Outcomes & Evaluation: We successfully developed a palliative care needs assessment and curriculum and conducted a one week course. We used daily surveys to improve and customize the course and an end-of-course survey to evaluate satisfaction, relevance, and to identify gaps in our curriculum. The course was well-received — participants reported improved understanding of palliative care, skills in managing symptoms and increased comfort in discussing prognosis. Future surveys will be implemented to evaluate knowledge retention, practice changes, and knowledge dissemination.

Going Forward: A National Palliative Care Center is now being developed in Belarus. We plan to provide additional training courses on advanced topics (e.g., interventional pain management, enhanced communication techniques), improve our translated curriculum, provide video consultations and ongoing mentorship. Furthermore, the needs assessment, intermediate palliative care curriculum and surveys, will be adapted for palliative care education beyond Belarus. Ultimately, we hope that our experience and materials provide resources for additional palliative care education and development worldwide in LMICs.

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Abstract #: *02ETC045*

Humanitarian crisis simulation

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Program/Project Purpose: International humanitarian response is a dynamic and immensely challenging field that requires the most of the professionals who provide relief. There is a high level of interest amongst students and health professionals in humanitarian relief, but most prospective humanitarian workers have low levels of knowledge and skills for participating in such work. Faculty in the Medical School and at the Humphrey School of Public Affairs at the University of Minnesota saw an opportunity to create a participatory and multidisciplinary course on Humanitarianism. Our goal is to give prospective humanitarian workers a realistic and hands on introduction to the profession. We held our third annual course in September 2014.

Structure/Method/Design: The course practicum is held over three days in a large outdoor setting. The first morning and afternoon are devoted to interactive didactic sessions on issues common to most humanitarian crises, for example, malnutrition, security, water sanitation and hygiene. This is followed by a two day simulation exercise. 50 participants are then divided into multidisciplinary teams of 5. Students came from many disciplines within the University of Minnesota including Medicine, Public Health, Public Affairs, Engineering, Social Work, GIS, etal, as well as a number of external institutions. Teams must work and live together to navigate a fictionalized area that is experiencing a humanitarian crisis. Seasoned experts from within the University of Minnesota and from other institutions collaborate to organize and conduct the course. Approximately 150 volunteers helped throughout the three-day course with logistics, role playing, and teaching.

Outcomes & Evaluation: The exercise has been enthusiastically received and has strengthened collaborative relationships between disciplines and organizations. This year, for the first time, participants took both pre- and post- tests to assess baseline and post course knowledge. In addition, a survey was sent to participants one week after the class, and a second one will be administered 3 months following the course. The survey asks students to assess their pre and post course levels of competence, for their opinions of how it will impact their further career plans, and for their general reflections on the experience. The results of this data will be available for presentation at the meeting.

Going Forward: There are innumerable opportunities for improving and expanding our course. Similarly, there are opportunities for collaboration with external partners and conducting research. Lack of protected time and financial resources are the major barriers.

Funding: course fees and tuition, PERL Grant

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Multidisciplinary pediatric oncology training in Botswana

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Program/Project Purpose: 80% of the 175,000 children who develop cancer annually live in low & middle income countries (LMIC) where survival is considerably less than in resource-rich settings. A major challenge in treating pediatric cancer in LMIC is a lack of trained providers. Baylor College of Medicine (BCM) and Texas Children's Cancer and Hematology Centers (TXCH) have had a partnership with Princess Marina Hospital (PMH) since 2007 as the only center in Botswana treating children with cancer. PMH has two full time pediatric oncologists and a care coordinator from BCM/TXCH. Staff including nurses, pharmacists, dieticians and social workers receive very little, if any, pediatric cancer-specific training. We aim to develop a multidisciplinary pediatric oncology curriculum for Botswana in partnership with Botswana RNs/MDs, to train Botswana RNs/MD at TXCH prior to the workshop in Botswana, and conduct a workshop for health workers caring for children with cancer in Botswana.

Structure/Method/Design: We conducted a multidisciplinary workshop to improve cancer care in Botswana. Two nurses and one pediatric resident from PMH were invited to BCM/TXCH for intensive training prior to the workshop. They served as instructors along with Botswana and Houston-based TXCH staff. The novel curriculum designed for this workshop included: an overview of pediatric cancer and treatment; supportive care; chemotherapy safety and administration; pain management; family-centered care; and palliative care presented as case studies, didactic lectures and open forum discussions. The trained nurses and doctors will serve as future trainers to build capacity.

Outcomes & Evaluation: The one week workshop was attended by 30 participants representing nine Botswana institutions. Eight disciplines were represented including physicians, nurses, pharmacists, surgeons, dieticians, and social workers. Pre and post-tests conducted daily demonstrated the curriculum's effectiveness in relaying key principles to learners. Participant evaluations strongly supported the need for this training.

