

anesthesiologists and 53.7% of obstetricians, are located in a state capital. However, only 24% of the population lives in a state capital, resulting in a maldistribution of the surgical workforce.

The average age of the surgical workforce in the state capitals is 46.85 years and 47.86 years in the interior ( $p < 0.0001$ ). Additionally, the north and central-west of the country are large donor regions for the surgical workforce. 492 SAO (18.5% of the total SAO born in the north) migrating out of the north region and 2,642 SAO (49.74%) migrating out of the central-west.

**Interpretation:** Although Brazil has a large surgical workforce, inequalities in its distribution are concerning. Government policies and leadership from surgical organizations are required to ensure that the surgical workforce will be more evenly distributed in the future. This will both improve work conditions as well as ensure access to surgical care throughout the country.

**Funding:** None.

**Abstract #:** 2.020\_HRW

### A multidisciplinary combined global health pathway for post graduate medical education

C. Mattar<sup>1</sup>, I. Trehan<sup>2</sup>, S. Hilbert<sup>3</sup>, R. Patel<sup>1</sup>; <sup>1</sup>Division of Infectious Diseases, Washington University in St Louis, USA, <sup>2</sup>Department of Pediatrics, Washington University in St Louis, USA, <sup>3</sup>Department of Emergency Medicine, Washington University in St Louis, USA

**Program Purpose:** Given the growing interest in Global Health among medical graduates over the recent years, and given the increasing need for a standardized approach to global health education and training, we have decided to bring together residents from three training programs: internal medicine, pediatrics and emergency medicine with specific interest in global health to address competencies required for residents to practice medicine and research in resource limited settings.

**Structure:** The program is designed to extend over a 2 year period starting in post graduate year two of training and extending into the third year. It involves an intensive 2-week mandatory rotation which includes didactic sessions as well as hands-on experience and simulation. Methodology of Global health research is also addressed. It is followed by monthly discussions and lectures involving current controversies in global health as well as progress meetings with each of the participants.

**Outcome/Evaluation:** The pathway is intended to provide the trainees with the knowledge, skills, cultural competencies, and an overall understanding of the current challenges in global health. Ultimately, we aim at providing opportunities for the residents to become actors in achieving improved healthcare delivery and health equity.

The short term evaluation of the course involves a pre and post course test to evaluate the perceptions and knowledge of the participants.

**Going Forward:** Future steps will entail the addition of the Radiology, as well as Obstetrics and Gynecology and Anesthesiology programs to the course and the standardization of the post graduate global health education for post graduate medical education on the institutional level.

**Abstract #:** 2.021\_HRW

### Effects of a short training course and professional background on the job performance of community health extension workers in Kenya

M.S. McAlbaney, J. Ndungu, S. Mbugua, C. Waitthera, B. Jowi, M. Adam; AIC Kijabe Hospital, Kenya

**Background:** The Kenyan Ministry of Health (MOH) created a job category in 2013 called the Community Health Extension Worker (CHEW), who function as a link between Level 1 and 2 in Kenya's health system. None of the approximately 2500 employed CHEWs had formal training specific for this position. Kijabe Maternal Newborn Community Health Project developed an in-service course to improve CHEWs' effectiveness in implementing the community health strategy. This study aims to examine if CHEWs who had nursing or public health background performed at a different level than CHEWs from other professional backgrounds (social work, psychology, community development, etc.).

**Method:** The 5-day in-service course had didactic and practical field instructions and required an action plan with skills applied at their workplace. Innovations included six months of technical assistance (phone/email) and two days of site visits. The course emphasized the roles and responsibilities of a CHEW, practiced facilitation skills especially in low-literacy adult learners, and utilized the MOH community health volunteer (CHV) curriculum so CHEWs could train their own volunteers. Participants were encouraged to develop health system linkages, utilize local resources, improve data collection techniques, and identify narratives for community engagement and education. Tools to track progress include written pre and post knowledge test, and checklists for field visits and evaluating facilitation skills. Action plan grading used direct observation, and verbal interviews of CHEWs, CHVs and colleagues during site visits.

**Findings:** 121 CHEWs from 14 Kenyan counties participated. Nurses, public health officers, and clinical officers were classified as having medical training (61%). Other professions were classified as non-medical (39%). Mean action plan scores for CHEWs with non-medical background was 79% (SD=0.0695) while those with medical background was 80% (SD=0.0867); ( $t_{(119)}=0.7828$ ,  $p>0.05$ ).

**Interpretation:** This study showed that individuals not trained in clinical medicine or public health can perform CHEW functions at the same level as those who were. This has broad implications given the scarcity of medical professionals and the urgent need to scale up the primary healthcare systems close to the community. Participants most appreciate the emphasis on facilitation skills especially for low-literacy adult learners from the course.

