternal safety.

Janjua, Martyna A.
University of Toronto, Canada
Co-authors: Gastaldo, Denise (University of Toronto); Bender, Amy (University of Toronto); Rea, Elizabeth (Toronto Public Health); Batt, Jane A.E. (St. Michael's Hospital)

Latent tuberculosis infection among Canada's immigrants: migration as a social determinant of health

The World Health Organization (WHO) has recently developed a post-2015 global tuberculosis (TB) strategy aimed at eradicating TB worldwide by 2050. The first step towards this goal is to reduce the rates of new TB cases by 90% in low TB-incidence countries by the year 2035. In order to realize this goal, eight priority actions have been proposed including detection and treatment of active and latent TB infection (LTBI), continued and more sophisticated disease surveillance programs, as well as addressing special needs of migrant populations.

In low-incidence high-income nations, including Canada, TB disproportionally affects the most socioeconomically disadvantaged groups, such as the poor, the homeless, migrants and ethnic minorities. In the case of migration, the association between immigrant status and TB is problematic. Newcomers to host countries are labeled as an 'at risk' population, which potentially leads to stigma and discrimination not only socially, but also in national policies. Specifically, public health and immigration policies focus on the detection and treatment of TB and LTBI among newcomers, monitoring individuals through a post-landing medical surveillance system. These policies and programs perpetuate the notion that TB is an imported disease (from high-incidence to low-incidence countries), thus failing to consider the effects of the migration journey and the settlement process itself as a determinant of TB.

The anticipated success of the global TB strategy partially relies on improving prevention of new cases in low-incidence countries as well as addressing the social determinants of health. We propose that to explore these two tenets, research should employ theoretical and methodological choices that allow researchers to study the circumstances surrounding the diagnosis and treatment of LTBI in the context of migration. In order to better understand how newcomers experience the process of surveillance for TB, a highly stigmatized disease, during their migration and settlement in Canada, we propose qualitative approaches to critically examine the mandates of Citizenship and Immigration Canada. Observations in TB clinics, document analysis, interviews, and arts-based data generation with immigrants, their relatives, and community members have potential for challenging current thinking on the role of migration by conceptualizing it as a social determinant of TB and in turn recommending improvements to the Canadian TB Prevention and Control Program.

Jasmin, Emmanuelle
Université de Sherbrooke, Canada
Co-authors:

Société, culture et occupation : Un cours sur l'environnement socioculturel en lien avec l'ergothérapie, les occupations humaines et la santé mondiale

Justification : Les ergothérapeutes peuvent être appelés à intervenir auprès de personnes provenant de divers milieux socioculturels. Dans ce contexte, il importe que les étudiants en ergothérapie acquièrent des connaissances en sciences humaines et sociales.

Objectif : Cet exposé vise à présenter un cours portant sur la sociologie et l'anthropologie en lien avec l'ergothérapie, les occupations humaines et la santé mondiale.

Méthode : Le cours, offert à des étudiants en ergothérapie de première année, a principalement été donné sous forme d'approche par problèmes. Les vignettes, les objectifs d'apprentissage et les lectures étaient liés à trois thématiques, soit l'inadaptation sociale, la pauvreté et l'immigration. Le cours a été évalué individuellement et en groupe par les étudiants.

Résultats : Il ressort de l'évaluation du cours que les étudiants ont grandement apprécié cette activité pédagogique, notamment les vignettes, les lectures et les liens avec l'ergothérapie. La pertinence du cours, en tant que futur professionnel de la santé, a également été relevée. Des étudiants ont noté mieux comprendre la société ainsi qu'être plus ouverts à la diversité culturelle à la suite du cours.

Discussion : L'acquisition de connaissances en sociologie et en anthropologie, contextualisée à la pratique, apparaît essentielle à la formation des ergothérapeutes. D'abord, ce nouveau savoir apporte une meilleure compréhension de l'environnement socioculturel des personnes, nécessaire à l'analyse occupationnelle en ergothérapie. Cette formation amène aussi les étudiants à être plus réceptifs à la diversité culturelle, ce qui est primordial à l'établissement d'une alliance thérapeutique auprès des personnes issues d'un autre milieu socioculturel. Enfin, ce cours conscientise les étudiants aux situations d'injustice sociale et occupationnelle, les préparant ainsi à devenir des agents de changement en santé mondiale.

Conclusion : Cette expérience pédagogique valide la pertinence d'inclure un cours en sciences humaines et sociales dans un curriculum en ergothérapie. Ce domaine de connaissances, lié à la santé mondiale, pourrait certes bénéficier à la formation d'autres types de professionnels de la santé, s'il est mis en relation avec leur discipline respective.

Jinah, Ashna
The University of Western Ontario, Canada
Co-authors: Campbell, Karen, M.; Gilliland, Jason; Sarma, Sisira

An analysis from the National Population Health Survey (NPHS) on the association between neighbourhood walkability and adult obesity, in 2010/11

Rationale: Extensive literature has reported that built environment changes over recent decades have contributed to the increasing prevalence of overweight and obesity worldwide. The global obesity epidemic in Canada is a consequence of individual, behavioral, social, and built environment factors. A number of Canadian studies have investigated these risk factors and found that certain aspects of the built environment, for example, neighbourhood walkability, are linked with obesity, even after controlling for physical activity, diet and socioeconomic factors.

Objectives: The global objective of this study is to investigate the association between neighbourhood walkability and adult obesity prevalence in urban Canada. More specific aims are: 1) to examine associations between neighbourhood walkability and physical activity; 2) to examine the association between physical activity and obesity; 3) to identify whether physical activity is a potential mediator in the association between neighbourhood walkability and obesity, and estimate its indirect effect.

Methods: Three neighbourhood walkability measures (intersection density, population density, and the land use entropy index) were constructed from Census and DMTI Spatial Inc. at the DA level, and arranged in tertiles representing less walkable to more walkable DA's in ascending order of 'low,' 'medium,' and 'high' walkability. Individual physical activity was represented by the energy expenditure variable from the National Population Health Survey (NPHS) in 2010/11 and adult obesity was measured by body mass index (BMI) variable in NPHS. Univariable and multivariable linear regression analyses for a sample of 3195 adults aged 18 to 64 were conducted in STATA'13, and adjusted for individual-level socioeconomic and demographic factors. Methods described by Schluchter (2008) were used to test the mediation of physical activity between neighbourhood walkability and obesity in SAS 9.3.

Results: A significant association was found between population density and physical activity albeit in an unexpected direction and of small magnitude. As expected, significant associations were found were between physical activity and obesity. No significant associations were found between neighbourhood walkability measures and obesity. Physical activity was found to mediate the association between 'medium' population density and obesity.

Discussion: Our study did not find associations between neighbourhood walkability and obesity. In the built environment literature, numerous mixed associations between neighbourhood walkability and obesity have been reported, and findings from our study may differ from others due to methodological discrepancies.

Conclusion: Many of the hypothesized associations were not found. The lack of associations found between neighbourhood walkability and obesity were generally inconsistent with previous cross-sectional findings.

Joachim, Juliana
Muhimbili University of Health and Allied Sciences, Tanzania
Co-authors: Petricca, Kadia;Johns Hopkins University, Bloomberg School of Public Health ; Muhimbili University of Health and Allied Sciences Joachim, Juliana ;Muhimbili University of Health and Allied Sciences Mkoba, Clarence;Muhimbili University of Health and Allied Sciences Ndege, Priska; Muhimbili University of Health and Allied Sciences Semu, Helen; Tanzania Ministry of Health and Social Welfare Baqui, Abdullah;Johns Hopkins University, Bloomberg School of Public Health Mpembeni, RoseMuhimbili University of Health and Allied Sciences; Killewo, Japhet;Muhimbili University of Health and Allied Sciences

Mapping community-based programs in tanzania: supporting the implementation of a national community health worker cadre

Rationale: Over the past five years, the Ministry of Health and Social Welfare (MoHSW) has been committed to the implementation of an integrated National Community Health Worker (CHW) cadre. To provide research support the MoHSW during this planning and implementation process, the Community Health Worker Learning Agenda Project (CHW-LAP) emerged as a collaborative partnership built around key research objectives. One of these objectives is to conduct a landscape mapping of existing and recently completed CHW programs to inform the MoHSW on existing infrastructure and capacity that may be leveraged for future planning.

Objective: The objective of this oral presentation will be to provide an overview of the methods and findings that emerged from the CHW program mapping and will describe tools and approaches used to communicate these findings to MoHSW counterparts.

Methods : Semi-structured interviews were conducted with CHW program managers that focused on six themes: (1) a profile of the CHW program; (2) selection and training; (3) supplies and referrals; (4) CHW performance, supervision, and community involvement; (5) health information management; and (6) NGO programming and future intentions. Data collection took place between June to December 2014.

Results: Forty-four CHW programs participated in the survey in which 40,827 CHWs were identified with the greatest numbers in Rukwa (n= 6090) and Mwanza (n=4165) and the least in Ruvuma (n=256) and Katavi (n=15). The findings further reveal that the CHW scope of practice varies widely given programmatic diversity within the system. Although each CHW is trained on different curriculum, the majority have basic knowledge in health promotion and hygiene, HIV, family planning and reproductive health, nutrition, and safe motherhood. The majority of CHW programs have CHWs working in a voluntary capacity (n=41). Further, the study findings reveal that the training duration for the majority of programs lasted from 12 days to 3 weeks. Many CHW programs also appeared to support refresher trainings for their CHWs that ranged from 3 months to 2 years post initial training.

Discussion: To date, this study provides the first attempt to consolidate comprehensive information regarding CHW programs throughout Tanzania. Findings reveal the existence of significant programmatic diversity, which supports the basis for the movement towards a nationally recognized integrated CHW cadre.

Conclusion: The generation of research for decision-making is an important element in implementation science. To facilitate transitioning existing programs towards an integrated cadre, there is a need to harmonize training curriculum, incentive packages and recruitment criteria.

Joachim, Juliana
Muhimbili University of Health and Allied Sciences, Dar es Saalaam, Tanzania
Co-authors: Mmbaga Elia, Kaaya Sylvia, Kilonzo Gad, KajulaLusajo, Mrema Noel , Muhimbili University of Health and Allied Sciences

Effect of sexual and reproductive health education intervention on peer to peer sexual health communication among primary school adolescents age 12-14 in kinondoni municipal, dar-es-salaam

Rationale: Sub 'Saharan Africa still bears the largest burden of HIV and other Sexually Transmitted Infections (STIs) with youth below 24 years, at the highest risk of infections. There is more call for innovative and effective interventions for primary preventions.

A school-based sexual behavioral intervention named PREPARE was developed to effectively promote healthy sexual and reproductive health practices among primary school adolescents in Dar es Salaam, Tanzania.

Objective: To asses effect of PREPARE intervention on peer to peer sexual health communication among primary school adolescents age 12-14 in Kinondoni Municipal Dar es Salaam

Method: A cluster-randomized controlled trial, involving 38 (19 intervention and 19 delayed intervention) primary schools was conducted. Using the same standardized questionnaire, data was collected at baseline and 6 months follow-up after intervention. The Change in mean peer to peer communication was examined using extended generalized estimating equation model controlling for dependence of measurement resulting from repeated measure.

Results: Total of 5099 adolescents completed the survey at baseline and follow up one. PREPARE intervention was found to have a positive effect in increasing likelihood of peer to peer communication in the intervention group by 32%. When controlled for age, class and gender, adolescents from the intervention schools were 38% more likely to communicate as compared to the control group (ARR=1.38, 95%CI: 1.25-1.52, p=0.01)

Adjusted determinants for independent predictors of change in peer to peer communication showed that, the intervention had a positive effect among peers with high self-efficacy (ARR2.75, 95%CI:2.56- 2.97; p <0.001) also among peers who communicated with friends and parents(ARR=3.35, 95% CI 2.92- 3.85 ; p<0.001) and (ARR=1.716 95%CI: 1.49-1.96; p<0.001) respectively. Adolescents with high HIV knowledge were more likely to communicate to their peers. (ARR=1.69, 95%CI1.39-1.95; p <0.001)

Discussion: Peer to peer communication increased significantly among the intervention group indicating a positive effect of the intervention. Of which the intervention was designed and implemented in way that it addressed the different components levels such as the classroom intervention, peer led intervention and the collaboration of schools and youth friendly services. This might explain why we observed positive effect following the PREARE intervention.

Conclusion: Ongoing efforts to improve adolescent HIV knowledge needs to incorporate training that will improve self-efficacy with an emphasis on parental communication. Acceptability and flexibility that we observed during the implementation of the intervention, makes PREPARE a commendable sexual and reproductive health education intervention to be adapted in primary school settings in Tanzania.

Jogiat, Uzair
University of Calgary/ Cumming School of Medicine, Canada
Co-authors: Jogiat Uzair University of Calgary; Winn Anika University of Calgary; Konje Eveline Catholic University of Health and Allied Sciences, van der Meer Frank University of Calgary, Hatfield Jennifer University of Calgary; Bastien Sheri University of Calgary, Olesaningo Godwin community member NCA, Orsel Karin University of Calgary

Teaching aids availability for the primary school curriculum in Tanzania

Rationale: Soil-Transmitted Helminths (STH) are endemic within the Ngorongoro Conservation Area (NCA) in Tanzania and have a high prevalence among schoolchildren. The primary school curriculum of Tanzania provides a brief overview of these parasitic infections, but teachers have expressed their lack of knowledge on the subject. Furthermore, teachers considered their limited knowledge on STH an impediment to educating. Our work focused on the use of freely available teaching aids to support effective STH education.

Objective: The objective of this research was to evaluate the local relevance and applicability of widely available teaching aids as well as to investigate the currently used teaching aids to educate about STH infections in primary schools.

Methods: An online search for teaching aids took place with criteria for relevancy comprising three main requirements: teaching aids must be culturally relevant, at an appropriate level of knowledge for primary school teachers, and primarily consist of images to accommodate all audiences. During the field component of the research, verbal consent was first obtained during a meeting with the headmasters of each school. A qualitative semi-structured group interview with the teachers followed to assess their needs regarding teaching aids. When requested, a presentation utilizing the selected teaching aids was provided.

Results: Primary schools mainly depend on manual drawings to support their educational topics. The online search for freely available teaching aids, revealed a limited number of culturally relevant visuals that could be used in STH education. When presented, the teachers considered the content to be valuable, but were concerned with the feasibility of implementation. For the teaching aids to be effective, they should be laminated and in a poster format for large audiences, and translated to Swahili. However, currently schools within the NCA lack the resources and capacity to accomplish this.

Discussion: Limited resources are available to teachers to support teaching on STH infections. Although relevant teaching aids were limited available, the selection presented was perceived useful when in appropriate size and format to teach large groups of primary school children. The lack of financial resources and internet access was identified as a barrier to access teaching aids.

Conclusion: To optimize health education, teachers identified the need for more in-depth knowledge on STH, supplemented with sustainable supportive programs for the teachers requiring a cooperative effort from all stakeholders. Currently STH teaching aids are scarce and limited funds are available to primary schools in the NCA.

Jones, Cameron
Okanagan Zambia Health Initiative, Canada
Co-authors: Barker, Jessica; University of British Columbia. Nelems, Bill; Okanagan Zambia Health Initiative. Silumesii, Andrew; Zambian Ministry of Health

Overcoming the barriers inherent in capacity building interventions: a zambian case study

This paper addresses many of the obstacles traditionally faced by capacity building organizations. In July of 2011, four OKAZHI members, including the Executive Director and the Medical Super-intendant for a Zambian Hospital, formed an evaluation team. Their intention was to perform a comprehensive, exploratory study to review the impact and effectiveness of a joint Canadian-Zambian medical organization's work. Their study employed a flexible (qualitative) research design and involved two types of data collection: qualitative interviews and cross sectional surveys. The results of their evaluation indicated shortcomings inherent to the nature of capacity building in low resource settings. Four main barriers are outlined, which include: retention of human resources, limits to existing infrastructure, communication and institutional leadership. Based on the interview and survey responses of Zambian stakeholders, an original '4 Ts' framework was developed, which outlines four techniques and theories for circumventing the aforementioned barriers. These include the development of 'Train the Trainers' programs, 'Tailoring' programs in ways that are cognizant of local supply constraints, building 'Transparency' amongst stakeholders and 'Teaching' leadership skills. By defining and emphasizing solutions to the main obstacles of capacity building initiatives, this paper aims to support improved program design and resource use within NGOs of a similar mandate.

JUAREZ-RAMIREZ, CLARA
CENTRE FOR HEALTH SYSTEMS RESEARCH-NATIONAL INSTITUTE OF PUBLIC HEALTH, MEXICO, MEXICO
Co-authors: FREYERMUTH LAURA; Organization: Alternativas y Capacidades A.C.

Between activism and intervention: the work of civil society and its impact on health policy of indigenous women.

Background: In light of the evidence of the lack of equality in the attention to the health of the indigenous population, and the recognition of the roles CSOs can play to improve it, Alternativas y Capacidades A.C. identified the necessity of documenting the potential of CSOs and the level of influence they have achieved in national, state and local politics in forwarding the agenda of indigenous women's health. In order to achieve this, a team of researchers and members of CSOs with experience on the subject have worked together to produce this study.

Objectives: The overall objective of this study is to improve our understanding of the ability of Mexican organizations offering support to indigenous women to instigate changes in society. We also aim to explore the way in which they engage with government institutions and the extent of advocacy achieved in different government structures in order to address issues within the vitally important area of healthcare. The research had the aim of recovering and drawing attention to experiences of CSOs that demonstrate the diverse ways in which they have confronted the State's limitations in order to respond to the health needs of indigenous women.

Methodology: The Methodology Design was constructed by Cases Study, were defined as those CSOs that had worked to influence public health policy affecting indigenous women, even if this did not result in an actual change to public policy. Question research: How can an underprivileged group such as indigenous women achieve equality in health care' What kind of organizations are working in different ways to bring about this change' How do they interact with health systems'

Findings: Encouraging the participation of different social groups is important to generate a health system that is adapted to the needs of the population. In particular, it is necessary to involve the community so that the prevention and treatment of diseases associated with poverty can be effective.

Conclusions: One finding of this study is that these concepts help demonstrate processes that occur when approaching and interacting with indigenous people, but do not succeed in defining it completely. The complexity of the issues relating to healthcare for indigenous people overlap, which has presented a challenge to us researchers. In the majority of the analyzed case studies, the achievements of advocacy reveal micro-processes that are representative within the local context, but do not transfer to the scale of national public policy without complications.

Kadio, Kadidiatou
Université de Montréal, Burkina Faso
Co-authors: Kafando, Yamba; Association AGIR, Burkina Faso, Ouédraogo, Aboubacar; Consultant, Ridde, Valéry; Institut de Recherche en Santé Publique de l'Université de Montréal (IRSPUM)

Protection sociale en santé au Burkina Faso : analyse d'un programme de solidarité pour affilier les plus pauvres à une assurance maladie.

Justificatif: En 2012, le Réseau d'appui au Mutuelle (RAMS) et le Ministère de l'Action sociale et de la Solidarité (MASSN) ont organisé un programme de solidarité pour améliorer l'accès aux services de santé des ménages démunis. Ce programme répond à un besoin de connaissance sur la meilleure façon d'affilier les personnes démunies au « Régime d'Assurance Maladie Obligatoire » (RAMU-BF) à travers les mutuelles de santé, d'où la pertinence de notre étude sur la réalisation de ce programme.

Objectif: Comprendre l'émergence, la formulation et la mise en 'uvre du programme de solidarité.

Méthode: Une étude de cas unique. Le cadre conceptuel inclut des concepts de l'étude des politiques publiques et de l'anthropologie du développement. Des entretiens (n=55) ont été effectués auprès de 4 catégories d'acteurs impliqués. L'analyse thématique a guidé le traitement des données.

Résultats: La mise en place du RAMU fut la fenêtre d'opportunité pour l'émergence du programme. Le RAMU prévoit un régime d'Assurance Maladie obligatoire qui s'appuie sur les mutuelles de santé pour couvrir les acteurs du secteur informel et les personnes démunies. Afin de disposer de connaissances issues d'expérience contextuelle, le MASSN accorde une subvention au RAMS pour affilier des ménages pauvres à des mutuelles santés. La formulation du programme privilégie des solutions plus profitables aux mutuelles qu'aux personnes démunies. Les mutuelles ont renfloué leur caisse grâce à la subvention des frais d'adhésions des bénéficiaires, qui pourtant ne sont pas exemptés du paiement du ticket modérateur. Le maintien du ticket s'explique par la volonté de respecter le principe de fonctionnement des mutuelles et la crainte de payer d'importants coûts de prestations néfastes aux capacités financières des mutuelles. La sélection des ménages pauvres fut passive et a privilégié les personnes ayant déjà eu recours aux services sociaux, au détriment des résidents des villages éloignés. Un déficit de collaboration et de communication fut constaté dans la formulation et la mise en 'uvre.

Discussion: Identifier les incohérences dans la formulation, les conflits d'intérêts entre les acteurs, permet de détecter les obstacles et les goulots d'étranglement probable dans la mise en 'uvre. La formulation a été faite sans une concertation, laissant la latitude aux acteurs de décider dans le sens de leurs intérêts. L'importance des données probantes contextuelles pour améliorer les interventions est reconnue par les acteurs.

Conclusion: Il est pertinent et nécessaire de supprimer le ticket modérateur pour une meilleure couverture sanitaire des indigents par les mutuelles.

Kaljee, Linda
Henry Ford Health System, United States
Co-authors: Poitevien, Genevieve; Université Quisqueya Faculté des Sciences de la Santé. Dunbar, Willy; Université Quisqueya Faculté des Sciences de la Santé. Jean-Francois, Anani; Université Quisqueya Faculté des Sciences de la Santé. Parke, Dana; The Global Health Initiative Henry Ford Health System. Kilgore, Paul; the Global Health Initiative Henry Ford Health System. Prentiss, Tyler; The Global Health Initiative Henry Ford Health System. Simon, Yanick; Université Quisqueya Faculté des Sciences de la Santé. Zervos, John; The Global Health Initiative Henry Ford Health System. Zervos, Marcus; Division of Infectious Diseases Henry Ford Health System

An integrated training and research collaboration between Université Quisqueya Faculté des Sciences de la Santé and Henry Ford Health System

Rationale: Five years after the 2010 earthquake, Haiti continues to rebuild its communities and healthcare and medical education infrastructure. While many resources flowed into Haiti immediately after the earthquake, long-term collaborative efforts are needed for sustainable change. Health disparities exist between socio-demographic groups including lack of health services and resulting poor health outcomes for more than 150,000 residents in internally displaced persons (IDP) camps.

Objective: Our program is designed to build on the knowledge and skills at two medical institutions (Université Quisqueya Faculté des Sciences de la Santé [UNIQ-FSSA, Port-au-Prince] and Henry Ford Health System, Global Health Initiative [HFHS-GHI, Detroit]) to create a training and research consortium focused on addressing healthcare access and needs in Haiti as articulated by UNIQ-FSSA collaborators. Integrating interdisciplinary research training at UNIQ-FSSA can support students and young faculty toward development into independent researchers.

Methods: Our collaboration is community-focused and interdisciplinary inclusive of medical, public health, and social sciences. Our trainings utilize traditional face-to-face classroom training, student and faculty exchanges between institutions, field work experience, and long-distance learning.

Results: Various training-research activities have been completed. Since 2012, four UNIQ-FSSA students and faculty participated in clinical and research observations at HFHS. In 2014, 29 UNIQ-FSSA medical students and Haitian community health workers participated in a 3-day research training workshop conducted by HFHS-GHI and UNIQ-FSSA faculty. In 2015, fourteen of participating UNIQ-FSSA students worked with IDP community leaders to conduct a healthcare utilization and access survey in four IDP camps to assess current needs and enhance relationships between UNIQ-FSSA, HFHS-GHI, and IDP communities. In April 2015, HFHS-GHI and UNIQ-FSSA Divisions of Infectious Diseases launched a videoconferencing series for UNIQ-FSSA students. Lectures included hepatitis, skin infections, pneumonia, tuberculosis, meningitis, and Ebola and will be expanded in 2015-16.

Discussion: The training and research opportunities resulting from the collaboration between our institutions have been well-received by participants. We continue to explore new options for expanding health assessment training into local communities and establishing a community-focused health curriculum at UNIQ-FSSA. The research data from the healthcare survey will provide insight into the needs of IDP communities and support future efforts to initiate community-based research at UNIQ-FSSA.

Conclusion: Haiti continues to undergo reconstruction to address multiple health challenges. Development and implementation of interdisciplinary health training within a local medical institution provides a sustainable option for improving community well-being and a stronger health infrastructure. This framework can be adapted for implementation in other low-resource settings.

Khamisa, Sabrina
Princess Margaret Cancer Centre; University Health Network, Canada
Co-authors: Rosen, Barry, Dr, Princess Margaret Cancer Centre; University Health Network ; Khamisa, Sabrina, Princess Margaret Cancer Centre; University Health Network

Cervical cancer screening program with moi teaching & referral Hospital (Eldoret, Kenya) in partnership with the Princess Margaret Cancer Centre (Toronto, Canada)

Cervical Cancer Screening Program with Moi Teaching & Referral Hospital (Eldoret, Kenya) in partnership with the Princess Margaret Cancer Centre (Toronto, Canada)

Dr. Barry Rosen, Sabrina Khamisa

Rationale: Cancer is set to become the newest epidemic in the developing world. In 2002, cancer was 13% of the global mortality burden, more than HIV/AIDS, TB and malaria combined. Low resource settings such as Africa are seeing a rise in cancer rates faster than in North America. The concern is that 30% of cancers worldwide have access to 90% of resources whereas 70% have <10% of resources. This program set out to develop a comprehensive approach to gynecologic oncology care. The main areas of focus are providing comprehensive obstetrical care, addressing the need for fistula services, and caring for women at risk of, and with, cervical cancer.

Objective: To build local Kenyan capacity to care for women through a threefold initiative:

1. Providing direct clinical care

2. Supporting training and education of doctors and nurses

3. Facilitating relevant, needs-based and clinically-oriented research

Methods: A gynecologic oncology plan was devised in conjunction with AMPATH (Academic Model Providing Access to HealthCare) which represents a consortium of North American academic institutions to expand cervical cancer screening, provide surgical training, and chemotherapy treatment protocols for ovarian, cervical cancers and GTN. This vision grew to a concept of sustainable capacity building in the region by developing a gynecologic oncology fellowship program in partnership with Moi University to initiate a program that would continue to train others and provide the necessary credentials.

Results: Two local Kenyan doctors have successful completed the 2 year fellowship program and represent the first 2 gynecologic oncology surgeons in the country. Over 20,000 woman have been screened for cervical cancer since the program's inception in 2008. The program has now expanded to include a focus on nursing and exploring palliative care and radiation.

Conclusion: The model has proven successful and sustainable with the potential to expand across the cancer program (radiation, palliative, etc). The program will continue to grow in the area of cancer care with a greater focus on sustainable capacity building, research and data collection.

Khan, Maheer
McMaster University, Canada
Co-authors: Maheer Khan, Jared Paty, Eleanor Ng, Hadi Musa, Pablo Lamelas, Tara McCready, Jon-David Schwalm; McMaster University

Implementation of a non-physician health worker training curriculum for the assessment and management of cardiovascular disease

Rationale:

Cardiovascular disease (CVD) is the major cause of mortality globally and is increasing in low to middle income countries (LMIC). In response to this, the training of non-physician health workers (NPHW) is part of the growing trend of task-shifting supported by the World Health Organization. NPHW can deliver cost-effective, community-based risk assessment and culturally relevant counselling and prevention strategies to at-risk populations.

Objective:

Our aim was to develop and implement a standardized, culturally adaptable, and evidence-based training curriculum aimed at improving assessment and management of CVD in LMIC.

Methods:

Aligning with the asset based community development (ABCD) model, we considered the training of local NPHWs to be of chief importance. To accomplish this, the interdisciplinary team consulted both local and international resources to design an interactive, nine-module training curriculum. After completing pilot-testing sessions in Canada, we implemented the curriculum in Colombia and Malaysia, administering feedback questionnaires and pre-and post-module tests to document the training process.

Results:

The pilot-testing process in Canada indicated that NPHWs with no formal health care experience could be trained to undertake CVD risk assessment. After implementation in Colombia and Malaysia, NPHWs also showed a better understanding of curriculum topics which is highlighted by an improvement of 10% on pre and post module test scores. Qualitatively, 86% of NPHWs felt well trained in cardiovascular disease management after completing the training while 79% believed that the curriculum could be adapted in different cultures and settings.

Discussion:

The successful training of NPHWs in Colombia and Malaysia indicates that a culturally adaptable and evidence-based training program has the potential to improve CVD outcomes in LMIC. It also highlights the urgent need to review and revise regulatory barriers which prevent implementation of task-shifting initiatives into existing health systems.

Conclusion:

We successfully developed a curriculum for NPHW training. Although NPHW performance after this training is pending, we have achieved reasonable uptake of curriculum material and satisfaction among NPHW in Colombia and Malaysia.

King, Nia
Department of Population Medicine, University of Guelph, Canada
Co-authors: Dodd, Warren; Department of Population Medicine, University of Guelph; Dewey, Cate; Department of Population Medicine, University of Guelph

Self-reported morbidity and health service utilization in rural southern India

In Tamil Nadu, India, the state government and healthcare stakeholders have made great strides toward developing a high-quality, universally accessible healthcare system; however, poor rural residents continue to confront substantial barriers to obtaining quality healthcare. While other studies have used National Sample Survey and Census data to examine the demographic determinants of health-seeking behaviour in various settings in India, few have conducted mixed methods studies to investigate the context within which individuals experience the healthcare system. As such, this study drew on in-depth quantitative and qualitative data to examine the intersections between individuals': self-reported morbidity; health literacy and beliefs; and healthcare preferences, utilization, and experiences, within India's model state of healthcare provision. The study's main objective was to investigate the relationship between government health policies and lived healthcare experiences in order to identify potential improvements to policies addressing rural healthcare accessibility. Sixty-six semi-structured interviews conducted in the Krishnagiri district of Tamil Nadu provided qualitative data and informed the development of a cross-sectional questionnaire used to randomly survey 300 households (1693 individuals) in 20 rural villages. The study concluded that the 10-year period prevalence of self-reported major health conditions among all individuals was 25.3%. When classified according to the International Classification of Diseases' system, major morbidities included: connective tissue injuries (7.7%), nervous system and sense organ diseases (5.3%), and circulatory and respiratory diseases (2.7%). Although government facilities were the most common healthcare access point for rural households, these facilities were highly mistrusted; 48.7%, 19.1%, and 18.8% of respondents reported perceived inappropriate treatment protocols, corruption, and excessively long queues, respectively, at government facilities. Conversely, high treatment cost was the main cited barrier to accessing private facilities (93.3%). Health-seeking behaviour was also influenced by individuals' perceptions of disease etiology and severity, with care typically only being sought once pain interfered with daily activities. This study highlights the impact of perceived healthcare quality on care-seeking behaviour, as mistrust in government services resulted in a widespread preference for private facilities; however, private healthcare costs either further impoverished individuals or barred access altogether. While healthcare provision in Tamil Nadu has improved, our results show that disease morbidity remains high amongst the rural poor, which may be attributable to healthcare accessibility barriers and poor health literacy. More attention is needed by policy makers in this setting to improve public health programs and policies in order to better serve Tamil Nadu's poor rural populations.

Klassen, Sheila
Libin Cardiovascular Institute of Alberta, Canada
Co-authors: Fine, Nowell; Libin Cardiovascular Institute of Alberta; Bafadel, Ahmed; Libin Cardiovascular Institute of Alberta; Girgis, Mina; McGill University; Isaac, Debra; Libin Cardiovascular Institute of Alberta

Barriers to optimizing patient care in a dedicated public heart failure clinic in Guyana

Background: Cardiovascular diseases are now the leading cause of death in most South American countries, with heart failure (HF) representing a significant proportion of this disease burden. A nurse-managed HF clinic was implemented at the Georgetown Public Hospital, Guyana, in November 2014 through collaboration with the Libin Cardiovascular Institute of Alberta, Canada. After the first 3 months, it was noted that clinical outcomes were sub-optimal. The purpose of this study was to investigate barriers to provision of effective HF care in this setting.