Going Forward: The two major ongoing challenges are to disseminate this training and awareness of pediatric cancer throughout the country and retention of trained nurses in the pediatric oncology ward. We have therefore obtained funding to present 12 mini-workshops throughout Botswana over the next 3 months to improve awareness at local clinics,

primary and district hospitals. To date, 4 workshops with over 80 attendees have been conducted with a 3:2 nurse:physician ratio for attendees. We are continuing efforts at communication with nursing leadership at PMH to imrpove retention of nurses who have received advanced training in pediatric oncology.
Funding: This project was funded by a TCH Education Award.
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Grassroots global health: An Ethiopian experience

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Program/Project Purpose: Our aim was to form an American/Ethiopian research collaborative using the principals of contextual fit (Damschroder et al., 2009; English, 2013). Contextual fit matches strategies and procedures of research to values, needs, and skills of individuals experiencing the project. The program occurred in June-August 2014 and focused on epidemiological research questions.
Structure/Method/Design: The goals of the program were to (1) initiate international collaboration at a student level (2) perform public health research and (3) improve the capacity of students and faculty to perform future studies. American students traveled to Addis Ababa and established research collaboration with Ethiopian students and faculty. Ethiopian students and faculty were selected based on their interest in international collaboration and research expertise. Through this partnership, we established joint ownership of a monetary-independent initiative. Ethiopian faculty assisted in research planning, gaining ethical approval, connecting students to prominent figures within the medical system, and supervising research. Using Ethiopian mentors, we promoted project sustainability and set the stage for future student-led research.
Outcomes & Evaluation: Outcome of Goal (1): We signed a MOU between an American student-founded NGO and Addis Ababa University School of Public Health. We designed research studies and gained ethical approval from U.S. and Ethiopian academic institutions and the Ethiopian government. Close involvement of Ethiopian faculty was essential during the review process. Outcome of Goal (2): Students completed data collection that assessed methods of pre-hospital transport to Black Lion Hospital, the temporal association between hospital admission and pediatric mortality and the prevalence of pediatric illnesses. Data analysis is ongoing. Outcome of Goal (3): Students gained hands-on experience in research conduct, writing proposals, study methods, analysis and ethical considerations. Students learned about IRB review, acquired governmental approval in Ethiopia, and coordinated/collected data at multiple sites, including Black Lion and Zewditu Hospital and Teklehyminot, Bole, Kasanchez, and Kirkos Medical Centers. Ethiopian students completed most of the data collection after the American cohort left Ethiopia. Evaluation of results is ongoing.
Going Forward: Challenges included communication between American and Ethiopian cohorts. Ethiopian faculty mentors helped navigate the Ethiopian medical system and alleviated many barriers. Unmet goals included using four of seven approved study sites and the impact of Goal (3) has yet to be evaluated. Going forward, we aim to work with Ethiopian faculty and students to design community outreach programs based on research results, assess student capacity and analyze patient outcomes after educational interventions in Addis Ababa. Our unique, student-initiated program builds leadership and research capacity for both American and Ethiopian cohorts. By initiating mentorship with Ethiopian faculty, we contextually fit our project so students may experience and flourish in global health.
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Clinical preventive services: Operationalizing tribal consultation priorities and supporting the IHS directors' initiative

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Program/Project Purpose: The Great Plains Tribal Chairmen's Health Board (GPTCHB) serves 17 American Indian reservations and one IHS service unit in North Dakota, South Dakota, Nebraska and Iowa; and Indian Health Services (IHS) is the primary healthcare provider for Tribes in the Aberdeen Area IHS region. American Indians in this region have the highest mortality rates compared to other racial and ethnic groups and even other American Indians in the country. As a result, GPTCHB and Tribal leadership deemed clinical preventive services as the second leading health priority in their Budget Formulation for 2015 to focus on upstream causes of morbidity and mortality.
Structure/Method/Design: To operationalize this objective, GPTCHB sought to determine how often high-impact preventive health services were being offered in IHS service units. The focus was on relatively low-cost and high-yield clinical preventive services, and we ultimately decided to use data published by Maciosek et al in 2006 that ranked clinical preventive services based on cost-effectiveness (CE) and clinically preventable burden (CPB). The IHS routinely uses Government Performance and Results Act (GPRA) indicators to demonstrate that IHS is using funds effectively. Therefore, through an assessment of GPRA indicators and a query of the Resource and Patient Management System (RPMS), we evaluated how often the top nine clinical preventive service priorities were offered in one service unit during the 2012 GPRA year.
Outcomes & Evaluation: Overall, we found that preventive services were inconsistently and infrequently documented and/or offered to patients in this region. We used these results to then educate healthcare providers about priorities among preventive services and about how often the facility was offering these services. Information regarding Medicare and Medicaid coverage of these high value preventive services was additionally discussed for each preventive service with healthcare providers and personnel to increase awareness about how to expand and standardize possible billing opportunities.
Going Forward: Several barriers prevent Tribal members from benefitting from these preventive services, and some barriers include silos of care between different branches within a service unit, limited specialist providers to perform invasive screenings, lack of transportation for patients residing in areas further from healthcare facilities, and greater emphasis on acute care services rather than routine preventive services. There are many clinical preventive services that have not been included in the study because research was based on national data and risk profiles, but future studies may also include services related to sexually transmitted disease education and obesity screenings. Although this study was merely an initial step in