

Project Purpose: Students and professors from the Brigham Young University (BYU) College of Nursing traveled to Guayaquil, Ecuador in 2014 to perform a qualitative study related to the hospital's process of managing difficult intravenous (IV) access in this large hospital. The objectives of the study were (1) Determine the need for a difficult IV access algorithm. (2) If the need existed, donate intra-osseous (IO) equipment and training materials to the hospital. (3) Plan and organize a skills training program for the hospital. The results of the research identified the need for an alternative IV access method and algorithm to follow when IV starts were challenging. The following May, 2015, the group presented the hospital with a generous donation of intra-osseous supplies from the Teleflex™ company. The team of two professors and 20 nursing students taught physicians and nurses the use of the equipment. Additionally, the BYU team worked with the hospital's lead physicians and nurses and assisted in the development of a difficult IV access algorithm for them to put into practice.

Method/Design: This was a non-experimental, descriptive study using structured interviews. Fluent Spanish-speaking nursing students conducted the qualitative interviews in the Luis Vernaza hospital. Participants were a convenience sample of hospital physicians and nurses. The interviews were recorded, translated into English, and transcribed. Using qualitative data analysis (Miles and Huberman, 1994 methods), recurrent themes from the interviews were identified.

Outcome & Evaluation: Data analysis confirmed the need for a difficult IV algorithm and the necessity of IO access as an alternative method for IV access. It was determined that great strides in the care of hospitalized patients in Guayaquil, Ecuador could be achieved with the implementation of these items. The training was provided and the algorithm initiated. While the training and implementation were both highly successful, there remains a lack of commitment from the physicians and nurses to use the IO equipment as directed in the algorithm. Continued skepticism from the healthcare providers regarding the effectiveness of the IO device continues to be a problem.

Going Forward: The BYU College of Nursing visits this hospital annually and will regularly provide follow-up training on the IO device/equipment. Moreover, the team will evaluate the need for new supplies and additional education. It is imperative for the BYU team to follow up and provide continued face-to-face training to maintain sustainability of the use of the IO supplies the difficult IV algorithm.

Funding: None.

Abstract #: 2.003_HRW

Developing global health awareness in students through participation in an international health sciences conference

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Program/Project Purpose: The College of Health Sciences (COHS) at Sam Houston State University (SHSU) and the Medical School of the Universidad de Iberoamerica (UNIBE) partnered in the First Annual International Health Sciences Conference

conducted in San Jose, Costa Rica, September 2015. The purpose of the student focused conference was to enhance global health awareness, collaboration, and responsibility between health science students at SHSU and medical students at UNIBE. Focus areas included: educational initiatives; designs for health and sustainability; evidence-based practices in nursing; correctional public health; global sport management; preventive health, lifetime fitness and wellness; medical exchange programs; service learning; and nutritional health.

Structure/Method/Design: Project goals: increase international health science educational opportunities between students and faculty, and broaden the scope of global health in Latin America countries and the USA. Project outcomes: provide students with a language immersion experience, integrate international health opportunities, provide international research, and service learning opportunities.

Twenty-three students and 21 faculty represented SHSU. Sophomore, Junior, Senior, and graduate students were selected by faculty. Freshman were randomly selected to attend the conference. Program faculty specialist were invited to present. One-third of the presentations were co-presented by faculty and students, and 90 percent of the poster sessions were faculty/student collaborative research activities. UNIBE medical students served as conference hosts. Future conferences will be held annually on a rotating basis between the universities.

Outcome & Evaluation: Both universities regarded the conference as a success. Both student groups expressed their commitment to engage in study abroad, service learning, language immersion, and research opportunities. Faculty stated their willingness to sponsor research, study abroad experiences, service learning projects, and global health activities. Focus group results: extend conference dates; conduct additional tours of community centers, schools, clinics, and hospitals; include service learning activities; engage in international research; conduct pre-conference student social; and incorporate conference into a study abroad experience.

Going Forward: The goals and outcomes were achieved. Lessons learned: increase concurrent presentations, provide additional student collaborative activities, schedule conference in summer, implement conference registration fee, and extend reach of student and faculty participants.

Funding: Expenses were paid by UNIBE and the COHS.

Abstract #: 2.004_HRW

Improving access to education and support for community health nurses in rural Guatemala through telehealth

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Program/Project Purpose: The population of the Trifinio region in rural southwestern Guatemala experiences high rates of poverty and lack of access to adequate education, healthcare and clean water. The Trifinio Human Development Project includes a clinic and community outreach program and was implemented in 2011 to address these vulnerabilities. Local community health nurses

(CHNs), trained by Center for Global Health personnel, deliver the maternal and child programs, which provide education and screening interventions. To better meet the needs of the CHNs and to reduce costs in faculty time and travel, a plan to conduct weekly training sessions via telehealth was actualized in May 2015, with the aim of strengthening the local team's knowledge and capacity.

