

Outcomes & Evaluation: Of undergraduates interviewed, 87.5% had travelled internationally at least once, 65.3% had taken a course related to a global topic, 25.5% listened to global news a few times each week or more, and 27.8% engaged in on-campus activities and organizations relating to global topics. The four issues most frequently identified by undergraduates as the greatest global challenge facing their generation were conflict and political instability (24.5%), inequity (19.9%), food insecurity and hunger (18.5%), and climate change (16.7%). Far fewer undergraduates assigned significance to key global health issues, including lack of access to clean water and improved sanitation (4.6%) and infectious disease (3.7%). Students' identification of the greatest global challenge differed significantly according to whether or not they had traveled abroad. Those who had were more likely to identify food insecurity and hunger, infectious disease or conflict/political instability than students without international travel experience. Students who felt that their government had a responsibility to address global challenges in other countries were three times more likely to engage in related on-campus activities than students who did not feel their governments should shoulder such a responsibility. There was no significant correlation between students having taken classes at the college level on global issues and their engagement in related on-campus activities. Students who reported having taken a class outside the US were more likely to be engaged in global issue-related, on-campus activities than their peers whose academic experience was limited to the US.

Going Forward: Given the significant relationship between international travel experience and the nature and extent of student engagement on global issues, universities committed to educating global citizens should consider strategies to increase the international expos.

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Building locally relevant ethics curricula for nursing education in Botswana

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Program/Project Purpose: The goals of this multi-institutional collaboration were to 1) develop an innovative, locally relevant ethics curriculum for nursing students, faculty, and professionals in Botswana, and 2) build capacity in nurses in Botswana to utilize the International Code of Ethics in everyday practice. Nurses in Botswana face ethical challenges that are compounded by a lack of resources, pressures to handle tasks beyond training or professional levels, workplace stress, and professional isolation. International codes of ethics and guidance documents are of limited relevance in everyday practice because they are introduced in academic environments using case examples set in high-resourced, 'developed' countries. Faculty capacity to teach nursing ethics in the classroom and in professional practice settings has been limited, despite a growing emphasis in Botswana on promoting ethical conduct in the health environment.

Structure/Method/Design: A pilot curriculum, designed to promote problem-based learning through the use of cases set in local contexts, was tested with nursing faculty in Botswana in 2012. At the conclusion of the 40-hour training session, 33% of the faculty indicated they would be more comfortable teaching ethics. A substantial number of faculty indicated that they were more likely to introduce

the ICN Code of Ethics in teaching, practice, and mentoring as a result of the training.

Outcomes & Evaluation: Based on evaluation data, curricular materials were developed using the ICN Code of Ethics and the regulatory requirements for nursing practice in Botswana. A web-based repository of sample lectures, discussion cases, and evaluation rubrics was created to support the use of the materials. A new masters-level course, Nursing Ethics in Practice, has been proposed for fall 2015 at the University of Botswana. The modular nature of the materials and the availability of cases set within the context of clinical nurse practice in Botswana make them readily adaptable to various student academic levels and continuing professional development programs.

Going Forward: The ICN Code of Ethics for Nursing is a valuable teaching tool in developing countries when taught using locally relevant case materials and problem-based teaching methods. The approach used in the development of a locally relevant nursing ethics curriculum in Botswana can serve as a model for nursing education and continuing professional development programs in other sub-Saharan African countries to enhance use of the ICN Code of Ethics in nursing practice.

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Primum non nocere – ethical concerns from procedural risks in the global health setting

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Background: Two billion people in various regions of the world are estimated to have little or no access to surgical care. Traditional medical mission trips are one means to provide necessary care to these areas. But the inherent risks of surgical procedures are amplified in underserved regions due to lack of infrastructure to manage complications. To evaluate the impact of otherwise straightforward surgical complications on patient outcomes, we reviewed our experience with providing surgical service to a profoundly underserved region of sub-Saharan Africa.

Methods: Through KenyaRelief.org, 25 volunteers, including surgeons (2 ENT, 1 adult general surgeon, and one pediatric surgeon), residents, CRNAs, scrub technologists, circulating nurses, and a recovery room team, staffed a surgical clinic for three days in Migori, Kenya. Complications and effect on convalescence were recorded.

Findings: The surgical teams performed 67 procedures of varying complexity. The commonest procedures were thyroid lobectomy (n=19), skin and soft tissue excisions (n=16), and inguinal hernia repair (n=15). Other notable procedures included cleft lip repair (n=2), cleft palate repair (n=1), and thyroglossal duct cyst excision (n=1). The majority of patients suffered no complications (n=65); however, postoperative complications in one patient, and an ileus in another, underscored the need for medical mission teams to prepare for the worst. One four-year old orphan developed an ileus after giant ventral hernia repair. Although treatment of an ileus is typically supportive, the team struggled to communicate with and educate local nurses resulting in substandard care. An adult patient having a benign goiter causing tracheal deviation underwent subtotal thyroidectomy. She developed a neck hematoma in the recovery room ultimately requiring emergent tracheostomy. She was transferred to a local hospital and experienced a respiratory arrest due to mucous plugging of the tracheostomy. Although a surgeon on the team urgently removed the tracheostomy, it became clear the local hospital

lacked infrastructure and experience in caring for patients with tracheostomies.

