

**Going Forward:** A team of faculty members from the Thailand branch of SEAOHUN participated in Training of Trainers workshops using the Leadership and Collaboration modules. The modules are also available as an open source online and have already been used by faculty members of SEAOHUN universities, University of Minnesota, and Tufts University.

**Funding:** USAID

**Abstract #:** 02ETC032

### Development of a community-based educational program on hypertension in Dhulikhel Municipality, Nepal

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**Program/Project Purpose:** A community health assessment conducted for Dhulikhel Municipality, Nepal, identified hypertension as a vital health issue. An ongoing study of cardiovascular disease in this area has found a prevalence of hypertension among adults over age 17 of 42.2% for males and 29.5% for females. When asked in qualitative interviews, ten members of the Dhulikhel Municipality stated that they would be very interested in attending a community-based educational class on hypertension. The goal of the project was to develop the curriculum for hypertension education to be given by the Dhulikhel Hospital Community Department (the "Community Department"). The project took place over an eight week period during the summer of 2014.

**Structure/Method/Design:** Seventeen interviews and six more informal conversations conducted over a two-week period in June 2014 formed the basis for a community health assessment for Dhulikhel Municipality. The findings of the community health assessment were supported by a literature review focused on hypertension and cardiovascular disease in Nepal. With the assistance of the Community Department, a lesson plan for a community-based educational program on hypertension was developed, field tested, and revised. It is anticipated that this curriculum will be given by the Community Department throughout the Dhulikhel Municipality.

**Outcomes & Evaluation:** The curriculum was tested on July 20, 2014 in Shreekhandhapur, a town in the Dhulikhel Municipality. The class was provided with the assistance of Dhulikhel Hospital, the local government-run Urban Health Clinic, and two Female Community Health Volunteers for Ward Eight of the Dhulikhel Municipality. Fifty adults attended the trial educational program; of these, twenty-four were over the age of sixty, eighteen self-identified as hypertensive and sixteen self-identified as having a family member with hypertension. Following the class, the curriculum was evaluated and further revised based on feedback from the nurse educator at Dhulikhel Hospital who presented the trial program.

**Going Forward:** The project successfully developed the curriculum for a community-based educational program on hypertension that will be implemented by the Community Department throughout the Dhulikhel Municipality. Additionally, it is anticipated that the hypertension curriculum will be used as a model by the Community Department for future community-based educational programs.

**Funding:** University of Washington School of Medicine Global Health Immersion Program.

**Abstract #:** 02ETC033

### A situational analysis of health information library needs in Tanzania

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**Program/Project Purpose:** The National Library of Medicine (NLM) is supporting the development of a curriculum to train medical information specialists for the Tanzanian Ministry of Health and Social Welfare (MOHSW).

**Structure/Method/Design:** Last year a Tanzanian technical advisory/working group (TAG) met in Morogoro to develop tools to assess the Tanzanian user community's medical library and information needs. The TAG recommended, and helped carry out, a series of focus groups consisting of stakeholders from all areas of the healthcare system in Dar es Salaam, Moshi, Mwanza, and Njombe.

**Outcomes & Evaluation:** Based on the results, the TAG recommended that a three year Diploma program be developed to train Health Information Specialists, who would then be placed in all clinics, hospitals, and medical and nursing schools under the auspices of the MOHSW. They also recommended combining this program with their medical records certificate program. The role of the Health Information Specialists will be to organize medical records, facilitate the transition to an electronic system, provide appropriate information resources to patients and families, provide evidence based medicine resources to clinicians, and assist medical and nursing students.

**Going Forward:** We are now designing the actual curriculum and believe this program can serve as a model for neighboring countries.

**Funding:** National Library of Medicine

**Abstract #:** 02ETC034

### Building equity in the global health research agenda: The partners in health-harvard medical school research partnership in Rwanda

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**Program/Project Purpose:** Partners In Health (PIH) has supported health service delivery in three districts in rural Rwanda since 2005. In line with the Rwandan Ministry of Health's (RMOH) emphasis on research and capacity building, PIH/Rwanda and Harvard Medical School (HMS), supported by research partners at Brigham and Women's Hospital, have developed a collaborative partnership to produce high-quality research documenting programmatic successes/challenges and increase Rwandan engagement and leadership in research. In-country partners, including the RMOH, University of Rwanda School of Public Health (UR-SPH) and other national research bodies, advise and collaborate on activities.

**Structure/Method/Design:** The PIH/Rwanda Research Department and Research Committee were established in 2010 to provide adequate research infrastructure. The Research Department facilitates research implementation in the field, while the Research Committee reviews all proposed research to ensure that it is technically sound and aligns with RMOH and PIH/Rwanda priorities. Simultaneously, the Department of Global Health and Social Medicine (DGHSM) at HMS established the Global Health Research Core. The Core (including epidemiologists, statisticians, and data analysts) provides technical support to projects across PIH

sites and includes an HMS faculty member as a Rwanda-based research advisor and technical support. Research capacity building activities have been prioritized. District-based research trainings develop skills to both produce research and integrate research findings into practice. To develop research leadership, students are supported to complete MPhil/PhD degrees at UR-SPH. To bridge the mentorship gap due to a large student body and small faculty at UR-SPH, these students are co-supervised by UR-SPH and HMS faculty.