Methods-Results: Structured questionnaires administered to HF clinic patients assessed barriers to clinical care. HF clinic nurses were interviewed to determine their perception of barriers to patient care. Additional questionnaires administered to referring physicians assessed barriers to referral. There were 30 (75%) HF clinic patients with completed questionnaire data available and 25 (63%) with ‘3 months follow-up, among whom 4 (16%) experienced decline in NYHA functional class, 3 (12%) were hospitalized and 1 (4%) died in the follow-up period. Major patient-identified barriers to HF clinic compliance included cost of travel to clinic (73%) and belief that private clinics provide superior care (90%). Twenty-eight (93%) HF clinic patients indicated improved understanding of their disease and treatments since enrolling in the clinic. The two HF clinic nurses were interviewed and identified the following patient barriers to HF clinic compliance: 1) denial of HF diagnosis, 2) belief that medications prescribed are unnecessary when asymptomatic, 3) belief that excess sodium intake is acceptable, and 4) belief that medication side-effects indicate toxicity. Barriers to effective nursing care included: 1) lack of consistent medication availability in the public pharmacy, and 2) lack of a clinic external telephone line. Questionnaire data was available from 48 potential referring physicians, who identified barriers to HF clinic referral including lack of awareness of a HF clinic (52%), difficulty finding the referral form (15%), and belief that private clinics generally provide better care (31%). Seven (15%) physicians believed the public HF clinic was not sustainable.

Discussion: Misconceptions regarding the role and value of a dedicated HF clinic and appropriate medical therapy among HF patients and referring public hospital physicians represented significant barriers to provision of care in a newly established HF clinic in Guyana. Mistrust of public healthcare, patient accessibility and resource limitations were also important barriers. Addressing patient and healthcare provider misconceptions will be critical for continued success of the HF clinic in Guyana.

Konje, Eveline
University of Calgary & Catholic University of Health and Allied Sciences, Tanzania
Co-authors: Konje, Eveline T.; Department of Community Health Sciences, Cumming School of Medicine, University of Calgary & School of Public Health, Catholic University of Health and Allied Sciences, BUGANDO AREA, Mwanza, Tanzania. Magayane, Anold;School of Public Health, Catholic University of Health and Allied Sciences, Mwanza, Tanzania. Matovelo, Dismas;Department of Obstetrics and gynecology, Weill School of Medicine, Catholic University of Health and Allied Science, Mwanza, Tanzania. Nyanza, Elias;Department of Community Health Sciences, Cumming School of Medicine, University of Calgary & School of Public Health, Catholic University of Health and Allied Sciences, Mwanza, Tanzania. Dewey, Deborah;Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, & Department of Paediatrics and Alberta Children's Hospital Research Institute, Cumming School of Medicine, University of Calgary

Traditional birth attendants in Sengerema District Northwest of Tanzania: Do their delivery practices matter?

Rationale: Approximately 50% of pregnant women in Tanzania deliver at home. High maternal mortality rates in rural Tanzania are a significant public health concern. Most of these deaths occur from preventable causes such as birth-related complications and or hygiene related infections. Poor accessibility to high quality health care, a shortage of skilled personnel, and inadequate supplies in rural health care facilities contribute to this high mortality rate.

Objective: To investigate in Sengerema district northwest of Tanzania, training, management of birth-related complications during delivery, and hygienic behavior practices of Traditional Birth Attendants' (TBAs)

Methods: This descriptive cross sectional study interviewed 50 TBAs. The TBAs were identified by village leaders, the village health team, and TBA district coordinator and consented to participate in the study. A structured questionnaire was administered to each TBA in her home.

Results: 96% of TBAs had no professional training in midwifery. They reported that their delivery-related knowledge and skills were inborn or inherited. Working with experienced TBAs, and spiritual power were also mentioned as means by which they acquired their skills. In terms of management of severe postpartum bleeding, only 46% of TBAs stated that they would refer their patients to a health facility if they had severe bleeding. Herbal use, massaging, induced vomiting, cord pulling, and hand insertion were common practices for dealing with a retained placenta. 40% of TBAs indicated that they would refer women with prolonged labor. Other ways of managing prolonged labour were using herbs, massaging, or giving hot tea. Hand washing with soap and water prior to delivery was commonly reported. Use of protective gear during delivery was not a standard procedure; 32% of TBAs reported using sterilized gloves, and 22% had access to plastic bags. Use of new razor blades for cord cutting was practiced by the majority of TBAs (88%).

Discussion: Few TBAs in Sengarema District have formal midwifery training and some engage in harmful practices such as pulling retained placenta and vagina hand insertion that may endanger the life of the delivering women. Poor hygienic practices such as reuse of gloves and delivering with bare hands could facilitate transmission of infections.

Conclusion: TBAs are involved in the delivery of up to 40% infants in rural Tanzania. To reduce the rates of maternal mortality, efforts need to focus on improving accessibility to high quality care in rural settings. TBAs should also be provided with basic midwifery training and hygiene education.

KPATCHAVI, Codjo Adolphe
Université d'Abomey Calavi Bénin, Bénin
Co-authors:

Rôles d'interface des comités de santé en Afrique de l'Ouest et du centre : études de cas du Bénin, de la Guinée et de la République démocratique du Congo

Justification

L'Initiative de Bamako visait la couverture universelle des SSP, la participation et le financement communautaire dans le secteur de la santé. Les réformes actuelles des politiques de santé en Afrique essentiellement orientées la décentralisation et le financement basé sur les résultats (RBR) ne sont pas articulées avec les expériences de l'IB. Quelles leçons tirer du rôle d'interface et de reddition de compte des comités de santé 25 ans après l'IB '

Objectifs

Ce travail décrit dans les trois pays les bonnes pratiques d'interface et de reddition des comptes des comités de santé, analyse les déterminants et l'impact de ces pratiques sur les politiques d'accès universel aux soins.

Méthodologie

Il s'agit d'une étude rétrospective, qualitative et quantitative dans trois pays africains : Benin, République Démocratique du Congo, République de la Guinée. Elle est réalisée à partir de l'observation, des entretiens individuels approfondis et des focus group auprès des comités de santé, du personnel de soins et autres structures d'interface. Près de 500 enquêtés sélectionnés dans 4 centres de santé dont 2 performants et 2 non performants dans chaque pays. Les données sont traitées et analysées à l'aide du logiciel ATLAS TI.

Résultats

Les comités de santé sont fortement implantés comme structures d'interface dans les trois pays. Dans la plupart des cas, leur mode d'élection est très politisé même s'ils sont choisis par leur communauté et légitimés par les ministères de la santé. Ils sont impliqués à des degrés divers dans plusieurs activités : gestion des ressources et des médicaments, promotion de la santé, information et sensibilisation, collectes et gestions des plaintes des patients, planification, monitoring et supervision des soins.

Discussion

L'étude met en évidence une forte dépendance des comités de santé du système de santé et du personnel de soins, un grand écart entre les membres élus et les membres actifs, une faible représentation des femmes qui sont premières utilisatrices des services de santé.

Conclusion

Les comités de santé ont permis de démocratiser le débat sur l'accès aux soins et ont impacté la gouvernance du système de santé. Leur positionnement institutionnel hors des ministères de santé, le renforcement de leurs capacités permettraient d'améliorer efficacement leur rôle d'interface.

Mots clés : comité de santé, participation communautaire, reddition des comptes.

KPATCHAVI, Codjo Adolphe
Université d'Abomey Calavi Bénin, Bénin
Co-authors: Togbé Codjo Timothée, Ph.D., Département de Sociologie, Université d'Abomey Calavi; Bédard Emmanuelle, Professeur, Université de Québec à Rimouski, Dugas, Marylène Ph.D; Université Laval Québec, Guédou Fernand Ph.D, Université Laval Québe, Batona Georges, Université Laval Québec, Alary Michel Professeur, Université Laval Québec

Les déterminants de la mobilité des Travailleuses de Sexe et prévention du VIH au Bénin : ethnographie des sites de prostitution le cadre du projet « Equité en Santé ».

Justification
Un des traits caractéristiques des Travailleuses du Sexe (TS) au Bénin comme dans d'autres pays de l'Afrique de l'Ouest est leur extrême mobilité. Ce phénomène constitue un frein à la prévention du VIH et à la prise en charge des PVVIH en milieu prostitutionnel. Les enquêtes quantitatives ont très peu investigué les causes de ce phénomène.

Objectif
L'objectif de cet article est de décrire et analyser, dans une perspective qualitative, les principaux déterminants de la mobilité des TS au Bénin.

Méthode
Les données ont été collectées dans le cadre du projet « Equité en santé » au Bénin (2012) : 66 femmes TS enquêtées dans la ville de Cotonou et 6 autres villes du Bénin. Leur recrutement est fait sur huit sites : maisons closes, buvettes, maisons de passe, hôtels, rues, places publiques, dortoirs, marchés. Les techniques d'enquête sont : observation participante de type ethnographique et entretien. Le traitement et l'analyse des données ont été faits par la méthode d'analyse de contenu.

Résultats
Les récits et trajectoires des toutes les TS rencontrées ont montré qu'elles sont passées ces trois derniers mois de TS « affichées » aux TS « clandestines » et vice 'versa. Par ordre de priorité, raisons économiques, violence sous toutes ses formes, peur de la stigmatisation, émergence de nouveaux espaces de rencontre en villes et usage du téléphone mobile sont apparus comme principaux déterminants de leur mobilité. Ces déterminants remettent en cause la typologie classique qui distingue les TS "affichées" et les TS "clandestines".

Analyse
La complexité et l'évolution constante des comportements des TS et leurs clients au Bénin montrent que les deux formes de prostitution sont soumises à des dynamiques à la fois inclusives et exclusives. Une stratégie avancée en matière de prévention s'impose. Mais celle-ci doit être nourrie par des enquêtes à la fois quantitative et qualitative.

Conclusion
Ethnographie des sites de prostitution, suivi des trajectoires des TS et leurs clients permettraient une meilleure appréhension des contextes et contribuerait à une efficacité des actions préventives.

Mots clés : travailleuses de sexe, mobilité, déterminants.

Kusumawardani, Nunik
National Institute of Health Research and Development Ministry of Health Republic of Indonesia, Indonesia
Co-authors: 1) Tjandrarini, Dwi H; National Institute of Health Research and Development, MoH Republic of Indonesia. 2) Mubasyroh, Rofingatul; National Institttue of Health Research and Development MoH Republic of Indonesia.

Public health development index (PHDI) to measure inequity gap of public health development across district in Indonesia

Rationale:

Indonesia is a country which has high diversity in cultural, economic, social and geographical settings with total 497 districts in 2013 and total population of around 237 million people in 2014. The diversity leads to higher gap of health performance as well as health resources across districts which will requires health development standard to measure inequity of health. There is no specific and comprehensive tools that can be used to monitor and measure health development across district in Indonesia

Objectives: to measure the gap of public health development across 497 districts in Indonesia using public health development index

Methods:

This study used a survey data from 2013 National Health Survey in Indonesia, which consists of 497 districts in total as the analysis unit that consists of total individual sample size of 1,027,763 people. District PHDI was calculated based on weight score of each indicator, minimum and maximum prevalence or coverage of each of selected indicators within 497 districts. The PHDI used 30 health indicators from the national health survey which was grouped into seven groups: 1) under five health; 2)reproductive health; 3) health care delivery; 4) health behaviors; 5) non-communicable disease; 6) communicable diseases; 7) access to clean water and sanitation.

Results:

Main results are: National Public Health Index was 0.5404, the highest index was 0.7352 in Gianyar district (Bali province) and the lowest was 0.2169 in Tolikara district (Papua province). The indexes of the seven health indicators groups were: 0.6114 for under five health; 0.4756 for reproductive health; 0.3808 for health care delivery; 0.3652 for health behavior; 0.6267 for non-communicable diseases; 0.7507 for communicable disease; and 05430 for access to clean water and sanitation.

Discussion:

The health index reached the lowest for health behaviors and health care delivery, in which describe in general, the need to prioritize and strengthen health intervention for behavior changes and health care delivery in Indonesia.

Conclusion

Inequity in health development occurs in Indonesia, since the PHDI gap was quite high across districts. This PHDI enable each district in Indonesia aware about their position in term of public health status in comparison toward other district and what specific health areas that need to be strengthened. This PHDI calculation will be done in every six years, which means national as well as district will know the progress of public health status

Laksono D, Agung
National Institute of Health Research and Development Ministry of Health Republic of Indonesia, Indonesia
Co-authors: 1) Laksono, Agung D; National Institute of Health Research and Development MoH Republic of Indonesia. 2) Pramono, Mochamad S; National Institute of Health Research and Development MoH Republic of Indonesia. 3) Sukoco, Noor EW; National Institute of Health Research and Development MoH Republic of Indonesia. 4)Tumaji; National Institute of Health Research and Development MoH Republic of Indonesia. 5)Kusumawardani, Nunik;National Institute of Health Research and Development MoH Republic of Indonesia

Factors related to improvement of public health development index: a qualitative exploration in three districts in Indonesia.

Rationale

Indonesia has firstly used public health development index (PHDI) since 2007 and continued to calculate the PHDI in 2013. The PHDI covered 440 districts in Indonesia using national health survey in 2007 which was showed about 156 district had low index. There were some districts within the low 2007 PHDI had very impressed increasing PHDI in 2013. There is no clear evidence yet about what are enabler factors that contribute to the PHDI improvement in which can be used as lesson learnt for other district in Indonesia .

Objectives

To identify enablers factors that relate to improvements of health performance in three districts.

Method

This is a qualitative study use in depth interview and observation in three selected districts in Province of South East Sulawesi (Wakatobi district), Central Kalimantan (Murung Raya district) and Aceh (Nagan Raya district). Informant was from health providers (district health office and primary health center), non-health institutions, local government, community member. Data collection was done during February 2015.

Results:

Enabler factors in Wakatobi district includes strong leadership from local government (city mayor), increase budget investment for health programs; improve human resources for health program. In Murung Raya district: village budget allocation (1 billion for one village) for infrastructure development, strong leadership and commitment from health sectors, significant economic growth. In Nagan Raya district: stronger roles of cultural leaders, supports from government and non-governments bodies as part of the Tsunami aid impact, and community commitment and awareness.

Discussions

Each district had different experience and local specific factors that enable them to have significant improvement of PHDI. These factors includes all aspects such as government functions, community participation, cultural influences, economic factors as well as roles of non-health sectors and non-government contributions.

Conclusions

District with low public health development index are able to achieve better improvement by working closely with non-health aspects such as economic and cultural factors, meanwhile strong leadership, in some ways, is one of the main keys of better achievement in health development and implementation of health in all in policy.

Lam, June
University of Toronto, Canada
Co-authors: Gajaria, Amy; University of Toronto; Matthews, David; University of Toronto; Zaheer, Juveria; CAMH

Mental health on the margins: a psychiatry resident-initiated global mental health interest group

Rationale: Mental and substance use disorders contribute significantly to the global burden of disease. However, only 9% of US psychiatric residency programs have global health training programs. Resources are often limited to support International electives, and these electives also vary in their availability, educational value, and benefit to host countries. Other means of global mental health training are worth exploring.

Objective: To create and implement a resident-led global mental health and transcultural psychiatry discussion group at the University of Toronto, and understand its impact on the training of its members.

Methods: A monthly, informal discussion group over dinner with an invited expert speaker and a pre-reading around each topic was organized by psychiatry residents at the University of Toronto. Group members included researchers, allied health professionals, and residents and staff physicians from multiple specialities. For program evaluation, quantitative and qualitative data were gathered through an online pre-interest group survey, and compared with a post-survey after six months. Members who attended each meeting were also asked to complete a brief session evaluation at the end of each meeting. Completion of all surveys was entirely voluntary and anonymous; formal ethics consent was not obtained.

Results: Members described being motivated to participate in the group to improve knowledge and skills for patient care, connect with like-minded colleagues involved in the field, engage in a safe space to discuss challenging topics, and develop a career involving this work. They valued the informal, inclusive, and participatory learning environment; as well as the passion, knowledge, and experience of the invited speakers. Post-interest group survey results characterized and confirmed the educational value of the group for its members.

Discussion: Resident-led initiatives can provide a safe place to discuss issues related to global mental health and can foster interest, connections, and knowledge important in doing global mental health work. Interdisciplinary groups can provide psychiatric residents with richer perspectives on their own clinical work, and help create a local network of global mental health practitioners. Incorporating critiques of psychiatry and discussions of cultural psychiatry are necessary to educational initiatives related to global mental health.

Conclusion: An interdisciplinary resident-initiated global mental health discussion group can contribute effectively to the global mental health training of medical trainees.

Lara, Elia
Universidad de Guanajuato, Mexico
Co-authors: Peña-Fung Luis Fernando, Castillo-Cardiel José Arturo, Moncada Timoteo, Hernádez Yanheli, Macías Dulce, Padila Margarita, Almaraz Mariana, Alvarez Marcela, Cárdenas Jorge, Cruz Rogelio, Flores Shadia, Hinojosa Sara, Jiménez Gabriela, Lara Saida, León Karina, Raygoza Abner, Salinas Diocelina, Sánchez Juan Luis, Tovar María, Vázquez Mayté, Zamudio Kevin.

Desarrollo de competencias a través de un diagnóstico de salud integral participativo y con enfoque ecosistémico

Introducción: La realización de diagnósticos de salud comunitarios son requisito indispensable en el servicio social profesional (1-3) como parte del proceso de aprendizaje y titulación en medicina. Generalmente los estudiantes realizan diagnósticos de salud sin comprender su relevancia para su futuro profesional al convertirse en una obligación y no en un aprendizaje significativo. La carencia de un programa académico uniforme (4) ha ocasionado que los pasantes realicen una práctica heterogénea sin considerar las necesidades de la población. Esta práctica no favorece el trabajo en equipo y ni el desarrollo de competencias para la identificación de problemas, necesidades ni para recolectar, procesar y analizar información.

Objetivo: Desarrollar habilidades de trabajo en equipo, comunicación, colaboración comunitaria en los estudiantes de medicina de 6to semestre de la Universidad Quetzalcóatl en Irapuato, Gto, para identificación de problemas, necesidades y determinación de prioridades a partir de la realización de un diagnóstico integral participativo y con enfoque ecosistémico.

Métodos: Se formaron 2 equipos de 17 personas cada uno quienes seleccionaron un grupo poblacional específico. Cada equipo hizo un diagnóstico a través de grupos focales. Se asignaron roles. Se identificaron los problemas, necesidades y se determinaron prioridades por técnicas de asignación directa y de clasificación por orden de importancia. Cada estudiante redactó un ensayo sobre su experiencia y la importancia de éste en su práctica profesional.

Resultados: Se realizaron 2 diagnósticos de salud integrales. En los ensayos cada alumno manifestó esta experiencia como importante, p ej: ‘‘para un buen desarrollo de este diagnóstico, es la confianza que deben tener los habitantes de la comunidad hacia nosotros como médicos y viceversa, así como la empatía, respeto, tolerancia en toda actividad, para que realmente los habitantes se involucren en el diagnóstico y se tome en consideración su perspectiva, conocimientos y experiencias’; la comunidad los premió y reconoció.

Discusión: Los planes de estudio deben favorecer competencias sobre las interacciones humanas y conductas ante el trabajo comunitario.

Conclusión:. Los alumnos necesitan enfrentarse a la realidad social con métodos y técnicas que les hagan sentido para garantizar un aprendizaje significativo.

Latham, Emily
University of California Berkeley, USA
Co-authors: Cherniak, William, BSc, MD, CCFP; Bridge to Health Medical and Dental, and University of Toronto ' Department of Family and Community Medicine. Latham, Emily, MPH; University of California Berkeley. Anguyo, Geoffrey, MD; Kigezi Healthcare Foundation. Astle, Barbara J., RN, PhD; Centre for Equity and Global Engagement. Eichbaum, Quentin, MD, PhD, MPH, MFA, MMHC, FCAP; Vanderbilt University School of Medicine. Myser, Catherine, Ph.D; Global Health & Bioethics Consultant. Standish, Katherine, BA, MD Candidate; Yale School of Medicine. Evert, Jessica, MD; Child Family Health International.

Visiting students in global settings: host and partner perspectives on desired student outcomes

Rationale:

Current competencies developed for global health education programs have been largely based on the agendas and strategies of organizations and institutions in the Global North. Consequently, there has been little attention paid to the needs and desires of host communities in the Global South. This study aims to build a greater understanding of the viewpoints of host preceptors and institutions in the Global South towards visiting trainees in all disciplines and levels of training from the Global North.

Objective:

The objective of this study is to determine host community members' perspectives on competencies and learning objectives for visiting students from the Global North participating in short-term programs in a low- or middle-income country (LMIC).

Methods:

A brief literature review was conducted and inter-professional global health competencies developed by a sub-committee of the Consortium of Universities for Global Health (CUGH) were collected in order to determine frequently cited competencies for trainees from the Global North engaging in global health experiences. These competencies were used as a framework to develop a 35-item online survey in English, Spanish, and French. The survey is currently being distributed to partner sites across the world.

Results:

The initial data collection period is March - June 2015, data analysis will be conducted following this period of time.

Discussion:

The results of this study will give a voice to partners in the Global South, revealing what they see as important to teach students coming from high-income countries (HICs). It will help to engender empowerment, set clear expectations, and build mutually-beneficial partnerships. We anticipate that this study will begin to shift the paradigm in how global health education programs are structured by encouraging North-South connectivity and collaboration.

Conclusion:

By gaining insight into host community members' perceptions on desired competencies, global health education programs in LMIC settings can be more ethically designed and implemented to meet the needs and expectations of those aiding in the development of students and trainees.

Lemaire, Jane
University of Calgary, Canada
Co-authors: Hollaar, Gwen; University of Calgary Wright, Bruce; University of Victoria Bouphavanh, Ketsomsouk; University of Health Sciences Lao PDR Guenter, Clarence; University of Calgary

The "adopt-a-region" initiative: a collaborative mentorship approach to developing community-based academic medical education training centers in Lao PDR

Rationale: Lao PDR seeks to improve healthcare delivery to its predominantly rural inhabitants. The country's single medical school and teaching hospitals are situated in the capital city of Vientiane. In collaboration with the University of Calgary (UC), a Family Medicine Specialist training program (FMSTP) was created with carefully defined learning objectives. Graduates are targeted to provide healthcare leadership and primary care at the level of small provincial and district hospitals. A rationale to move FMSTP closer to the rural areas was further supported by a congested central academic teaching setting. However, outside of Vientiane, there were no hospitals equipped for formal physician training.

Objective: The objective was to aid the development of provincial and district hospitals as sites for FMS training using a collaborative mentorship model between Lao PDR and UC physicians based on the 'adopt-a-region' concept.

Methods: Lao medical education leaders identified target sites and assigned FMSTP coordinators. UC Lao project leaders assigned experienced project members to 'adopt' a region. This involved return visits and the development of collegial relationships with hospital administration and staff. Faculty development workshops were delivered together with local faculty. Topics included refreshing clinical examination skills, bedside teaching, and how to give feedback. UC physicians role modeled patient care and medical education methods with a focus on 'learning by doing' and acquisition of practical knowledge and skills. Systematic trainee evaluation was introduced as a new concept. Lao colleagues provided bridges within the healthcare system and guidance around local and cultural needs.

Results: Four provincial hospitals and their associated district hospitals are training centers for FMSTP learners. They also provide increased training capacity for medical students, new physician graduates not enrolled in post-graduate programs, and physician assistants. 'Adopt-a-region' also supports FMSTP graduates working in small regional district hospitals through on-site visits and co-development of education events.

Discussion: 'Adopt-a-region' served to develop training sites for FMSTP. UC mentors experienced opportunities to build relationships, interact directly with their target stakeholders, obtain first-hand knowledge of local needs, enhance their credibility as invested collaborators, develop cultural sensitivity and build on previous work. Lao mentors experienced opportunities to showcase their accomplishments and be validated for same, enhance their medical expert knowledge, education and leadership skills, and serve as guides to their UC colleagues.

Conclusion: 'Adopt-a-region' proved an effective model for developing community medical education training sites across Lao PDR and provides a solid foundation for a sustainable collaboration through mutual mentorship.

Little, Matthew
University of Guelph, Canada
Co-authors: Humphries, Sally; University of Guelph, Patel, Kirit; Central Mennonite University, Dewey, Cate; University of Guelph

Employing qualitative methods to investigate social determinants of type 2 diabetes: Lessons from rural Tamil Nadu, India

Type 2 diabetes (T2D) is a pandemic with high global morbidity and mortality. Current estimates posit that, as of 2014, there were 387 million people with T2D worldwide. This number is projected to increase to 592 million by 2035, likely at enormous economic cost. An alarming 80% of the global T2D burden lies in low and middle-income countries (LMICs). While T2D burdens in urban areas of LMICs are recognized and often well-studied, recent prevalence data suggest that diabetes is an increasing problem among rural populations as well. This is often broadly attributed to 'modernization', however few researchers have examined the precise mechanisms by which modernization increases rural risk of T2D. This study employed qualitative research to analyze the roles of various individual, cultural, historical, and sociopolitical factors in T2D onset and management in a rural area of Tamil Nadu, India. We conducted in-depth interviews and focus groups with 63 healthy individuals and 54 individuals with diagnosed T2D to understand sources of health knowledge, T2D explanatory models, and impacts of recent social and political changes on individual and familial health. We found that modernization has affected rural nutrition and livelihoods and subsequent risk of T2D in four ways. First, liberalization and globalization of food markets has provided avenues for trade of local crops and increased access to processed foods. Second, expanding social welfare programs has created a dependence on food rations through the Public Distribution System, further facilitating changes in food consumption habits. Third, migrant labour has shifted livelihoods away from agricultural activities and firmly embedded rural populations in the cash economy. And finally, modernization has created dozens of new stressors, which have varying impacts on both mental and physical health. Exploration of these topics through qualitative research provides opportunities for researchers, policymakers, and NGOs to better formulate a unified strategy for combatting T2D in rural India by addressing biological and social determinants simultaneously.

Liu, Jing
The Infectious Diseases and Immunity in Global Health (IDIGH) Program of the Research Institute of the McGill University Health Centre (RI-MUHC), Canada
Co-authors: Behr, Marcel; Pai, Madhukar; Schurr, Erwin: The Infectious Diseases and Immunity in Global Health (IDIGH) Program of the Research Institute of the McGill University Health Centre (RI-MUHC)

Improving global health through research and training - the Infectious Diseases and Immunity in Global Health Program at the RI-MUHC

The Infectious Diseases and Immunity in Global Health (IDIGH) program was created in 2014, as part of the restructuring of the Research Institute of McGill University Health Centre (RI-MUHC). The vision of the program is to (i) act as catalyst for innovative research and establish discovery pipelines in select diseases, (ii) train the next generation of scientists in biomedical, clinical, and health outcome research, and (iii) facilitate capacity building in resource poor countries disproportionally affected by diseases of poverty (e.g. TB, leprosy, HIV, neglected tropical diseases).

The IDIGH program unites expertise, resources and networks in infectious diseases, immunology and global health at the RI-MUHC in three categories in one location: 17 laboratory-based research groups at the Centre for Translational Biology (CTB), located at the new state-of-the-art MUHC Glen campus that opened in the spring of 2015; 17 groups with focus on Epidemiology & Health Outcomes research (CORE); and 25 groups in Clinical Research. Research and training conducted within the program is both highly interdisciplinary, highly multidisciplinary, and has a strong translational focus.

The training of young researchers with strong interests in global health is major task of the IDIGH program. Training emphasis is placed on integrating basic research with clinical and public health problems and students from all disciplines jointly work on the same problems from different angles. Program groups regularly exchange trainees with collaborating groups from major endemic countries. Such exchanges contribute to reciprocal capacity building.

The IDIGH program members are engaged in building of local awareness of global health problems. Likewise, faculty participate in the McGill Summer Institute in Infectious Diseases & Global Health, lecture series and serve on policy committees (e.g. WHO), as well as advisory boards of non-profit foundations. Our trainees and faculty aspire to become one of the focal points of Canadian global health research and training efforts.

Lohmann, Julia
Institute of Public Health, University of Heidelberg, Germany
Co-authors: Kambala, Christabel; College of Medicine, School of Public Health and Family Medicine, University of Malawi; Muula, Adamson S.; School of Public Health and Family Medicine, College of Medicine, University of Malawi; De Allegri, Manuela; Institute of Public Health, University of Heidelberg, Germany

Carrots and sticks: Health workers perspectives on performance-based incentives: findings from a mixed-methods study in Malawi.

In recent years, performance-based financing (PBF; also results-based financing) has received enormous attention from low and middle income country governments and development partners. PBF schemes attempt to compensate for the lack of incentives for high performance inherent in traditional input-based health financing systems. They do so by linking health care provider reimbursements to measurable performance indicators, adopting the long-established private sector practice of tying parts of the compensation to work performance. While there is an increasing body of evidence on the impact of PBF on health service coverage and quality, little scientific literature exists to date on the processes through which PBF schemes exert their impact on health system performance. Such research is urgently needed to understand results emerging from current evaluations and indicating mixed impacts, and in order to improve the design of future PBF interventions. We addressed this gap in knowledge by exploring health workers' perceptions of and reactions to the performance-based incentives in the context of the impact evaluation of the Malawian Results-Based Financing for Maternal and Neonatal Health (RBF4MNH) Initiative. Specifically, we conducted both a structured survey and a series of in-depth interviews with health workers in 18 intervention health facilities one and two years after the introduction of the intervention. In both rounds of data collection, we surveyed 85 health workers and conducted in-depth interviews with 20 health workers. We present the results of our research, with specific focus on key themes related to incentive amounts, distribution, and use, such as expectations, fairness, transparency, and autonomy. We pay particular attention to the difference between individual and collective incentives, as well as to changes in perceptions and reactions over time. Our findings give insight into factors associated with success or failure of PBF schemes, and provide guidance for future PBF design.

Lozano, Rosa Elia Huicochea
Secretaria de Salud del Estado de Guerrero, Mexico

Búsqueda de casos de tb, en jornaleros agrícolas, en zirandaro, guerrero

"OBJETIVO. Detectar casos de TB en población migrante indígena, que labora temporalmente en el albergue La ordeña del municipio de Zirándaro del Estado de Guerrero.

JUSTIFICACIÓN. El 13.6% de municipios indígenas en Guerrero registran en promedio cada año 70 casos nuevos de TBTF, el 88.6% son TBP, afectando a población migrantes y jornaleros que residen temporalmente en campos agrícolas, cultivo de melón en el estado, procedentes de comunidades indígenas altamente marginadas.
La incidencia de TB en el albergue La ordeña, representa 3.3% de la región, concentrando población del idioma náhuatl, mixteco y amuzgo, lo que hace necesario focalizar estas áreas, dado los determinantes sociales presentes en este sector con mayor riesgo a desarrollar TB.

METODOLOGÍA. En coordinación con el programa de promoción a la salud, en la feria de la salud, realizada en el albergue La ordeña, se informó al coordinador general las actividades, instalación del modulo para toma de BK, y pláticas sobre TB, a niñeras y cabos,(traductores bilingües), responsables de las 4 galeras, con 28 cuartos, con la utilización de la pancarta ?Mi Tos es seca o con Flemas?, y el video TB, procediendo a la identificación de Sintomáticos Respiratorios, toma de BK, realización de cerco epidemiológico e intensificación de búsqueda en 2 albergues.

RESULTADOS: Del operativo 26 de marzo al 14 de abril del 2015, se impartieron 2 pláticas, examinando a 3 Sintomáticos Respiratorios, un caso TBP (+++),sexo masculino 29 años de edad, prueba de VIH(-),TAES, supervisado por promotora del albergue capacitada, formación de Red de apoyo participando la empresa (una habitación, alimentos, ropa y sueldo), del cerco epidemiológico: Sintomático Respiratorio (0), 217 jornaleros informados, cobertura BCG 98% en niños<5 años; de la búsqueda de casos 13 Sintomáticos Respiratorios (Bk-) y capacitación a 29 niñeras y 15 promotores.