Interpretation: These examples underscore the need to plan mission trips carefully to ensure that local physicians and nurses can care for potential complications that arise or persist after the surgical teams depart.

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A novel trauma first responder course in Potosí, Bolivia: initial results

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Background: An estimated 5.8 million deaths annually are attributed to traumatic injuries worldwide, with low- and middle-income countries, such as Bolivia, disproportionately shouldering over 90% of the burden. Basic pre-hospital care can increase survival and decrease morbidity, yet Bolivia lacks a standardized, effective emergency response system, or accessible trauma first responder training. This study sought to implement and assess a trauma first responder course (TFRC) at multiple sites within Bolivia.

Methods: An eight-hour TFRC, previously validated in La Paz, Bolivia, was offered at ten medical and fire centers in seven towns and cities within the Potosí region of Bolivia. The course was advertised to adults in the area, with registered participants paying a nominal fee to cover administrative costs. Led by a group of trained American students, the course incorporated both didactic and practical components, making use of commonly available local supplies for treatment. Participants completed a baseline survey, pre- and post-tests on important trauma and injury management concepts, and a course evaluation. The main outcome of interest was participant test performance. Data were assessed via the one-sample chi-squared test and the signed rank test for categorical and continuous variables, respectively.

Findings: A total of 315 participants completed all evaluations for analysis. The median participant age was 32 years old (IQR 27-38). There was a high representation of medical professionals (83.1%), followed by police (4.8%), firefighters (2.8%), and other professionals (9.3%) ($p < 0.0001$). Participants were more likely to be female (56.4% vs. 43.6%, $p=0.03$), with a higher proportion of participants taking courses in rural areas (81.9% vs. 18.1%, $p < 0.0001$). Overall median test scores increased significantly after course completion across the cohort (40% vs. 80%, $p < 0.0001$).

Interpretation: Study strengths include prior validation of the course, robust local interest and participation, and both objective and subjective course evaluation data. Limitations include the generalizability of the results to the Bolivian population given the high proportion of medical personnel enrolled. However, it is important for healthcare providers to first accept and incorporate the emergency response protocols, with subsequent effective concept dissemination and adoption by laypeople. Additionally, there may have been a selection bias due to convenience sampling. Despite these limitations,

this study demonstrates a significant increase in important injury management knowledge after completion of the trauma first responder course. This provides strong evidentiary support of the importance to further develop, standardize, and propagate this course to other regions within Bolivia, with possible extension to other low- and middle-income countries.

Funding: The project was partially supported by a Global Health Initiative Award from the Center for Global Health at Northwestern University Feinberg School of Medicine. A small registration fee provided additional monetary backing.

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Participation of Harvard Medical School and Brigham and Women's Hospital to a major academic global health initiative: Benefits to faculty, trainees, and institutions

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Program/Project Purpose: The Human Resources for Health - Rwanda (HRH) Program was launched in August 2012 to expand the number, diversity, and competencies of the Rwanda health workforce. The HRH program includes faculty from 23 U.S. academic institutions, including Harvard Medical School (HMS) and Brigham and Women's Hospital (BWH), and builds on a longstanding partnership between the Boston-based nonprofit Partners in Health (PIH) and the Rwandan Ministry of Health. This study focuses on the contributions of Harvard-affiliated institutions and faculty deployed to Rwanda in 2012 and 2013 through the HRH program to determine the institutional benefits of participation in this initiative.

Structure/Method/Design: We developed an evaluation framework with inputs (governance, operations, faculty and trainees, infrastructure, equipment, and funding), activities (research, training, and health service delivery), and outputs (capacity building, partnerships, and knowledge generation/innovation). Data for these indicators was collected through a systematic review of internal HMS and BWH reports, and by interviewing 20 Harvard-affiliated faculty deployed to Rwanda.

Outcomes & Evaluation: Governance: A novel Memorandum of Understanding (MOU) was created collectively by the Rwanda Ministry of Health (MOH), HMS, and BWH to respond to the needs of Rwanda while remaining consistent with each co-signatory's institutional mandate. This MOU serves as a useful template for coordinating future government partnerships across multiple Harvard-affiliated institutions. Operations: Drawing from PIH's experience deploying Harvard-affiliated faculty to Rwanda, HMS and BWH have been able to harmonize processes within their own institutional structures for faculty recruitment, licensing, malpractice coverage, orientation, and ongoing mentoring and supervision. Faculty: In 2012 and 2013 respectively, 9.3 and 15.5 full-time equivalents from Harvard were deployed in anesthesia, dentistry, global health, medicine, obstetrics-gynecology, pathology, pediatrics, psychiatry, radiology, and surgery. The work pursued by these faculty in Rwanda has led to oral presentation at conferences, publications, grants, awards, and professional growth. Trainees: Between 2012 and 2013, at least 20 trainees from Harvard-affiliated institutions have been engaged in activities related to the HRH Program. Additionally, at least 15 faculty