

Research ethics training of trainers: Developing capacity of Bolivian health science and civil society leaders

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Program/Project Purpose: The University of San Andres, Faculty of Medicine in La Paz, Bolivia in collaboration with Touro University California, Public Health Program was awarded a NIH Research Ethics Planning Grant in June, 2013 to develop strategies and processes for implementation of a comprehensive national research ethics program for Bolivia. Although the importance of scientific research based on ethical principles is highlighted in the Bolivian constitution and national health legislation, few Bolivian academics, researchers and health professionals have received formal training in the principles and practices of research ethics. A principle aim of the Planning Grant is to develop and implement a Research Ethics Train the Trainers (TOT) course with the goal of training faculty for future implementation of a national research ethics program.

Structure/Method/Design: A Project Directors Committee representing public health science universities from four participating Bolivian Departments/States (La Paz; Santa Cruz, Cochabamba & Chuquisaca) was formed to oversee all project activities including implementation of a three day in-person TOT followed by a 10 week online training. Training modules utilized materials developed by Bolivian academics and scientists and international research ethics programs at PAHO (Pan American Health Organization) and CITI (Collaborative Institutional Training Initiative), University of Miami. TOT University and civil society representatives were selected from each participating Department/State for a total of 26 participants. Upon completion of the training, participants were asked to implement educational research ethics activities in their local communities and institutions.

Outcomes & Evaluation: A pre-test/post-test study design was used to assess change in participant knowledge related to research ethics principles and practices. The mean score improved from 73% correct at baseline and 84% at course completion. Participants completed a course evaluation after the in-person and virtual components of the course. Participants highlighted the most useful topics in the course as respect for persons and human rights, principles of bioethics, informed consent and the function of research ethics committees. The most positive aspects of the in-person component of the course were the high level of participation, group work, communication and debate among participants representing different academic disciplines and social sectors. Eighty percent of participants completed the course with five dropping out during the virtual component. Most students reported that the instructions for using the virtual platform were clear and they received sufficient support from the Course Coordinator, however, most stated that some of the teachers provided insufficient academic support.

Going Forward: Integrating the group interaction strengths of the in-person TOT component with the flexibility of the virtual component recommends using a mixed methods approach while providing additional training to teachers related to virtual teaching methodologies.

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Cross cultural near-peer modules teaching emergency medicine skills and BLS in Haiti: Results and future directions

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Background: As with many low and middle-income countries, Haiti has inadequate emergency medicine (EM) services. Additionally, the medical training received at Institutions such as our partner school, Université Quisqueya (UniQ), does not provide students with sufficient instruction in EM and basic life support (BLS) techniques. We have previously reported results of a near-peer module in which American medical students and EM residents at Icahn School of Medicine at Mount Sinai (ISMMS) certify a group of Haitian medical students in BLS. In addition to BLS certification, the module includes didactic sessions on emergency response techniques practical to the Haitian environment, including response to motor vehicle accidents and trauma. Through participation in this program, UniQ students become more prepared for emergency response, contributing to an improved healthcare infrastructure in Haiti.

Methods: In our most recent module in March 2014, eight medical students and two EM residents certified thirty students from UniQ in BLS and gave lectures and practical skills sessions on EM techniques. The lecture topics included Approaching the Patient, Musculoskeletal Trauma, Wounds and Burns, and Central Nervous System Trauma. Each lecture lasted approximately one hour. The skills sessions included application of wound dressings, splinting of unstable fractures, patient transport, and other clinically applicable skills. Two instructors led each session that lasted approximately thirty minutes. Students were assessed based on a pre- and post- five point Likert Scale self-efficacy (SE) survey and an EM fund of knowledge (FOK) multiple-choice test.

Findings: In 2014, 30 UniQ students were successfully certified in BLS. UniQ student SE increased by 2.82 ± 1.06 ($p < 0.001$) on the 5-point scale. FOK scores increased by $41\% \pm 16\%$ ($p < 0.001$).

Interpretation: Our results demonstrate an improvement in both SE and FOK after students participated in the near-peer module. These results are consistent with data from our previous 2013 module, which demonstrated improvement in SE (2.75 ± 0.93) and FOK ($22\% \pm 15\%$). The greater increase in student scores in 2014 vs. 2013 suggests that our teaching module may be improving over time. To further advance our program, efforts to certify a group of Haitian UniQ students as BLS instructors are ongoing. An expansion of this program to neighboring schools that could benefit is also being formulated. In addition, a preparatory course streamlining the process of BLS instructor certification for future ISMMS students while simultaneously integrating topics on Haitian culture and current medical affairs is being implemented. Our ultimate goal is to establish a BLS training center in Haiti eliminating the need for our intervention and creating a sustainable, self-perpetuating teaching process.

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One health approach to workforce capacity building: A technology and curriculum partnership between Tufts university and an African University Network in Eastern and Central Africa