CONCLUSIONES: La estrategia basada en la búsqueda intencionada de casos de TB, en población migrante-jornaleros en albergues agrícolas logró la cobertura de diagnóstico oportuno en personas indígenas con mayor riesgo de TB, de procedencia de municipios altamente marginados con presencia de tb del Estado de Guerrero.

Servicios de Salud del Estado de Guerrero.

Lozano, Rosa Elia Huicochea
Secretaria de Salud del Estado de Guerrero, Mexico

Exito del taes, en afromestizos por tb, en cuajinicuilapa, Guerrero. Mexico.

OBJETIVO: Brindar atención con calidad y calidez, a los enfermos de TB afromestizos, mediante atención integral, para lograr la adherencia al tratamiento en el municipio de Cuajinicuilapa del Estado de Guerrero.

JUSTIFICACIÓN: En promedio el municipio de Cuajinicuilapa registra cada año 18 casos nuevos de TB, aportando el 8.5% de la morbilidad de la región. El 16.3%,de los enfermos son afromestizos, que de acuerdo a su cosmovisión (creencias de hechicería, brujería),de carácter fuerte, representan un reto para los servicios de salud para llevarlos al éxito del Tratamiento, aunado a factores socioecómicos, que lo condicionan, de ahí se hace necesario brindar la atención centrada, en este grupo de personas.

METODOLOGÍA: Se desarrolló la estrategia: ""Atención integral"", en cinco fases implementadas por la enfermera de Red TAES; la primera empoderamiento al enfermo sobre la TB, haciéndole sentir respeto, confianza y reducción del tiempo en sala de espera, llamándolo por su nombre, monitoreando reacciones adversas; la segunda : Visitas Domiciliarias Mensuales, la tercera: atención psicológica (proceso de aceptación), la cuarta: colectas alimenticias en ferias TB, rifas y boteo económico, quinta: premiación al esfuerzo, otorgando estímulos: felicitándolos por cumpleaños, resultado de BK de control negativo, ganancia de peso, e invitándole simplemente un almuerzo, o jugo de frutas; se analizó el historial de la TB en este grupo étnico.

RESULTADOS: De 1996 al 2015, se diagnosticaron 59 casos nuevos TBTF, 98.3% TBP y 1.7%miliar, el 72.9% fueron detectados en consulta externa, 27.9% en pesquisa casa a casa, 33.9% en contactos. La positividad fue de 28.1% (+),13.6% (++), 32.2%(+++),25.4% por Rx; las comorbilidades identificadas: desnutrición (69.5%), Diabetes Mellitus 23.7% y VIH 5.0%, el rango edad 21 a 79 años. 66.1% fueron hombres, 33.6%mujeres, beneficiándose 59 personas afromestizas, con dotación alimentaria quincenal, consultas y suplementos alimenticios mensual, económico para pasajes; gestión de actas y constancias de identidad (3 personas),pólizas de seguro popular (10 personas),laboratorios, Rx particulares (10 personas, curó el 94.9%, y el 5.1% continúa en tratamiento.

CONCLUSIÓNES: La estrategia basada en la atención integral personalizada, por enfermería en personas afromestizas afectadas por TB no modificó la cosmovisión de con relación a la enfermedad, sólo garantizó el éxito del TAES, demostrando la importancia de la detección en los contactos, para incidir en el control de la TB, en el Municipio de Cuajinicuilapa, Guerrero.

Lozano, Rosa Elia Huicochea
Secretaria de Salud del Estado de Guerrero, Mexico

Búsqueda Activa de casos de Tuberculosis, en población indígena del municipio de Ayutla de los libres, Guerrero, México.

"OBJETIVO. Detectar casos de tuberculosis en población indígena, mediante pesquisas dirigidas a grupos de riesgo, en el municipio de Ayutla de los libres, Guerrero.

JUSTIFICACIÓN. El municipio de Ayutla con alta presencia de población indígena, de habla mixteco-tlapaneco, registra en promedio anual 49 casos nuevos TB, el 90% indígenas, residentes de localidades de muy alta marginación, con tasa de 150.6 por 100,000 habitantes, superior a la regional 69.9 y estatal (37.4), aunado a comorbilidades como: Desnutrición 33.3%, Diabetes 13.3%, 1.6% VIH ,lo que hace necesario dirigir la búsqueda intencionada en ese grupo de riesgo para TB.

METODOLOGIA. Se revisaron los cuadernillos de casos positivos baciliferos de años anteriores, focalizando localidades, (croquis), se implementaron dos estrategias de búsqueda: extramuros con visitas programadas a comunidades afectadas casa por casa, talleres comunitarios, visitas de sitio de pasajeras; la segunda en sala de espera con platicas breves utilizando la pancarta ?MI TOS ES SECA O CONFLEMA?, fueron desarrollas por enfermera de Red TAES y promotores comunitarios, procediendo a la tomas de baciloscopias y consulta médica.

RESULTADOS: En 2013, se recorrieron 29 localidades, 10 sitios de pasajeras, 12 pláticas/talleres en sala de espera, 87 perifoneos examinando a 821 S.R, se diagnosticaron 60 TBTF, 95% TBP, 5% extrapulmonar (ósea, piel intestinal), incrementando 140% el diagnostico con respecto al 2012, la positividad fue 18.3.%+ , 13.3% ++, 21.7% +++, y Clínica/RX 46.7%, (sospechosos y BAAR NEG), la curación fue del 90.0%, 6.7% falleció durante el tratamiento y el 3.3% abandono. Autorización del proyecto de fondo de comunidades saludables por $450,000.00 .M.N.

CONCLUSIÓNES. Las estrategias a través de la acercabilidad del servicio de detección dirigida a localidades altamente marginas afectadas por TB y de primer contacto en sala de espera consulta externa, logró disminuir la transmisibilidad y el riesgo de morir por TB, en población vulnerable, e involucramiento de autoridades locales, para procurar la salud respiratoria en el municipio de Ayutla, Guerrero.

Lozano, Rosa Elia Huicochea
Secretaria de Salud del Estado de Guerrero, Mexico

Búsqueda activa de casos de tb, en colonias marginadas en el municipio de Zihuatanejo de Azueta guerrero.

OBJETIVO. Detectar casos de TB, en colonias marginadas del municipio de Zihuatanejo de Azueta del Estado de Guerrero.

JUSTIFICACIÓN. El municipio de Zihuatanejo, aporta el 40.1% de la incidencia de TB en la región Costa Grande, con promedio anual de 58 casos nuevos, el 82.7%, residen en colonias de bajo desarrollo, que representan el 19.5% de asentamientos humanos afectados por TB, aunado la asociación TB/Diabetes Mellitus 23.2%, 20.3% Desnutrición 8.7% alcoholismo, 7.2% VIH/SIDA, se hace necesario focalizar estas áreas con promotores de la región.

METODOLOGIA.Se gestionaron incentivos para promotores comunitarios, autorizados por el seguro popular, en tres periodos, cinco para cada uno con intervalo de tiempo 6 meses. Previa selección de colonias se capacitaron en TB, las actividades fueron coordinadas por la médico del programa y enfermera Red TAES , realizando detección de Sintomático Respiratorio, casa a casa , distribuyendo dípticos ,perifoneo, volantes, e impartición de pláticas con la pancarta ?Mi Tos es seca o con Flemas?, en grupos de riesgo, realizando la toma de baciloscopias.

RESULTADOS: De marzo a noviembre 2012 a enero de 2015, se recorrieron 25 colonias impartiendo 1203 platicas, 6953 vistas domiciliaras; examinando 1331 S.R, diagnosticando 51 casos de TBP, el rango edad 7 a 86 años, 54.9% mujeres y 45.1% hombres, asociándose TB/Desnutrición/DiabetesMllitus 17.6%, respectivamente, 7.8 % alcohol/drogas; la positividad fué 9.8% de 1 a 9 bacilos, 62.7% (+), 11.8% (++) ,7.8% (+++) y 7.9% por RX. El 58.9% curó, 7.8% abandonó, (adictos) ,2.0% fracasó, 3.9% falleció y 27.4% continúa en tratamiento.

CONCLUSIONES. La estrategia logró la cobertura de diagnóstico oportuno en alta proporción, relacionada con el índice de contagiosidad, en los conglomerados poblacionales focalizados, sin embargo invita a reorientarla en el sentido del aseguramiento del TAES, dada la presencia de determinantes sociales.

Lozano, Rosa Elia Huicochea
Secretaria de Salud del Estado de Guerrero, Mexico

Participación de enfermería en el control de la tb, en el municipio de Acapulco, gro.

OBJETIVO. Contribuir al control de la TB, mediante la pasantía de servicio social por enfermería en el programa TB, del municipio de Acapulco, Guerrero.

JUSTIFICACIÓN. El municipio de Acapulco, presenta la mayor carga de TB, en Guerrero, 52.1%, promedio anual 604 casos nuevos, primer lugar de los municipios a nivel de país con tasa de 82.4 casos por 100,000 habitantes, superior a la estatal 37.4 y nacional 16.6., lo que se hace necesario establecer alianzas (APP), con escuelas formadoras de recursos humanos para la salud, interesadas en el control de la TB, de ahí la importancia de incorporar la pasantía de servicio social en el programa.

METODOLOGIA. Previo acuerdo de colaboración, entre el programa TB y escuela de enfermería No.2 de la Universidad de Guerrero, se ofertó el campo clínico servicio social por un año, 4 pasantes eligieron la propuesta, capacitándolas sobre TB, y asignándolas a las áreas operativas. Fueron coordinadas por la enfermera de Red TAES, otorgándoles apoyo económico para trabajo de campo, realizaron acciones: preventivas, detección, seguimiento y actividades de ACMS y además elaboraron planes de cuidados a las personas afectadas.

RESULTADOS: De Agosto del 2013 a julio de 2014, impartieron 729 platicas, identificando 287 Sintomáticos respiratorios, diagnosticándose 11 casos nuevos de TBP, atendieron en total 87 pacientes en este periodo, el 65.5% curó con TAES, el 1.5% abandonó, fracasó ó se trasladó respectivamente; 3.4% falleció, 27.6% continuó en tratamiento. Realizaron 42 estudios de contactos,67 detecciones,133 promocionales (pinta de bardas, periódico mural, dípticos,), 314 visitas domiciliarias, se reconquistaron 25 pacientes y se elaboraron 67 Planes de cuidados integrados al catálogo de PLACE TB.

CONCLUSIONES. La intervención demostró la fortaleza del establecimiento de alianzas, entre instituciones públicas (APP), para incidir en problemas de salud pública, a nivel local como lo constituye la TB, mediante la pasantía social de enfermería en el Programa de TB, del municipio Acapulco, Guerrero.

Lucas, Michel
Laval University, Canada
Co-authors: Pirkle, Catherine (Department of social and preventive medicine, Université Laval); Furgal, Chris (Indigenous Environmental Studies Program, Trent University, Peterborough); Muckle, Gina (Department of psychology, Université Laval); Côté, Suzanne (Population Health and Optimal Health Practices Research Unit, CHU de Québec Research Centre); Laouan Sidi, Elhadji A. (Population Health and Optimal Health Practices Research Unit, CHU de Québec Research Centre); Lucas, Michel (Department of social and preventive medicine, Université Laval)

Food insecurity prevalence and food quality among Nunavik Inuit pregnant women, a cause for concern'

RATIONALE: Food insecurity is elevated in the Canadian Arctic. Consequences of food insecurity in pregnant women are concerning, especially if accompanied by malnutrition. Inadequate nutrition during pregnancy increases the risk of obstetrical complications, affects foetal growth and development, and increases the child's risk of developing chronic diseases in adulthood. Even if diet quality is imbricated in most food security questionnaires, few studies assess the relationship between food insecurity and an overall dietary quality index, such as with the alternate Healthy Eating Index 2010 (aHEI-2010).

OBJECTIVE: Determine the association between food insecurity and the dietary quality index aHEI-2010.

METHODS: Between September 2013 and April 2014, 159 adult pregnant Inuit women were recruited in Nunavik. Dietary intake and food insecurity were assessed through interviews by a trained research nurse. Information about food insecurity (in the past 30 days) was collected using the Household Food Insecurity Access Scale (HFIAS) and household hunger scale (HHS). Dietary intake was assessed using semi-quantitative food-frequency questionnaires with 108-items divided into 2 sections: 31 traditional food items and 77 market food items. The quality of dietary intake was determined by using a modified version of the aHEI-2010, i.e. without the alcohol component. The aHEI-2010 had 10-components (vegetables, fruit, whole grains, sugar-sweetened beverages and fruit juice, nuts & legumes, red/processed meat, trans fat, long-chain omega-3 (EPA+DHA), polyunsaturated fatty acid, sodium. Each component score ranged from 0-10 and the total score ranged from 0-100. A higher score indicated a more healthful diet.

RESULTS: Most women (n=122, 76.7%) were food insecure, with 10.7% categorized as mildly, 15.7% moderately, and 50.3% severely food insecure. Of those categorized as severly food insecure, 36 (22.6% of total sample) had the most severe form of food insecurity – hunger. Total aHEI-2010 scores were lower among food insecure women compare to food secure (P for trend = 0.002). Total aHEI-2010 score was 47.2±1.8 for food secure, 44.0±2.0 for mildly, 42.8±1.6 for moderately, and 41.5±0.9 for severely food insecure.

DISCUSSION: Knowing that the diet and body composition of a pregnant woman can have significant implications on the future health of the child, the high rate of food insecurity among pregnant women in this study and the relationship with lower overall dietary quality index warrants specific attention. However, more studies need to be done with the dietary quality index aHEI-2010 in the context of Aboriginal dietary habits and culture.

Luis Gonzalvez, Isabel Pilar
National Institute of Hygiene, Epidemiology and Microbiology. Cuba, Cuba
Co-authors: MArtinez Calvo, Silvia. National School of Public Health, Havana, Cuba. Alvarez Perez, Adolfo. National Institute of Hygiene, Epidemiology and Microbiology

Community Engagement, Personal Responsibility and Self Help in Cuba's Health System Reform.

RATIONALE: In 2011 the Cuban health system began a process of reforms to improve the health of Cuba's population. The main actions involved are reorganization, consolidation and regionalization of services and resources. Despite community engagement and personal responsibility are not mentioned in the strategy document. We need to use this opportunity to revitalize both topics and encourage a new, appropriate and full incorporation into the Cuban health system.

OBJECTIVE: To discuss the importance to include community engagement, personal responsibility and self-help in the actions of system reforms development by Cuban Ministry of Public Health since 2011.

METHOD: We conducted semi-structured interviews with 30 social actors (representative of health sector, academic institutions, and civil society) about their perceptions related how community engagement, personal responsibility and self-help are approached into the reform´s process currently leaded by Cuban Ministry of Public Health. Interviews were transcribed and analysed qualitatively using NVivo 10. Quantitative codes were applied and descriptive statistics are reported alongside qualitative findings.

RESULTS: Community engagement, personal responsibility and self-help emerging as important topics to reorientation in the context of the health system reform under way, spite they are not explicitly mentioned in the strategy document. They are consistent with the objectives and actions of system reforms proposed and been ethically justified according to principles of the beneficence as responsibility and justice as solidarity.

DISCUSSION: In a society such as Cuba's, with a health system characteristics of universal coverage and a political system with high levels of social organization and cohesion, where humanism and solidarity are declared core values; objective and subjective conditions exist for introduce personal responsibility actions as a way to reverse a certain public inertia in relation to caring for people's health. A new sense of personal responsibility had to be assume, far away of neoliberalism discourse characterize an inappropriate government cuts to health services and self-blame or stigmatization for those who cannot meet the high standards of 'healthism' and 'good citizenship'.

CONCLUSIONS: Health system reforms currently under way in Cuba, need the contribution citizen can make through their personal responsibility for the care and protection of individual and collective health, through public mechanisms of empowerment that assure the sustainability of healthy public policies, intersectoral action and social protection of health, based on the principles of solidarity and responsibility.

MacDonald, Noni
Dalhousie University, IWK Health Centre, Canada
Co-authors: MacDonald, Noni, Dalhousie University, Halifax, Nova Scotia, Canada; Bortolussi, Robert, Dalhousie University, Halifax, NS ; Kollmann,Tobias, University of British Columbia, Vancouver, BC; Kabakyenga, Jerome, Insitute of Maternal Child Health , Mbarara Univeristy of Science and Technology, Mbarara , Uganda ; Pemba, Senga, Tanzanian Training Centre for International Health, Ifakara, Tanzania ; Mwanda, Walter University of Nairobi Institute for Tropical and Infectious Diseases, University of Nairobi, Nairobi, Kenya .

Capacity building for health research in Eastern Africa (EA): 2015 review of 6 years experience of MicroResearch (MR)

Background: Sub-Saharan African countries have urged grassroots input to improve research capacity (WHO 2008) including community directed research. In Uganda, Tanzania, Kenya, and Ethiopia, MicroResearch (MR) is building capacity to find local, sustainable, community solutions for local health problems.

Objectives To share East Africa experiences at 6 years on MR implementation, practices and outcomes.

Methods: MR training occurred during intensive 2-week workshops (WS) where 20-30 health workers (HW) were introduced to principles of research, community engagement, knowledge translation, health policy. Small interdisciplinary teams (6-8 HW) self-identified community directed research question and proposals were outlined. Post-WS, each team developed full proposal supported by 2 MR coaches (1 from EA) and submitted for international MR peer review. Following local ethics approval, successful projects were funded (up to $2,000). Projects were implemented, results reported and knowledge translated (written report, extended abstract (published in peer-reviewed PubMed journal), policy /practice change). MR evaluation at 6 years consisted of review of WS participant/proposal data, standardized post WS evaluations and EA MR site data.

Results: Between 2008/ Dec 2014, 20 workshops were conducted at 6 EA sites with 533 participants (49% female); 30% MD, 21% RN or Midwife, and 50% other HW. By Dec 2014, 38 projects were approved for funding, 19 completed,9 published or accepted, 19 ongoing. 3 projects helped change health policy/practice, 4 lead to career advancement. The 38 projects focused on: 36% child health, 33% maternal health, 31% both. Gender equity was fostered by MR: women project leaders (54%), coaches (32%), facilitators, (50%) and judges (44%) (latter by 2014). MR principles are now embedded in undergrad HW curriculum 2 MR sites; in post grad continuing education 2 sites. African Universities manage all local grants. Post WS, >90% participants rated WS as excellent; ~20% noted MR changed culture of inquiry at work. Since 2013 an online MR LinkedIn' network, lead by an EA MR WS graduate, has recruited >135 MR participants and leaders and is used regularly to discuss collaborations and research opportunities.

Conclusion: MR is building capacity for EA community directed interdisciplinary team research at modest cost. MR projects lead to local health care changes, enhance culture of inquiry, support gender equity. EA MR successes, with EA MR leadership will support growth beyond the 6 EA sites if resources become available.

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MacVicar, Sarah
McGill University, Canada
Co-authors: MacVicar, Sarah; McGill University; Berrang-Ford, Lea; McGill University; Harper, Sherilee; University of Guelph; Ross, Nancy; McGill University; Yang, Seungmi; McGill University; Steele, Vivienne; McGill University; Lwasa, Shuaib; Makarere University; Namanya, Didacus; Ugandan Ministry of Health; IHACC Research Team

How does weather affect birth outcomes' A multi-level modelling study in Kanungu District, Uganda

Those already facing the greatest burdens of infant mortality and morbidity will be especially vulnerable to the threats of climate change. Infant mortality statistics in sub-Saharan Africa are among the highest in the world and the region is already experiencing early stages of the projected negative effects of climate change. The effects will intensify stress on water availability, compromise food security, and may increase the burden of other climate-sensitive health outcomes, all of which could in turn affect pregnancy and birth outcomes.

The aim of my research is to develop our understanding of how weather exposures affect birth weight, with a view to situating these findings in the context of broader climatic changes. My research questions are the following:

1) Are meteorological factors influencing size at birth?

2) If so, what are the causal mechanisms through which weather may be affecting birth weight?

3) To what extent do social factors contribute to or mitigate the effects of weather on foetal growth?

This quantitative component of my research uses hospital record data and meteorological record data from community partners in rural southwestern Uganda to model the relationship between birth outcomes and extreme weather exposures in utero. Results show that the timing of meteorological trends may affect the extent to which they impact birth outcomes. Exposures to more days of extreme temperature or humidity during the third trimester were more likely to result in intrauterine growth restriction.

The overarching objective of this work is to understand how this knowledge might be applied to enhance adaptive capacity in the local community. In a more aspirational vein informed by a desire to create 'usable science', my ultimate question is this: how can this knowledge inform adaptations to minimize any adverse health impacts of climate change on mothers and infants?

Magaço, Amílcar
National Institute of Health, Mozambique, Mozambique
Co-authors: Mbofana, Francisco; Chicumbe, Sergio; Magaço, Amílcar; Ubisse, Arminda; Health System Cluster, National Institute of Health Mozambique; Pascoal, Eva; WHO Mozambique

Assessment of "health in all policies" framework in governmental sectors of mozambique

Rationale: "Health in All Policies - HIAP" is an approach that proposes interventions on health determinants with public policy, given that improving health depends largely on the different government health sectors. This cross-sectoral approach is promoted by the World Health Organization and roots in Alma-Ata Conference (1978) and Ottawa (1986), and more recently following the WHO Commission's report to the Social Determinants of Health. Many low income countries, including Mozambique, have not done systematic assessment of HIAP approach in the country.

Objective: evaluate if the formulation of "public policy" in Mozambique is aligned with the WHO´s conceptual framework for HIAP.

Methodology: policy review and interviews with key informants from selected government departments. Policies and respondents were identified by purpose sampling. Sectors of interest included Ministries of Transport, Labour, Infrastructure, Policy and Agriculture. "Policies" (strategies, programs and sectoral plans) were analyzed by content and emerging themes.

Results: Of the evaluated public policy (2 for about 5 policies by sector), some framed considerations of its contribution in enhancing or mitigating specific diseases, but clearly the determinants of health approach were not evident. The analysis suggests that there was not a pattern of policy formulation that incorporates HIAP conceptual framework, systematically, comprehensive or consistentently.

Discussion and Conclusion: Public policies in Mozambique take into account the potential for protection and promotion of health by specification of how will mitigation of specific diseases such as HIV and water borne diseases be done. However, the results suggested that a major need to strengthen and improve urgently how policies are being formulated and implemented in Mozambique, including the adoption of logical frameworks of HIAP and others based on determinants of health (as opposed to disease).

Mallya, Shruti
University of Ottawa, Canada
Co-authors: Mallya,Shruti; University of Ottawa. Sander, Beate; Public Health Ontario, Institute of Clinical Evaluative Sciences. Roy-Gagnon, Marie-Helene ; University of Ottawa. Jolly, Ann; University of Ottawa. Kulkarni, Manisha; University of Ottawa

Modelling Human Risk of West Nile Virus using Surveillance and Environmental Data

Rationale: West Nile Virus (WNV) is a mosquito-borne pathogen that has been documented in Africa, the Middle East, and parts of Asia and Europe. The virus was first detected in North America in 1999 when it caused an outbreak in New York City. Shortly thereafter, it spread across the continent and since then has become endemic across the United States and parts of Canada. Infection with the virus is often asymptomatic but in rare cases can cause flu-like symptoms and in a minority of cases, result in neurologic disease. For this reason, WNV has become a public health concern in North America with many public health agencies undertaking preventive measures. Mapping of WNV hotspots can aid public health agencies at targeting their educational programs and allow for a better and more cost effective public health response.

Objective: This study aims to assess epidemiological and environmental risk factors associated with human WNV infection in Ontario, Canada. Using spatiotemporal analysis and Geographic Information Systems (GIS), WNV risk will be mapped across the province in order to detect clusters of human WNV infection and relate these clusters to positive mosquito pools in space and time.

Methods: Public health data on the human incidence of WNV in Ontario and mosquito surveillance results in conjunction with environmental data will be incorporated into a model predicting human WNV infection using a Poisson regression. Clusters of human WNV and mosquito WNV-positive pools will be identified using SaTScan. These will subsequently be mapped using ArcGIS.

Results and Discussion: Maps of West Nile virus transmission hotspots in Ontario will be presented along with information on risk factors for human infection. These results will be discussed in the context of recent trends in West Nile virus transmission in North America and the implications of future climate change.

Conclusion: Spatial epidemiological methods can help to identify patterns of West Nile virus risk in endemic areas. This approach can further be applied to identify areas at risk of emergence and establishment of new disease vectors and vector-borne pathogens, which may arrive in Canada through international travel and trade or range expansion due to climate change.

Marier-Tétrault, Emmanuel
Université de Montréal, Canada
Co-authors: Paris-Migneault, Audrey Jade; Université de Montréal. Marier-Tétrault, Emmanuel; Université de Montréalé

Défis de la pratique infirmière pour le transfert à domicile de la troisième à la première ligne à l'hôpital Prince Aly Khan (PAKH) sur Mumbai

Les inégalités en matière de conditions sanitaires et les habitudes de vie, dont la consommation tabagique, constituent des enjeux de santé publique en Inde. Situé à Mumbai, mégapole indienne, PAKH est un hôpital communautaire privé qui est notamment reconnu dans les domaines de l'oncologie maxillo-faciale et de la chirurgie cardiaque. Plusieurs défis s'exposent à une pratique infirmière de qualité en Inde et plus particulièrement à PAKH. La transition de la troisième à la première ligne nécessite une attention particulière en pratique infirmière avancée dont un plan d'éducation à la santé.

Les objectifs ont été : 1. Exposer certains défis reliés à une pratique infirmière en oncologie maxillo-faciale et aux soins intensifs dans le contexte d'un hôpital communautaire; 2. Illustrer les caractéristiques d'une proposition d'intervention infirmière en éducation à la santé afin d'optimiser la transition de soins de la troisième vers la première ligne pour les domaines susmentionnés.

Diverses activités de partage de connaissances entre étudiantes en sciences infirmières, infirmières, professionnels de la santé et professeurs ont permis d'échanger et de partager sur les meilleures pratiques infirmières en terme de transition de soins, de leadership clinique, de soutien psychologique et d'enseignement aux personnes et familles. Ces activités, incluant des clubs de lecture, ont également permis l'élaboration d'un guide clinique pour les infirmières sur un court programme d'éducation à la santé et sur les sujets mentionnés ci-haut.

L'augmentation des connaissances, une sensibilisation à ces défis et l'amélioration de la qualité et sécurité des soins prodigués par les infirmières ont découlées de ces activités. Les résultats attendus sont donc un enseignement structuré et adapté aux besoins qui facilitera le retour à domicile en outillant les personnes vivant ces expériences de transition et leur famille sur la gestion de leurs symptômes et de leur maladie à domicile. De plus, le soutien psychologique empreint d'humanisme et de caring s'intègre également dans cet objectif de qualité des transitions et dans l'étendue de la pratique infirmière à son plein potentiel.

Il est attendu que la contribution au renforcement des compétences infirmières favorise une meilleure collaboration interprofessionnelle ainsi que l'empowerment des infirmières, des patients et des familles. L'intégration d'un partenariat avec les personnes et leurs familles dans les programmes d'enseignement et d'intervention sera bénéfique pour la transition vers le domicile de la troisième à la première ligne. En somme, la pratique infirmière lors de transition de soins constitue une opportunité importante d'optimisation de la qualité et sécurité des soins en Inde et nécessite que l'on s'y attarde.

Martin, Annabelle
Programme Santé-Cap, Canada
Co-authors:

L'accaparement de terres et le droit à l'alimentation: implications pour la santé des populations en Colombie

1. Justification

Cette recherche est importante puisqu'elle aborde un sujet actuel, soit l'accaparement de terres, phénomène dont l'étendue considérable se traduit par des transactions foncières à grande échelle et par le déplacement interne de populations. À titre d'illustration, en Colombie, en date de janvier 2015, plus de 5.7 millions de personnes ont été déplacées en raison des conflits internes (UNHCR, 2015), faisant de la Colombie l'un des pays comptant le plus de personnes déplacées, et ce, tout juste derrière la Syrie (CICR, 2015). De plus, notre travail répond au besoin urgent de reconnaître et d'instaurer une politique sur le droit à l'alimentation.

2. Objectifs

Cette recherche vise à comprendre les impacts sur la santé et sur l'environnement, ainsi que les conséquences pour le droit à l'alimentation de la communauté d'El Hatillo, située au nord de la Colombie dans le département de César, des processus d'accaparement de terres pour permettre les activités d'une mine de charbon à ciel ouvert.

3. Méthodes

Cette recherche qualitative articule deux approches méthodologiques, soit l'approche écosystémique à la santé et l'approche par les droits.

4. Résultats

Nos recherches permettront de mettre en évidence les liens entre les activités de la mine de charbon à ciel ouvert et ses impacts sur l'environnement et la santé de la communauté d'El Hatillo. Ces résultats nous conduiront à la rédaction de stratégies d'action éventuelles démontrant aux instances départementales et gouvernementales colombiennes, par des données probantes, l'urgence de trouver des solutions dont entre autres, la relocalisation de cette communauté.

5. Discussion

Les résultats de cette recherche auront comme finalité de contribuer à l'avancement des connaissances en approche écosystémique à la santé, en approche par les droits et au niveau des Droits de l'Homme. De plus, ces résultats permettront de démontrer scientifiquement l'utilité de croiser ces deux approches.

6. Conclusion

Cette présentation orale sur l'accaparement de terres et le droit à l'alimentation permettrait de faire connaître davantage ces enjeux de santé mondiale qui nous interpelleront de plus en plus à l'avenir.

Merry, Lisa
McGill University, Canada
Co-authors: Semenic, Sonia; McGill University, McGill University Health Centre (MUHC); Gyorkos, Theresa W; McGill University, McGill University Health Centre (MUHC); Fraser, W; Centre Hospitalier Universitaire de Sherbrooke (CHUS) Research Centre, University of Sherbrooke;Gagnon, Anita J; McGill University, the Research Institute of the McGill University Health Centre (RI-MUHC)

Predictors of emergency caesarean births to low-risk migrant women from low- and middle-income countries giving birth in Montreal, Canada

Background: The high number of caesareans performed in High Income Countries (HICs) is of concern due to associated risks. Recommendations to reduce caesarean rates include preventing emergency caesarean births among low-risk women (i.e., vertex, singleton, term pregnancies). Births to migrant women (i.e., women born abroad) account for up to one fifth of all births in some HICs. Pregnant migrant women from low and middle income countries (LMICs) may face conditions that exacerbate childbearing and delivery health risks. The objective of this study was to identify medical, migration, social and health service predictors associated with emergency caesarean births to low-risk migrant women from LMICs.

Methods: Using a case-control research design, migrant women from LMICs, and living in Canada ‘ 8 years were recruited from the postpartum units of three Montreal hospitals between March 2014 and January 2015. Data were collected from medical records and by administration of the Migrant-Friendly Maternity Care questionnaire (available in 8 languages). Low risk women who delivered by emergency caesarean for discretionary indications (cases) or vaginally (controls) were included in analyses. Multi-variable logistic regression was performed to identify predictors of emergency caesarean births.

Results: 233 cases and 1615 controls were analyzed. Predictors of emergency caesarean births were: pre-pregnancy BMI ‘ 25 and/or excessive pregnancy weight gain (OR=1.49, 95% CI 1.02-2.13), admission to birthing centre during early labour (OR=6.48, 95% CI 3.50-12.01), and length of time in Canada < 2 years (OR=2.04, 95% CI 1.04-4.03). Women from Sub-Saharan African/Caribbean trended towards greater risk for having an emergency caesarean (OR= 2.39, 95% CI 0.95-5.99). Among women < 2 years in Canada having a humanitarian migration classification (OR=4.48, 95%CI 1.21-16.49), and admission to the birthing centre < 4 cm dilated (OR=7.43, 95% CI 3.04-18.18) were important predictors.

Conclusion: There are important medical and non-medical predictors of emergency caesareans to migrant women from LMICs LMICs indicating that strategies to prevent emergency caesareans need to be comprehensive and consider the unique circumstances and needs of migrant women.

