**Outcomes & Evaluation:** Through this nutrition curriculum evaluation, multiple themes emerged: An increased capacity among HPs to deliver curriculum content, personally learning and applying that knowledge towards nutrition related recommendations. The HPs were not using the nutrition booklet in community homes as designed due to concerns regarding being received as too formal or pretentious. The HPs recurrently described their ability to personalize the education through a process consisting of: an environmental scan, diet assessment, and educational and behavioral recommendations.

**Going Forward:** The findings illuminated barriers and opportunities related to community health education using the health promoter model, such as tensions for HPs across their multiple roles, specifically as a professional and neighbor. These tensions have implications for training, program implementation, and program sustainability. Steps forward include: Sharing results with clinic staff and HPs to engage their expertise in topic priority setting and delivery format. Augmenting our support and training of the HPs and clinic staff to address these tensions and preferences through further skill building in educational techniques and motivational interviewing. Design subsequent assessment of the program revisions and interviews with another key stakeholder: the community members/recipients.

**Funding:** Funding for this project came from Vanderbilt Peabody College and Vanderbilt Medical Center's Pediatrics Department.
**Abstract #:** *01ETC070*

## Giving back: A mixed methods observational study of the contributions of US-based Nigerian physicians to their home country

*J. Nwadiuko[1], K. James[2], G.E. Switzer[3], J.L. Stern[3], L. Hagander[4], J.G. Meara[5]; [1]University of Pittsburgh, Pittsburgh, PA/US, [2]University of Pittsburgh Graduate School of Public Health, Pittsburgh, PA/US, [3]University of Pittsburgh School of Medicine, Pittsburgh, PA/US, [4]Lund University, Lund, Sweden, [5]Program in Global Surgery and Social Change, Harvard Medical School, Boston, MA/US*

**Background:** There is increased interest in the capacity of US immigrants to spur economic growth in their homelands via entrepreneurship and remittances. However, there has been little research examining how immigrant physicians may support health systems and what factors facilitate or raise barriers to increased support.

**Methods:** This study used an observational design with survey and interview components. A purposive sample was drawn from attendees of a 2011 conference for US Based Nigerian physicians; respondents who were not US residents, physicians, and of Nigerian birth or parentage were excluded from further analysis. Respondents were randomly selected to complete a follow-up interview, with separate scripts for those having made past financial contributions or medical service trips to support Nigerian healthcare versus those who had done neither. Survey results were analyzed using Fischer exact tests and interviews were coded in pairs using grounded theory. Study protocol was approved by IRB at the University of Pittsburgh.

**Findings:** Seventy-five (48%) of 156 individuals who attended the conference met inclusion criteria and completed surveys, and 13 interviews were completed (with 7 "contributors" and 6 "noncontributors"). In surveys, 65% percent of respondents indicated a donation to an agency providing healthcare in Nigeria the previous year, 57% went on medical service trips in the past 10 years and 45% indicated it was "very likely" or "likely" that they would return to Nigeria to practice medicine. Frequency of encounters with Nigerian professionals was significantly associated with likelihood of having made a donation (p=0.024) or medical service trip (p=0.001), and perceived likelihood of permanent return was associated with level of perceived impact of practice in Nigeria (p=.002). In interviews, respondents tended to favor gifts in kind, financial gifts, and medical service as modes of contribution, with medical education facilities as the most popular recipient. Personal connections, often forged in medical school, tended to facilitate contributions, while lack of cooperation from government tended to hamper it. Individuals desiring to return permanently focused on potential impact and worried about health system under-preparedness; those not desiring permanent return reported concerns about safety, financial security and health systems.

**Interpretation:** An important portion of Nigerian physicians are engaged in home country health care utilizing a spectrum of contributory levels and mechanisms. Relationships with other Nigerians likely have a positive effect on contributions while health system issues largely prohibit contributions and return. As such, there is reason to believe that strengthening accountability mechanisms and outreach from health systems can further increase support. Our study is limited by its restriction to a single organization but nonetheless represents an engaged subset of physicians upon whom interventions will have great impact.

**Funding:** University of Pittsburgh Institute of Clinical Research Education; University of Pittsburgh SOM Dean's Summer Research Project.
**Abstract #:** *01ETC071*

## Improving occupational and environmental health in Mongolia through a multidisciplinary public-private international capacity building partnership

*P.B. Olkhanud[1], D. Lodoysamba[1], C. Ochir[1], D. Warburton[2]; [1]School of Public Health, Mongolian National University of Medical Sciences, Ulaanbaatar, MN, [2]Children's Hospital Los Angeles /University of Southern California, Los Angeles, CA/US*

**Program/Project Purpose:** Mongolia is currently experiencing rapid social and economic changes that are further intensified by the recent mining boom in the country, and Environmental and Occupational Health (EOH) is only now emerging as a new field within the public health sector in Mongolia. Although the government is committed to promoting sustainable green development by passing a law to require both environmental and health impact assessment for all projects implemented in the country, its implementation and the future of EOH field hinges upon the development of human capacity as we are in a dire need for EOH professionals with modern knowledge and skills to deal with the current challenges faced in Mongolia.