Structure/Method/Design: The curriculum of the 30-minute weekly trainings includes content and guidelines from the World Health Organization, the Breastfeeding Telephone Triage and Advice Book (author MB), the Wellstart International Lactation Self-study Modules and recommendations from the Guatemala Ministry of Health. Trainings are conducted using the Vidyo® technology platform. The initial curriculum focused in breastfeeding and has since included topics requested by participants such as fever, cough and pneumonia, dengue fever and chikungunya, diarrhea, child development and infant rashes.

Outcome & Evaluation: Initial evaluation of the telehealth project through participant discussions and assessments shows positive impact on knowledge, confidence and capacity. Customizing the training content to meet the participants' specific needs enhanced acceptance of the remote training. In addition to the educational component, having formalized weekly contact with the CHNs allows for a more effective mechanism for feedback that further strengthens the programs themselves to ultimately improve maternal and child health in the region.

Going Forward: Special attention to adult learning techniques such as case-based, interactive teaching to improve engagement and knowledge retention is important for project sustainability. Furthermore, there is a need to determine if certain content is better delivered only in-person versus via telehealth, or via telehealth augmented with in-person training. Revisiting of topics is essential and should be guided by recurring evaluation.

Funding: There is no direct funding for this program but is supported by the institutions named above.

Abstract #: 2.005_HRW

Tackling maternal mortality in rural Liberia: a field and facility-based approach

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Program/Project Purpose: Liberia's maternal mortality rate (1,072 deaths/100,000 live births) is among the highest in the world. Contributory factors include low rate of facility-based deliveries (56%) and limited antenatal care. After years of civil war and the worst Ebola outbreak in history, the Liberian health system has struggled to rebuild comprehensive maternal health care. Last Mile Health (LMH), an NGO committed to improving health for remote populations through work with community health workers (CHWs), is a partner of the Liberian Ministry of Health (MOH). LMH has developed new programs to increase facility-based deliveries and improve access to ANC services.

Structure/Method/Design: LMH will address maternal mortality in two counties in Liberia through a comprehensive field and

facility-based program. Process objectives include: number of CHWs trained in maternal health; number of facilities receiving midwife delivery kits; number of facility-based midwives who receive basic obstetric lifesaving skills (BLSS) training; and number of communities per month receiving ANC services via outreach programs. Outcome objectives include: percentage of women receiving antenatal care during pregnancy; percentage of facility-based deliveries; and maternal mortality rates. Participants include CHWs, their supervisors, and midwives. County Health Teams (CHTs) and the women of rural Liberia will be engaged as key stakeholders. The program focuses on training and ongoing mentorship of facility-based midwives and field-based staff. Additionally, the design and implementation process are done collaboratively with the respective CHTs and the Liberian MOH to facilitate ease of integration into national plans for community health initiatives.

Outcome & Evaluation: Midwife delivery kits have been delivered to most facilities in target areas in both counties. Re-design of curriculum and program activities are currently ongoing.

Going Forward: The improvement of maternal mortality is a complex endeavor. While the current program is designed to tackle many contributing factors, poor road conditions and long distances to health facilities present ongoing challenges.

Funding: Several project activities are funded by grants from Direct Relief and the ELMA Foundation.

Abstract #: 2.006_HRW

Global health competencies for undergraduate nursing students in South Korea

Abstract Opted Out of Publication

Abstract #: 2.007_HRW

Assessing point of care ultrasound in Nicaragua: A survey of utility, access, training, and interest amongst health care providers in rural and urban centers

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Background: This study explored the functional need for and potential receptivity to point of care ultrasound (POCUS) in urban and rural health care settings to guide future research and training programs within an annual exchange program between the University of California Davis and La Universidad Nacional Autónoma de Nicaragua (UNAN), León. It was hypothesized that there would be limited POCUS availability; that patients and physicians could benefit from greater access to POCUS; and that urban health care systems will have fewer barriers to POCUS use as compared to rural settings.

Methods: The study consisted of a survey in written Spanish given to a subject population that included 142 physicians, medical students, nurses, and nursing students selected on a convenience sampling basis from rural and urban clinics associated with UNAN- León in León, Totogalpa, and Sabana Grande, Nicaragua. Oral informed consent was obtained from each participant. The study was approved by the IRB of UC Davis and the Dean of UNAN- León.