Take Home Messages: Migrant women who recently-arrived and have a humanitarian status, are particularly vulnerable to having an emergency caesarean and this is not fully explained by medical factors.

BMI/pregnancy weight gain is also an important predictor of emergency caesarean and healthcare providers should consider the unique circumstances of migrant women when promoting a healthy lifestyle.

Early admission for delivery should be discouraged when possible.

More research is needed to learn more about the experiences of care of migrant women and the potential impact they have on mode of birth.

Misra, Shivali
McGill University Faculty of Medicine, Canada
Co-authors: Doucet, Alison; McGill University Department of Family Medicine, Morales, Juana; Community of Cotacachi in Ecuador, Macaulay, Ann; McGill University Department of Family Medicine and Participatory Research at McGill (PRAM), Walrod, Jemie; McGill University Faculty of Medicine, Seccareccia, Erica; McGill University Faculty of Medicine, Andersson, Neil; McGill University Faculty of Medicine and Participatory Research at McGill (PRAM), Evans, Andrea; Center for Global Child Health at The Hospital for Sick Children

Global health education with community engagement promotes capacity building: a novel approach for a global health medical student elective

1. Rationale: Medical institutions have responded to the increased need for global health education with electives subject to heterogeneous requirements. Students on traditional electives develop varying levels of medical competency, are more often involved in one-way exchanges that favor themselves over the community and are at increased risk of having responsibilities exceeding their level of training.

2. Objective: Offer a global health elective to medical students that develops global health and physician competencies, in an ethical manner that builds community capacity.

3. Methods: A partnership based on community engagement, using the principles of participatory research was initiated between McGill University and the rural and indigenous community of Chilcapamba (Cotacachi) in Andean Ecuador in 2008. Each summer, a preclinical medical student collaborates with three Andean communities to investigate a research question jointly elaborated by the communities and the student with faculty support. Students attend pre-departure workshops and training, are mentored by physicians at McGill and supervised by a community leader. Students have the opportunity to observe while supervised in the local hospital. Continuity is ensured by students handing down projects from year to year, committed community leadership and faculty supervision.

4. Results: Eight research projects were completed on topics within maternal-child health, agriculture and food security. One publication was accepted, two conference posters were presented by each student and four oral presentations were delivered. A sustainable bi-directional partnership was achieved between students and community, strengthening capacities of both. Decision-making and student responsibilities prioritized community engagement with joint data collection. Results were shared with the communities. All CanMeds roles for physicians in training, and all global health core competencies mandated by the Association of Faculties of Medicine of Canada/Global Health Education Consortium were fulfilled.

5. Discussion: Community engagement based on the principles of participatory research is an effective approach for medical students to develop core competencies in global health, research and medicine while also evaluating community concerns often influenced by the social determinants of health. It responds to the call for transformative learning (Lancet commission, 2010) by empowering students and communities as agents of change through ethically responsible collaboration. The model is not restricted to pre-clinical medical students.

6. Conclusion: We suggest a global health elective based on community engagement for medical and health science students seeking ethically responsible, global health training that provides a holistic learning experience while increasing community knowledge, promoting community empowerment and capacity building.

Mofid, Layla S.
Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Canada
Co-authors: Blouin, Brittany; Department of Epidemiology, Biostatistics and Occupational Health, McGill University; Razuri, Hugo; Research Institute of the McGill University Health Centre; Casapia, Martin; Asociación Civil Selva Amazónica; Gyorkos, Theresa W.; Department of Epidemiology, Biostatistics and Occupational Health, McGill University & Research Institute of the McGill University Health Centre

Benefits of close on-site field observation in cross-culture applications of study instruments

Rationale: Use of standardized scales in primary epidemiological research is recommended for evaluating study outcomes. However, cross-culture differences in populations, above and beyond language, are important issues to consider during scale selection.

Objective: To discuss the importance of on-site field observation and how it relates to scale selection.

Methods: In a trial on maternal postpartum deworming currently being conducted in Iquitos, Peru, fatigue is assessed as one of the maternal health outcomes. Prior to trial recruitment, all study instruments were pilot-tested in the target population of postpartum mothers. Maternal fatigue was assessed one month following delivery using the Multidimensional Assessment of Fatigue (MAF), with a 10-point numeric rating scale for responses to questions. During supervision in the field, it was observed that participant comprehension of the scale was suboptimal.

Results: The following observations were noted during the field supervision:

1. Mothers poorly understood the instructions to rate their fatigue numerically from 1-10, possibly due to low socio-economic status and unfamiliarity with scales of this type.

2. Mothers frequently wanted to explain their fatigue verbally rather than provide numeric responses.

3. Mothers frequently chose numbers at random to respond to questions about their fatigue, which were often discordant with their verbal expression of the fatigue they were experiencing.

4. Research assistants frequently had to re-explain the instructions during administration of the scale.

Discussion of these issues with the trial steering committee led to the decision to pilot test another scale, the Fatigue Assessment Scale (FAS), during the remainder of the one month study visit, in addition to completing the MAF. The FAS had previously been used in postpartum populations and it uses a 5-item verbal Likert scale for responses to questions. In a subsample of 210 mothers, both the MAF and the FAS scales were administered. After analysis and re-evaluation, the trial steering committee decided to continue with the FAS for the remainder of the study.

Discussion: Pilot-testing of study instruments is essential but may not be enough to expose underlying issues in comprehension and cultural appropriateness of scales. Close on-site field supervision is necessary to ensure research assistants are correctly administering questionnaires, and study participants are adequately comprehending instructions, questions and response options.

Conclusion: Continuous and close supervision of study procedures in the field is key to ensuring the collection of accurate and meaningful data. Implications for adjustment of study instruments and re-training of field staff should be carefully considered.

Mohammed, Husein
McGill University, Canada
Co-authors: Marquis, Grace S - School of Dietetics & Human Nutrition, McGill U; Aboud, Frances - Dept. of Psychology, McGill U; Samuel Aregash, Ethiopian Public Health Institute, Ethiopia

Iodized salt improved young children's cognitive development but the effect differed by food security and nutritional status in a cluster RCT in Ethiopia

Iodized salt improved young children's cognitive development but the effect differed by food security and nutritional status in a cluster RCT in Ethiopia

Husein Mohammed1, Grace S Marquis1, Frances Aboud2, Karim Bougma1, Aregash Samuel3.

1School of Dietetics & Human Nutrition, McGill U, Canada, 2Dept. of Psychology, McGill U, Canada, 3Food Sciences and Nutrition Directorate, Ethiopian Public Health Institute, Ethiopia.

Rational: Iodine deficiency affects child physical and mental development. This is the first randomized clinical trial that evaluated the effect of iodized salt on child development.

Objective: The study examined the effects of iodized salt on the growth and mental development of young children in a moderately iodine deficient area.

Methods: Forty-four communities across five zones in the Amhara region of Ethiopia were randomly assigned to intervention (early access to iodized salt) or control (later access through market forces). A total of 1220 pregnant women living in the 44 communities and who conceived after the intervention began were enrolled and assessed for their iodine and iron status. Additional data were collected once their young children were 2 to 13 months old on household socio-demographic status, quality of salt, home stimulation (Home Observation for Measurement of the Environment (HOME)), and anthropometry, and young children's diet, anthropometry, urinary iodine, haemoglobin, and mental development scores (Bayley III scales: cognitive, expressive language, receptive language, and fine motor scales). Intention to treat cluster control and sub-group analyses were done.

Results: The median urinary iodine excretion was higher in the intervention vs control group for both mothers during pregnancy (161 vs 121 µg/L, $p<0.0001$) and young children (142 vs 107 µg/L, $p=0.01$). Additionally, fewer mothers (45 vs 60%, $p<0.05$) and young children (37 vs 44%, $p<0.05$) were iodine deficient in the intervention compared to the control group. The HOME score was significantly higher in the intervention group (22.31±0.15 vs 21.89±0.19, $p=0.01$). The intervention children had a significantly higher cognitive score (32.95±5.29 vs 31.96±5.15; ‘=0.10; $p=0.04$) but this difference was not seen in the scores of the other Bayley scales. The intervention effect on the cognitive score was less significant in stunted (‘=0.43±0.47; ‘=0.11; $p=0.35$) compared to non-stunted (‘=0.81±0.35; ‘=0.20; $p=0.02$) and in food insecure children (‘=0.50±0.87; ‘=0.12; $p=0.57$) compared to food secured children (‘=0.74±0.29; ‘=0.18; $p=0.01$).

Discussion: The higher cognitive score of children who were exposed to iodized salt during the foetal period and in infancy indicates the importance of iodine in early stages of brain development. Food security and stunting may influence the outcome of iodine interventions so must be considered in rolling out such interventions.

Conclusion: Iodised salt intake resulted in a better iodine status of both pregnant women and their young children, and led to a higher infant cognitive development in non-stunted and food secure children.

Sponsored by Micronutrient Initiative, Canada

Moubassira, KAGONE
centre de recherche en santé de Nouna, Burkina Faso
Co-authors: Maurice YE, Hamidou SANOU, Justin TIENDREBEOGO, Ali SIE , CRSN

Etude qualitative de l'acceptabilité de la santé mobile en milieu rural au Burkina Faso

Introduction / contexte

Le Centre de Recherche en Santé de Nouna (CRSN) a bénéficié d'un financement du CRDI pour mettre en 'uvre le projet de recherche mobile santé dans le domaine de la santé maternelle et infantile. L'importance de cette recherche nous a conduits à considérer l'opinion des acteurs concernés par rapport à l'utilisation de la téléphonie mobile pour l'amélioration de la santé au sein de la population.

Méthode

Les entretiens semi-structurés auprès de 20 agents de santé et 10 focus group ont été réalisés auprès de 91 femmes dans dix villages. 44 femmes avaient l'âge compris entre 16-25, 19 avaient l'âge compris entre 26-30, 22 avaient l'âge compris entre 31-36 et 6 avaient l'âge compris entre 37-46 ans. Les entretiens ont été enregistrés puis transcrits. Le logiciel d'analyse qualitative Atlas ti a été utilisé pour codifier les données et effectuer l'analyse préliminaire.

Résultats

Les résultats montrent que la téléphonie mobile joue un rôle important dans la prise en charge sanitaires des malades. Elle constitue un outil efficace permettant de suivre les patients. La réduction du nombre d'intervenant dans la diffusion de l'information, transfert rapide des informations sanitaires, assistance locale échange entre les infirmiers, elle permet de retrouver les perdus vue lors des séances de vaccination, la prise en charge des patients sous ARV par un suivi rigoureux.

Discussion

Les technologies de communication sont très utiles dans le domaine de la santé, elles peuvent contribuer à améliorer la santé de la population. Elles sont également acceptées par la population et les professionnels de santé mais il ya des défis à relever tels que l'insuffisance l'énergie pour le fonctionnement de ces appareils.

Conclusion

Introduire les technologies de communication dans le système sanitaire constitue un outil efficace de monitoring des patients et peut contribuer à améliorer efficacement la santé de la population.

Mukamana, Olive
Département de médecine sociale et préventive, École de santé publique, Université de Montréal. Unité de Santé Internationale, Centre de Recherche du Centre Hospitalier de l'Université de Montréal (USI-CRCHUM), Canada
Co-authors: Mira, Johri, Unité de Santé Internationale, Centre de Recherche du Centre Hospitalier de l'Université de Montréal (USI-CRCHUM). Département d'administration de la santé,École de santé publique, Université de Montréal

What is known about school-based health promotion in developing countries? A scoping review

Rationale: Schools are widely recognized as environments that can play an important role in health promotion mainly by improving students' health literacy, behaviors and academic achievements. In developing countries facing the challenges of low health literacy and high burden of disease, decision-makers may benefit from current knowledge on effective strategies in school health promotion and in order to contribute to this knowledge, this study surveyed the literature on school-based health promotion interventions in these countries.

Objective: This study aimed at analyzing the literature for the purpose of sharing evidence-based information and recommendations based on the components and effectiveness of school-based interventions for health promotion in various developing countries.

Method: A scoping review of the literature focusing on school-based interventions for health promotion and their impact in developing countries was performed in four steps: (1) definition of the research question and search strategy; (2) selection of the literature (3) data charting and synthesis (4) analysis and generation of recommendations.

Results: 147 records were retrieved from searched databases and websites and they were assessed for eligibility. 31 records (23 primary studies, 2 systematic reviews and 6 reports) were ultimately included in the analysis. They covered a variety of school-based interventions that were analyzed according to their targeted outcomes and underlying mechanisms. These interventions involved the prevention of malnutrition; hand washing and oral health promotion; the prevention and management of infectious diseases, cardiovascular diseases, mental health problems and substance use. This analysis showed that although diverse, the interventions can be classified in two main categories: on one hand, health education interventions targeting individual determinants of health and health behaviors such as knowledge, skills, and attitudes and on the other hand, multi-component interventions which target both the individual and environmental determinants such as the social and physical environment, policies and services at the school, family and community level.

Discussion: The findings of this analysis suggest that health education can improve the individual determinants of health but that a comprehensive approach is required to effectively address both the individual and environmental factors necessary to induce long-term behavior change and to improve health and educational outcomes.

Conclusion: School-based interventions targeting priority health issues in a given setting have considerable potential to improve students' health and academic achievements if they address individual and environmental determinants of these issues in a comprehensive approach involving key stakeholders at the school, family and community level.

Mulumba, Moses
Center for Health, Human Rights and Development, Uganda
Co-authors: Leslie London

Promoting community participation in health system governance: Lessons from CSOs engagement with Health Unit Management Committees in rural Uganda

Rationale: This paper presents results from the capacity building interventions that were implemented as part of an IDRC funded health and human rights action research project titled, 'Health system governance: Community participation as a key strategy for realizing the right to health.' The project was implemented in collaboration the Learning Network for Health and Human Rights of the University of Cape Town (UCT) to explore, develop and operationalize methods and best practice for realization of the right to health.

Objective: The project explored the hypothesis that building stakeholder capacity to participate in health care and in other social services that determine health using a rights-based approach, in the context of interventions to enhance service responsiveness, will address inequities in health and promote stronger and more sustainable governance systems for health that give a voice to the poorest and most marginalized people in low-income settings.

Methods: This intervention was anchored on the human rights based approach to health. Health Unit Management Committees (HUMCs) indentified as key mechanisms for enhancing community participation in health governance. As such, through the use of participatory action research methods the HUMCs capacities were built. The intervention also involved building networks; sharing of experiences; and testing local systems for participation. It has also involved student internships, regional meetings to share experiences and best practices in community participation in health system governance

Results: While HUMCs are a management structure whose primary role is to oversee the running of their respective health centers, if well facilitated and oriented, they can be effective advocacy bodies that can play a critical role in lobbying for solutions to challenges facing health centers. Incorporating human rights and responsibilities in their orientation adds value, as this will enable them look at health care as an entitlement rather than a favor, and to appreciate their responsibility to claim for the right to health.

Conclusion: HUMCs have the potential to play a critical role in bridging the gap between the communities and health facilities, and to help in making services responsive to community needs. However, this role can be strengthened by streamlining membership and representativeness of this key structure, and providing the necessary resources and empowerment to enable them provide effective oversight over the running of lower level facilities on behalf of the communities they serve. Rights based approaches are key in building the capacities of HUMCs.

Najafizada, Maisam
University of Ottawa, Canada
Co-authors: 1. Labonte, Ronald; Department of Epidemiology and Community Medicine, Faculty of Medicine & Institute of Population Health, University of Ottawa, Ottawa, Canada 2. Bourgeault, Ivy Lynn; Telfer School of Management & Institute of Population Health, University of Ottawa, Ottawa, Canada

Stakeholder's perspective: Sustainability of a community health worker program in Afghanistan

1. Rationale and objectives

Most studies of sustainability have focused on small projects implemented in isolation from the health system. There is little knowledge on sustainability of national health projects within health systems funded by international organizations. The objective of this paper is to explore sustainability of Afghanistan's national CHW program from the perspective of different stakeholders specifically how they 1) define sustainability, and 2) identify facilitators and challenges, and 3) propose measures to ensure financial sustainability.

2. Method

We have interviewed 63 individual key informants, and conducted 11 focus groups [35 people] with policymakers, health managers, community health workers, and community members across Afghanistan. The participants were purposefully selected to provide a wide range of perspectives. Ethics were obtained from the University of Ottawa, and Afghanistan's Ministry of Public Health.

3. Finding

Different stakeholders define sustainability differently. Policymakers emphasize financial resources; health managers, organizational operations; and community-level stakeholders, routine activities. The facilitators they identify include integration into the health system, community support, and capable human resources. Barriers they noted include lack of financial resources, poor program design and implementation, and poor quality of services. Measures to ensure sustainability could be national revenue allocation, health-specific taxation, and community financing.

4. Discussion and Conclusion

Until recently, sustainability of the Afghan national CHW program has been ignored by most of the program's key stakeholders try to ignore. To ensure sustainability, there is a need for a common definition and coordinated effort amongst all stakeholders.

Newman, Kristine
Daphne Cockwell School of Nursing, Ryerson University, Canada
Co-authors: Booi, Laura; Simon Fraser University

Capacity building for global health dementia initiatives: next generation leadership for research and practice.

Rationale:

Our work bridges the generation gap in the search for global dementia solutions.

Capacity building for global health issues related to dementia is important in order for all generations, including younger less established ones, to strengthen their understanding of dementia related issues.

Objective:

Objective #1.To discuss global health dementia initiatives and show the importance of younger generations' leadership and understanding of dementia as a social, economic and public health issue.

Objective #2. To encourage practitioners and researchers to make room for the voices of younger, less established generations in discussions surrounding the search for global dementia solutions.

Methods:

The first G8 Summit on Dementia took place in London, England in December 2013. This event spurred a commitment to dementia from all attending nations and their delegates, including an obligation to participate in four subsequent G7 Legacy events (England, Canada-France, Japan, Washington). These four legacy events provided an opportunity for more specific dialogue from world leaders in dementia. In parallel with these Global Action Against Dementia Legacy Events young local leaders were given the opportunity to develop innovative ideas to support the ongoing work of the World Dementia Council, and to create a sustainable global network which will continue to address the challenges presented by dementia.

Results:

The 120 selected Young Leaders in Dementia, met in Ottawa, Tokyo, Washington D.C, and London to discuss innovative ideas to address dementia. Young Leaders in Dementia were also represented in Geneva at the First Ministerial Conference on Dementia where they brought their recommendations to the World Dementia Council.

Discussion:

Our entire world is at a pivotal moment, the entire global population is aging and the incidences of dementia are estimated to skyrocket. Currently, the numbers are estimated at 36 million in 2010. These numbers are doubling every 20 years to 66 million by 2030 and to 135 million by 2050. We need to harness the momentum for change and impact found in the energy and innovation from younger generations.

Conclusion:

Youth are the leaders of our future and their full participation and understanding of the global health issue surrounding dementia is required to support the aging population. Capacity building, sustainability and innovation will guide the next generation in their solutions for public health issue of dementia.

Ng, Kevin
University of British Columbia, Canada
Co-authors:

The sociology of AIDS: social, political, and personal factors and their influence on AIDS research

In the 35 years since it was first observed, AIDS has remained a constant presence in scientific research. While AIDS research has provided some of science's greatest achievements, from the discovery of the HIV virus to the development of effective antiretroviral drugs, the epidemic is far from over, with an estimated 1.5 million AIDS deaths in 2013. It should be no surprise that AIDS remains one of the most highly funded areas in science, with approximately $19 billion USD spent in 2013 for research and treatment in middle to low-income countries alone. However, this research is certainly not free from controversy beyond the bounds of pure science. In a seminal publication in 1998, sociologist Steven Epstein identifies three factors that contribute to the controversy of AIDS research: its relevance to a politicized social issue, the presence of a mobilized related social movement, and often-overlooked social and political aspects of the scientific research world itself. In the past 17 years, however, AIDS research and its associated controversies has not gone away. Building upon Epstein's early analyses of such factors in early AIDS research, I have explored more recent controversies in the topic in an attempt to discover how such societal and political factors have evolved with the epidemic. Using both internal and external sources, I focus on scientific debates such as AIDS causality, the pathway to HIV discovery, the AIDS crisis in South Africa, and current debates over treatment as prevention. For of these cases, I identify the major non-scientific factors - personal gain, economics, political posturing, and religious and social values- that have contributed to the debate both within and without the scientific community. In addition, I have also considered the effect of the scientific community itself on such social and political factors, thus revealing a cycle of influence in AIDS research in which science, society, and politics cannot be separated. Though research does not occur in isolation and thus cannot expect to ever completely eliminate these extra-scientific factors, their elucidation and analysis will allow researchers and policy-makers to consider and synthesize these aspects of this complex issue.

Nguyen, Hoang
Hanoi School of Public Health, Vietnam
Co-authors: Hoang Nguyen, Hoa Do, Thuy Nguyen, Chau Le, An Nguyen; *Hanoi School of Public Health

Human resource in Health in low income settings: Lessons learnt of global health approach in Vietnam

Rationale and objective

An important component in human resource in health (HRH) management is ensuring the appropriate distribution of health staff among facilities to provide health services to community, especially in LMICs. In Vietnam, Circular 08/2007-TTLT-BYT-BNV issued in 2007 by the Government provided guideline for distribution of personnel in state health sectors. Up to now, in the context of disease pattern change, globalization and reform of health system, Circular 08 became out-of-date. This research was conducted to provide evidence for the Government to identify gaps between distributions of human resource in reality and the Circular, determine issues during implementation of this policy in order to develop more appropriate version.

Methods

A mixed-method design with quantitative and qualitative techniques were applied. Quantitative data were collected in all provinces via Provincial Health Bureaus to get evidence related to gaps of personnel distributions. Qualitative data were conducted by interviewing representatives of stakeholders (Ministry of Health, hospitals, health centers, etc.) to identify issues during the implementation of Circular 08.

Results and discussion

Most important indicators of HRH distribution in reality are under initiation in the Circular. Average numbers of clinical health staff per bed are 0.73-1.04 (reality) vs. 0.9-1.7 (initiation). Numbers of preventive health staff per 10,000 residents are 25-30 (reality) vs 32-35 (initiation). Ratio between physicians and other staff are 1/3.9 (reality) vs. 1/3 (initiation). Ratio between professional and administrative staff are 87/13 (reality) vs. 82/18 (initiation).

Key issues happened during the implementation of Circular 08 includes insufficient supervision from central to communal levels, inconsistent management system of health facilities at district level, inappropriate unique model applied for diversity of commune health centers. In addition, difficulties in health staff recruiting and management at lower levels are also the concerned issues with lack of local authorities' involvement in financial resource mobilization for HRH as well as ineffective incentive and task-shifting policies.

Conclusion

Vietnamese Government should revise Circular 08 with the adjustment for specific indicators of HRH distribution. Along with the revision, it needs to develop a supervisor strategy to ensure effectiveness of the implementation of new Circular. The Government is also recommended to reform the management system at lower levels with appropriate models (combined model for district clinical and preventive health sectors and flexible models for commune health centers). Besides, the Government ought to deploy decentralization for local authorities to empower them in dealing with limited finance and issues of health staff recruiting.

Nixon, Stephanie
International Centre for Disability and Rehabilitation (ICDR), Canada
Co-authors: Cameron, Cathy; International Centre for Disability and Rehabilitation Mweshi, Margaret, University of Zambia Nkandu, Esther Munalula, University of Zambia Okidi, Carilus, Disability Services Programme, Kenya Tattle, Stephen, Canadian Working Group on HIV and Rehabilitation (CWGHR) Yates, Tammy, Canadian Working Group on HIV and Rehabilitation (CWGHR)

Missed opportunities: Perspectives of PTs and OTs in Kenya and Zambia regarding the role of rehabilitation in the care of people living with HIV (PHAs)

Rationale: The prevalence of HIV is greater than 15% in both Nyanza Province and Lusaka. ART access is growing in these settings, resulting in many people living longer with HIV and the resulting comorbidities and disablement. Therefore, the need is great for HIV training across the health care continuum, including rehabilitation. Yet, there is little empirical research investigating the state of rehabilitation and HIV in Sub-Saharan Africa.

Objective: To explore the perspectives of physical therapists (PTs) and occupational therapists (OTs) in Nyanza Province, Kenya, and Lusaka, Zambia, regarding the role of rehabilitation in the care of people living with HIV.

Methods: Pilot testing was conducted to assess an HIV teaching tool for rehabilitation providers in Sub-Saharan Africa in October-November, 2014. The tool was adapted from the Canadian 'E-Module on Evidence-Informed HIV Rehabilitation' developed by CWGHR. Pilot testing was conducted in Kenya (n=32, 21 PT/11 OT) and Zambia (n=31, all PT) and included a demographic questionnaire, a survey on knowledge of HIV and rehabilitation, and focus groups (5 in Kenya, 5 in Zambia) to discuss the teaching tool. We present an interpretive analysis of focus group data regarding participants' perspectives on rehabilitation for PHAs. Ethics approval was received from University of Toronto, University of Zambia, and KEMRI (Kenya).

Results: These rehabilitation providers in Kenya and Zambia described the role of rehabilitation in the care of PHAs largely in terms of missed opportunities. That is, opportunities were missed for using rehabilitation to mitigate disability and promote wellness among people living with HIV. Despite the high local HIV prevalence, many participants described their participation in this study as 'eye-opener' to the role of rehabilitation in HIV. In particular, opportunities that were missed, each directly or indirectly related to improving the wellbeing and social participation of people living with HIV, included: (1) HIV disclosure, (2) interprofessional and intersectoral collaboration, (3) community-based rehabilitation (CBR), (4) training for rehabilitation providers, (5) pediatric rehabilitation, and (6) awareness of the links between disability, HIV and poverty.

Discussion and conclusion: Formal HIV policies (e.g., national strategic plans) in Sub-Saharan Africa now frequently recognize disability within the HIV continuum, yet rehabilitation providers remain marginalized if not excluded from the HIV response in many settings. Incorporating HIV training into undergraduate and continuing rehabilitation education is a crucial next step for the HIV response in Africa.

Noga, Jacqueline
University of Alberta, Canada
Co-authors:

Building the capacity to improve water quality through partnerships with the for-profit sector: a case study in Eastern Tanzania

This research is focused on a partnership between a non-profit organization and for-profit company. Students' International Health Association (SIHA) is a student-run non-profit organization that works in two rural villages in Eastern Tanzania. Since 2010, SIHA has been engaged in health promotion and community development projects with community members. IDEXX Laboratories, Inc., a multinational corporation that makes user-friendly water quality testing kits, has approached the University of Alberta's School of Public Health looking for insight on how to improve water quality and make a positive impact on public health in low and middle income countries. The aim for IDEXX is to build on and enhance their vision on their Corporate Social Responsibility (CSR). This research is meant to explore how IDEXX can do this in a meaningful, ethical, and sustainable way. The objective is to better understand how IDEXX, SIHA, and the community members can work together to improve Water, Sanitation, and Hygiene (WASH) initiatives in the two villages. The first phase of this research is to go to Tanzania with SIHA and do some preliminary observations, and conduct a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of the current WASH initiatives. The next phase is to go to IDEXX's headquarters and get an inside perspective of the company and how it operates, as well as how current CSR initiatives are executed. The SWOT analysis will be presented to the leaders in IDEXX's Water Business, after which the leaders can decide which of the opportunities identified in the SWOT analysis they are interested in engaging in. The final phase will be to return to Tanzania with SIHA in the summer of 2016 to connect with the involved community members about whether they are interested in a continued partnership with IDEXX. During this phase there will also be a survey of both the community members' perspectives of their health and objective measures of public health. This final phase will evaluate how the company's involvement could impact community health, and will inform future directions for the company. The results from the first phase would be discussed at the Canadian Conference on Global Health. What I would like to gain from this presentation is insight and feedback from more experienced global health researchers. The experience of the conference attendees could benefit this project, and help to build the capacity of this research.

Normore, Ryan
Faculty of Medicine, Memorial University, Canada
Co-authors: Greene, Helena; Faculty of Medicine, Memorial University. DeLong, Allison; Faculty of Medicine, Memorial University. Furey, Andrew; Faculty of Medicine, Memorial University.

The orthopedic trauma symposium: a team broken earth initiative

Rationale: While single-trip volunteer medical teams can provide much needed acute trauma care in the event of a natural disaster their ability to leave a legacy of improved care in the region may be limited. To address this issue medical relief teams such as Team Broken Earth have taken a more persistent approach by continuing to provide medical support years after the initial disaster. Team Broken Earth is mandated not only to deliver care to local patients but also to provide education and training to local medical professionals. One way in which such training can be provided to a large number of individuals is via conference-based teaching such as the Orthopedic Trauma Symposium (OTS), a two day educational course held in Haiti in 2014.

Objective: The OTS was one of the first courses of its kind internationally and as such there is a scarcity of research regarding how best to implement and run such a program. Thus, the purpose of this project is to present survey data collected from both summit participants and instructors as well as to comment on how these results might impact both future iterations of the OTS as well as the implementation of similar programs globally.

Methods: A survey was developed which used a Likert scale to assess respondents' opinions regarding the value, content, and delivery of the OTS. Respondents were classified in terms of their role in the OTS (instructor vs. student) as well as their level of training (medical student, resident, practicing physician). The survey responses of each of these sub-groups are presented and compared.

Results: The majority of survey respondents indicated agreement with the survey statements suggesting an overall positive opinion of the OTS. In general, the medical students tended not to agree with the survey statements more often than did the other groups of respondents.

Discussion: The results of this study demonstrate the importance of local context in shaping training initiatives and highlight areas where realignment may potentially be most helpful. These findings should be noted by both the OTS and others attempting to establish similar programs internationally.

Conclusion: Team Broken Earth and other organizations committed to improving medical care in austere environments must evaluate their training and capacity building initiatives and will benefit from local feedback as they continue to develop the OTS and similar initiatives globally.

Nyanza, Elias C.
University of Calgary, Tanzania
Co-authors: Nyanza, Elias C; Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, 3280 Hospital Drive NW, Calgary, AB CANADA T2N 4Z6 & School of Public Health, Catholic University of Health and Allied Sciences, P.O. Box 1464, Bugando Area, Mwanza, TANZANIA. Yohana, Petro; School of Public Health, Catholic University of Health and Allied Sciences, P.O. Box 1464, Bugando Area, Mwanza, TANZANIA. Thurston, Wilfreda E., Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, 3280 Hospital Drive NW, Calgary, AB CANADA T2N 4Z6 & Department of Ecosystem and Public Health, Faculty of Veterinary Medicine, University of Calgary, University of Calgary, 2500 University Drive, NW, Calgary, AB CANADA T2N 1N4. Thomas, Deborah S.K.; Department of Geography & Environmental Sciences, University of Colorado Denver, P.O. Box 173364, Denver, CO 80217-3364, USA. Konje, Eveline; Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, 3280 Hospital Drive NW, Calgary, AB CANADA T2N 4Z6 & School of Public Health, Catholic University of Health and Allied Sciences, P.O. Box 1464, Bugando Area, Mwanza, TANZANIA. Dewey, Deborah; Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, 3280 Hospital Drive NW, Calgary, AB CANADA T2N 4Z6 & Department of Paediatrics and Alberta Children's Hospital Research Institute, Cumming School of Medicine, University of Calgary, 3280 Hospital Drive NW, Calgary, AB CANADA T2N 4Z6.

Increased cyanide use in gold extraction among small scale miners in northern Tanzania; a call for developing capacity for adherence, monitoring and understanding on the cyanide code of practice

Rationale: Tanzania have seen explosive development of small scale gold mining (SGM) operations which provides direct employment for more than 1.5 million people and is an indirect source for livelihood for more than 10 million people. Recently, the use of cyanide has become more common in SGM, especially in the reprocessing of mercury amalgamated tailings from artisanal mining sites. Cyanide is toxic and low levels of exposure can be fatal.

Objective: To examine the level of knowledge and adherence to the Cyanide Code of Practice (CCOP) among workers and managers at SGM operations in northwestern Tanzania that use cyanide for gold extraction.

