Annals of Global Health

Guatemala, El Salvador, Nicaragua and Panama; statistically-significant (SS) knowledge acquisition and retention among participants; increased ability of trainees to effectively triage patients. Triage process outcomes: SS uptake and sustained utilization of triage algorithms; SS decreases in admission rates from emergency rooms to pediatric and intensive care units; trends towards decreased length of stay and mortality rates of acutely-ill children.

Going Forward: Ongoing challenges include: limited personnel and equipment; need for bi-directional sustained mentoring; and managing foreign government partnerships. Unmet goals include: a free CETEP curriculum in Spanish for distribution by PAHO; expansion funding; and limited faculty time for development and implementation.

**Funding:** PAHO, MoH, and in-country partners fund training staff time, materials, and logistics. BCM/TCH provides internal funding and in-kind support for curriculum and training program development and generation of data supporting use and scale-up for CETEP trainings.

Abstract #: 01ETC019

#### Impact of a health education program on Adolescent Girls' health knowledge in rural Maharashtra, India

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Background: Adolescent girls in rural India often have poor health knowledge, marry early, and are at risk for violence. The Comprehensive Rural Health Project in Jamkhed supports village-based health initiatives, including an Adolescent Girls' Program (AGP) for health education. This study assessed AGP participants' knowledge of reproductive health and sociocultural factors such as early marriage and dowry that affect women's health in India, as compared to the knowledge of non-participants.

Methods: 51 girls who graduated AGP in 2012-2013 and 51 unexposed girls sampled from similar villages with no AGP participation completed a survey on health topics covered in AGP. Participants were 12-19 years old. Using SAS 9.3, responses given by AGP-exposed and unexposed groups were compared using hierarchical logistic regression models including AGP exposure, age, caste/religion, school attendance, education, and translator as independent variables, with village as a random effect. Exact multiple logistic regression was used where AGP exposure produced quasi-complete separation in hierarchical regression. Informed consent was obtained from each participant's guardian. Ethical approval was granted by Mount Sinai's Institutional Review Board and CRHP.

Findings: The mean age and educational level of study participants was 14 years 6 months ( $\pm 18$  months) and 8th standard ( $\pm 1$  standard) with no significant difference in age, caste/religion, educational level, or school enrollment between groups. In hierarchical logistic regression, exposed girls had a greater odds of identifying violence against women as a consequence of dowry (odds ratio [OR] 8.475; 95% confidence interval [CI] 1.649-43.569; p=.0202), identifying an intrauterine device as a contraceptive method (OR 27.319; 95% CI 1.195-624.782; p=.0419), knowing any correct method of HIV transmission (OR 24.664; 95% CI 3.433-177.208; p=.0087), and identifying sexual contact as a method of HIV transmission (OR 14.236; 95% CI 1.871-108.284; p=.0200). In the exact logistic regression models AGP exposure was a significant predictor of being able to identify any negative consequence of dowry (OR 13.981; 95% CI 2.678-∞; p=.0040), being less likely to associate women being deprived of food as a consequence of dowry (OR 0.120; 95% CI 0-0.657; p=.0335),

identifying lack of physical development as a health risk of early marriage (OR 4.427; 95% CI 8.725-∞; p < .0001), identifying condom as a contraceptive method (OR 22.492; 95% CI 4.560-∞; p < .0001), and identifying blood contact as a method of HIV transmission (OR 13.241; 95% CI 2.605-∞; p=.0039).

Interpretation: The AGP program appears to successfully transfer knowledge of several contextually important health topics. Study limitations included a selection bias towards girls whose baseline health education interest was high and potential disparities among non-CRHP health services in the villages. Further research is needed to elucidate the impact of concurrent socioeconomic and cultural factors on girls' implementation of knowledge gained through AGP. Funding: No funding listed.

Abstract #: 01ETC020

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

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Program/Project Purpose: In 2011, the Canadian Society of International Health (CSIH) created MentorNet, a national global health mentorship program aimed at connecting students and young professionals (SYPs) with experts in fields relevant to global health. With long standing commitment to creating the next generation of leaders in the field, the program aims to facilitate knowledge transfer between SYPs studying and working in global health, with experienced global health experts in Canada. Three mentorship cohorts have completed the program to date (2011-12, 2012-13 and 2013-14), with a fourth cohort beginning in January 2015. 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.

Structure/Method/Design: MentorNet is run by a volunteer Steering Committee of seven 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.

Outcomes & Evaluation: There were a total of 156 SYP (vs. 140 in 2011 and 70 in 2012) and 40 mentor (vs. 30 in 2011 and 22 in 2012) applications in Year 3 (2013). The program capacity increased to 29 matched pairs for cohort 1 lasting ten months and 8 matched pairs for cohort 2 lasting eight months. The geographic distribution of participants within Canada was 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.

