

### An alliance of educators to support post graduate surgical training in Tanzania

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**Background:** We established a non-profit corporation to link surgical educators from multiple institutions with the Surgery Department at the Muhimbili University of Health and Allied Sciences (MUHAS) in Dar es Salaam to assist in training Tanzanian surgeons.

**Methods:** Surgical educators, often accompanied by a US surgical resident, were recruited for 1 month teaching rotations at MUHAS through the Pacific Coast Surgical Association and personal contacts. The visiting surgeons effectively joined the MUHAS Surgery Department participating in all clinical and academic activities.

**Findings:** From October-2012 – November 2015, 16 months of surgical education was provided by nine surgical educators accompanied by eight surgical residents. A total of 282 procedures were taught including several advanced procedures such as abdominoperineal resection, Heller myotomy and Dor fundoplication, esophagectomy, Nissen fundoplication, liver resection, pectoralis major myocutaneous flap and common duct exploration which had either never been done or done infrequently previously. Many of these procedures are now both being done independently and taught to others by our Tanzanian colleagues.

**Interpretation:** A long term collaborative association between a consortium of HIC and LMIC surgical educators resulting in improvement in both skill set and surgical training is possible.

**Funding:** None.

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### Assessing the implementation of a community health worker intervention in India

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**Background:** Community Health Workers (CHWs) have proven effective in addressing Human Resources for Health (HRH) challenges that exist in remote, inaccessible areas where health systems are inadequate and absenteeism is high. Evidence shows that CHWs have improved newborn breastfeeding and complementary feeding practices. However, due to the varied definition, role, and function of CHWs, even within countries, studies are inconclusive about the overall impact of CHWs on child health. This study contributes to this growing body of literature by undertaking implementation research to understand contextual factors that contribute to the potential success or failure of a CHW intervention. The objective of this study was to assess the implementation of a CHW program introduced in 2009 and its effect on newborn care practices among new mothers in rural Rajasthan.

**Methods:** Researchers performed a secondary data analysis on data collected between 2013 and 2015 in Rajasthan, India. Data was collected purposively using qualitative methods. Semi-structured interviews in intervention and non-intervention villages were conducted asking about nutrition practices of new mothers (n=131).

**Findings:** Proportion of mothers practicing exclusive breastfeeding and breastfeeding during illness showed little difference and were high across both intervention and non-intervention groups (92% v. 90%, 91% v. 96%). However, introduction of weaning foods between 6–8 months was much higher among women in intervention areas compared to non-intervention (71% v. 42%).

**Interpretation:** Many CHW programs focus on proper nutrition practices given that they are under-practiced in many LMIC. In rural Rajasthan, we found proper breastfeeding to be largely practiced across all villages, leaving little room for improvement. In contrast, non-intervention areas illustrated poor complementary feeding practices compared to intervention areas. These findings not only confirm the effectiveness of CHWs on improving nutrition practices, but also suggest future implementation should tailor programs to meet different contextual and cultural needs thereby maximizing program resources and outcomes.

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### Factors influencing staff recruitment and retention in Tanzania district hospital based on preliminary needs assessment

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**Background:** Shirati District Hospital must manage the challenges of the health workforce shortage in Tanzania while providing appropriate care. The aims of this project are to identify the factors influencing staff recruitment, training, and retention as well as quantify the self-confidence of the staff in treating prevalent diagnoses with the long-term goal to increase the hospital's healthcare capacity.

**Methods:** All hospital staff members were invited to participate in an anonymous survey and focus group discussion in June 2015. Survey responses were marked by the participants. The discussion responses were recorded by a note-taker during the session. The quantitative survey data was analyzed using basic statistics. The open-ended responses and group discussion remarks were evaluated for thematic trends.

**Findings:** Of the 29 completed surveys, the majority of respondents were full-time employees (86%), nurses (62%), female (55%) and averaged 38 years of age. The focus group discussion was attended by four female nurses and two male clinical officers. Staff members trained across Tanzania but chose to work at Shirati Hospital due to a job opening (45%) and proximity to home (41%). All respondents had at least two years of formal training for their current position, and 100% of them were interested in attending workshops about 11 prevalent conditions. 86% of respondents self-reported confidence in their ability to manage patients

with these diagnoses. Anecdotally, staff members relied on their supervisors for ongoing education and professional advice but want to learn from outside organizations to confirm best practices.