Methods: A cross-sectional survey of workers and managers at 17 selected SGM sites was conducted. A cluster random approach was used to recruit 215 mine workers who have worked at the same site for more than a month and 23 mine managers. These individuals participated in structured face to face interviews that investigated knowledge of and adherence to the CCOP.

Results: The interviews revealed wide variations in knowledge of and adherence to the CCOP; 61.4% of workers and 38.9% of managers had no knowledge of CCOP, and 54% of workers and 39.1% of managers were not adhering to CCOP. Workers who reported to have been trained on CCOP were significantly more likely to have knowledge of the CCOP (24.24%) as compared to untrained workers (4.31%) ($x^2=79.78$, $p<0.001$). Level of education was associated with level of knowledge ($x^2=74.81$, $p<0.001$). Of the workers (n=83, 38.6%) who had knowledge of the CCOP, the majority (58.1%) had secondary education and above.

Discussion: Overall, SGM mining workers had limited knowledge of the CCOP. Further, adherence to the CCOP was limited in SGM operations in Tanzania. The limited knowledge of the CCOP among workers and managers, combined with poor adherence to cyanide waste management practices indicates that there is a need for education, health promotion and sensitization among workers and managers to improve adherence to CCOP. There is also a need to enhanced monitoring for compliance to environmental, chemical, occupational and health and safety standards.

Conclusions: To ensure the health and safety of SGM workers and managers and to protect the environment and local communities around, education and enhanced monitoring is required.

Odundo, Gordon
Gertrude's Children's Hospital, Kenya
Co-authors: 1) Ngwiri, Thomas; Gertrude's Children's Hospital, Kenya. 2) Chanzu, Nadia; Gertrude's Children's Hospital, Kenya.

The impact and successes of a pediatric endocrinology fellowship program in Africa

Rationale: The prevalence and distribution of endocrine disorders in children in Africa is not well known because most cases are often undiagnosed or diagnosed too late. In addition, tertiary facilities and trained personnel for paediatric diabetes and other endocrine diseases are virtually non-existent. The awareness of this led to the launch of the Pediatric Endocrinology Training Center for Africa (PETCA) designed to train pediatricians on diabetes and endocrinology. Through training, the specialists are able to diagnose, treat and manage endocrine diseases, which have long gone undetected, been misdiagnosed or diagnosed when it is too late.

Objective: PECTA aims to improve quality and access to health care by training pediatricians from Africa in pediatric endocrinology.

Methods: PECTA is coordinated at the Gertrude’s Children’s Hospital, Kenya. The fellowship is undertaken over an 18-month period; 6 months of clinical and theoretical training in Kenya, 9 months of project research at the fellow’s home country and 3 months consolidation in Kenya. Tutorship is offered by experts from the European Society for Pediatric Endocrinology and International Society for Pediatric and Adolescent Diabetes. Upon completion, certified pediatricians are expected to set up Centers of Excellence in their home countries.

Results: Since the launch of PETCA in 2008, there have been two successful phases. Phase I: January 2008 - October 2012 and phase II: January 2012 - April 2015. Forty four (44) fellows have been certified: 34 (phase I) and 11 (phase II). Another nine (9) are currently in training. The fellows were from 12 African countries: Kenya, Ethiopia, Ghana, Uganda, Botswana, Nigeria, Tanzania, Congo, Sudan, Rwanda, Mauritius and Zambia. Over 700 patients with ranging endocrine disorders have been diagnosed, treated and are being followed up at the centers of excellence. As a result on the success of PETCA in Nairobi, a similar program was launched in Nigeria in 2013 to expand training opportunities in West Africa.

Discussion: Practical instruction during the fellowship has allowed actual detection, treatment and care of patients with complex endocrine conditions within the training institutions. Graduates of the fellowship program have also initiated centers of excellence on return to their home countries. This has provided opportunity for more patients to be reached.

Conclusion: The successes of the PETCA program demonstrate the impact a capacity building and knowledge transfer model can have on a people. PETCA serves as an innovative model to encourage equity in the availability of qualified health care personnel globally.

Odundo, Gordon Otieno
Gertrude's Children's Hospital, Kenya
Co-authors: Chanzu, Nadia; Gertrude's Children's Hospital, Kenya

Decentralization of paediatric healthcare in Kenya: The Gertrude's children's hospital model

Rationale: There are 1.5 million births in Kenya annually but in spite of the government's commitment to provide quality health care, child mortality rates in Kenya are high. UN estimates indicate there are 106,000 child deaths annually; the under 5-mortality rate is currently 71 per 1,000 live births; the infant mortality rate is 48 per 1,000 live births and neonatal mortality rate is 26, per 1,000 live births. There is need for increased efforts towards the provision of paediatric care in Kenya. Towards this, Gertrude's Children's Hospital, which is a specialized paediatric institution, implemented an outreach model to foster the provision of high standards of care for children in Kenya.

Objective: To build and implement an outreach model into the wider community to offer child health services, vaccination and primary care to children in Kenya.

Methods: The main hospital campus is based in Muthaiga, Nairobi. The hospital initiated a pilot as a means to increasing access to quality healthcare services for larger proportion of children due to the distance to the campus in Muthaiga. The success of the pilot led to investment in the present model, which has seen the hospital have diversified locations within Nairobi and its suburbs.

Results: Since the adoption of the model in the year 2003, the hospital has opened 11 outpatient clinics, two community outreach clinics in informal slum settlements and has a 100 bed capacity hospital in its campus in Muthaiga, Nairobi. There has been a marked increase in outpatient attendees over the period from 60,204 children in the year 2003 to 263,564 children in the year 2013; an average of 143, 518 visits annually. The hospital has also launched an immunization program, which has had a transformational impact; 267,882 children have been immunized at the hospital campus and outreach clinics.

Discussion: Forming an early relationship with children and their families is important and a well-organized clinic, in convenient locations, staffed with skilled and well-qualified professionals is an important part of this decentralization model. The model is very successful and has won a Millennium Development Goal Award.

Conclusion: This model has had a transformational impact on children's lives and serves as a boost to the current paediatric health care system in Kenya.

O'Hearn, Shawna
Dalhousie University, Canada
Co-authors: Wilson, Maria; Dalhousie University

Institutional Policy Changes: Implications for the Future of Global Health

Rationale: In May 2014, the Center for Strategic and International Studies (CSIS) published a report with the University of Washington and the Consortium of Universities for Global Health (CUGH) that examined the sustainability and growth of global health programs in U.S. and some Canadian universities. Many university stakeholders cited strong international partnerships as critical to the success and sustainability of their efforts.

Canadian universities are at a turning point with federal funding reductions, national enrolment numbers declining and private partnerships becoming a mandatory component to research and programming priorities. With these challenges, universities have turned to the international market focusing on enrolment and research funding as a potential answer to their financial challenges. The international market as only a 'financial' resource is a narrow view of globalization.

Global health has typically sat in the background of the internationalization priorities within Canadian universities. However, universities recognize the need to bring global health into the dialogue and planning of internationalization. This study will explore the opportunities for global health to influence a socially and fiscally responsible Canadian university.

Objective: Recognizing the growing importance of international partnerships in university global health programs, this study will:

1.Explore how international partnerships are mutually benefiting universities and their international partners

2.Describe the opportunities and challenges for the development of sustainable global health programs at Canadian universities

3.Provide insights that could serve as a framework for university leaders to navigate the development and growth of global health programs

Methods: The study included a web-based survey for tertiary educational institutions with global health programs. Targeted institutions were located through member list of the University Advisory Council of the Canadian Coalition for Global Health Research (CCGHR). For the qualitative component, semi structured interviews conducted with 10 senior members of global health programs.

Results: Resources, partnerships and interest in global health continue to grow within the Canadian university environment. While the global health community is diverse, there is a common vision and set of principles based on social responsibility, ethical engagement and collaboration. These principles can be the foundation to intersect the policy development and priority setting in internationalization strategies.

Discussion: Building a robust global health agenda for the training of talent, extension of relationships across multiple borders and the mobilization of new ideas among higher education institutions and partners will benefit our domestic community and foster global stability. Approaching internationalization of higher education where sector issues, like global health are core is a relevant and necessary approach to strategy development.

Conclusion: The intent of this study is to serve as a framework for discussion as university leaders navigate the development and growth of global health programs within the university context.

O'Keefe-Markman, Caroline
Students International Health Association, Canada
Co-authors:

Maternal health challenges in remote rural Tanzania: Maasai maternal health

The Maasai population in Eastern Tanzania represents an underserved community with unique health needs due to their geographic isolation and pastoralist lifestyle. They are faced with barriers in accessing health care and often lack basic reproductive health knowledge. Additionally, their culture and traditions make adhering to health practices challenging. Deliveries occur without assistance, as the women are unaware of the signs of labor, as well as being reliant on male permission to seek medical care. Students International Health Association (SIHA), a student run group from the University of Alberta, has been involved in health initiatives in this community since 2014. They aim to stimulate the community's capacity to improve their own health in a sustainable way through multisectoral action and community engagement. A context analysis was performed to understand the unique challenges faced by this remote community, which highlighted the need for accessibility to better education, safe birthing facilities and skilled birth attendants. Reproductive health seminars ranging from puberty, sexually transmitted diseases, contraception as well as safe pregnancy and delivery have previously been provided. A program evaluation is currently underway to assess the community's needs with the intention of generating feasible solutions. Retention of knowledge is currently being assessed, as well as the potential to partner with a local outreach program to aid in childbirth and prenatal care. The use of focus groups, in depth interviews with key informants, as well as clinical statistics will be incorporated to ensure needs of the community are adequately addressed and to ensure the community is able to overcome barriers contributing to maternal mortality. Lack of reproductive health and maternal health education are significant contributors to overall cause of maternal and infant death in sub-Saharan Africa. This is especially enhanced in the Maasai population in Tanzania. It is of the utmost importance to build capacity within this community in order to address the health concerns of a marginalized and underserved group.

Otupiri, Easmon
Kwame Nkrumah University of Science and Technology-School of Public Health, Ghana
Co-authors: Larsen-Reindorf, Roderick; Komfo Anokye Teaching Hospital, Ghana/ Nakua, Emmanuel; Kwame Nkrumah University of Science and Technology, Ghana/ Apenkwa, Joana; Catholic University College of Ghana, Fiapre-Sunyani, Ghana

Performance monitoring and accountability 2020: an innovative approach to nationally representative population-based surveys in Ghana

Rationale:
In Ghana, the notable population-based health surveys are the Demographic and Health Survey (DHS) and the Multiple Indicator Cluster Survey (MICS). The usual approach has been to train teams that are deployed to use paper forms to collect data from eligible respondents once every 5 years. The time between start of data collection and data dissemination could take as much 12 months. The need to generate quality data to inform program implementation in a faster way and at shorter intervals is overwhelming; performance monitoring and accountability 2020 shows the way.

Objective:
To develop rapid turnaround surveys using mobile phone technology that supports the collection and transmission of data to a cloud server for real-time aggregation, analysis, and dissemination.

Methods:
One hundred female resident enumerators (REs) were trained to use smart phones to collect family planning, and water, sanitation and hygiene (WASH) data from households and service delivery points (SDPs) in a randomly selected nationally representative sample of 100 enumeration areas. It took 2 weeks to train the REs whom a team of 12 supervisors supervised; the REs were recruited from or very near the sample clusters. Using a multi-stage cluster sampling technique and anticipated non-response rate, the round I survey had a target sample size of 3,400 females and 150 SDPs.

Results:
Since November 2013, three survey rounds have been conducted at almost 6-monthly intervals; a forth round of data collection is scheduled to be completed in June 2015. In the first round, 2,758 females, 3,581 households and 149 SDPs were covered; households with eligible females (15-49 years), and eligible SDPs were contacted and consented for interviews. Round I data show that modern contraceptive use has increased slightly since the 2008 DHS survey. The average number of children per woman has steadily declined while adolescent births rate has fallen to 64 births per 1,000 women aged 15-19. The unmet need for family is still very high and 16% of households rely on unimproved water sources as their main source. Weights were calculated based on non-response at the cluster, household and individual levels and applied to all estimates

Discussion:
The data matched the results of recent DHS and MICS surveys.

Conclusion:
It is possible to train a team of female resident enumerators to conduct mobile-assisted surveys with a turnaround time of 9-10 weeks. The rapid turnaround time facilitates a more responsive flow of evidence for programming at the national, regional and district levels.

Parnia, Abtin
Dalla Lana School of Public Health, University of Toronto and Public Health Ontario, Canada
Co-authors: Chakravartty, Dolon; Dalla Lana School of Public Health, University of Toronto. Wiseman, Clare L.S.; School of the Environment, University of Toronto. Archbold, Josephine; Toronto Public Health. Copes, Ray; Public Health Ontario & Dalla Lana School of Public Health, University of Toronto. Zawar, Noureen; Dalla Lana School of Public Health, University of Toronto. Chen, Shirley; School of the Environment, University of Toronto. Cole, Donald C.; Dalla Lana School of Public Health, University of Toronto.

Newcomer women in the greater Toronto area: The case of trans-national metal exposures in a global environment

Rationale:
Newcomers to Canada bring with them histories of environmental exposure in their home countries, yet limited research in Canada has examined environmental exposures as a function of country of origin and gender variation. Newcomer women continue to be exposed to metals through fish consumption and other dietary choices, skin whitening products or cosmetics such as Kohl, traditional remedies, lead paints, or cookware and other products imported from their countries of origin in addition to new behavioural, environmental, and occupational exposures in Canada. Blood levels of metals such as lead (Pb), mercury (Hg), and cadmium (Cd) can serve as indicators of such trans-national environmental exposures.

Objective:
We sought to describe the exposures and blood concentrations of Pb, Hg, and Cd among South and East Asian newcomer women of reproductive age in the Greater Toronto Area (GTA).

Methods:
We worked in collaboration with public health units and community organizations utilizing a community-based research model. Peer researchers were hired from South and East Asian communities with proficiency in eight languages. Participants had resided in the Greater Toronto Area for 1 to 5 years, provided blood samples and participated in phone interviews on potential sources of exposure in Canada and their home countries including diet, cosmetic products, traditional remedies, work-hobbies and housing.

Results:
From February to May 2015, 138 participants had completed blood tests and interviews. They originated from Bangladesh (20%), China (25%), India (31%), Pakistan (18%), Sri Lanka (5%) and other countries (1%). The upper 95 percentile (%ile) for participants' blood metal concentrations were 8.89 nmol Cd/L, 0.21 umol Pb/L and 33.4 nmol Hg/L. Compared to the upper 95%ile concentrations among participants in the Canadian Health Measures Survey (Cycle 2, 2009-2011), 34%, 6%, and 7% had higher concentrations for Pb, Cd and Hg, respectively.

Discussion:
Our initial results suggest that newcomer women from South and East Asian countries have higher blood metal concentrations compared to the general Canadian population, likely reflecting both past exposures in their countries of origin and exposures that continue after arriving in Canada. Specific sources identified can inform public health interventions for various transnational communities in the GTA.

Conclusion:
A community-based research model effectively reached these newcomer populations. Newcomer women are exposed to global sources of metals with resultant higher blood concentrations.

Patterson, Kaitlin
McGill University/IHACC, Canada
Co-authors: Berrang-Ford, Lea; McGill University, Lwasa, Shuaib; Makerere University, Namanya, Didicus; Ugandan Ministry of Health, Ford, James; McGill University, Harper, Sherilee; University of Guelph, IHACC Research Group

AT WHAT SCALES DOES FOOD INSECURITY VARY' A CASE STUDY OF HIGHLY FOOD INSECURE INDIGENOUS COMMUNITIES IN SW UGANDA

Rising food prices, constraints on agricultural land, and the occurrence of severe famines and droughts have contributed to increasing attention to global hunger and food security. One of the most common tools used to estimate food security is the USDA household food security survey module (HFSSM) questionnaire. The HFSSM is premised on heterogeneous food insecurity among households within a population and across typical HFSSM categories. There has been little validation of this tool within severely food insecure and homogenously poor populations or to test the scale-dependence of module. The Batwa of Kanungu Uganda are an Indigenous Pygmy population and previous research has indicated that the communities face steep social gradients in health and high burden of disease. Our objectives were to: 1) estimate the prevalence and range of food insecurity in an Indigenous Batwa population in southwestern Uganda, and 2) estimate variation in food security explained by household and community level variation. An adapted version of the HFSSM was administered 6 times at 3-month intervals between January 2013 and April 2014 (n=767 households). We apply a multilevel modeling approach to determine household and community level predictors of food insecurity. The Batwa are highly food insecure (97% food insecure, 84% severely food insecure), ranking among the highest estimates of food insecurity published in the peer-reviewed literature. Variation in food insecurity that is explained by household and community-level risk factors was low. Our results suggest that variation in food insecurity may be poorly reflected in household-level, or even community-level, analyses and that variation and key predictors of food security ' and therein appropriate intervention entry points ' are likely occurring at the regional scale. Food insecurity analysis should be considered scale-dependent, with increased use of multilevel modeling approaches to identify methodologically-appropriate and policy-relevant scales of analysis.

Pérez Lu, José Enrique
Universidad Peruana Cayetano Heredia, Peru
Co-authors: Ruth Iguiñiz ; Perez, Jose; Universidad Peruana Cayetano Heredia

WawaRed-PERU: 'Reducing health inequities and improving maternal care by improving health information systems' at different levels through the public health sector

There is evidence that is possible to improve the health of the mother and newborn with preventive and emergency obstetric care to avoid and resolve complications during pregnancy and childbirth. However, the implementation of these actions by health care providers in fragmented health care systems need good health information systems to guide their decisions. Inadequate access to health records and information by health care providers at public health services usually translates in inadequate health care and wideness inequities between, especially in low-income and rural populations.

Objective: Contribute to the integration and interaction of fragmented maternal health information systems to improve the availability of higher quality, timely data accessible to health providers from primary care level and specialized health facility through electronic health records.

Methods: Develop a model of integration-interaction of maternal health information systems in Peru by applying interoperability principles to make women´s electronic health record (EHR) available to health care providers at different levels through the public health sector. We conducted a qualitative study to determinate a) the situation of maternal health information system and their usage by health providers at different levels of care delivery; b) the different levels in with maternal health care is provided

Results: Services are provided by specialty and information from medical records are not properly shared between services. The medical record of a user on a primary care level are not accessible when the user uses a more specialized health facility.

Prenatal care to pregnant women is provided mainly by midwives in first-level health facilities. Delivery occurs in centers of higher resolution capacity. Women carry with them a summary of her medical history (prenatal care card) in print. If a pregnant woman lost or forget its card, the information of pre-natal checks is lost and will delay care delivery or repeat unnecessary tests.

After delivery, medical information is not transferred to the local health center from which women came from and which is responsible for postpartum care and control of the child. This limits the health center opportunities to follow up on postpartum and newborn child health care.

Analysis and Conclusion: The experience of implementing EHR as part of the objectives of Wawared project brought to light the problem of the lack of integration and interaction of the different information systems and levels of care of maternal health, and the need to ensure the availability of information throughout women´s journey through the various levels of health system to improve health providers access to information and appropriate care delivery.

Perez-Lu, Jose Enrique
Universidad Peruana Cayetano Heredia, Peru
Co-authors: Garcia, Patricia Jannet; Universidad Peruana Cayetano Heredia

WawaRed Rural: Randomized Controlled Trial of the use of voice messages to improve maternal care in Rural Areas in Peru

Rationale: Maternal health has become a priority worldwide. Currently, it is estimated that one woman dies every minute due to pregnancy related issues. Many of the deaths are in rural areas and are preventable. The coverage of cell phone in Peru is very large. There are more cell phones than people. This technology should be used in health to reach people in remote areas such as rural areas.

Objective: To evaluate the impact of voice messages in Quechua (Quechua is the native language in the Andean region) or Spanish with reminders for medical appointments, general pregnancy health tips and nutritional tips, sent by cell phone to pregnant women in rural areas on pregnancy outcomes.

Methods: We performed a randomized controlled trial enrolling pregnant women from rural Ayacucho in the Peruvian Andes. Women were randomized in two group: to receive voice messages and a control group. We collected information regarding antenatal care visits (ANC) through health records, and interviewed each women after delivery to collect data on number of ANC visits, reported adherence to ferrous sulfate supplements, hematocrit level at third trimester, number of doses of tetanus vaccine received, newborn weight, if women had attend postpartum clinic appointment. We also explored about knowledge of warning signs in pregnancy.

Results: 208 women were enrolled, 104 in the intervention and 104 in the control group. Pregnant women who received messages compare to women in the control group were 3 times more likely to have 6 or more ANC on time ($p=0.067$); 1.2 times more likely to have 2 doses of tetanus vaccine ($p=0.009$); over 15 times more likely to be adherent to taking ferrous sulfate supplements ($p=0.007$); over 8 times more likely to recognize 6 or more warning signs during pregnancy ($p< 0.001$); and almost 3 times more likely to go to their postpartum control visit ($p< 0.001$). In addition, pregnant women who received messages were 21% less likely to have decreasing hematocrit levels ($p=0.004$).

Discussion and conclusions: In rural areas, voice messages in Quechua and Spanish for rural pregnant women had significant impact on several indicators related to maternal care. Due to the high penetration of cell phones in rural areas, voice messages represent a very useful tool to reach women in their own language.

Rahman, Nazneen
BRAC, Bangladesh
Co-authors: last name: Roy,First Name:Tapsh , last name: Afsana, First Name: Kaosar Organization: Health, Nutrition and Population Program; BRAC, BRAC Center, 75 Mohakhali, Dhaka-1217, Bangladesh

BRAC's upgraded Shasthya Shebika; the effective and sustainable community health worker model in Bangladesh: BRAC's experiences.

Rational

Shasthya Shebikas (SSs) of BRAC are Community Health Worker and very first contact point between community and health services. Considering the emerging situation such as non-communicable disease and consumer preference for 'skilled' health professional, BRAC initiated to upgrade SS called Model SS from the pool of existing ones from mid-2011. There is no concrete evidence available that BRAC's SS approach makes a difference in the lives and well-being of SSs themselves. The present study, therefore, attempts to fill this gap. It considers the journey of new upgraded SSs to understand whether this refined CHW model has enable women to perform effectively and well-being at community levels in a sustainable way.

Method

Data was collected using in-depth interview with randomly selected 70 Model SSs and 35 community people who received service from Model SS. Data from project Management Information system (MIS) was also used.

Objective

The objective of this study is to capture BRAC's lessons and to explore the experienced by the Model SSs in professional and the potential of the model as an effective and sustainable means of providing community-based services.

Result

The role of Model SSs is to primarily screen the cases and mobilize community forwards. During 2014, over 56,715 were measured and among them 7,499 screened and referred for hypertension. 6,955 from referred cases received diagnosis from formal care provider. About 24,406 were tested and 3,943 were referred for high blood glucose with glucometer. Among them 3,227 attended facility and appeared further blood test. To check the sensitivity of screening by Model SSs, 654 for hypertension and 308 for diabetes referred cases were observed. Among them 394 and 248 of hypertension and diabetes respectively were identified as confirm diagnosed by formal health provider. The program successfully monitored and found that, more than 90% of cases referred by Model SSs were attended the formal doctor for further diagnosis. Among them 70% were diagnosed formally as confirm cases.

All Model SSs noticed that, 'the training such as measure BP, screening diabetes; increased confidence'. Some of the service receivers replied, 'Model SSs are reliable even at mid night they are knocked if anyone feels unwell'. The data also revealed that after being Model SSs their income increased three times more than a normal SS.

Conclusion

To upgrade the Community Health Workers by technical based training would be an effective way to make them sustainable and address the newly rising needs.

Rahman, Nazneen
BRAC, Bangladesh
Co-authors: Ahmed,First Name: Anisuddin, Organization: icddr,b, Sharker,First Name:Malabika, Organization: JPGSPH, BRAC University, Roy, Tapsh , Afsana, Kaosar Organization: Health, Nutrition and Population Program; BRAC

Knowledge, attitudes and practices of community skilled birth attendants (CSBAs) for maternal health care in rural Bangladesh

Rationale:

Due to the pregnancy-related complications about 6,000 women die in Bangladesh every year. This may refer the case of deliveries which is mostly (71%) home based. 96% of them are attended by the unskilled birth attendants. To improve the quality of care during delivery, the Government of Bangladesh along with its development partners initiated culturally approved Skilled Birth Attendants in the community called CSBA. They are made-up to provide normal safe delivery at homes and act as a referral to the emergency obstetric care if needed.

To determine the level of awareness of health workers in the healthcare system it is therefore necessary to determine the attitudes and practices of such health workers towards service delivery. This would help proper mobilization and training of the healthcare delivery system to respond to the concerns and growing need for proper health care practices.

In Bangladesh, after 14 years of initiation of CSBA program, there are still lacks of studies on KAP of CSBAs. This study will help Bangladesh Government as well as NGOs to help in guiding the policy makers and programme Managers in designing and operationalizing the MNH interventions in an integrated manners.

Objective:

This study aims to determine the knowledge, attitudes and practices of the CSBAs working in the rural Bangladesh.

Method:

The study was conducted in two districts of Bangladesh namely Shirajgong and Mymensingh. The data was collected purposively by seven in-depth and 90 pre-coded structured interviews with the CSBAs successively.

Result and discussion:

We assessed knowledge score for 1st stage, 2nd stage and 3rd stage management of labour among the CSBAs. Their mean score were less than 50% which was below satisfactory level. There was no specific standard indicator found among the CSBAs to measure Post Purterm Hemorrhage .Regarding PPH management, majority of the CSBAs (66.7%) reported the ‘massage uterus’. Very few (12%) of the CSBAs reported ‘use bi-manual compression and refer the cases to the facility’. The indicator ‘Refer immediately during convulsion’ found common practices among100% of the CSBAs. Unfortunately 19.2 % of the CSBAs reported that, they put spoon in between jaw while convulsion started in case of aclampsia.

Conclusion:

The study found significant knowledge gaps among the CSBAs. However, an in-depth study is needed for exploring the current knowledge and practice of the CSBAs to improve effective package of maternal health care significantly.

Rajani, Rozeena Abdul Rasool
Aahung, Pakistan
Co-authors: Aziz, Ayesha; Aahung

Youth Access to Sexual & Reproductive Health and Rights

Pakistan's demographic profile depicts the features of a young population where issues of adolescents and youth are of particular concern as 63% of the country's population is under the age of 25 years. The WHO report of 2009, highlighted that the underlying issues of adolescent mortality caused by suicide, violence, HIV/AIDS and complications during pregnancy and child birth pertained to sexual and reproductive health and rights issues that usually remain unattended due to social taboos and limited communication. Comprehensive sexuality education, along with healthcare services and parental or community support have been proposed as an option for ensuring the well being of adolescents/youth and future generations. Young people in Pakistan desperately need information about their bodies, yet they lack avenues for obtaining this information. Moreover, the taboo associated with the subject, induces discomfort and unwillingness in both information seekers and providers. Therefore, most Pakistani youth have reported being unaware of basic information on puberty and development.

In order to address issues of Pakistani youth, Aahung has developed a comprehensive sexual and reproductive health life skills curriculum that includes topics such as puberty, human reproductive parts and processes, pregnancy and childbirth, HIV/AIDS, body protection and dealing with violence. To ensure teachers' involvement in youth sexuality education the program focuses on building their capacity to promote healthy attitudes such as positive body image, self-esteem and confidence through teaching Aahung's life skills curriculum.

Since September 2008, Aahung has worked with 79 schools and 515 teachers who are understood to provide education to 37,424 young students. Anecdotal evidence related by teachers illustrates an improvement in students' knowledge on puberty, body protection and healthy behaviors while an increase in their confidence and communication skills to raise questions and resolve personal/family issues through discussion was also noted.

Aahung's experience of involving teachers in youth sexuality education has enabled us to recognize the significance of engaging school management personnel as well as parents and other community influentials in the process of education. Our program was more effective in schools where all stakeholders were engaged and the commitment from school management ensured institutionalization and accountability mechanisms. We have also learned that in the Pakistani context, it is more acceptable to initiate comprehensive sexual education by focusing on building basic life skills so that comfort and trust between teachers and students can be established before discussing core sexuality topics.

Rajani, Rozeena Abdul Rasool
Aahung, Pakistan
Co-authors: Aziz, Ayesha; Aahung

Children ' Rights to protection and Information

Child sexual abuse (CSA), one of the least talked about forms of child abuse is any activity in which an adult or older child uses a child in a sexual way. CSA adversely affects the physical, mental and emotional health of survivors during childhood, adolescence and adult life. In Pakistan, CSA is largely recognized as a social crime that is rarely reported. Lack of education about their bodies and rights predisposes children to sexual abuse. Moreover, the social taboos, guilt and shame associated with discussing sex and sexuality endorses reluctance to report CSA incidents. The role of caregivers, like schools teachers and parents, in empowering children to protect their rights is seen as an opening but has often been ignored in policies and programs.

Aahung, a non-profit organization established in 1995, has attended to the issue by considering CSA as one of the thematic work areas. Aahung works for CSA prevention by sensitizing schools teachers and parents on basic prevention techniques and educating them on signs and symptoms that CSA survivors usually present with. It is understood that teachers' leverage in the socio-cultural and educational system can be used to prevent, draw attention towards and deal with CSA incidents.

Since September 2008, Aahung has worked with 1560 teachers and parents from 36 schools in Karachi, the urban hub of Pakistan. Teachers and parents who attended Aahung's awareness raising sessions reported an increase in knowledge on types of abuse, abusers and survivors in CSA incidents. However, during follow-up many teachers and parents related their hesitation to initiate dialogue and use Aahung's CSA flash cards and video while communicating with children. Though the awareness raising sessions held in the schools were well received, most teachers and parents were of the opinion that a comprehensive training on CSA awareness and prevention should be offered to develop comfort and alleviate their anxiety in utilization of tools for communicating with children and managing CSA incidents.

The experience of work on CSA has enabled Aahung to recognize that messages on the issue are well accepted in the Pakistani culture across the boundaries of different ethnicities and religious sects. CSA awareness raising campaigns on electronic and print media, in partnership with local corporate sector will be cost effective in increasing knowledge of a wider audience of caregivers. However, trainings conducted at the interpersonal level should focus on skills/strategies for initiating dialogue, preventing and dealing with CSA incidents.

Rakita, Uros
McMaster University, Canada
Co-authors: Giacobbe, Peter; University of Toronto/ UHN

Factors predicting patterns of global electroconvulsive therapy utilization

Rationale and Objective: Neuropsychiatric disorders, primarily depression, contribute about 14% to the overall global burden of disease. Despite overwhelming evidence that Electroconvulsive Therapy (ECT) is a safe and effective treatment for a number of debilitating psychiatric illnesses, there are notable differences in the rate that it is employed across the world. The current project investigated the reported rates of ECT utilization worldwide and factors associated with this difference. Further analysis investigated factors associated with ECT utilization and antidepressant medication utilization across nations. Ultimately, the goal of this study was to highlight potential circumstances that limit the access to psychiatric care worldwide.

Methods: ECT utilization rates by country were derived from published research articles. Data were obtained from WHO and OECD databases regarding nation-by-nation differences in healthcare indices, including suicide rates, number of psychiatrists and nurses per capita, as well as governmental health and mental health expenditure per capita. Measures of the ability of nations to provide for the social and environmental needs of their citizens were obtained from the Social Progress Index database.

Results: A stepwise regression revealed that government expenditure on mental health (but not healthcare in general) explained the majority of variation in ECT rates, accounting for the majority of the reported variability in ECT utilization across countries ($R^2=0.54$, $p=0.005$). Higher ECT usage was independently associated with lower suicide rates and higher levels of social progress in the area of health and wellness. This three-factor model accounted for 66.9% of the variability of ECT utilization across nations worldwide. Global variations in antidepressant utilization were not associated with government expenditure on mental health.