Going Forward: After three years, MentorNet has proven to be a valuable initiative for supporting Canadian SYPs to become leaders in global health. Moving forward, MentorNet aims to continue fostering mentorship relationships that are beneficial to both mentors and SYPs

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## Identifying gaps in clinical nursing and midwifery research in African countries: Making a way forward with sustainable mentorship

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Program/Project Purpose: Worldwide, nurses comprise the largest proportion of health care professionals and are the backbone of health care systems. To address the large global health disparities, the development of a robust nursing profession needs to be a critical goal in countries and regions with minimal human resources for health and huge disease burden. The African region bears 25% of the disease burden and only 1% of healthcare workers. Many gains have been made in nursing/midwifery clinical practice, such as nurse-initiated and managed care in sub Saharan African countries, and in competency-based nursing education to increase the quantity, quality and relevance of new graduates. Increasing the depth and quality of nursing research is central to validating outcomes of nursing care provided. This requires research expertise to collect and critically analyze data and identify priorities and gaps for improved clinical practice.

Structure/Method/Design: In collaboration with Columbia Global Center/Africa, the Forum of University Nursing Deans of South Africa (FUNDISA), the University of Malawi/Kamuzu College of Nursing, and the University of Nairobi School of Nursing, the Columbia University School of Nursing is helping to build a cross-regional core group of nurse and midwifery leaders and researchers in Sub-Saharan African countries. Methods include conducting a scoping review, an environmental scan, Delphi survey and network analysis.

Outcomes & Evaluation: An initial scoping review of all published research in African countries by nurses regarding clinical practice was conducted in fall 2014 as well as a survey to determine what networks exist formally and informally amongst nurses/midwives involved in clinical research. The collaborative group is also developing a database of nurse and midwife leaders involved in regional research and program evaluation; performing an environmental scan; conducting a Delphi survey to develop consensus on research agenda; and carryingout a network analysis. This will culminate in a regional research summit in June 2015 to reach consensus on gaps in knowledge and priorities for nursing and midwifery research to address essential population health needs. The group will also develop an implementation plan to support nursing and midwifery research with mentorship strategy.

Going Forward: We are engaged in the development of sustained networks of nurse and midwifery researchers in Sub-Saharan Africa as a central component to strengthen the impact of nurses and midwives at frontline clinical arena. This will be adapted and replicated with Columbia Global Center/Jordan and nursing researchers in its region. Strengthening and expanding research under the leadership of nurses and midwives engaged on the ground will improve clinical care and communities' health at this critical time.

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### Nutrition education for newly arrived refugees in Tucson, Arizona: Mixed methods evaluation as education

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**Program/Project Purpose:** The International Rescue Committee (IRC) of Tucson, Arizona aims to prevent food insecurity by targeting newly arrived refugees through nutrition education focusing on food availability and access. Refugees face challenges of a low income, a different food environment and learning another language that increase a refugee's chances of experiencing food insecurity. The Nutrition Education program is a three month program with three knowledge modules at 2 weeks, 6 weeks and 8 weeks led by an IRC intern, accompanied by an interpreter. The objectives were to develop, coordinate and evaluate the IRC's Nutrition Education program.

Structure/Method/Design: The development of the program included reviewing other food security programs currently utilized with refugees, conducting interviews and observations, as well as involving refugee participants to assist in developing the Nutrition Education Program with a focus on maintaining culturally appropriate foods. The evaluation utilized a mixed methods approach of pre and post surveys with refugee clients, participant observations, semi-structured interviews with key IRC employees, focus groups with refugee clients and interpreters that participated in the Nutrition Education program from January to August 2013. Data were collected to measure knowledge retention of healthy vs. unhealthy food, food safety, hygiene and proper storage, as well as participant satisfaction of the program. Outcomes & Evaluation: Nutrition Education Curriculum to decrease food insecurity was developed, pilot tested and implemented for 6 months prior to the evaluation. Survey results show an increase in having enough food to last for three days and knowledge regarding nutrition labels. Refugee and interpreter focus groups indicate positive perceptions of the Nutrition Education program, a need for preteaching certain topics before going to the grocery store, and to explain SNAP and WIC benefits in more detail.

Going Forward: Recommendations have been made to improve the curriculum, including assessing prior knowledge before teaching each module, pre-teaching specific concepts before going to the grocery store and developing a WIC specific module as well as incorporating language appropriate handouts. To continue this program and have it be sustainable the evaluator suggests that the implementers of the program should be shifted from IRC interns/volunteers to CHWs (Community Health Workers) that are currently employed by the IRC. The CHWs are previous refugees themselves and would provide a better cultural liaison than the intermittent IRC interns.

Funding: IRC funded the interpreters for their time contributed to this project.

Abstract #: 01ETC023

# Evaluating the effects of organizational and educational interventions on adherence to clinical practice guidelines in a low resource primary care setting in Kenya

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Background: In Kenya, adherence to internationally recognized clinical quality guidelines remains low in inpatient settings (Mwaniki