**Funding:** None.

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### Developing global health curriculum: Pediatric resident elective in rural Guatemala

K. McConnell<sup>1,2</sup>, J. Boster<sup>2</sup>, A. Krack<sup>2</sup>, R. Ortenberg<sup>2</sup>, E. Asturias<sup>1,2</sup>; <sup>1</sup>Center for Global Health, Colorado School of Public Health, Aurora, CO, <sup>2</sup>Department of Pediatrics, University of Colorado School of Medicine, Aurora, CO

**Program Purpose:** Medical residents are demanding global health themed and international electives to promote their training and interests. The Center for Global Health and the Children's Hospital of Colorado developed a formal global health track and international elective in 2012. The clinic, in southwest Guatemala, provides experiential learning, through illness and psychosocial issues that are unique to international experiences, but not systematically learned during pediatric residency. Preliminary evaluation by rotating residents reported unique experiences and growth in diagnostic skills, treatment options and interpersonal communication; but also revealed a lack of preparedness and resources for these unique clinical situations. Current research supports pre-rotation education, competency-focused goals and debriefing as important factors to successful global health electives. This program intends to create a full elective curriculum, designed to address specific competencies using entrustable professional activities.

**Structure and Methods:** This is a group effort with residents in the global health track, the fellow and faculty. The American Academy of Pediatrics and additional organizations have developed competencies for global health education, from which we are customizing to our elective. Entrustable professional activities are also forming the framework for developing an online, downloadable, platform with text and video material, assigned reflections as well as teaching presentations for the pediatric residency program and the clinic nurses. This platform will complement and enhance the clinical experience.

**Outcome and Evaluation:** Post elective debrief and surveys alongside formal evaluations facilitate assessment and improvement of the curriculum. To date, there is an outline of curriculum, including competencies and entrustable professional activities, with topics currently being curated into text and video. The team is working with the medical education department within the residency program as well.

**Going Forward:** The team is working to create content and evaluations to assess progress. The curriculum will be made available to rotating residents as it is created. The elective will become more robust and this curriculum may be adapted for use by international rotations at additional institutions.

**Funding:** The team has no direct funding of this program but is supported by the institutions listed above.

**Abstract #:** 2.023\_HRW

### **Developing an oral health care curriculum for Rwandan primary school-aged children using the classroom teachers in a non-traditional manner to promote life-long oral health knowledge and practices**

V.I. Meeks<sup>1</sup>, M.N. Johnson<sup>1</sup>, R.E. Salzman<sup>1</sup>, S. Yoon<sup>2</sup>; <sup>1</sup>University of Maryland School of Dentistry, Baltimore, MD, USA, <sup>2</sup>University of Maryland School of Pharmacy, Baltimore, MD, USA

**Program/Project Purpose:** The Rwanda Annual Health Statistics Booklet produced by the Rwanda Minister of Health's Health Management Information System notes that diseases of the teeth and gums consistently ranks among the top ten most frequent outpatient services in the district hospitals of Rwanda. In 2010, diseases of the teeth and gums ranked #1. There are reported approximately 122 dentists and dental therapists in Rwanda serving a country of 11 million. This shortage of oral health care providers, even more

apparent in resource-poor rural communities of Rwanda, provided motivation to design a project where the use of available human resources could be used to promote and expand oral health knowledge. This non-traditional approach to providing oral health education uses primary school instructors to teach oral health across the various classroom subjects in the school curriculum. The goal of the project was to develop an oral health care curriculum that can be implemented across various primary school classroom subjects that would provide instruction in proper oral hygiene instructions as well as foster sustainable lifelong oral health care knowledge and habits. The Urukundo Learning Center (ULC), a preschool to third grade (with fourth grade classrooms under construction) primary school located in rural Muhunga, Rwanda was selected for the project because of direct access to school administrators and teachers, relatively small teacher to student ratio class size and there is a dental clinic onsite.

**Structure/Method/Design:** Utilizing available NIH and American Dental Association (ADA) oral health education guidelines for elementary school age children, lesson plans were developed with modifications paying close attention to the need for cultural competency. Lesson plans were designed to be assimilated to the "Scheme of Work" template used by the ULC faculty. Collaborative discussion between the faculty and project designers provided input relative to where in the curriculum (i.e. subject) could various oral health concepts could be presented.

**Outcome & Evaluation:** Facilitate increasing autonomy in developing lesson plan topic that promote life-long good oral health is anticipated as lesson plans are reviewed after implementing.

**Going Forward:** The University of Rwanda College of Medicine and Health Sciences, School of Dentistry uses ULC as one of its outreach dental clinic sites. The project hopes to have the dental students work with the ULC faculty to foster good oral health as an interprofessional collaboration as lesson plans continue to be developed.

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### **From buzzword to lasting change: The journey from headcount diversity to truly inclusive nursing communities**

F. Mena-Carrasco, A. Gresh, E. Dallman, E. Johnson, L. Rosales, V. Pantaleon, K. Brooks, P. Sharps; Johns Hopkins University School of Nursing, Baltimore, MD, USA

**Program/Project Purpose:** Diversity, inclusion and cultural humility are foundational for building an effective health care workforce. The IOM reinforces the imperative to develop a nursing workforce that is prepared to serve an increasingly diverse and global population. Efforts to improve diversity in health care, however, must themselves be inclusive in design. One that not only improves the pipeline and recruitment of underrepresented individuals, but also creates and sustains inclusive, respectful conditions in which all can contribute, learn, feel valued, and succeed.

**Structure/Method/Design:** In 2008, the Dean of the Hopkins School of Nursing (JHSON) commissioned an evaluation that identified gaps in the ethnic, cultural, and religious diversity of JHSON