Discussion and Conclusion: In summary, both economic and societal factors may be influencing ECT utilization rates around the world. Differences in the per capita expenditure for mental health accounts for the majority of the variability in the rates of use of ECT across countries worldwide. Societal and professional stigma towards patients with mental illness and psychiatric treatments may also be preventing adequate access to psychiatric care. Perhaps ECT utilization can be used as a measure of not only global psychiatric treatment accessibility, but also as a measure, beyond antidepressant utilization, of a nation's commitment to mental healthcare in general. Efforts to improve the accessibility of ECT from a global perspective may need to address the three-factor model.

Redden, Kara
McGill University, Canada
Co-authors: Breger, Dana; McGill University. George, Suzanne; McGill University. Mardakis, Stephanie; McGill University. Roy, Julien; McGill University. Saint-Laurent, Olivia; McGill University. Macdonald, Mary Ellen; VOICE, McGill University. Carnevale, Franco; VOICE, McGill University.

Indigenous childhood ethics: A scoping review

Introduction: Childhood ethics can be defined as 'all knowledge and practices relating to childhood matters of right/wrong, good/bad, or just/unjust' (Carnevale, F. A., Campbell, A., Collin'Vézina, D., & Macdonald, M. E., 2013). While ethics inquiry has been developed in many domains, the field of healthcare has been challenged to examine treatment decision-making processes for children (CPS, 2004). In Canada, there are no universally accepted standards regarding the child as capable of making morally competent decisions. Indigenous children are doubly vulnerable in that they face additional systemic health inequities including 'higher rates of infant mortality, tuberculosis, injuries and deaths, youth suicide, middle ear infections, childhood obesity and diabetes, dental caries and increased exposure to environmental contaminants including tobacco smoke' (Greenwood & Leeuw, 2012, p.381). These inequities reflect a need for understanding how Indigenous children are involved in health care decisions that affect them.

Objective: This analysis has examined published ethical concerns regarding Canadian Indigenous children in the healthcare context. The objective was to identify what is known in the literature regarding health related Indigenous childhood ethics in Canada since 2004 and highlight the gaps in the research thus far.

Methods: An established scoping review framework was adopted from Arksey and O'Malley (2005). Both normative and non-normative literature was searched in CINAHL, Medline, Embase, Global Health Database, Web of Science, Anthropology Plus, Bibliography of Native North Americans, Canadian Paediatric Society, and United Nations Convention on the Rights of the Child.

Results: The Canadian Paediatric Society and the United Nations Convention on the Rights of the Child have positions on child autonomy, the best interests of the child, capacity for decision-making and, involvement of the family and community. Yet, there is no empirical literature comparing what is and what ought to be in practice regarding decision-making capacity among the child Indigenous population.

Discussion: The best interests of the child and respect for autonomy are two opposing approaches guiding the extent to which children's voices should be heard in healthcare decisions that involve them, neither of which consider the particularities of Indigenous populations. In light of the various health inequities faced by Indigenous children, the question of whether these standards are even suitable for this population has been raised.

Conclusion: This analysis serves as groundwork for future research in this topic, aiming to eventually provide a culturally sensitive framework for healthcare professionals working with Indigenous children.

Rogalska, Tetyana
Queen's University, Canada
Co-authors: Yeates, Karen; Queen's University

Ethical considerations and community impact of global health electives

Rationale: International experience is becoming an increasingly valuable asset in medical training, with growing numbers of medical students seeking opportunities to work in developing, resource-limited settings. The impact of international learners on local communities and their health care systems has not been assessed to date.

Objective: This study aims to evaluate the impact of global health electives on local communities in order to inform the development of ethical and mutually beneficial opportunities for medical learning.

Methods: Questionnaires assessing quantitative and qualitative data points were developed for visiting medical students, local medical students, local physicians, and hospital/clinic administrators. This research took place in Tanzania, and was organized in two phases: a pilot study (Phase I) held at Pamoja Tunaweza Women's Centre, followed by a full-scale study (Phase II) that will include the Kilimanjaro Christian Medical Centre, Mount Meru Hospital, and Arumeru District Hospital. Structured interviews were held with study participants, and data was analyzed for common themes and ethical concerns.

Results: We report the results from the single-center, pilot study at Pamoja Tunaweza Women's Centre. The clinic's physician, administrator, and two international medical learners were interviewed. All study participants reported that the main benefits of global health placements included bilateral knowledge exchange, capacity-building, and financial support through donations and activity fees. Learners reported that their supervisors had a good understanding of their level of training and elective goals, that they received appropriate supervision, and that they were never asked to assume responsibilities beyond the scope of their education or experience. Language barriers in clinical encounters were the major identified challenge, and were overcome with the assistance of translators. Medical learners reported that while their contributions to patient care were low-to-moderate, their elective goals were well met by the end of their placement.

Discussion: Our findings suggest that global health electives benefit both visiting medical learners and local communities when the program structure facilitates good communication of goals and expectations between staff and students, when students receive appropriate supervision and responsibilities for their level of training, and when supports are in place to overcome communication barriers.

Conclusion: The results of this pilot study indicate that international global health placements can benefit both visiting students and local health institutions. No major ethical concerns were identified. Phase II of this research will determine whether these results are consistent with the experience of other centres, and will allow for a statistical analysis of reported measures.

Rosales, Alfonso
World Vision US, USA
Co-authors: Rosales, Alfonso; World Vision US; Hedrick, Juli; World Vision US; Cherian, Dennis; World Vision US; Kuol Kuol Amet; World Vision South Sudan; Walumbe, Elizabeth; World Vision South Sudan;

Translating knowledge and skills into practice. A case-study on supportive supervision for community based health service delivery in rural South Sudan.

Background: Improving and maintaining clinical skills of frontline health workers over time is critical for strengthening health systems and providing adequate care to mothers, newborns, and children'supervision is widely recognized as key to improving health worker performance. Nonetheless, evidence on suitable supervision models for this level of care is scarce.

Methods: This research study describes and assesses a supervision model for illiterate community health workers (CHWs). Fifteen CHWs were trained and studied to assess correct use of health record forms; identification and classification of disease; treatment of sick children; referral to health facilities; and use and storage of tools and medical supplies. CHWs were visited weekly by a field supervisor for three months and then monthly for 10 months. Information was prospectively collected by individual observation and use of check-lists.

Results: 87% of CHWs were accredited as competent to deliver Integrated Community Case Management plus essential newborn care services. Other results included 95% of registration forms completed, only 7% discrepancy between classification of illness and drug administration, and all drugs accounted for with complete stocks. The overall referral initiation rate to primary health care unit found was 73%, with a 92% referral completion rate. A total of 2,552 children under age five were seen by CHWs, with a mean of 196 child visits per month.

Conclusion: Results showed CHWs to be effective in improving coverage of key MNCH practices, assessing mothers and children, and initiating treatment for malaria and diarrhea. Likewise, results suggest that a supervision process to monitor, improve and maintain clinical skill performance by CHWs within a community case management strategy is important. Supervision should be integral to health program design and implementation in order to obtain positive outcomes, especially within community-based approaches where treatment with drugs is included, and in fragile state contexts.

Roussakis, Christina
McMaster, Canada
Co-authors: Hunter, Andrea; McMaster

Mental health care training of health workers in low and middle income countries

Mental health is a key area of focus in the global health community with mental health issues affecting people everywhere. However, mental health is perceived, acknowledged, diagnosed and treated in very different ways around the world. Many of these differences relate to variations in who is delivering mental health services and what type of training they are receiving. In order to work towards the goal of mental wellness for all, it is important to consider these differences in training and determine what future research and courses of action are required. This research looks at how mental health is approached in low and middle income countries by looking at the training health workers in these countries receive in mental health. In doing so, it seeks to identify gaps in the current literature and propose future points of research focus. This topic was explored using the scoping review style described by Arksey and O'Malley (2005). Five databases were searched for peer-reviewed journals relevant to the research question 'What is known in the existing literature about the inclusion of mental health in the training of health care practitioners in low and middle income countries'. Preliminary results indicate there is great variation in the types of workers responsible for mental health care and further variation in the training they receive. Most studies reported positive changes in attitude and increased knowledge in health workers immediately post-training. Additionally, there was a trend in the literature towards training non-physicians and non-mental health specialists in mental health care. In many of the studies, training followed Western practices and protocols and was adapted for local context. These results identify two main gaps in the research, lack of information on non-Western training and lack of information on the long-term effects of mental health training for health workers. Future research could therefore expand upon both of these things. Ultimately, mental health is a global issue that affects all equally. In order to address it as such, it is important many perspectives are taken into account and that research continues to look towards sustainable, long-term solutions.

Salaeva, Dinara
Brock University, Canada
Co-authors: Rempel, Lynn, Brock University, Department of Nursing; Bich, Tran Huu, Hanoi School of Public Health; Rempel, John K., St. Jerome's University; Hoa, Dinh Thi Phuong, Hanoi School of Public Health

Father involvement in Asian culture from the identity theory perspective: predicting father-infant interaction and breastfeeding support in Vietnam

Child development is an important determinant of global health (Rebello Britto, Engle, & Super, 2013), and fathers' involvement can enhance child behavioural, social, and cognitive development (Lamb & Lewis, 2010). However, father parental involvement varies within and between different cultures, and research on fatherhood in Asian cultures is limited (Shwalb, Shwalb, & Lamb, 2013). It is important to understand the factors that influence fathers' involvement in Asian cultures, and whether theoretical models developed in Western cultures are applicable in the context of the countries such as Vietnam.

Identity theory (Stryker, 1968) describes how behaviour such as father involvement is guided by identities. The aim of this study was to examine identity theory concepts including fathers' affective commitment, role identity, the psychological centrality of this role identity, and fathering role performance.

To achieve the aim of the study, secondary data analysis was conducted based on data obtained from the control group (n = 412) from a longitudinal father involvement intervention study in Vietnam. Affective commitment was measured using attitudes toward fathers' involvement with infant and breastfeeding; father-infant attachment was used as an indicator of psychological centrality; role performance was measured using fathers' reports of father-infant interaction and involvement in breastfeeding. Preliminary results of relationships between affective commitment and psychological centrality in regard to role performance were examined using baseline prenatal, 1-month and 4-month postpartum data.

Indicators of fathers' role performance at 1 and 4-months were regressed against the theoretical predictors of identity theory in hierarchical regression analysis. Greater levels of affective commitment and stronger psychological centrality were important predictors of increased fathers' role performance in the infants' lives and in supporting mothers' breastfeeding decisions. Findings regarding sociodemographic factors were mixed. Despite the fact that marital relationship quality declined over time, it predicted fathers' involvement in breastfeeding practices, and to a lesser extent father-infant interaction.

Hence, fathers' parenting attitudes, their attachment to the infant and marital relationship quality can help to explain fathers' involvement in their infants' lives and in supporting mothers. These findings support the idea that Western concepts regarding the factors associated with fathers' involvement can be translated into the context of Asian culture, and that Stryker's (1968) identity theory model can be used to inform the development and implementation of programs aiming to increase the level of fathers' involvement in Vietnam and globally.

Saleh, Sherif
McMaster University, Ontario, Canada
Co-authors: Rakita, Uros; McMaster University Mulvale, Gillian; McMaster University

An Analysis of the Ontario Mental Health Act: using the Houston and Richardson Problems Definition Framework

Mental health continues to represent a significant public health concern even in the most developed countries like Canada. In turn, mental health policies in Canada have served to insure that the needs and basic human rights of a historically stigmatized and feared population are maintained. The Ontario Mental Health Act (OMHA) is a legislation designed to regulate the admissions process of mental health patients in Ontario, primarily the fashion in which involuntary hospitalization is enforced. Despite its long history, the OMHA has encountered and still remains the subject to many controversies regarding its efficacy in addressing issues and inappropriate implementation. The current study investigated the background sociopolitical and economic factors that have resulted in the 4 major amendments (1967,1978,1987, and 2000) of the OMHA since its formulation in 1957.

Using the Houston and Richardson problem definitions framework, this policy analysis investigates the development of OMHA legislation based on how the societal burden of mental health issues were perceived at different time periods. The Houston and Richardson problem definitions framework consists of six problem definition components: societal condition, empirical evidence, causal theory, solutions, and values; along with five success characteristics: effective entrepreneur, consensus within proponents, feasibility of solutions, comprehensiveness, and compatibility with other definitions. Through a historical revision of official governmental reports, primary studies, case-studies, and reviews, three competing problem definitions were identified to have dictated OMHA amendments: security, human rights, and holistic health.

The study findings revealed that the human rights and security definition historically played greater roles in the development of the OMHA, where their influence was dependent on the sociopolitical climate of the time. With a recent increasing trend in public support of libertarian values, the influence of the security definition may become overshadowed by the remaining two definitions. To balance the interests of the two historically antithetical problem definitions, the current analysis suggests greater inclusion of the community in involuntary admissions processes and advocates for a healthcare team-based assessment model. In conclusion, this analysis revealed the importance of the fashion in which a social issue is framed politically as well as the role dominant cultural perceptions of a certain period play in the manufacturing of policy. The current framework facilitates greater understanding of mental health policy development and highlights the underlying factors that undermine its effective implementation. Similar analysis could be applied for other policies global regions and controversial health issues.

Saleh, Nadira
Mennonite Economic Development Associates, Canada
Co-authors: Phiri, Thokozani; University of Waterloo; Guo, Victor; University of Waterloo

Market approaches to nutrition: fortifying virgin sunflower oil with vitamin A in Tanzania

Malnutrition is a critical development challenge in Tanzania. In the past decade alone an estimated 600,000 children under the age of five have died as a result of inadequate nutrition in Tanzania. Vitamin A deficiency is a particular challenge: a third of children under five and 37% of women aged 15-49 are suffering from Vitamin A deficiency. Rural areas far from centrally fortified oil are disproportionately affected by this nutrition burden, yet have considerable access and preference for locally milled and widely available sunflower oil.

This project tests two emerging technologies for children and lactating mothers, focusing on two regions of Tanzania most affected by Vitamin A deficiency: Manyara and Shinyanga. Recent work by MEDA and BASF suggests virgin sunflower oil maintains shelf-life over 70 days when fortified with Vitamin A. Using HPLC, this project tests the viability and shelf life of oil fortification at the local small and medium enterprise (SME) level and along the value chain to see if a sustainable business model can support fortified oil distribution.

The second emerging technology is an innovative electronic voucher (eVoucher) to promote the new fortified product. The voucher utilizes cellphone messaging to deliver targeted discounts to mothers of children under five, and other residents of selected Vitamin A deficient communities, while jump-starting demand for the new fortified oil from the three SMEs. Using this real-time data, the project measures uptake of fortified oil at decreasing levels of discount to understand how purchasing behaviour is affected.

The eVoucher data is paired with a longitudinal household survey which measures 300 households in both treatment and control areas to assess changes in vitamin A deficiency (HPLC of serum retinol).

Overall, this project determines the potential for the private sector (producers and retailers) to contribute to a well-nourished, food-secure society by providing sustainable access to Vitamin A fortified sunflower oil in rural Tanzania.

Salena, Kristen
The Hospital for Sick Children, Canada
Co-authors: Kristen Salena, Ellie Adler, Cassandra Bick, Dr. Curt Bodkyn, Dr. Sumit Gupta, Dr. Corrine Sin Quee-Brown and Dr. Victor Blanchette, SickKids

The SickKids-Caribbean Initiative (SCI): A twinning program to build capacity for care in paediatric cancer and blood disorders in the Caribbean

Rationale: While significant increases in childhood cancer survival have been achieved in high-income countries (HIC), low- and middle-income countries (LMIC) have not made parallel gains. The vast majority of childhood cancers are not preventable, necessitating a programmatic focus on early detection, treatment and management. Twinning between established paediatric haematology/oncology centres and hospitals in resource-constrained settings facilitates bidirectional sharing of clinical expertise and organizational skills, thereby improving survival (Ribeiro, 2014).

Objective: The Division of Haematology/Oncology at the Hospital for Sick Children (SickKids), Toronto, Canada is among the largest worldwide. We aimed to leverage clinical expertise to establish a twinning program with Caribbean institutions through the SickKids Centre for Global Child Health in order to enhance local capacity to care for children with cancer and blood disorders.

Methods: Launched in 2013, the SickKids-Caribbean Initiative (SCI) aims to bridge the gap in survival by partnering with institutions in six Caribbean countries: Bahamas, Barbados, Jamaica, St. Lucia, St. Vincent and the Grenadines and Trinidad and Tobago. Through multiple site visits culminating in formal partnership agreements and concrete relationships with key academic, Ministry of Health and hospital stakeholders, relationships are primarily managed via multimodal communication. A needs assessment was conducted which informed a five-year strategic plan focusing on thematic areas derived from local need and available resources.

Results: Thematic areas were confirmed by local clinical champions and operationalized through five interprofessional working groups, identified areas included: diagnostic services, clinical care, oncology databases, nursing education and sickle cell disease. SCI has successfully developed the foundational framework by which to conduct a twinning program and has begun implementation of project activities in all participating countries.

Discussion: Caribbean countries face unique geopolitical challenges, such as small population size and limited accessibility to specialized diagnostic services and anti-neoplastic agents. Given the limited available literature on twinning partnerships in the region, evaluating the impact of SCI will demonstrate how effective twinning can be applied. This work will generate results that may serve to both improve the effectiveness of SCI's work in the region and to provide evidence for other global initiatives working in this area of paediatric disease.

Conclusion: Characterized by building local capacity and interprofessional knowledge transfer through targeted education and training, SCI is working to enhance outcomes for children with cancer and blood disorders in the Caribbean. Careful future evaluation of SCI processes and outcomes will provide evidence on the most effective ways of organizing twinning programs.

Sawhney, Pearl
Grinnell College, USA

Implementation of national rural health mission in India: a tale of two states

Rationale: The NRHM was launched by the government of India in order to address the growing health problems. The mission's primary goal was to provide improved access to quality health care, especially for those residing in rural areas, the poor, women and children. Reduction in infant mortality rate and maternal mortality ratio were two primary goals besides prevention and control of communicable and non-communicable diseases, promotion of healthy life styles, and population stabilization. Despite the universality of the policy itself, the impact of NRHM in the various Indian States has been different, which is the subject of this study.

Objectives: The paper examines the impact of socio-economic factors such as literacy rates, gender inequality, poverty levels, land reforms, social inequality, and corruption etc. on the implementation outcomes of NRHM.

Methods: A case-study method is used to examine the implementation of NRHM in Himachal-Pradesh and Uttar-Pradesh, which are highly rural and have similar government systems.

Results: The health outcomes show success in Himachal-Pradesh and failure in Uttar-Pradesh due to supportive and unsupportive socio-economic factors respectively.

Discussion: The observations suggest that rational decisions are often subjugated by the unfavorable socio-economic factors that can drive individuals to act otherwise.

Conclusion: Though there is no easy solution to break the web between various social, political and economic problems that are integrated and intertwined, I believe the very first step should be to bring land reforms that become the foundation for reduction in rural inequality and social inclusion. Linked to the land reforms is the corruption that can be marginalized by bringing greater transparency in keeping land-records by digitizing the information and making it publicly available. The combined result of these two steps will be greater community involvement and better micro-level leadership, which will become watch dogs for better implementation of NRHM. In addition, the funds under IEC-program should be used for education and publicity of the health services, so that the citizens are better informed of the services they can use, hence providing better checks and balances to improving healthcare services. The government needs to take strong measures in creating gender equality and education, because both these factors reinforce the health initiatives adopted by a family. Also, government needs to simultaneously invest in the economic infrastructure such as power, roads, transport, communication etc. For example, transport and communications infrastructure aids in providing access to health services and education, particularly for females and children.

Schulz, Mark
Private, Canada
Co-authors:

Mental Disorders as the 5th NCD: A Proposed Hybridized Model

The research conducted for this paper addresses the growing gap between global mental health and non-communicable disease (NCD) models. It posits that, among the commonly associated risk factors for developing NCDs, an additional risk should be an individual's mental wellbeing. This presentation will explore the syndemic association between maternal wellbeing and fetal-infant mental disorders, and how this relationship markedly increases the long-term risk for the infant to develop NCDs. Through studying epidemiological models, such as the Fetal Development Origin Theory, the objective is to support global recognition of mental health as the fifth NCD, and the promotion of daily mental health through a hybrid mental health and NCD Framework that promotes holistic wellbeing through the adoption of a life-course approach to health. To determine the validity of this hybrid model, an analysis of select nation states' domestic mental health legislation was conducted. The objective was to determine whether the proposed hybridized model, which employs a human rights-based approach, can reconcile the existing tensions and prejudices presently impairing necessary mental health initiatives from being fully integrated into domestic health systems. At present, the results from this research have not been fully determined. Analysis of case study legislation has presented variable outcomes that appear to be associated with individual nation states' economic and political systems. These initial results are not outside the realm of expected outcomes; however, they present further challenges that must be reconciled if such a hybridized model were to be implemented. Summarily, the adoption of a human rights-based approach by member states will undoubtedly inform the process and procedure of domestic legislation reform by fully embracing the articles outlined in the paradigm shifting Convention on the Rights of Persons with Disabilities. Furthermore, the human rights-based approach reorients both individual citizens and policy makers through empowerment and increased accountability. This permits policy makers to approach future domestic legislation unabated by past social barriers thus leading to increased public and private funding allocation.

Seca-Masot, Nicolas
HEC Montreal, Canada
Co-authors: Bélanger, Valérie; HEC Montreal and CIRRELT; Rancourt, Marie-Ève; UQÀM and CIRRELT; Seca-Masot, Nicolas; HEC Montreal and CIRRELT; Soriano, Patrick; HEC Montreal and CIRRELT; Atim, Pamela; Makerere University/Gulu University; Ochola, Emmanuel; Lacor Hospital; Ogwang, Martin; Lacor Hospital

Improving healthcare delivery at St-Mary's hospital Lacor through operations management/operations research

After twenty years of armed conflict in northern Uganda, St-Marys Lacor Hospital Gulu has faced a sharp rise in the number of patients presenting chronic conditions, which require longer treatments and a profound modification of the health service offer. This new situation is challenging the Hospital's management team to review and refine its practices and management tools in order to ensure the best delivery of services with it's limited human and financial resources. Tuberculosis (TB) has been identified as a critical disease for which the hospital needs new methodologies and tools to improve the logistics of treatment delivery and patient follow-up mechanisms (essential for a successful treatment).

This project pursues two complementary objectives: 1) identify the main challenges related to the TB healthcare delivery process and propose improvements; 2) identify supports activities of the hospital, involved in the TB healthcare delivery process, which could also benefit from improved management methodologies or decision support tools.

Since this project was initiated without any prior information on the actual TB delivery process in place at the Hospital, the initial phase consisted in a comprehensive collection of information, through a literature review and questionnaires, followed by an extensive series of interviews and observations carried out on site. The data obtained was then analyzed to produce a comprehensive process mapping which, when complemented with the interviews, would allow to identify the main challenges encountered in the TB delivery process as well in the other hospital activities supporting it.

The major challenges identified from this analysis were the following. 1) The internal management of the information on diagnosed TB patients needs to be organized in a systematic fashion to improve data entry efficiency, accuracy and availability, which will in turn make it possible to improve follow-up activities; out-reach activities in the community (including TB follow-up) need to be better structured, coordinated and supported; various solutions are proposed to this end, including a computerized database. 2) Infection control in the hospital during the TB diagnosis phase could be significantly improved; several solutions are proposed ranging from simple process adjustments, establishing a fast track for suspected TB patients, to a simulation tool.

Finally, several challenges were identified in the hospital support activities such as: transportation planning and maintenance; nurse demand planning and scheduling. However, tackling these issues requires longer-term research efforts to develop decision tools based on operational research.

Seguin, Carlyn
U of S, Canada
Co-authors: Meili, Ryan, U of S, Arcand, Jaylynn, U of S, Abdul, Najwa, U of S

Making the links: Certificate in global health

Rationale: The College of Medicine has offered the Making the Links (MTL) program since 2005. Making the Links is a unique certificate program for undergraduate medical students, combining academic courses with intense service-learning experiences in: (1) the Saskatoon's underserved core communities at SWITCH (Student Wellness Initiative Towards Community Health); (2) Remote northern Saskatchewan; and (3) the Global South. The additional global health training has strengthened the knowledge base of participating students, improving their overall medical education.

Objective: After 10 years, MTL alumni are now practicing as physicians in our communities and our aim is to investigate the impact of MTL on the students.

Methods: We examined aggregated statistics from 2007-2014. Employing a longitudinal study, we compared the MTL alumni to the non-MTL students. Comparative effects can be defined by the following variables: academic outcomes (LMCC scores), demographic measures (age, race, gender, rural or urban, and Aboriginal status) and academic outcomes (LMCC scores) compared to their medical school counterparts.

Academic Performance: Independent samples t-test were run on both sets of scores in order to demonstrate effects of the program on academic performance.

Qualitative Assessment: A survey aimed to answer the 'where are they now'' question will be answered through a survey aimed at alumni of MTL.

Results: An independent samples t-test was conducted to compare LMCC scores for those who participated in the MTL program (N = 44) and those who did not participate in the program (N = 518). There was a significant difference in the LMCC scores for those who participated in MTL (M=542.64, SD=80.94) when compared to those who did not participate in MTL (M=501.31, SD=75.24) t (560)= 3.48, p = 0.001, d= 0.53).

Discussion: The results suggest that participation in MTL can have a positive effect on academic performance, as measured by LMCC scores.

Conclusion: In 2007, a need was seen for a developed global health program in the College of Medicine, leading to the inclusion of the MTL: Global Health Certificate into the college's long-term plan. The preliminary findings suggest that participation in MTL has a relationship with earning a higher score on the LMCC exams and anecdotal evidence, currently being investigated, suggests that MTL also influences students' final selection of career path. This suggests that the development of a service-learning certificate program in Global Health can help strengthen the medical education of the student participants.

Seguin, Carlyn
U of S, Canada
Co-authors: Meili, Ryan, U of S, Schwandt, Michael U of S, Calvez, Stryker, U of S, Abdul, Najwa, U of S

Social determinants of health clinical assessment tool

Rationale: A robust body of research has shown a strong effect of the SDOH on the health outcomes of populations. These effects are not limited to underserved or marginalized members of a community but impact the overall health of the entire population. There is currently a gap in the availability of clinical assessment of patient's needs based on the SDOH and the requisite necessary interventions.

Objective: This tool is envisioned as becoming an ongoing addition to patient's chart and will allow the health care provider to maintain a real time understanding of the impact of specific determinants while guiding clinical decision-making. The tool additionally aims to provide a channel by which patients are connected with the appropriate local interventions, resources, and programming. Patients are empowered to take better control of their individual health by engaging with their healthcare provider and discussing the complex array of social, economic, and environmental factors that impact individual and community health.

Methods: Face Validity - Medical students, acting as mock patients will complete the tool and then be prompted to fill out a survey to evaluate the patient experience. A short survey, intended to gain insights into how participants comprehend the questions, and process and recall the information provided, will follow.

Scale Reliability - This stage will involve the recruitment of 300 undergraduate students at the University of Saskatchewan to test the reliability of the tool. Aggregate data will then be coded for testing.

Clinical testing: A larger trial will begin once the tool has been proven to evaluate the use of the tool in a clinical setting. A mixed methods design will gather qualitative and quantitative data around the patient and provider experience as well as patient health outcomes.

Results: We will be running validity and reliability in June - August 2015 and will have results to report by September 2015.

Discussion: N/A

Conclusion: This tool is for physicians and healthcare providers to use in primary health centers to assess and address patient needs based on the social determinants of health (SDOH). The tool additionally aims to provide a channel to connect patients with the appropriate local interventions, resources, and programming. The electronic platform is adaptable, and both the questions and resources can be tailored based on need or geography. We have developed key partnerships with local community initiatives, and have national team of experts driving the progress and refinement of this tool and its' use.

Shah, Lena
McGill University, Canada
Co-authors: Shah, Lena; McGill University, Rojas Peña, Marlene; Direccion de Salud Lima IV Este, Zamudio, Carlos; Universidad Peruana Cayetano Heredia; Kaufman, Jay S.; McGill University, Seas, Carlos; Universidad Peruana Cayetano Heredia, Otero, Larissa; Universidad Peruana Cayetano Heredia, Gotuzzo, Eduardo; Universidad Peruana Cayetano Heredia, Brewer, Timothy F.; University of California, Los Angeles

Design of a pragmatic research protocol to evaluate the cost-effectiveness of a population-based active tuberculosis (TB) control program in Lima, Peru : challenges and opportunities

Rationale:

Operational research (OR) on the functioning of TB prevention and control programs in high-burden, low-resource regions is key to identifying best practices. However, few National TB Programs (NTP) have the expertise to undertake OR, and many researchers are unfamiliar with the constraints faced by NTP under routine programmatic conditions. San Juan de Lurigancho (Lima, Peru).

Objective:

NTP officers and university-based researchers jointly designed the implementation and evaluation of an active case finding program to improve household contact (HC) screening of TB cases in 34 district healthcare centres (approx. pop.: 900,000).

Methods:

Working together, NTP officials and researchers are conducting a pragmatic stepped-wedge cluster randomized approach to initiate a new active TB screening program for all HCs of smear-positive TB cases. District TB clinics, stratified by case rate, are being randomly allocated to begin the active case finding intervention at one of four time periods. This systematic, phased introduction of the program will facilitate its execution and evaluation compared with the existing passive HC detection program. These data are crucial for determining the intervention's effectiveness, cost-effectiveness and sustainability.

Results and Lessons learnt:

Trust and time were required to understand each group's needs and challenges. NTP officials helped researchers recognize constraints'financial, staffing, training and political'regarding how programs can be initiated and the outcomes of most importance from a public health perspective. Researchers helped officials with critical elements of program design, data collection and quality in order to meaningfully assess a program's impact. Together, we are coordinating and evaluating a new population-based active case finding strategy across 34 routine NTP facilities in a low resource, TB endemic setting. Lessons learned could help determine the usefulness of expanding this program to similar settings and contribute to identifying best practices for TB prevention and control.

Conclusions and recommendations:

NTP/researcher partnerships in the design and evaluation of large-scale TB interventions under routine programmatic conditions in endemic settings can substantially improve TB control globally. Taking advantage of this potential requires a willingness to understand each others' expertise and needs, sustained by the common goal to eliminate TB.

Sheppard, Phillip
Global Health Division of the Canadian Physiotherapy Association, Canada
Co-authors: Phillip S. Sheppard, Michel D. Landry, & Sudha R. Raman

Role of rehabilitation in post-earthquake Nepal

Rationale: On April 25th, 2015 a 7.8 magnitude earthquake struck the Lamjung district of Neapal, 81 km Northwest of the capital city of Kathmandu. More than 8500 people were killed and over 16000 individuals were injured. In addition over 750 000 houses were destroyed or damaged in the earthquake. The event was deemed the worst disaster to strike the region in over 80 years. Two weeks after the initial earthquake, a large aftershock of 7.3 magnitude shocked the nation. In total more than 18500 people were injured in both major tremors. Non-Governmental Organizations (NGOs) already present in the country were able to respond within hours of the earthquake by providing rehabilitation services and delivering mobility aids and essential equipment to hospitals in Kathmandu. Most of the damage was sustained in rural communities. However, due to the majority of infrastructure being located in urban centres coupled with difficulty accessing rural areas, humanitarian relief was initially focused on the capital. The earthquake caused a sharp increase in the number of people living with a disability.

Objective: The aim of this presentation is to demonstrate the important role of rehabilitation professionals from the immediate post-disaster response to the months following the earthquake in Nepal.

Methods: The presentation will follow the experiences of a physiotherapist who was in Nepal during the earthquake and the role of rehabilitation professionals in post-disaster relief in Pokhara and Kathmandu. Results: Rehabilitation professionals have an important role in post disaster relief to improve mobility, function, and participation for those affected.

Discussion: By focusing on participation and decreasing disability, rehabilitation professionals can decrease the burden on the healthcare system by initially ensuring safe discharge from the hospital for those with minor injuries to free up beds. In the long-term, rehabilitation can help people with a newly acquired disability reintegrate to their community and society.

Conclusion: Rehabilitation plays an important role in post-disaster relief and should be included from the initial stages through to recovery and community development for the years following.