**Interpretation:** District hospitals should recruit and train community members to join the hospital staff, create positions for locally trained providers, and provide opportunities for continuing education to increase self-confidence. Hospitals will retain staff members who live in proximity to the site and feel confident in their work. This baseline needs assessment will guide the strategic plan for staff development and the design of future workshops.

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### Building a curriculum for global health nurse competencies

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**Program/Project Purpose:** Nursing care is the backbone of health care delivery globally. As interest in the field of global health increases, curriculum and opportunities that prepare nurses to work in low resource settings are necessary. However, there is minimal consensus on what competencies are key for effective global health nursing leadership. A collaborative evaluation of educational approaches is necessary to prepare nurses for complex global health work. The UCSF Global Health Nursing Fellowship (GHNF), established in 2014, is a model for evaluating curriculum that delivers core global health nursing leadership competencies.

**Structure/Method/Design:** The UCSF GHNF was designed in partnership with the non-profit Partners In Health (PIH). The program aims to (1) provide experience in global health for nursing fellows, and (2) to support educational opportunities for Haitian nurses in hospital settings. To achieve these goals, an experiential curriculum was implemented based on global health competencies defined by UCSF interprofessional faculty. Educational exercises include 1) Pre-departure self-assessments and objective setting; 2) Interactive interprofessional field orientation; 3) Prompted self-reflections; 4) Literature reviews and discussions; and 5) independent projects mentored by Haitian and UCSF faculty.

**Outcome & Evaluation:** Results of the first year's evaluation indicated that fellows need structured mentorship in core competencies. Preliminary results from year two indicate that 1) interactive field orientation set realistic expectations and goals for the year; 2) ongoing self-reflection exercises are important for managing competing priorities in a hectic resource constrained environment; and 3) literature reviews provide insight into concepts common encountered in the field.

**Going Forward:** Given that advance practice nurse graduates enter global health fellowships with varying perceptions of how their work should impact host communities, agreement upon fellowship competencies is necessary. The challenge of global health nursing training is to guide the learners through their experience with a balanced consideration of best-practices and self-reflection; as well as interprofessional team focus and independent initiative. In summary, time in the field alone is not adequate to prepare advanced practice nurses to work in global health.

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### Near-peer teaching between Haitian and American medical students: a longitudinal evaluation of an emergency response curriculum

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**Program:** Using the principles of near-peer teaching, US students from the Icahn School of Medicine, accompanied by Emergency Medicine residents from Mount Sinai Hospital, taught Haitian medical students at Université Quisqueya (UniQ) Basic Life Support (BLS) skills and practical emergency management of common injuries.

**Methods:** The 3-day long program consists of interactive lectures and hands-on skills workshops. The sessions include BLS certification, and emergency response to wounds, musculoskeletal injuries, trauma, and other clinically applicable skills. Each year from 2013-2015, we administered a fund of knowledge (FOK) assessment and a self-efficacy (SE) survey to Haitian medical students before and after the program. These results were compared using paired t-tests. In 2015, students trained in 2014 were also invited to retake the FOK to evaluate their retention of the material.

**Results:** FOK values were 35.2% ±12.9% pre-test, and 57% ±15.6% post-test (p<0.005, n=53) in 2013; 39.7% ±14.6% pre-test and 78.8% ±10.1% post-test (p<0.001, n=19) in 2014; and 45.3% ±2.3 pre-test and 79% ±8.2% post-test (p<0.001, n=40) in 2015. 2015 retest of 2014 students showed values of 68.8% ±2.8% (n=18). SE results showed an increase of 2.75 ±0.93 (p<0.0001, n=25) in 2013, 2.8 ±1.06 (p<0.001, n=19) in 2014, and 3.11 ±0.53 (p<0.0001, n=41) in 2015 on a 5-point Likert scale.

**Conclusion:** Each year, students demonstrated a statistically significant improvement on FOK and SE exams post-program and students tested comparably well across all three years demonstrating long-term value to this focused intervention. We will continue evaluation of this program to optimize it for the unique needs at UniQ, with the goal of increasing the number of students taught while maintaining educational quality. The next phase in our effort to create a sustainable intervention is teaching the alumni of the class to be instructors, which we successfully piloted this year and plan to expand in 2016.

**Funding:** U.S. participants fundraise for the trip. Université Quisqueya provides facilities.

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### Evaluating a pilot program partnering US graduate nursing students and Kenyan Nurses