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.
Funding: None.
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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 Potosi 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

deployed to Rwanda have taught classes or given lectures related to the HRH program at Harvard-based institutions. Research, Training, Health Service Delivery: Knowledge generation and innovation has occurred in research, training, and health service delivery, including by working with PIH and Harvard-affiliated institutions to develop a Master in Global Health Delivery program.

Going Forward: Despite ongoing challenges, especially related to mentoring and supervision of faculty, the experiences of Harvard-affiliated institutions through the Rwanda HRH Program will continue to produce insights into how other U.S. academic institutions can develop streamlined processes to serve the health needs of low-income countries while strengthening their own mission.

Funding: Funding for the HRH Program comes from the Government of Rwanda, the Center for Disease Control, and the Global Fund.

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The OxPal Medlink: the use of synchronised distance-learning platforms to strengthen medical education and healthcare capacity in unstable environments

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Program/Project Purpose: Unstable geopolitical environments and poor infrastructure present challenges to the development of a robust medical education culture. In the Palestinian territories, the unstable security situation, limited economic resources, and travel restrictions constrain access to clinical learning. Established in March 2012, the OxPal Medlink uses a web-based, distance-learning programme to identify and support educational needs of Palestinian medical students and postgraduate trainees, aiming to strengthen local long-term capacity for education and healthcare delivery.

Structure/Method/Design: Needs assessment was conducted during two field visits to the West Bank. Using an online virtual classroom, which incorporates interactive whiteboard and presentation facilities, participants attend regular tutorials delivered by clinicians based in Oxford. Tutorials focus on developing clinical reasoning skills, which students identified as being limited by their environment. Clinical cases provided by students and tutors form the centre for real-time discussion, enabling students to direct teaching to areas of perceived need. OxPal also delivers postgraduate tutorials in psychiatry, focusing on sub-specialities such as forensic and child psychiatry.

Outcomes & Evaluation: To date, OxPal has delivered 141 tutorials in internal medicine, general surgery, paediatrics and psychiatry, engaging 150 students at three Palestinian universities. The programme is continually evaluated via online feedback questionnaires, face-to-face focus groups and semi-structured interviews with participating students, tutors and clinical faculty. In recent feedback, students reported that OxPal had positively modified their current clinical practice, with 100% of students rating tutorials as "Good" or "Excellent", and 92% stating tutorials are "Fairly" or "Very" relevant to their future practice. Following needs assessment in April 2014, OxPal initiated a postgraduate seminar programme in psychiatry. Thus far, 3 postgraduate psychiatry tutorials have been delivered to 8 residents at various stages of training at Bethlehem Mental Hospital. All trainees reported improved confidence in subject areas following tutorials with 100% expressing intentions to register for future tutorials.

Going Forward: Following discussion with students and faculty during field visits, OxPal is looking to expand the partnership to all four medical schools in the Palestinian territories and to introduce further specialist seminars and mentorship for postgraduate trainees

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Innovations in global health education: A global interprofessional collaboration

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Program/Project Purpose: Schools of nursing around the world are interested in integrating global health into their curriculum. Curricular innovations related to creating and implementing global health courses must address the needs of all partners: students; host community; and home institution/faculty in order to insure the development of programs that are ethical, sustainable and meaningful.

Structure/Method/Design: A group of international, interprofessional healthcare experts has convened to share lessons learned, evidence-based best practice and next steps for global program development in schools of nursing. International, Interprofessional Team (ITT) members, Global program director from Toronto, Pilot program director from a state university in California (first of its kind, credit-toward major clinical), Global partner representatives (MPH and nursing), Global program developer and international faculty member.

Outcomes & Evaluation: Service: stakeholder engagement activities; identifying nursing-focused service projects which meet community needs; assessing community capacity and addressing health concerns with sustainable interventions. Learning: meeting nursing's strict clinical course requirements in an international setting; the importance of preparation and follow-up meetings including the importance of debriefing; reflective journaling; stages of change - working with administration and faculty to understand and embrace international clinical experiences. Evidence-based practice Team members have been involved in research on the following subjects: driving forces, obstacles and opportunities for global program participation in US schools of nursing; community-based participatory research; interprofessional pedagogy in global health education; evaluation tools for global nursing courses. Existing literature on the subject of global experiences for students has been thoroughly reviewed and integrated into the team's approach. Team members will identify high-impact resources and will discuss how this evidence has been used in developing successful programs.

Going Forward: Nursing is at a critical juncture and has an opportunity to identify its role in global health education. The Team aims to educate nursing leaders on ways to integrate ethical and evidence/informed based practice as they develop and implement global programs. These principles guide schools of nursing as they develop effective community health partnerships while ensuring meaningful educational opportunities for students. Future steps include