

Methods: Three data collection tools were utilized: a modified Core Assessment Tool on Child Health (CATCH) – administered to women who had given birth to a child less than 2, the WHO survey on sanitation and the modified Reproductive Age Mortality Survey (RAMOS 4+2; *Bulletin of the World Health Organization* 2016;94:86–91.). Under 5 mortality was calculated through asking mothers how many children they had and how many died within the past five years.

Findings: Respondents from 122 households representing 56% of the 216 community households were interviewed. Of the 126 infants who were born within the past five years, 13 (10%) infants died. There were six deaths to women of reproductive age in the last 5 years, four of which were maternal deaths giving a maternal mortality ratio of 3,174. Of the 55 community infants, 74% of their births occurred at home with a traditional birth attendant, 19% took place in a health care facility and 7% were unassisted. Of the 15 living infants 0–6 months old, 9 (60%) were exclusively breastfeeding. Within the past two weeks of being interviewed, 75% of these children had a fever, 55% had diarrhea, and 67% had cough or difficulty breathing. Every family drank water from an unprotected spring / river.

Interpretation: These rural border communities demonstrate particularly poor health outcomes. The extraordinarily high maternal mortality ratio is particularly concerning. This program demonstrates that quick, reliable and rapid assessments of remote, rural communities can be performed integrating a community based method of maternal mortality surveillance. Health promoting advocacy and interventions can now be focused by local NGOs and governments to provide comprehensive programs to reduce both maternal and infant mortality and improve health.

Source of Funding: The Graham Sustainability Institute Dow Fellows Program.

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Addressing Gaps in Infectious Disease Training and Care in the Caribbean Region: The University of the West Indies - Jamaica / University of South Carolina Partnership to Develop a Postgraduate Infectious Diseases Fellowship

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Program/Project Purpose: There is need to create and support existing programs to increase the number of qualified Infectious Disease (ID) physicians and overall system of care for infectious diseases, including HIV, throughout the Caribbean.

The climactic characteristics of the Caribbean have lent themselves to ID outbreaks. Correlated examples are Dengue, Chikungunya and Zika. Additionally, a high rate of gastrointestinal and healthcare associated infections, multidrug resistant organisms and sexually transmitted diseases exists. Comparatively, the region's HIV prevalence is the second highest worldwide.

This background supports the need for more ID trained physicians throughout the Caribbean. Minimal local training is available

and Caribbean physicians who train overseas often do not return to serve the region. Additionally, overseas training is not always the most relevant to the Caribbean context.

Structure/Method/Design: Bridging the gap, University of West Indies (UWI) and University of South Carolina (USC) partnered to develop a two-year postgraduate clinical ID fellowship program at UWI, Mona Campus. The curriculum formatted from the American Academy of Graduate Medical Education, is modified to ensure Caribbean relevance. Trainees rotate through general ID and subspecialty areas such as microbiology, transplant ID, Tuberculosis, HIV clinics and public health. Via videoconferencing, UWI trainees participate in USC case conferences, didactic lectures and HIV/HCV management meetings. UWI trainees also rotate at USC for 2 months every year. This partnership is supported by the US President's Emergency Plan for AIDS Relief (PEPFAR).

Outcome & Evaluation: Resulting from the partnership, a consortium of Caribbean ID physicians is growing. To date, 4 physicians have entered the program. The first graduate in 2015 now serves as the HIV Country Director for the Bahamas and clinical educator at the Princess Margaret Hospital, Nassau — a training site for UWI. The second trainee graduates in 2017 and will practice in Jamaica. A graduate from the USC fellowship program will also return to his home country of Trinidad in July 2017 to establish a practice.

Going Forward: As the number of ID physicians increases in the Caribbean, the goal is to develop ID training sites at other UWI campuses and a consultative network to guide development and research initiatives.

Source of Funding: American International Health Alliance.

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Dementia and Memory Care: Strengthening Health Systems Capacity through Long-term Service Learning Projects and Study Abroad Programs

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Program/Project Purpose: Repeated exposure to memory care activities is recommended for optimal benefit to dementia patients, yet many senior centers, assisted-living facilities, and rehabilitation centers lack sufficient human resources to carry out comprehensive long-term memory care programs. For the past four years, health majors taking a Human Disease course at Texas A&M University have participated in a Service Learning project dedicated to dementia and memory care.

