

Program/Project Purpose: Neonatal mortalities continue to be an overwhelming burden for many of the world's developing countries. Ethiopia in particular has one of the highest neonatal mortalities in the world, accounting for 4% of the estimated 4 million global neonatal deaths a year. Helping Babies Breathe (HBB) is a program designed to reduce infant mortality through education and training on neonatal resuscitation. In June 2014, a group of medical students from Touro University provided HBB training to healthcare workers in Ethiopia. The aim is to educate and empower healthcare workers in Ethiopia to utilize neonatal resuscitation and improve neonatal outcomes.

Structure/Method/Design: The goal of this study is to evaluate the impact of HBB training on knowledge and confidence of participating healthcare workers in Ethiopia. Midwives, nurses, and medical officers were asked to voluntarily attend an HBB training session at Debre Markos district hospital. Surveys completed before HBB training are compared with surveys completed after HBB training. Four multiple-choice questions about when to intervene, signs of needed intervention, and technique for resuscitation were asked to measure education. One question about the comfort of the user using a bag-valve mask was asked to measure confidence. Two questions were asked about the helpfulness of the class and whether or not the healthcare workers will utilize what they learned in order to assess the impact of HBB training. Answers to the survey before HBB training were tallied and compared with answers to the survey after HBB training. We believe that HBB training and education will build capacity through a sustainable skill to improve neonatal mortality.

Outcomes & Evaluation: Overall, the education questions demonstrated an 18.72% increase in correct answers after HBB training compared with before the training. Confidence increased 4.27% after HBB training. 100% of the healthcare workers found the training useful and 70.73% reported that they will utilize what they learned from the training. 39 surveys were collected before the training and 42 surveys after the training.

Going Forward: The next step will be to measure how HBB training translates into improved clinical outcomes on neonatal mortality. It cannot be assumed that healthcare workers that have learned HBB, even if they show improved knowledge in education, confidence, and impact.

Funding: This study did not receive any funding from external sources.

Abstract #: 01ETC053

The influence of a global health concentration on the future career paths of undergraduate medical students: Pilot study results from a university of Calgary longitudinal study

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Program/Project Purpose: With the growing emphasis on social accountability in medicine and widespread interest among medical trainees, there are increasing global health education opportunities. The Global Health Concentration (GHC) is a student run organization within the University of Calgary that aims to increase medical student exposure to underserved populations locally and globally while fostering the development of advanced global health skills. This project aims to elucidate whether pre-GHC admission characteristics and participation in the GHC program during medical school influences future global health practice, clinical practice for underserved populations, and careers in primary care. The aim of the pilot study was to refine data collection tools and to elicit agreed-upon global

health themes, which could be incorporated into future questionnaires to facilitate Phase 1 of this longitudinal study. Findings from this inquiry may help determine the value of specialized global health training at the undergraduate level as well as inform medical school admissions policy.

Structure/Method/Design: This study has two phases: Phase 1 describes the characteristics and attitudes of successful and unsuccessful GHC applicants, along with a cohort of students who did not apply to the GHC. Phase 2 will follow GHC and non-GHC students over approximately 10 years to describe their practice patterns including medical specialty and global health practice. For the pilot, the inaugural group of GHC students completed an electronic questionnaire and participated in a focus group. The questionnaire included demographic information, previous work experience, motivations to pursue a medical career, future goals, to-date satisfaction with medical and global health training, and perceived value of global health training to future career plans. Discussions focused on student backgrounds, definitions of global health, values/traits of competent physicians, perceived similarities and differences between GHC and non-GHC peers, future career plans, and perceived influence of the GHC on professional training. Analysis of the focus group data employed a grounded theory approach.

Outcomes & Evaluation: This poster describes the characteristics of successful GHC applicants and key themes identified from the focus group data. The following themes were identified as important factors in supporting global health career development: peer and faculty mentorship, focused clinical experience, global health engagement prior to medical school, and global health conceptualization. The participants agreed that the GHC has had a meaningful impact on decisions to pursue their respective specialties, including Psychiatry and Family Medicine.

Going Forward: These results have illuminated themes for future analysis and have shaped data collection tools to facilitate interviews with subsequent cohorts of GHC and non-GHC student groups from the last three years of intake. These data will form the basis of evaluating influential factors for future global health practice.

Funding: The University of Calgary Department of Family Medicine was the only source of funding.

Abstract #: 01ETC054

A global framework for integrating community-based maternal, newborn, and child health strategies into existing health systems: revaluing the role of international non-governmental organizations

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Program/Project Purpose: Historically, international non-governmental organizations (INGOs) have served as implementing organizations for community-based health programs in low- and middle-income countries. Recently, there has been a renewed call for INGOs to reevaluate their role, shifting from direct service delivery to a model that leverages their strengths and experiences to

influence health systems and increase impact at scale. This paper presents a novel conceptual framework through which INGOs can catalyze the integration of community-based maternal, newborn, and child health (MNCH) strategies into existing health systems at the district, national and global level.