**Outcomes & Evaluation:** The following outcomes have been observed. 1) Increased interest in research: 103 PIH/Rwanda, RMoH and UR-SPH colleagues have completed training programs since 2012 and demand for training far exceeds capacity (only 25-50% of applicants accepted into trainings). 2) Increased research productivity: The number of publications highlighting PIH/Rwanda-supported programs has increased from 1-5 peer-reviewed publications per year from 2006-2012 to 10 publications in 2013 and 15 publications published/accepted/submitted as of September 2014 (published/accepted/submitted as of September 2014). 3) Increased Rwandan leadership in research: The first Rwandan-led manuscript describing a PIH/Rwanda-supported program was published in 2013, and, in 2014, 67% (of 15) were first-authored by a Rwandan. 4) Increased link of research to policy: Current research is led or advised by RMoH and PIH/Rwanda program leads, better linking results to program implementation/policy.

**Going Forward:** This work will continue to leverage the institutional strengths of PIH/R and HMS and partnerships with RMoH and UR-SPH. Fostering inclusive research, with clear guidelines, technical support and trainings, remains a priority. However, flexible funding for in-country infrastructure, mentorship and field-based training programs is essential for continued growth.

**Funding:** This work is funded by HMS DGHS, PIH and the Doris Duke Charitable Foundation.

**Abstract #:** 02ETC035

### Low cost tube thoracostomy model for training in resource poor settings

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**Program/Project Purpose:** Tube thoracostomy is an integral procedure in trauma training. The Advanced Trauma Life Support (ATLS) and Primary Trauma Care courses both include chest tube insertion stations. Advanced simulators such as TraumaMan are available, but are often cost prohibitive, particularly in resource-poor settings. Here we introduce a new low-cost tube thoracostomy model made out of widely available five-gallon water jugs.

**Structure/Method/Design:** Materials: Five-gallon water jug Masking tape Clear packing tape Knife/shears Large construction paper Paper towels Permanent marker Cut a five-gallon water jug in half longitudinally so that there are two half cylinders, one with a handle and one without. Discard the one with the handle. With the remaining half, cut out four parallel, rectangular rib spaces in the transverse plane of the jug. The plastic that remains in between each space will serve as the bone. Cover the "bone" with masking tape to simulate the white color of the ribs and to cover any jagged edges in the plastic. Roll paper towels and place them over the "ribs". Using masking tape, tape these rolls tightly over each rib to simulate the three-dimensional feel of each rib. Flip the jug over so that you are looking at the inner aspect of the

"thorax". Place the clear packing tape longitudinally in order to cover the entire interior aspect of the cutout ribs. This tape serves as the pleura and allows the trainee to puncture through the pleura with the kelly clamp. Lastly, flip the jug over back onto the other side. Lay a large sheet of construction paper over the outer aspect of the "thorax". This will serve as the skin. Draw important landmarks including the nipples and axilla and tape this to the water jug.

**Outcomes & Evaluation:** The water gallon chest tube model costs approximately \$15.00 USD. It is durable and reusable. The layering of materials allows the trainee to palpate and identify critical landmarks. The trainee is able to practice every step of chest tube insertion, from palpating the superior margin of the ribs at the nipple line over the mid axillary space to puncturing through the pleural cavity and sweeping a finger inside the thorax. The tape is durable and allows for several punctures through the pleural cavity. The model can be reset easily by placing a fresh sheet of paper over the thorax and replacing the clear packing tape. Limitations include the lack of lifelike tissues to simulate blunt dissection and inability to place surrogate fluid inside the thorax to be drained.

**Going Forward:** This model is inexpensive, durable and can easily be made from materials that are widely available in resource-poor countries.

**Funding:** None to disclose.

**Abstract #:** 02ETC036

### Cancer genetics education in a low- to middle-income country: Evaluation of an interactive workshop for clinicians in Kenya

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**Program/Project Purpose:** Clinical genetics is becoming the standard of care in the treatment of many inherited disorders, including some forms of cancer. Retinoblastoma (Rb) is an aggressive early childhood cancer that affects families worldwide. Rb can be heritable or non-heritable, and subsequent treatment of the affected individual, his/her siblings and future offspring is impacted by this diagnosis. While genetic testing and genetic counseling are readily available in developed countries, in low- to middle-income countries such as Kenya genetic testing is limited and genetic counseling is virtually non-existent. Genetic testing is likely to become widespread in Kenya within the next decade yet there has not been a concomitant increase in genetic counseling resources. Our aim was to design an intervention to build capacity in Rb genetic counseling in the health care workforce in Kenya.

**Structure/Method/Design:** We developed a comprehensive workshop on Rb genetics geared towards physicians and other medical professionals working with the families of Rb patients in Kenya. The workshop took place in Sept 2013 during the Kenyan National Rb Strategy (KNRbS) meeting. Participants were KNRbS meeting attendees: ophthalmologists, pathologists, oncologists, ophthalmic clinical officers and nurses. The workshop included a presentation on Rb genetics, small group discussion of Rb patient case studies and genetic counseling role-play of case studies. We assessed Rb genetics knowledge of participants pre- and post-workshop using a multiple-choice test. One year post-workshop, the test was re-administered to workshop participants at the September 2014 KNRbS meeting. The primary outcome desired was increased Rb genetics knowledge immediately and one-year post-workshop.