Structure/Method/Design: Approximately 170 students each semester are required to take part in a 2-hour session at a local assisted living facility, interacting with residents and engaging in memory care activities designed to slow the progression of varying levels of dementia. Activities include scent-painting with spices, bingo, and life story interviews. Each session includes a team of 10 to 12 students and two group leaders, all of whom have been well trained and prepared for the experience. Typically, 16 to 18 sessions are conducted across each semester, which provides the residents with ongoing, repeated exposure to the activities.

Outcome & Evaluation: This Service Learning project allows students the opportunity for hands-on experience directly related to the course curriculum, while serving the community in a very beneficial way. Student evaluations and reflective essays completed after their experience indicate enthusiasm for the project (98% highly satisfied), personal growth, and appreciation for the opportunity. Furthermore, anecdotal evidence (as gathered through observation and conversations with family members and facility staff) suggests that the ongoing, regular exposure to the activities has had a positive influence on the quality of life of some participants, as evidenced by displays of increased conversation and fewer signs of anxiety.

Going Forward: Due to the success of this project, we plan to continue and also hope to incorporate methods to quantitatively assess the impact on the dementia patients. Additionally, we will pilot-test the project in the Dominican Republic in a Service Learning Study Abroad trip for our health majors (May, 2017). We are looking forward to examining aging and dementia in a different cultural context, and adapting the project to fit the needs of the Dominican health system. Plans include partnering with a Dominican university to create a sustainable Service Learning project in their community.

Source of Funding: College of Education & Human Development, TAMU.

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Improving the Quality of Prehospital to Hospital Communication in Cuenca, Ecuador Using a Standardized Course

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Background: Poor communication can lead to adverse patient outcomes. Previous observations have highlighted the need for standardizing communication from the prehospital to hospital settings in Cuenca. The objective of the study was to determine the effectiveness of a standardized training course on the quality of communication between prehospital and hospital settings in Cuenca, Ecuador.

Methods: A short communication course was designed and conducted as a part of the Ministry of Health's prehospital training program. The course emphasized transmission of critical variables including: demographics, mechanism, injuries, vitals, treatment, allergies and meds during prehospital to hospital communication, using didactic and scenario-based techniques. A customized checklist was used by trained volunteers to observe patient handoffs before and after the training course based on these variables to assess for

changes in the quality of data transmitted. Preliminary statistical analysis was performed using STAT 14.1.

Findings: A total of 65 observations were conducted, 40 before and 25 after training. Before training, there were no cases when all variables were communicated. This did not change with training. The most common variables communicated before training were Chief complaint (88%), Mechanism of injury (88%) and patient age (80%). After training, rates of transmission of several variables increased including: respiratory rate (pre: 22.5%, post: 56%), blood pressure (pre: 32.5%, post: 76%), and oxygen saturation (pre: 37.5%, post: 72%). However, despite clinically significant increases, none were statistically significant. There were minimal differences in transmission of medications (pre: 17.5%, post: 28%) or allergies (pre: 2.5%, post: 4.0%).

Interpretation: Implementation of a standardized course increased the quality of transmission of critical patient variables from the pre-hospital to hospital settings in Cuenca, Ecuador in a preliminary analysis. Vital signs showed the largest improvement after the course, however allergies and medications showed minimal improvement. Data analysis is ongoing and may show greater statistical difference when complete. The training may have emphasized some variables at the cost of the others and future iterations may need to take this into account to be more effective.

Source of Funding: VCU School of Medicine.

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Effect and Tangible Measures of Value in Global Health Nursing Education: Findings from a Comprehensive Review

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Background: With increasing globalization, emerging diseases, shifting health concerns and growing health inequities among and within countries, all nurses need the skills to address complex global health challenges. Schools of nursing in the United States are continuously embracing global health programs and educational opportunities for their students, however there is little evidence which describes the impact of these educational endeavors.

Methods: To better understand the current landscape of educational endeavors in global health nursing, a comprehensive literature review was conducted to summarize the measures of value applied in these endeavors. In order to identify these measurable concepts, it was essential to focus on effectiveness and feasible applications within global health nursing curricula and clinical experiences at both the undergraduate and graduate levels. The review was limited to undergraduate and graduate nursing educational institutions located within the United States. To conduct a comprehensive search concerning these global health nursing curricula and clinical experiences, relevant and applicable databases included those with a focus on nursing, allied health, global health, education, service-learning as well those with an interdisciplinary focus. An informationist executed the search and an interdisciplinary team of health professionals reviewed and synthesized the data and concepts for publication.