Structure/Method/Design: The framework is based on practical experiences of INGOs that have been engaged in community-based MNCH programs for over 25 years as well as current literature on scale-up, implementation science, and evidence-informed policy making. We present three complementary pathways that have been shown to be critical to the uptake of community-based MNCH strategies across time and context. Six case studies illustrate the operationalization of the three pathways within the context of community-based MNCH projects. The cases represent six countries from three regions (Latin America and Caribbean, sub-Saharan Africa, and South Asia) and six INGOs ranging in size.

Outcomes & Evaluation: The first pathway for integration, “learning for leverage,” was demonstrated by Future Generations in Peru and CARE in Bangladesh. These two INGOs used community health strategies as sources of experimentation, innovation, and demonstration to influence changes in health systems and policy at a national level. The second pathway, “thought leadership,” was made evident by the Haitian Health Foundation in Haiti and Hellen Keller International in Nepal, where they captured and diffused lessons learned to advance better ways of solving MNCH challenges. The third pathway, “joint venturing,” was exemplified by two INGO consortiums: one in Rwanda and one in Senegal. These two consortiums worked in partnership with one another (as well as other public and private institutions) and used their collective voice to integrate community-based approaches into national health systems at scale.

Going Forward: Future community-based MNCH strategies must also address the primary components that drive their integration into existing health systems, including strategic responsiveness to national health priorities, partnership with policymakers and other stakeholders

Funding: This paper was supported by the USAID-funded Maternal Child Health Integrated Program, under the terms of Cooperative Agreement GHS-A-00-08-0002-00. The contents are the responsibility of the authors and do not necessarily reflect the views of USAID or the United States Government.

Abstract #: 01ETC055

Neurosurgical educational and training support in DPRK

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Program/Project Purpose: The Democratic People’s Republic of Korea (DPRK) has been one of the most isolated and inaccessible nations in the world since the end of the Korean War in 1953. The amount of knowledge and interaction with North Korea doctors still remains minimal for the most part. However, in recent years, DPRK has been more receptive towards the global community—primarily those of non-governmental organizations (NGOs). One example is the North Korea Doctor to Doctor Initiative of the Korean American Medical Association (KAMA). In 2007, Korean-American neurosurgeons established contact and built a relationship with the neurosurgeons in North Korea. The aim of this project is to support neurosurgical education and training in DPRK as well as to foster a respectful and trusting relationship that can lead to other areas of engagement both in healthcare and beyond.

Structure/Method/Design: In order to maximize the impact, the Pyongyang Medical College Hospital, the main training facility for DPRK physicians was chosen with the goal of training the trainers. Initial thorough assessment of the existing capabilities allowed a systematic approach to build the neurosurgery capacity. Support for educational material including books, journals and media was supplemented with series of lectures. Medical equipment was delivered to coincide with the biannual visits to demonstrate proper use in surgery. To facilitate international exchanges, The Korean Neurosurgical Association (DPR) became a member of the World Federation of Neurosurgical Societies. To foster publishing, joint authoring of academic research has begun.

Outcomes & Evaluation: Endoscopic treatment of hydrocephalus has been introduced and is being performed routinely thus obviating the need for ventriculoperitoneal shunts in most cases. Spine stabilization techniques, from simple wiring to complex constructs are now available although the sustainability of complex implants remains an issue. With aid of new operating microscope, bipolar cautery and high speed drill, modern microneurosurgery expands the safety and the scope of surgeries that can be performed. A jointly co-authored vignette has been submitted to an international neurosurgery journal.

Going Forward: Although the progress made so far has been tangible and significant, the healthcare system in DPRK remains severely challenged. With the exception of actual travel to and from DPRK, no other means of communication is possible with the DPRK doctors. They are unable to access the internet or journals. Economic realities mean reusing of disposable blades, IV catheters, gauze, needles, Foleys etc until they are unusable. Through the channels opened by KAMA as well as others, it is hoped that the international community expand the exchanges with our North Korean colleagues and support them in caring for their patients.

Funding: KAMA.

Abstract #: 01ETC056

Electronic health record integration in an interdisciplinary short term medical service to the dominican republic

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Program/Project Purpose: Medical Students Providing Across Continents (MedPACT), of the University of Central Florida College of Medicine (UCF COM), began developing a medical service trip to the Dominican Republic in 2011. Their project is to implement a portable, self-contained Electronic Health Record (EHR). Since 2012, the EHR program used is an OpenMRS module built by Partners in Health and the Regenstrief Institute. MedPACT is in partnership with UCF Undergraduate – Information Technology, in order to manage the EHR modifications specific for this service trip. The purpose of the EHR is to deliver a long-term patient record that is transportable and customizable to the local communities of the Dominican Republic for sustainable healthcare and assessment of community needs. In addition, MedPACT aims to implement the EHR to expose future clinicians to it and improve their patient interviewing and record keeping skills.

Structure/Method/Design: The primary goals of this year’s trip were to improve both student EHR utility and clinic accessibility and efficiency. Participants that used the EHR included UCF students – medical, nursing, and engineering – and University of Florida