Sia, Drissa
Département des sciences infirmières, Université du Québec en Outaouais, Canada
Co-authors: Hajizadeh, Mohammad; School of Health Administration, Dalhousie University; Nandi, Arijit; Institute for Health and Social Policy & Department of Epidemiology, Biostatistics, and Occupational Health, McGill University

The effect of gender inequities on HIV incidence in sub-Saharan Africa

Rationale and Objective: Women are disproportionately affected by HIV/AIDS in the Sub-Saharan Africa (SSA) region, where several countries are still severely affected by the pandemic. Gender inequities, including obstacles to women's active participation economic, social, cultural and political spheres, may contribute to gender inequalities in HIV/AIDS and help to propagate spread in the general population. However, the contribution of gender inequity to HIV incidence has not been quantitatively estimated in SSA. We assessed whether gender inequities, measured by gender gaps in educational attainment and labour force participation, influenced HIV incidence in SSA.

Methods: Our analysis is based on a country-level panel of 24 SSA countries assessed annually between 1996 and 2011. We used multilevel mixed-effects Poisson regression models to examine the effect of gender inequities on HIV incidence.

Results: Our descriptive results indicated that HIV incidence decreased by 50% over the study period. There was gender gap in labor force participation in the selected countries with half of these countries having a ratio of female to male labor force participation rate of 85.7% or less. Results from multivariable regression models showed that a one per cent increase in the ratio of female to male labour force participation reduced HIV incidence by 3 per cent (incidence rate ratio (IRR) = 0.97, 95% confident interval (CI) = (0.96 ‘ 0.98)). However, the ratio of female to male primary enrolment was not associated with the rate of new cases of HIV infection. The effect of GDP on HIV incidence depended on the level of GDP. Its effect results in HIV incidence increases but at a diminishing rate of return for each additional unit of GDP. Additionally, better government effectiveness reduced the incidence of HIV in SSA.

Discussion and Conclusion: Although several new international initiatives to fight against HIV/AIDS have emerged over the last two decades, the effect of these initiatives combined with the effect of other local initiatives on reducing HIV incidence has not been satisfactory. Our study indicated that mitigating gender inequities represents a potential strategy to reduce HIV incidence in the SSA region.

Sidze, Estelle
African Population and Health Research Center, Kenya
Co-authors:

Use of phone technology in improving maternal health in Kenya

Kenya has registered the lowest percentage decline in maternal mortality ratio among the USAID 24 priorities countries; 17% between 1990 and 2013. An overwhelming percentage of women in rural hard-to-reach communities continue to deliver at home without skilled attendance (more than 70% of women in some regions of Kenya). The World Health Organization (WHO) recommends skilled care during and immediately after delivery and emergency obstetric care in cases of complications as key to reducing maternal and neonatal deaths. While the vast majority of pregnant women in Kenya make use of antenatal care services (92% in 2008-09), the percentage of births attended by skilled providers remains very low at 44%.

To address the problem of low uptake of skilled delivery and improve maternal outcomes, the Kenyan Government introduced the Free Maternal Care in 2013, removing fees for delivery in all public health facilities [8]. However, this initiative is only likely to incentivize a small proportion of women to seek skilled delivery. Judging by the 2008-09 Kenya Demographic and Health Survey, cost of delivery prevented only 17% of women from delivering at health facilities. Transport and sociocultural factors prevent about 63% of women from seeking skilled delivery in Kenya. Thus for the new free maternity care policy to deliver its expected impact, strategies to overcome transport and cultural barriers to skilled delivery ‘ the missing link ‘ are urgently needed.

A team at the African Population and Health Research Center in collaboration with PharmAccess have proposed to develop and test a mobile phone platform exclusively designed for pregnant women to provide innovative transport solutions and birth preparedness messages. The ultimate aim is to increase the level of skilled birth attendance and early postnatal care, and to reduce maternal and neonatal deaths.

The conference is a great opportunity to share the idea and the foreseen health impact with a wider audience of researchers and implementers and the foreseen health impact in Kenya.

Silverberg, Sarah
University of Toronto, Canada
Co-authors: Hoffman, Steven; University of Ottawa and Harvard University

Empirically evaluating an experiential education experiment aimed at training the next generation of global health leaders

RATIONALE: Two trends are emerging in Canada's post-secondary education system that affect global health: a growing interest in global health education, and an increased use of experiential learning. Demand and interest in global health among Canadian students is well documented, despite the difficulty in integrating meaningful global health experiences into curricula. This study seeks to combine the two trends and develop a novel way of developing global health leaders in an undergraduate education setting.

OBJECTIVES: This study evaluates an experiment in global health education through an undergraduate experiential course aimed at training the next generation of global health leaders and explores the role that experiential education can take in doing so.

METHODS: Global health advocacy was taught to nineteen undergraduate students at McMaster University through an experiential education course during which they developed a national campaign on global access to medicines. A quantitative survey and analysis of social network dynamics were conducted, along with a qualitative analysis of written work and course evaluations. Data was interpreted through a thematic synthesis approach.

RESULTS: Themes were identified related to students' learning outcomes, experience and class dynamics. The experiential education format helped students gain authentic, real-world experience in global health advocacy and leadership. They learned concrete lessons about advocacy and personal and interpersonal skills. While experiential education is an effective tool for some learning outcomes, it is not suitable for all. However, group dynamics and evaluation methods impact the learning environment.

DISCUSSION: Experiential education can be an effective tool for teaching students about global health advocacy such that students feel connected and valued by the field. Tangible implications for their course work was a key motivating factor and the authenticity of the experience was critical to learning. However, students were unable to learn broadly across global health and advocacy topics, and rather focused on a singular campaign. Thus while experiential education is an effective tool for some learning outcomes, it is not suitable for all.

CONCLUSION: Real-world global health issues and advocacy approaches can be effectively taught through experiential education. These experiences are potentially empowering and confidence-building despite the heavy time commitment they require. Attention should be given to how such experiences are designed, as course dynamics and grading structure significantly influence students' experience. This study revealed lessons that are helpful for global health educators in designing future opportunities to integrate global health lessons into curricula.

Slaney, Paula
Memorial University, Canada
Co-authors: Allison, Jill (Ph.D); Memorial University

Rural Global Health: A student's experience participating in the International Summer Institute for Global Health Training (InSIGHT).

Rationale:
The challenge of providing quality rural medical services is common in both the developed and developing world. Experiences in rural health care in developing countries can be important for a well-rounded medical education by providing experiences in a low resource setting.

Objectives:

1) To learn about the rural health care challenges in Nepal and how these are being addressed

2) To make connections between rural healthcare in Nepal and in Newfoundland

3) To learn about the impact a rural global heath experience can have on medical education

Methods:
Student reflection as well as meetings with local Non-Governmental Organizations (NGOs), Patan Academy of Health Sciences medical students, community activists, and women's groups. There was also a four day rural community visit to Makwanpur.

Results:
Major challenges facing rural health care in Nepal included: lack of physicians, lack of services and lack of access to safe quality health care especially maternal healthcare. The poor road conditions and geography of Nepal makes it incredibly difficult to provide access to healthcare universally in the country. Providing healthcare in rural villages is left largely to health care volunteers.

Discussion:
Many of the challenges facing rural health care in Nepal parallels to the challenges being faced in Newfoundland and Labrador. Nepal has implemented many innovative approaches to address rural needs including: training rural health care workers to provide more services known as task shifting. There are also Women's Health collectives consisting of volunteers that have received basic training to identify and treat common medical conditions in remote villages. In Nepal, there is an expectation of medical students to return to their home villages to further their training and practice upon graduation. This expectation is accepted and many students feel privileged to be able to provide healthcare in rural areas. In Newfoundland, while returning to rural areas is encouraged we are still struggling to attract rural medical students back to their communities. Newfoundland is attempting to address the lack of physicians challenge with bursary incentives for practicing in rural areas.

Conclusion:
The InSIGHT program filled an important gap in my medical school curriculum by providing the opportunity to learn about rural health care in a developing country. While Western medicine differs in many ways from Nepal, we can still learn ways to address our local rural healthcare challenges from experiencing similar challenges thousands of miles away.

SOMBIE, Issiaka
Organisation Ouest Africaine de la Santé, Burkina Faso
Co-authors: Jude Aidam*, Gabriela Montorzi**, Susan Godt*** ‘ * West Africa Health Organisation, BP 153, Bobo-Dioulasso, Burkina Faso ‘ ** COHRED, Geneva, Switzerland ‘ *** IRDC, Nairobi, Kenya

Strengthening National Health Research System in post conflict countries in West Africa

Introduction: After a situational analysis in 2009, West African Health Organisation with the support of COHRED developed a regional project, co-financed by WAHO and IDRC to support national health research system development in four weak post-conflict countries (Liberia, Sierra Leone, and Guinea Bissau). The article aims to present the results, challenges and opportunities in implementing this project in such difficult environments.

Methodology: An analysis of project reports and discussions with stakeholders was used to review the results and impact of the work done.

Results: After four years, the project has been able to assist in the establishment of a functional research unit within the Ministry of Health of Liberia, develop research priorities in Liberia and Guinea Bissau, and develop a research policy and strategic plan for Sierra Leone. Other achievements have been the initiation of a research coordination committee in Mali and completed national research maps in the four countries. Over 200 health system workers have been trained to either update their national and institutional information, conduct health systems research or to support the development of their national strategic plan. The major challenges have been the availability engagement, and capacity of the country teams, frequent staff turnover, Ebola epidemic, political instability and stakeholder commitment.

Conclusion: Strengthening national systems for health research to support evolving health systems is possible even in difficult post-conflict countries. Many challenges will have to be taken into account to achieve the best results.

Keywords: National health research systems, health systems strengthening, West Africa

SOMBIE, Issa
SERSAP, Burkina Faso
Co-authors: Somé D. Télesphore, SERSAP; Magnini Seindira, SERSAP; Frank Bicaba, SERSAP, Souleymane Sidibé, SERSAP, Maurice Hien, Ministère de la santé, Abel Bicaba, SERSAP.

Implication des décideurs politiques dans un processus de recherche : Défis et enjeux

Justification : L'implication des décideurs politiques dans les projets de recherche est de plus en plus considérée comme un moyen de produire des informations qui répondent aux besoins des gouvernements et des partenaires au développement et aussi comme un moyen pour l'adoption et l'utilisation des résultats pour la prise de décision et la formulation de politique publique. La pratique montre que cette exigence se heurte à de nombreuses difficultés qui méritent d'être documentées.

Objectifs : A partir de l'exemple d'un projet de recherche impliquant décideurs politiques et chercheurs, cette recherche vise à recenser et à analyser tous les faits qui influencent la collaboration entre ces deux groupes d'acteurs.

Méthodes : Les données utilisées ont été collectées dans le cadre de la mise en 'uvre d'un projet de recherche dont l'équipe est constituée de chercheurs et des responsables du ministère de la santé du Burkina Faso. Ce projet consiste à l'élaboration d'un cadre d'évaluation de la performance d'un système de santé de district. La revue documentaire, les entretiens semi-directifs et l'observation ont été utilisés pour collecter les données. Quatre chercheurs et six décideurs politiques ont été interviewés. Une douzaine de séances de travail ont servi de cadre d'observations des interactions entre les membres de l'équipe de recherche. Les données ont été collectées sur les aspects suivants : la disponibilité des décideurs, leur réactivité, la nature des tâches qui leur sont confiées, la pertinence de leurs apports, les formes de motivation, leur niveau de satisfaction, la perception de leur rendement par les chercheurs, les difficultés de collaboration et leurs sources.

Résultats : Les résultats indiquent une faible disponibilité des décideurs politiques qui se traduit par une faible implication dans les activités de recherche. Aussi, accusent-ils beaucoup de retard dans l'exécution des tâches qui leur sont confiées. A cela s'ajoute la faiblesse de leurs capacités scientifiques qui les oblige à se focaliser sur les tâches administratives.

Discussion : Appréhender les défis et les enjeux liés à l'implication des décideurs politiques dans la recherche permettra de prendre des mesures idoines pour améliorer cette collaboration.

Conclusion : L'implication des décideurs comporte beaucoup d'enjeux qui méritent d'être connus et pris en compte.

Spagnolo, Jessica
(1) University of Montreal (2) Douglas Mental Health University Institute (3) Montreal WHO-PAHO Collaborating Center for Research and Training in Mental Health, Canada
Co-authors: (1) champagne, françois; IRSPUM; university of montreal (2) leduc, nicole; IRSPUM; university of montreal (3) piat, myra; douglas mental health university institute; mcgill university

Building system capacity in primary care: are mental health training programs for general practitioners (GPs) effective?

Rationale: Health systems worldwide are facing enormous challenges in meeting mental health needs, creating a gap between the need for treatment and its provision. This treatment gap has prompted international focus on building system capacity by integrating mental health into primary care, specifically through mental health training programs. General practitioners (GPs) have been the target of such trainings given their lack of appropriate mental health knowledge and skills, and their strategic position to detect and treat mental health problems in primary care. Assessing the effectiveness of these mental health training programs offered to GPs is of high importance, given the fact that they are being implemented worldwide. To our knowledge, there is currently no review that undertakes such an endeavor.

Objective: This review aims to answer the question: Are mental health training programs designed for GPs and implemented in low- middle- and high-income countries (LMHICs) effective in building system capacity in primary care.

Methods: This review is currently underway. To meet our objective, we are searching the following databases: MedLline, PubMed, EMBASE, EBM Reviews/Cochrane, CINAHL, PsychINFO, ERIC and Scopus. Search terms include: GPs, primary care, mental health, training, education, integration, and building system capacity. Study eligibility includes: literature published from 1980 onwards; articles written in English, French or Spanish; and studies using RCTs, cluster RCTs or quasi-experimental trials. Full texts that meet eligibility criteria will be reviewed for quality assessment using the Quality Assessment Tool for Quantitative Studies. Based on heterogeneity of the selected studies, meta-analysis will be conducted using RevMan 5.2.

Results: Preliminary results of this review show that a number of different mental health training programs for GPs have been developed, implemented and evaluated in LMHICs. Analysis to assess their effectiveness will be conducted. Results will report the study design, location of the training, and quality assessment.

Discussion: To our knowledge, this is the first review that assesses the effectiveness of mental health training programs offered to GPs. For this reason, this review will fill an important gap in the literature. Results will also serve to inform policy, by aiding policy-makers with training implementation decisions.

Conclusion: Mental health training programs have been developed to address the growing mental health treatment gap in LMIHCs by equipping non-specialized health care professionals such as GPs with mental health knowledge and skills. Before pursuing implementation of mental health training programs targeting GPs, it is important to assess their effectiveness in building health system capacity.

Stevens, Marianne
University of Toronto, Canada
Co-authors: Nixon, Stephanie A., University of Toronto

Research on rehabilitation interventions for adults living with HIV: A scoping study

Rationale: Many adults are living longer with HIV due to advancements in medical therapies. Despite this increased longevity, many people are facing HIV-related disablement due to the side effects of medications, opportunistic infections or the virus itself. Rehabilitation professionals are well suited to treat the various forms of disability.

Objective: The purpose of this paper is to use a scoping study design to investigate the extent, range and nature of research on rehabilitation interventions for adults living with HIV.

Methods: Electronic databases (MEDLINE, EMBASE, CINAHL, AMED and PsychINFO) and reference lists of the included articles were searched. Authors were emailed when possible for unavailable articles. A total of 897 titles and abstracts were retrieved. Following review of titles and abstracts and full text review, 33 articles were included in the study.

Results: There were 27 different rehabilitation interventions presented in the 33 studies, delivered by eighteen professions. The studies were completed in 4 different countries. However in 10 studies the geographical location of the study was not mentioned. Most studies were published in 2008. Randomized controlled trial was the most used method in this review. The nature of the studies were analyzed according to the three core concepts of the International Classification of Functioning, Disability and Health (ICF): 28 studies addressed impairments; 6 studies addressed activity limitations; and 14 studies addressed participation restrictions. Sixty-one percent of the studies were completed in high-income countries versus 9% in sub-Saharan Africa where the burden of the disease is the highest.

Discussion: This review offers direction to rehabilitation professionals in treating individuals living with HIV in collating all available research on rehabilitation interventions for adults living with HIV. It identifies areas that require more research, such as activity limitations, and discusses ways to advance research on rehabilitation interventions for adults living with HIV.

Conclusion: This scoping study advances the knowledge of research on rehabilitation interventions for adults living with HIV. More research on rehabilitation interventions is needed especially in sub-Saharan Africa and other low-and-middle-income countries, such as the Caribbean, to ensure these individuals are receiving the best possible care.

Tam, Vivian
McMaster University, Canada
Co-authors:

A formative evaluation of the mobile health clinic program in La Romana, the Dominican Republic

Rationale: The Good Samaritan Hospital coordinates a system of around 40 volunteer medical teams who provide care to impoverished sugar cane communities, or 'bateyes' in La Romana. Each team intends to provide needed health services, yet there are currently no mechanisms in place for community members to provide feedback on quality of care, or perceived effectiveness of the mobile health clinic (MHC) system. There is also little communication between teams to ensure that their efforts are complementary. Consequently, there may exist unmet community needs and/or a redundancy in the services made available to each bateye.

Objective: 1) To elicit the health priorities of communities served by the MHCs 2) To determine whether these are addressed by the current structure of MHCs

Methods: 34 clinic patients were interviewed after receiving care at a MHC over 1 week regarding their satisfaction with the care received, strengths and limitations of the clinic, health issues within the community, and suggestions for improving the clinic system. Results from these interviews were iteratively coded and themes were extrapolated using grounded theory methodology.

Results: All participants reported a high level of satisfaction with the clinic system. Three main community health priorities emerged: 1) Children's health and education 2) Water and sanitation 3) Sexual health. Participants were concerned that children went to school hungry and performed poorly compared to their peers. Water was scarce and contaminated with garbage and faecal matter, while there was only 1 potable water faucet to serve a community of 400. Condoms and family planning services were available through the hospital but were inaccessible due to distance, while the small supply of condoms available through community health promoters was stigmatizing to access.

Discussion: Participants expressed satisfaction with the MHCs likely because they don't perceive the system as capable of addressing their health priorities at a community level. However, there are concerns that may be amenable to adaptations in resource allocation by the MHCs. Instead of soliciting toy donations for children, clinics could solicit support for a school meal fund. Education modules focused on community sanitation and water filtration may alleviate hygiene issues, while offering condoms confidentially to each patient instead of leaving them with the promoter may offer a desired degree of privacy.

Conclusion: While it would not be possible to address all systemic concerns raised by the community, MHC stakeholders might consider a redistribution of their current resources to optimally address community-defined needs.

Tcholakov, Yassen
McGill University, Canada
Co-authors: Gopfert, Anya. Peremiquel, Paula. Tobón García, Daniel.

Creating future leaders: an interprofessional experiential training in advocacy and global health at the World Health Assembly

Context/Setting

The World Health Assembly (WHA) is the annual decision making body of the WHO. Youth organisations and NGOs are increasing in their formal engagement with UN bodies; yet meaningful engagement requires training and understanding of the processes.

Intervention

The International Federation of Medical Students Associations (IFMSA) organised a four day youth training prior to the conference. The event brings together yearly more than 50 youth from all over the world and from a variety of fields: future doctors, public health practitioners, veterinary doctors, pharmacists, dentists, as well as economy and politics students. The training consisted of knowledge based sessions and advocacy skills training.

Observations

We assessed the impact of this training with a 14 item questionnaire where participants rated their competency using 1-5 Likert Scale. The questionnaire assessed self-perceived competency in advocacy, knowledge, and confidence in interacting with peers and key stakeholders. Participants completed the questionnaire at three points in time: before and after the training and after the WHA. The responses showed a trend towards an increase in all areas evaluated; it was statistically significant in 8 of the 14 areas after the conference whereas in only 2 of after only the training.

Discussion

This training demonstrates the importance of providing experiential multidisciplinary training in fields relating to leadership and advocacy. Immediate implementation resulted in further increases in knowledge, skills and competence. The improvement of leadership skills and confidence to interact with key stakeholders demonstrates the potential of such workshops to create confident health advocates for future generations.

Tiggelaar, Bernice
Canadian Red Cross, Canada
Co-authors: Salim Sohani

Maternal, newborn and child health (MNCH) interventions and delivery modalities in fragile states: A review of the literature

Rationale: Over 1.4 billion people live in fragile states, which are particularly vulnerable to the effects of natural disasters and protracted conflicts, and often fluctuate between emergency and recovery. Fifty-six percent of maternal and child deaths occur in fragile states, and over 80% of the countries that have not met the Millennium Development Goals for maternal and child survival have experienced reoccurring natural disasters or conflict. With the changing environment and nature of conflict, delivering services to improve maternal, newborn and child health (MNCH) is hindered by security risks, displacement, reoccurring disasters, and loss of health infrastructure and personnel. Synthesized information is lacking on interventions and modalities of delivery that can be incorporated into a development program operating in a fragile state. The international community has yet to meet the needs of women and children in these challenging contexts.

Objective: The objectives of this review are to systematically identify interventions and modalities of delivery, and assess their effectiveness; to inform organizations working in fragile states how to improve MNCH outcomes.

Methods: Available literature for MNCH interventions and modalities in fragile states will be reviewed in a systematic way. The following academic databases are included in the search process: PubMed, CINAHL, DoPHER, Web of Science Core Collection, CDSR, Scopus, and Global Health. Hand-searching will be conducted and grey literature from donor, agency and research bodies will be assessed. Data analysis will be conducted by reviewing titles and abstracts identified through search terms; articles meeting inclusion criteria will be read in full. Findings will be categorized by method of service delivery, project outcomes, and primary project activities.

Results: Our main results will be the interventions and delivery modalities used by other organizations categorized by reported project outcomes. Initial findings indicate the potential value of task-shifting and contingency planning in fragile states.

Discussion and Conclusion: By identifying recommendations and categorizing reported project outcomes, we will be able to identify gaps in MNCH programs and research. With the increase in reoccurring natural disasters and conflicts within fragile states, decisions regarding MNCH programs need to consider all available evidence to sustain improvements in health outcomes when emergencies occur.

Tomayer, Andrew
University of Ottawa, Canada
Co-authors: Smith?, Robert; University of Ottawa, Kulkarni, Manisha; University of Ottawa

Mathematical modelling of the impact of integrated vector control interventions on malaria transmission in Africa

Rationale: Malaria is a vector-borne illness caused by mosquitoes that results in hundreds of thousands of deaths globally each year. There are two main interventions that can assist in vector control, insecticide-treated bed nets (ITNs) and indoor residual spraying (IRS) of insecticides to the walls of the home. These are effective interventions individually, but there is need to assess their combined effectiveness for strategic vector control and appropriate practice.

Objectives: The main objective of this study is to understand the effectiveness of the interventions through use of ordinary and impulsive differential equations to capture the impact of ITNs and IRS on malaria transmission. The timing of IRS will also be examined to review effective spraying intervals and understand the intervals with the greatest influence on malaria incidence.

Methods: Ordinary and impulsive differential equations were developed to model the effect of malaria within human and mosquito populations. Parameters relevant to the disease in human and vector populations were incorporated within the mathematical model in addition to the effect of ITNs and IRS. Parameter values will be mined from published randomized controlled trials in sub-Saharan Africa and will be applied to the mathematical model using MATLAB version 8.5. Simulations through time-series analyses will be performed along with a sensitivity analysis to determine the most effective use of ITNs and IRS in malaria endemic settings.

Results and Discussion: Planned results will be based on parameters applied to the mathematical model from randomized controlled trials assessing the use of ITNs and IRS in Africa. The differences among demographics, types of insecticides, and other factors will be considered in the review of the selected trials. Initial results on intervention effectiveness will be developed through time-series analyses with the parameters. Initial results will be presented to provide a discussion on suitable use of the vector control methods.

Conclusion: Mathematical modelling is a useful method to estimate the effectiveness of malaria interventions. Through use of ordinary and impulsive differential equations to assess the effectiveness of IRS and ITNs, parameters from randomized controlled trials in Africa comparing these methods can be applied to determine if a significant difference exists on each methods' individual and combined impact to malaria. Results can assist in the development of future decision support tools and inform appropriate strategies for the selection and timing of key vector control interventions to maximize their impact on malaria transmission.

Tondereau, Mirlaine
Partners In Health, Haiti
Co-authors: Romela Beatrice Zanmi Lasante, Valcourt Roodeline, Zanmi Lasante, Myrka Amazan Zanmi Lasante

Clinical Nurse Mentor Program: Setting a Standard for Professional Development in Haiti

Introduction/Background

Dynamic, astute clinicians are formed through years of rigorous academic study paired with individualized clinical mentoring while transitioning into professional practice. This model utilized in structured settings has built a strong cadre of nursing professionals who deliver medical services and treatment, manage multidisciplinary teams and train future generations. Mentoring provides a foundation from which nurses can expand upon their roles as clinicians into research, public health and policy realms. Haiti's Ministry of Health currently does not have the technical or human capacity to support a consistent, adaptive clinical mentoring program for new graduate or experienced nurses.

Objectives

The Zanmi Lasante/Partners in Health Nursing Initiative is working towards advancing nursing practice and ensuring provision of equitable, high quality, patient centered services via its clinical mentoring program. The objective is to design and implement a clinical nurse mentoring program to reinforce capacity across the care platform. In providing strategic skill building and mentoring to nursing staff in the Artibonite and Central Plateau regions, this initiative strives to advance professional expertise as well as impact on patient outcomes.

Description of Project

The nurse mentor program prioritizes translating clinical science and skills into practice. The focus is nursing care in specialty areas such as acute care, pediatrics, maternal health and medical/surgical nursing. Nurse mentors perform competency assessments and employ monitoring and evaluation techniques in order to identify gaps in service delivery and clinical practice. The multi-dimensional team is then able to formulate programmatic interventions that amplify nurses' expertise in decision making regarding strengthening patient care, as well as the health system. From patient to mentor to chief nurse, this program addresses disease burden and capacity building through bolstering clinical practice and nursing leadership.

Outcomes/Implications for Global Health Nursing

Working in solidarity with our nursing partners in Rwanda, this program sets a precedent for nurse mentoring programs in other resource challenged settings. Nurses' are licensed and placed in a facility in which they may be the most senior staff member, or sole clinician providing care to populations with complex presentations and acute illnesses. This program is part of a united front to strengthen global health nursing and equitable service provision. Nurses deserve support from expert colleagues as they champion health as a human right in delivery rooms, ARV clinics and hospitals in some of the most challenging settings globally.

Tuck, Jodi
Ingram School of Nursing, McGill University, Canada
Co-authors: Tuck, Jodi, RN, MSc(A); Ingram School of Nursing, McGill University; Sherman, Jessica RN, MSc.(A); Welcome Hall Mission; St-Cyr, Isabelle RN, MSc.(A); Montreal Children's Hospital

REW - Re-entry workshops: Supporting students to integrate their global health experiences

Objective:
To provide support to nursing students following a global health placement via a series of re-entry workshops (REW). To better understand the challenges faced by students returning from a global health placement.

Rationale:

- While global health placements are recognized to be a rich learning experience for students while they are on placement, there is also a rich learning experience to be had upon their return.
- Global health placements often generate ethical, social and emotional challenges for students upon their return.
- The value of pre-departure training has been recognized, however the importance of supporting students upon their return from global health experiences has received little attention, despite the challenges faced by students.
- Re-integration learning and challenges may be enhanced through academic supervision and support.

Methods:

- Five Masters level nursing students in a Global Health Concentration (GHC) spent 3.5 months in a global health partnership site completing both clinical and research components.
- All students were offered the usual pre-departure workshop and ongoing support while on placement; additionally these students were offered REW upon their return.
- The REW consisted of a 3 hour session per month over 3 months to allow for reflection and variations in personal adaptation.
- Each session was facilitated by 2 alumni of the GHC.
- Facilitators had no conflict of interest to ensure a safe space for discussion.

Results:
The re-entry sessions highlighted many challenges experienced by students. Themes include:

1. Disillusionment with humanitarian work
2. Difficult transition when returning to structured life of school in Canada
3. Re-integrating in peer groups within classroom setting
4. Challenge of transitioning into the workforce after graduation
5. Social media, and the impacts of maintaining contact with friends and colleagues
6. Pressure and responsibility of wearing the 'University hat' representing the University and Canada
7. Awareness and risk of culture shock upon return, mental health issues
8. Difficulties applying previous coping mechanisms when returning from placement

Discussion:
The importance of debriefing was apparent, students indicated that REW was helpful in processing their experience one year following their return. Several supportive strategies were noted:

- meeting together as a group functioned as a support network
- normalizing & sharing personal experiences alleviated some emotional challenges

Conclusion:
Providing re-entry support to healthcare students upon their return from working in global health settings is crucial in encouraging a smoother integration and useful in detecting mental health issues that require intervention and support.

Turcotte-Tremblay, Anne-Marie
Institut de recherche en santé publique de l'Université de Montréal, Canada
Co-authors:

Le Régime canadien d'accès aux médicaments doit-il être adapté pour favoriser l'accès aux médicaments dans les pays à faible et à moyen revenu'

Justification : La majorité des personnes nécessitant un traitement antirétroviral ou antipaludique n'y a toujours pas accès, notamment en raison des coûts des médicaments brevetés. Afin que les brevets n'interfèrent pas avec l'accès aux médicaments des plus pauvres, les gouvernements membres de l'Organisation mondiale du commerce (OMC) peuvent émettre des licences obligatoires. Ces dernières consistent à accorder à une personne autre que le détenteur du brevet l'autorisation légale de fabriquer des versions génériques de médicaments brevetés. Au Canada, le Régime canadien d'accès aux médicaments (RCAM) a été mis en vigueur pour permettre aux pays admissibles d'importer des médicaments génériques à moindre coût que leur version brevetée. Un débat animé existe actuellement sur la scène nationale concernant la nécessité d'adapter le RCAM pour faciliter son utilisation et améliorer l'accès aux médicaments essentiels dans les pays à faible et à moyen revenu.

Objectif: L'objectif de cette analyse critique est d'évaluer les faits qui permettraient de conclure sur le besoin d'adapter le RCAM pour améliorer l'accès aux médicaments essentiels.

Méthodes: Une revue de documentation scientifique et savante a été effectuée. La base de données Medline a été utilisée pour obtenir les articles scientifiques pertinents. Le moteur de recherche Google a été utilisé pour identifier la littérature grise (rapports, documents, etc). Nous avons développé et utilisé sept critères pour évaluer la littérature et conclure sur le besoin d'adapter le RCAM. Ces dimensions ont porté sur la pertinence du programme, son efficacité potentielle, l'effet de sa mise en oeuvre, son efficacité réelle, l'existence des solutions pour faciliter sa mise en oeuvre et les conséquences potentielles d'une adaptation.

Résultats : Le RCAM est toujours pertinent et l'efficacité potentielle de l'octroi de licences obligatoires a été démontrée. Toutefois, des éléments précis de la mise en oeuvre de RCAM nuisent à son efficacité réelle. En neuf ans, le RCAM aura donc contribué qu'à fournir un seul médicament, à un seul pays. Des solutions réalistes et viables pour faciliter la mise en oeuvre de RCAM existent. Les conséquences néfastes d'une éventuelle adaptation ne sont pas démontrées ou significatives.

Discussion : Il est urgent d'adapter RCAM pour améliorer l'accès aux médicaments dans les pays à faible et à moyen revenu.

Conclusion : Les résultats de cette analyse critique permettront de faire avancer le débat concernant la nécessité d'adapter le RCAM pour faciliter son utilisation et améliorer l'accès aux médicaments essentiels dans les pays à faible et à moyen revenu.

Turnell, Roger
University of Alberta, Canada
Co-authors: Aziz, Khalid; University of Alberta; Konkin, Jill; University of Alberta; Brenneis, Fraser; University of Alberta; Summerhayes, Janet; Ethio-Canada Project Office - Edmonton; Fowler, Amy; Ethio-Canada Project Office - Edmonton; Nordstrom, Pam; Mount Royal University; Zakus, David, Ryerson University; Getachew, Abrham; Ethio-Canada Project Office - Addis Ababa, Ethiopia; Chane, Wuletaw, St. Paul's Hospital Millennium Medical School, Addis Ababa, Ethiopia.

Ethiopia-Canada Project: Protecting pregnant/delivering mothers and newborns ' Systems approach to strengthening skilled birth attendance and referral

Rationale: The 2011 Ethiopian Demographic and Health Survey indicates the MMR was 676:100000 live births compared to 12:100000 in Canada. The majority of pregnant and delivering mothers live in rural areas and for social, demographic and cultural reasons, do not have access to skilled birth attendants or emergency referral systems. Even with the increased number of midwifery graduates over the last ten years, the clinical skills of graduates are weak and they have little practical experience with normal and high risk deliveries. Our project seeks to address this gap by training Senior Midwife Tutor Trainers [SMTT] and by strengthening the maternal referral system infrastructure.

Objectives: Two main goals are to improve midwifery training systems by increasing the clinical skills and pedagogical development of graduating and graduate midwives and to improve the emergency care referral system for pregnant and delivering mothers in order to reduce maternal and neonatal mortality.

Methods: A project directed by the University of Alberta consisting, in part, of a core curriculum based on adult education principles developed by Mount Royal University, University of Alberta and Saint Paul's Hospital Millennium Medical School, Addis Ababa, Ethiopia, assesses learners and institutions, with reinforcement of core midwifery content, routine obstetric care, acute obstetric emergencies, neonatal resuscitation [Helping Babies Breathe] and essential newborn care. Training in management of educational programmes and learners, community assessment, research and evaluation of midwifery practice was provided. This 4 year programme commenced in 2014 and provides five months of classroom, practical field experience and hands-on clinical refresher training.

Results: Forty-two SMTTs from all over Ethiopia have so far graduated. Of 18 SMTTs who graduated in 2014, four have gone on to graduate school in MPH Programs and as of November 2014, fourteen SMTTs reported cascading their training to at least 30 midwifery tutor/teacher colleagues and 150 midwifery students. Twenty-six graduates are just returning to their home institutions to cascade their learning. Currently 14 MNCH research projects are being undertaken.

Discussion: This sandwich type of education and cascading of classroom instruction, field experience, skills refresher in active clinical settings, followed by field experience and return to the classroom for confirmation of learning is an effective adult education method for ensuring quality trained SMTTs.

Conclusion: It is anticipated that over the remaining two years and with the production of SMTTs and country saturation that our project will have a significant impact on the reduction of maternal and neonatal mortality.

Vaskovic, Vedrana
University of Ottawa Heart Institute, Canada
Co-authors: Dhai, Ames; Steve Biko Centre for Bioethics, Ross, Eleanor; Johannesburg University; Townend, David; Maastricht University

Research ethics committee members' views regarding payment for clinical trial participants in South Africa

There is lack of consensus on how much reimbursement (monetary, in kind or services) can be considered ethically appropriate for economically disadvantaged populations to participate in clinical trials in South Africa or elsewhere. International and national guidelines are particularly vague and the interpretation is usually left to Research Ethics Committee (REC) members. Considering the number of clinical trials conducted in South Africa and the population demographics, the study aimed to determine how the members of a REC make decisions on undue inducement and to elicit their recommendations that would help guide their decision-making. The data were collected via semi-structured individual interviews from two RECs in Johannesburg, South Africa and analyzed using thematic content analysis. The study showed that there was variability among the REC members' perceptions of the current model of reimbursement for clinical trial and behavioral research. The committee members' divergent views were largely based on their perceptions of the vulnerable participants in South Africa and their understanding of the ethical principles of coercion and undue inducement as it relate to payment practices.

Vilar-Compte, Mireya
Universidad Iberoamericana, Instituto de Investigaciones sobre Desarrollo Sustentable y Equidad Social, Mexico
Co-authors: Vilar-Compte, Mireya (Professor, Research Institute for Sustainable Development and Social Equity, Universidad Iberoamericana). Avendaño-Villela, Carlos M. (Research Assistant, Health Department, Universidad Iberoamericana). Weitzman, Beth C. (Professor, Health and Public Policy, New York University Steinhardt). Macinko, James (Professor, Departments of Health Policy and Management and Community Health Sciences - Fielding School of Public Health, UCLA)

Lower leg length index (LLI) as an indicator of early nutrition environments. Is LLI associated with overweight and obesity?

Background: Prior research suggests that short legs relative to stature, are linked to negative early nutrition environments and increased risk of adverse health effects during adulthood.

Aim: We examine the association between short leg length index (LLI) and obesity in a population of Mexican immigrant women to the New York City Area.

Subjects and methods: The analysis was based on a cross-sectional survey of 200 Mexican immigrant women aged 18-70 years. The dependent variable, a proxy of adiposity, was operationalized by body mass index (BMI) and waist perimeter (WP). The main independent variable was LLI, but other key covariates of obesity were controlled for. A multinomial probit model was estimated to assess BMI, while a probit model led to WP predictions.

Results: The BMI multinomial probit model confirmed that having a short LLI decreased the probability of being normal weight by 28.3 percentage points. The probit WP model indicated that having a short LLI increased the probability of having a WP at risk by 33.3 percentage points.

Conclusions: We were able to confirm that short relative legs were associated with increased risk of obesity. Findings support the epidemiological evidence regarding the association between relatively short legs and increased risk of adverse health effects.

Walters, Dylan
Canadian Coalition for Global Health Research, Canada
Co-authors: Plamondon, Katrina, Canadian Coalition for Global Health Research; Johnson, Nancy, Canadian Coalition for Global Health Research

Finding Our Bearings for Better Global Health Research in Canada

Rationale:

Following the 2008 economic recession, the landscape of funding for health research changed. New global threats emerged, traditional funders reformed, philanthropists and corporations engaged, and fresh priorities were set'all while pressure to demonstrate results and value for money increased. During this time, attention shifted towards a post-2015 development agenda, and the 2010 Muskoka Initiative was introduced. In order to support the capacity of global health researchers to navigate this changing funding landscape and ultimately contribute to improved global health equity, the Canadian Coalition for Global Health Research's Gathering Perspectives Study engaged in a policy analysis.

Objectives:

- Understand the current Global Health Research (GHR) funding landscape
- Identify structural and policy gaps and opportunities
- Develop recommendations to support GHR principles of equity, engagement, effectiveness, and ethics

Methods:

Strategic plans, progress reports, and granting policies with relevance to GHR were retrieved from GHR funders within Canada and around the world.

Results:

- Investment in development assistance for health (DAH - a major determinant of funding for GHR) increased at an annual rate of 22.8% in Canada between 2001-2010, with a major reorganization of the funding landscape in the latter part of this time period. Canadian DAH investment has since declined significantly.
- Major funders of GHR include the Canadian Institutes of Health Research, the Department of Foreign Affairs, Trade and Development, Grand Challenges Canada, International Development Research Centre'combining an estimated annual investment of $90M. Each bring particular strengths and constraints to GHR.
- There is much variability in declared motivations and intended beneficiaries of GHR investment.
- International comparators for GHR invest more than Canada and have strategic plans for global health that often include research.

Discussion:

Canada has a vibrant GHR community, with several active funders. Levels of expenditure in international development and GHR, however, are either unclear or modest compared to international donors. It will be important for the funders to seek greater harmonization and sustained funding for GHR over a long-term period.

Conclusion:

Based on these findings we recommend:

1. Explicitly acknowledge improving the health and well-being of populations, communities, and individuals experiencing health and social inequities

2. Joint development of a national strategic plan for GHR

3. Set benchmarks for Canadian GHR funding

4. Create consistent GHR-friendly approaches to funding policies and procedures

5. Open funding competitions to Low and Middle Income Country researchers

6. Model transparency in GHR funding

7. Promote and engage in 'research on global health research'

Wesche, Sonia
University of Ottawa, Canada
Co-authors: Kenny, Tiff-Annie; University of Ottawa, Fillion, Myriam; University of Ottawa, Chan, Laurie H.M.; University of Ottawa, Gauley Gale, Patrick; East Three Secondary School, Inuvik, MacLean, Jullian; Inuvialuit Regional Corporation, O'Hara, Shannon; Inuvialuit Regional Corporation

Capacity-building to improve food security in the Inuvialuit Settlement Region, Northwest Territories, Canada

Rationale:

Food insecurity is a serious public health issue in Inuit communities of the Canadian Arctic. In the Inuvialuit Settlement Region (ISR), Northwest Territories, 46% of households experience some level of food insecurity. Recent changes in social-ecological systems are challenging the integrity of both country/traditional food and market food components of the Inuit food system.

Through our long-term research engagement in the ISR with its six communities, local and regional representatives have identified food security priorities for research and action. While we are addressing some priorities through our research program, community partners also highlighted key gaps in capacity that limit food security activities. Accordingly, we are developing a capacity-building and co-mentorship program with community youth.

Objectives:

- To engage community youth in taking action on food security;
- To strengthen food procurement skills and knowledge among youth: e.g. harvesting, gardening, food preparation;
- To develop youth leadership capacity;
- To build graduate student capacity to work with Indigenous communities, build strong relationships, mentor and co-learn with community youth, and develop a holistic understanding of a serious global health issue.

Methods:

Phase 1 of the project (spring and fall 2015) is focused on engagement with East Three Secondary School in Inuvik, building on existing food-related learning activities and infrastructure. Activities are ongoing in three program areas:

- Local plant cultivation: e.g., ethnobotany garden, Elders garden;
- On the land: e.g., harvesting, local environmental knowledge;
- Traditional food: e.g., butchering, preservation, school snack program.

Results and Discussion:

Working directly with community youth and others on tangible global health-related projects engenders a range of benefits. While many school students are learning as participants in these programs, three local youth are taking leadership roles in: gardening, traditional food procurement, and the wild food snack program. In addition to developing applied skills related to food security, the youth are also developing personal capacities (e.g., self-esteem, leadership) as well as transferrable skills (e.g., time management, communication).

The University of Ottawa student involved in leading Phase 1 is developing capacities in the areas of leadership, project management, communications, stakeholder engagement and partnership-building. Knowledge gained through on-site immersion will inform and strengthen our research activities and outcomes, ensuring strong alignment with community priorities. The momentum from this pilot project has provided a foundation for sustainable programming through Mitacs' Aboriginal Community Engagement Program, which is currently under development.

Conclusion: Approaching capacity-building from a holistic perspective generates multiple benefits for both academic and community partners.

Whalen-Browne, Molly
McMaster University, Canada
Co-authors: Inglis, Gabrielle; McMaster University, Leah, Jessica; McMaster University, Hunter, Andrea; McMaster University, O'Shea, Tim; McMaster University, Kraeker, Christian; McMaster University

A review of global health competencies in undergraduate medical training at McMaster University

Rationale: Global health and social medicine have become popular areas of curriculum development in medical education in recent years. However, there is considerable variety in the content and format of global health teaching at the undergraduate medical level. An assessment of the current state of global health and social medicine teaching within the McMaster MD program will serve as a basis for developing future curricula.

Objective: Map global health competencies to the undergraduate McMaster medical program in order to create a comprehensive global health and social medicine framework to be integrated into the existing undergraduate McMaster medical curriculum.

Methods: A review of global health competencies was performed. The global health core competencies (GHCC), recently created by adapting the GHEC competencies to the Canadian context, were mapped to the existing McMaster curriculum. An analysis of the mapping exercise was performed to identify areas of achievement as well as areas within the curriculum with room for development and inclusion of additional competencies.

Results: The global health and social medicine competency mapping exercise revealed that the McMaster curriculum addressed 28/38 competencies as identified by the GHCC. However, a number of these competencies were not explicitly identified in the curriculum and they were unevenly distributed throughout the program. In particular, the McMaster curriculum lacked inclusion of competencies related to the Scholar and Professional CanMEDS roles.

Discussion: Mapping the global health competencies as identified by the GHCC to the existing McMaster curriculum identifies areas of strength and weakness relating to global health in the McMaster undergraduate medical program, serving as an example for other medical schools looking to do the same. This mapping exercise will also assist in further enhancing and diversifying the inclusion of these competencies, in the formal curriculum.

Conclusion: Examining the inclusion of global health competencies within the McMaster undergraduate medical program reveals that the majority of competencies are covered within the existing curriculum but that there is room to improve the diversity of inclusions as well as increase the number of competencies covered within certain CanMEDS roles.

Wilhelm, Danielle
Institute of Public Health, University of Heidelberg, Germany, Germany
Co-authors: 1. Brenner, Stephan; Institute of Public Health, University of Heidelberg, Germany 2. Muula, Adamson; Department of Community Health, University of Malawi, College of Medicine, Blantyre, Malawi 3. De Allegri, Manuela; Institute of Public Health, University of Heidelberg, Germany

Results based financing: innovative approach, but what do implementers think about it'

Rationale: Results Based Financing (RBF) interventions to improve health care services have gained significant momentum recently. However, most RBF research has focused on results, providing little insight into how the contextual circumstances surrounding the implementation process have contributed to the intervention's success or failure. Our process evaluation of the RBF4MNH (Results Based Financing for Maternal and Neonatal Health) Initiative in Malawi fills this gap in knowledge, exploring factors affecting implementation from the viewpoint of key stakeholders involved in the implementation process.

Objective: Our specific objective was to assess the acceptability and adoption of the implementation of the RBF4MNH Initiative among key stakeholders in Malawi.

Methods: Our study employed an exploratory cross-sectional qualitative design. We used purposeful sampling techniques to identify respondents and used in-depth interviews to gather relevant information. We analyzed the transcribed material using a deductive open coding approach. The final interpretation of the findings emerged through active discussion among all co-authors.

Results: All stakeholders were involved early in the implementation process, through an implementation team, which included both Ministry of Health members and international and national consultants. Respondents described a mostly positive view of the indicators and incentives, but objected to the exclusion of family planning. Stakeholders encountered several challenges during implementation, which included delays in procurement of equipment and staffing shortages. The institution of feedback mechanisms, including those initiated independently of the intervention's requirements, assisted with addressing these challenges. This contributed to the adoption of the intervention through a process of progressive adaptation to the original design to meet the needs of the stakeholders. All stakeholders wished to see the RBF4MNH Initiative continue, but had doubts about its sustainability.

Discussion: Acceptance of the RBF4MNH Initiative grew stronger over time as understanding of the intervention improved and was supported by early inclusion during the design and implementation process. In addition, stakeholders took on functions not directly incentivized by the intervention, suggesting that they turned adoption into actual ownership. The sustainability of the intervention raises concerns about the potential negative effect on providers' motivation should the incentives be discontinued.

Conclusion: Based on these results, we recommend the inclusion of local stakeholders at the earliest stages of the implementation process and the institution of continuous feedback mechanisms to tackle challenges encountered during the implementation process. In addition, the sustainability of the intervention and its incorporation into national budgets should be addressed during design phases.

Williams, Robert
Université de Sherbrooke, Canada
Co-authors: Roy Pierre-Michel, Université de Sherbrooke, Valois Carol, Université de Sherbrooke, Couturier François, Université de Sherbrooke

Le microprogramme de 2e cycle en Santé Internationale à faculté de médecine et des sciences de la santé l'Université de Sherbrooke: une approche innovante.

Justification: La mondialisation, les contacts avec des populations immigrantes, le désir de travailler dans un contexte international ou de contribuer à l'action humanitaire, incitent les professionnels de la santé à développer leurs compétences spécifiques en santé internationale

Objectif(s): Présenter le microprogramme de 2e cycle en Santé Internationale de la faculté de médecine et des sciences de la santé (FMSS) de l'Université de Sherbrooke (U de S)

Méthodes: À partir d'une initiative de formation «pré-départ» pour les résidents en médecine de famille partant en stage au Mali, en 2007, le microprogramme de 2e cycle en santé internationale a été mis sur pied à l'Université de Sherbrooke pour répondre à une demande facultaire.

On visait un microprogramme innovant pour un large auditoire : résidents de toutes spécialités et d'universités québécoises, infirmières bachelières, médecins en exercice et autres professionnels de la santé. Le mode de présentation est maintenant multiplateforme (présentiel, visioconférence et webdiffusion) pour répondre aux besoins d'une clientèle répartie sur un vaste territoire.

Les thèmes abordés sont la médecine tropicale, la parasitologie, la santé publique, l'action humanitaire et la santé mondiale.

Ce microprogramme de 6 crédits universitaires ouvre la porte à des stages interdisciplinaires (6 crédits) au Mali, en Haïti, et en Ouganda, encadrés par des professeurs-superviseurs en collaboration avec l'équipe médicale locale.

L'exposition clinique variée, les activités académiques en cours de stage et les activités réflexives permettent aux stagiaires d'acquérir une expérience significative.

Résultats: Depuis 2007, plus de 450 étudiants ont suivi le microprogramme et près de 200 ont bénéficié du stage en santé internationale. Une étude en cours semble démontrer un impact significatif sur l'ouverture à la diversité culturelle, le travail dans un contexte de ressources limitées et la pratique clinique des étudiants. Plusieurs ont, par la suite, travaillé pour des ONG comme MSF, la Croix Rouge ou auprès d'organismes dédiés aux populations vulnérables.

Discussion: Par son contenu théorique solide et la possibilité d'appliquer les connaissances sur le terrain dans un cadre sécuritaire, le programme répond aux besoins de développer une expertise en santé internationale et mondiale et produit un impact réel sur les compétences et intérêts professionnels des étudiants.

Conclusion: Le microprogramme en santé internationale de l'Université de Sherbrooke a su s'adapter aux besoins de formation en ajustant son contenu à un monde en évolution, à une clientèle interdisciplinaire diversifiée, et à utilise des moyens technologiques indispensables pour rejoindre une clientèle étudiante en mouvance.

Wolff, Rebecca
Indigenous Health Adaptation to Climate Change (IHACC), Canada
Co-authors: Wolff, Rebecca; IHACC and the University of Guelph, Harper, Sherilee; IHACC and the University of Guelph, Carcamo, Cesar; IHACC and the Universidad Peruano Cayetano Heredia, Bussalleu Cavero, Alejandra; IHACC, Lancha Rucoba, Guillermo; IHACC, IHACC Research Group, Cuentas, Alejandro-Llanos; IHACC and the Universidad Peruano Cayetano Heredia

'Its spirit is strong': Shawi spirits, healers and diarrhea in the Peruvian Amazon

Waterborne illness remains a public health challenge faced by many Indigenous communities. The Shawi, a dominant Indigenous group in the Peruvian Amazon, have retained many cultural practices and belief systems. Traditional beliefs may be incorporated into Indigenous perceptions of illness, thus these perceptions may not always reflect known biomedical causes of disease, making some health interventions ineffective. The goal of this research was to explore how Shawi perceptions on the causes of diarrhea, as a symptom of waterborne illness, related to Shawi beliefs and cosmology about water. Semi-structured interviews were conducted in two Shawi communities in August 2014 to document beliefs regarding water spirits and the role of traditional healers in causing diarrhea. Results of this study show Shawi perceptions on the causes of diarrhea were predominately based in cosmology and beliefs on water spirits, as well as the power of traditional healers to cause fatal diarrhea. Many community members did not always perceive drinking water as able to cause illness; however, there were one spiritually believed cause of diarrhea that reflected known biomedical diarrheal risk factors, presenting a potential area for collaboration between Indigenous and biomedical health knowledge. This research seeks to demonstrate the importance of incorporating local beliefs and traditional health systems into health intervention and highlights how understanding Indigenous perceptions of illness is essential to informing the design of health interventions to reduce waterborne disease in Amazonian Indigenous Communities.

Woode, Maame Esi
INSERM-SESSTIM UMR912, France
Co-authors:

The impact of parental health shocks on medical spending, healthcare utilisation and child labour: the effect of health insurance

Rationale: Without health insurance, health shocks affect households. The most important economic costs are medical expenditure and the loss of income associated with reduced labour supply and productivity. To smoothen out consumption, households rely on several coping strategies including labour substitution. Health policies in Sub-Saharan Africa are focusing on universal healthcare coverage. The effect of this health insurance however goes beyond healthcare access and it is important to study these spillover effects.

Objectives: The goal of this paper is to study, both theoretically and empirically, the effect of parental health shocks on medical expenditure, healthcare utilisation and the working time of children in the household focusing on the role played by health insurance schemes.

Methodology: Using a two-period general overlapping generations' model, we study how health insurance affects the impact of parental health shocks on schooling and child work. Parental health shocks reduces labour productivity. Individuals can incur a medical cost to reduce this effect. To test theoretical results empirically, we use data from the 2011 Integrated Household Living Conditions Survey for Rwanda. Propensity scores are used to match children based on the insurance status of their parents. We then study the effects of parental health shocks on schooling using tobit and heckman selection models, unobserved heterogeneities. In addition, the impact of health insurance on healthcare utilisation and medical spending in the presence of health shocks is assessed.

Results: Results show that, in the presence of health shocks, the insured are more likely to spend on health. The higher the proportion paid by insurance, the higher the spending. Health shocks lead to a reduction (increase) in schooling (labour/chores) time of children, but to a lesser extent in the presence of insurance. This increase depends on the incomes earned by children and on the severity of the health shock.

Discussion: Universal healthcare coverage increases medical spending and healthcare utilisation. Individuals start to seek treatment once they get insured. Insurance means parents rely less on child labour income for medical treatment. Therefore, while making schooling free is good for enrolment, introducing health insurance schemes, governments can ensure that the impoverishing effect are controlled for and the effect of health shocks on schooling time/attendance, minimised.

Conclusion: Introduction of health insurance is not only important for health outcomes but also for educational human capital development. Universal health coverage protects against school drop out as a result of health shocks and reduces child labour.

Wren, Hilary
McGill University, School of Dietetics and Human Nutrition, Canada
Co-authors: HM Wren1, NW Solomons2, ME Scott1, KG Koski1 1 McGill University, Montreal, QC, Canada 2 CeSSIAM, Guatemala City, Guatemala

Subclinical mastitis is associated with impaired infant anthropometric indicators among indigenous Mayan mothers in the Western Highlands of Guatemala

Rationale: Among indigenous Mam-Mayan mother-infant dyads living in rural Guatemala, cultural and breastfeeding practices may contribute to subclinical mastitis (SCM), an asymptomatic condition of the lactating breast, and may be intertwined with infant growth. The prevalence of SCM in Guatemala and its contribution to infant growth is unknown.

Objectives: Objective 1 explored whether cultural practices were associated with compliance with WHO infant feeding recommendations. Objective 2 determined if any cultural practices were associated with SCM during early (3-46d) and later (116-184d) lactation. Objective 3 evaluated if SCM was associated with infant weight-for-age (WAZ), height-for-age (HAZ) or head-circumference-for-age (HCZ).

Methods: A questionnaire on cultural and breastfeeding practices, physical activity and maternal and infant health status was administered and anthropometry was measured. A single breast milk sample was collected from mothers during early and later lactation. Inductively-coupled plasma mass spectrometry (ICP-MS) was used to measure Na and K. SCM was defined as a Na/K ratio >0.6. Milk quality was measured.

Results: Mothers who delivered at the midwife's house (OR =2.5) and those who did not believe in the transmission of susto (fright) through breast milk (OR=2.4) were more likely to initiate breastfeeding within one hour postpartum. Fourteen percent had SCM, which was more prevalent during early (19%) verses later (9%) lactation. There was no association of SCM with cultural and optimal breastfeeding practices but increased breastfeeding frequency during the day (OR=1.27) and more daily hours of walking (OR=1.78) were associated with SCM. Importantly, SCM increased the likelihood of infant WAZ, HAZ, and HCZ < -2SD.

Discussion: These results show that the socio-cultural environment contributes to her compliance with WHO infant feeding guidelines for exclusive breastfeeding, early initiation < 1hr postpartum and higher feeding frequency. SCM is prevalent in indigenous communities and importantly contributes to growth faltering. Preliminary data show that SCM is an important inflammatory condition that adversely affects the quality of breast milk.

Conclusion: The cultural practice of using a temascal (traditional sauna) was associated with higher breastfeeding frequency, which is consistent with indigenous mothers' perception that the temascal stimulates breast milk flow. Other cultural practices increased compliance with WHO breastfeeding recommendations, but no cultural practice contributed to SCM. Importantly, SCM increased the likelihood of infants being underweight, stunted and having a low head-circumference-for-age z score and affected milk quality. Community health workers need to consider factors underlying SCM and optimal breastfeeding practices in order to improve infant growth.

Yoshino, Yae
Kitasato University School of Nursing, Japan
Co-authors: Surenkholoo, Altanbagana, Ministry of Health of Mongolia

Developing blended model to strengthen competencies amongst MCH nursing professionals in Mongolia.

Rationale: Ensure the MCH nursing human resources and competencies has been one of the major challenges to reduce Maternal and Child mortalities and morbidities in developing countries. However opportunities and resources to strengthen competencies are quite limited, especially in remote areas. Developing a low cost continuing education program model to improve the quality of MCH care on the local priority issues are crucial to tackle with current challenges. We have developed blended program on demand bases over the last 7 years together with the local nursing leaders.

Objective: 1) To strengthen MCH competencies amongst nursing professionals in Mongolia, especially remote area.2) To develop sustainable program model for the local stake holders.

Methods: Blended model, consists of four component, face to face seminars, interactive online seminars, short training program in Japan, and sharing the resources such as used medical and educational equipment and materials, including used textbooks were designed in collaboration with local nursing professional bodies and four national universities in Mongolia. Seminar contents were designed to cover the most demanded MCH issues in Mongolia.

Results: Our recent field work revealed positive changes amongst MCH nursing professional, teaching institutions, and clinical settings. Community of practice (COP) had been developed by setting up Moodle to share seminar materials, including seminar handout, lecture video, and references, and having invited Mongolian leaders to present local problems at the seminars that were effective to enhance awareness. Participants also reported change of competency, including improvement of risk assessment skills and intervention with quality. Introduction of psychological observation, assessment and care has been newly implemented at undergraduate curriculum, as well.

Discussion: Approximately 40 % of nursing profession was able to enroll at least one of seminars between 2008 and 2015. Online technology saved both traveling cost and time of Japanese lecturers but also Mongolian participants. All seminar credits have been accredited by the Mongolian government for renewal of nursing license, as little continuing education opportunities has been the major burden for retention of workforce in the country over the decades.

Conclusion: Program provided platform for the knowledge translation and introduce new skills to the local context, but also online seminars and training program in Japan had enhanced mutual understanding between Japanese and Mongolian professionals, faculties and students. Future work is planned to find evaluation indicators of the program for the development of general purpose model, to adapt countries with the similar situation.

Zakus, David
Ryerson University, Canada
Co-authors: Frishkopf, Michael; University of Alberta

Music as social technology: building sustainable capacity for global health promotion in northern Ghana

We will present results of a project, 'Singing and Dancing for Health' aiming to promote healthy behaviors in one of Ghana's most impoverished areas, where illiteracy, lack of media access, and entrenched socio-cultural attitudes present critical barriers to better health. Here, we hypothesized that participatory music and dance, fusing emotion, knowledge, tradition and collective action, presents a powerful aesthetic technology that can be successful in promoting healthy behaviors, by gathering and synchronizing entire villages in an atmosphere of receptivity, and by giving health messages an aura of traditional authority. We took as our specific objective to improve behaviors associated with low incidence of malaria and cholera, two crucial health problems that can easily be addressed via behavioral change, without expensive resources. Working with an accomplished professional music and dance troupe (Youth Home Cultural Group) based in Tamale, Northern Region, Ghana we co-developed two 'dance dramas' centered on these issues, delivering health information, dramatizing consequences of good and bad behaviours, using music and dance to focus attention, thereby rendering health information more memorable and likely to spur action.

We administered knowledge, attitude and behavior surveys in three villages (for baseline), then performed the dance dramas, and surveyed again. Surveying was coupled with participant observation during the interventions, and tracking individuals in each village who could report on changes in health behaviour. Surveys were coded and results analyzed using Epi Info. Results show that the music-dramas were highly effective in transforming behaviours. However, such performances by professionals, while memorable, are expensive and not sustainable as such. Subsequently, we sought to substitute sustainability for virtuosity, by exploiting the power of oral tradition. Having generated enthusiasm for this kind of aesthetic technology, we shifted to a second phase of research, entailing the founding of local village 'singing and dancing for health' troupes, equipped and trained by YHCG to perform the same dramas. We suggest that these local troupes, energized by powerful memory of professional performances and training from their mentors, are well-positioned to incorporate the new repertoire into the local oral tradition, performing at events (school assemblies, civic holidays, traditional festivals, etc.) throughout the year. These will transmit the newly-fashioned aesthetic forms to subsequent generations and hopefully inspire neighboring villages to take them up.

In conclusion, we suggest that where progress in global health depends primarily on behavioural change, music and drama present a powerful means for building sustainable capacity to achieve it.

ZANNOU, D. Marcel
Centre de traitement ambulatoire (CTA) du CNHU Hubert-K-Maga de Cotonou, Bénin
Co-authors: Baglo KM Anita, Centre de traitement ambulatoire (CTA) du CNHU Hubert-K-Maga de Cotonou; Azon-Kouanou Angèle, CTA du CNHU Hubert-K-Maga de Cotonou; Akakpo Jocelyn, CTA du CNHU Hubert-K-Maga de Cotonou; Ahouada Carin, CTA du CNHU Hubert-K-Maga de Cotonou; d'Almeida Chrispina, CTA du CNHU Hubert-K-Maga de Cotonou; Donadjè Pierre, CTA du CNHU Hubert-K-Maga de Cotonou

Evolution du profil général et de la survie des patients traités par antirétroviraux avant et après 2010 à l'hôpital universitaire de Cotonou, Bénin

Justification : Dans les pays à ressources limitées, la prise en charge des patients vivant avec le VIH (PVVIH) se fait en s'appuyant sur les recommandations de l'OMS. Ainsi, les conditions d'initiation de la TAR ont évolué dans le temps. Les normes et procédures béninoises s'inspirant des recommandations de l'OMS permettent de distinguer 2 périodes : avant 2010 (TAR si CD4 ' 200 cells/mm3) et après 2010 (TAR si CD4 ' 350 cells/mm3). Quel a été le bénéfice de l'application des recommandations de l'OMS pour les patients traités au Bénin '

Objectifs : Analyser le profil général (clinique, immunologique et thérapeutique) et la survie des patients traités par TAR avant et après 2010

Méthodes : Etude descriptive de cohorte rétrospective réalisée à partir de la base de données ESOPE du centre de traitement ambulatoire du CHU Hubert K. Maga, Cotonou. Tous les PVVIH âgés > 15 ans enregistrés de 2002 à 2013 et ayant au moins une visite de suivi étaient inclus. Paramètres étudiés : âge, sexe, stade clinique OMS, CD4 initial, type de TAR et la survie à 12 mois de TAR. La période avant 2010 (groupe 1) a été comparée à celle d'après (groupe 2). La probabilité de survie a été calculée avec le modèle de Cox pour un intervalle de confiance à 95%. Le seuil de significativité était fixé à 5%.

Résultats : Sur 3651 patients inclus, 2438 étaient du groupe 1 et 1213 du groupe 2. L'âge moyen était le même dans les 2 groupes (environ 38 ans). Le sexe féminin prédominait (60% vs 66%). Profil des patients à l'admission : Stade OMS 1-2 (1,8% vs 10,7% et stade OMS 3-4 (98,2% vs 94,1%), p>0,001 ; CD4 moyen bas (119 vs 175 cells/mm3, p <0,001) ; CD4'200 cells/mm3 (78,% vs 52,9%) et 200<CD4'350 cells/mm3 (16% vs 26%), p <0,001. La TAR contenait la Stavudine (59,5% vs 20,6%), la Zidovudine (25,1% vs 46,8%) ou le Ténofovir (0,2% vs 29,7%). La survie à 12 mois était de 96,2% [95,3-97] vs 97,1% [95,7-98,1].

Discussion : Les patients étaient admis au stade d'immunodépression sévère La stavudine, un produit toxique, est progressivement abandonnée au profit de la zidovudine et du ténofovir. Les TAR utilisées sont efficaces et donnent une survie satisfaisante.

Conclusion : L'application des recommandations de l'OMS est bénéfique pour les PVVIH. Ce bénéfice sera total si le dépistage et la prise en charge des patients était plus précoce.