**Structure/Method/Design:** We established the first department of Environmental and Occupational Health in the country under the School of Public Health of MNUMS to meet the urgent need to provide solutions to environmental and occupational health issues in Mongolia. Mission of our department is to prepare qualified professionals with knowledge and skills to conduct rigorous fact-based research in environmental and occupational health, identify and implement effective interventions, advance and disseminate knowledge, and to ultimately strengthen human capacity in the EOH field in Mongolia. Our department is working with various organizations including government agencies, academic institutions, and NGOs around the world on projects such as collaborative research studies on environmental exposure assessment and its health impacts, graduate training programs with research component, and advanced in-country seminars and training workshops, and benefits from financial and technical assistance from both national and international organizations such as Fogarty International Center and University of Southern California and private entities.

**Outcomes & Evaluation:** To date, we have established the first Department of Environmental and Occupational Health in the country, built sustainable multidisciplinary local and international Public-Private Partnership, started graduate level degree programs, obtained full scholarship and research grants, and organized national and international research conferences to promote collaboration and knowledge sharing.

**Going Forward:** We are working to further strengthen our program and improve its sustainability in order to improve EOH in the country by expanding our outreach, extending our collaborative network, serving as a bridge between public and private sectors, helping to adopt international environmental and occupational safety standards in the country, and promoting evidence based policy by conducting research.

**Funding:** We have been proactive and creative in sourcing funding and have obtained funding from different public and private institutions.

**Abstract #:** *01ETC072*

## Sierra Leone's health workforce crisis: Drivers of suboptimal distribution and poor retention of primary healthcare workers in rural areas

*G. O'Malley[1], V. Narayan[2], G. Gage[3], G. John-Stewart[1], E. Konjoh[4], C. Speed[1]; [1]University of Washington, Seattle, WA/US, [2]University of Washington, School of Public Health, Boston, MA/US, [3]Sierra Leone College of Medicine and Applied Health Sciences (COMAHS), Freetown, Sierra Leone, [4]Health and Social Development Association - Sierra Leone (HASDA-SL), Freetown, Sierra Leone*

**Background:** Sierra Leone's health outcomes rank among the worst in the world, and the country is currently afflicted by an Ebola epidemic that has killed thousands of people. A major health system challenge is the shortage of primary healthcare workers (HCWs) in rural areas. Most HCWs are concentrated in urban areas (mal-distribution), and those in rural areas are not staying long-term (poor retention). This study was undertaken to determine drivers of poor distribution, retention, and productivity of rural primary HCWs, and to identify solutions to overcome the barriers.

**Methods:** The study employed mixed methods. Interviews were conducted with 90 primary HCWs in the public sector, complemented by discussions with key informants and a review of national documents/tools. The HCW interviews included four parts: 1) card sort about health worker priorities, 2) questionnaire, 3) semi-structured discussion, and 4) free-listing of challenges and needs. Sampling for HCW interviews was 'purposive', with an emphasis on rural HCWs.

**Findings:** Among 90 HCWs interviewed, 58 were rural and 32 were urban. 71% of rural HCWs were dissatisfied with their jobs vs. 52% of urban HCWs ($p=.010$). 75% of rural HCWs intended to leave their post versus 38% of urban HCWs ($p=.011$). Of rural HCWs intending to leave, 87% wanted to stay in the public sector but move to an urban location ($n=52$). Overall, job dissatisfaction was correlated with intention to leave (Pearson $r=0.77$). From the HCW perspective, drivers of poor rural job satisfaction fell into 5 categories. 1. HCWs lacked knowledge of policies, entitlements, and procedures, making it difficult to access their employee rights. 2. HCW remuneration was inconsistent with official policy. 3. Rural HCWs lacked essential infrastructure—motorbikes, electricity, clean water, and housing quarters. 4. Rural HCWs had not received adequate clinical supervision, personal support, and recognition for achievement. 5. 'System-related' gaps indirectly fueled job dissatisfaction, including over-centralization of human resource management, inadequate data systems, and ineffective compulsory service enforcement mechanisms.

**Interpretation:** Rural HCWs in this study were dissatisfied and wanted to relocate to urban areas because they were ill-equipped to deliver health services and their quality of life was poor. Poor rural job satisfaction fuels negative primary health outcomes by causing a shortfall of rural HCWs, and by reducing their motivation and productivity. This analysis yielded 18 specific recommendations to overcome drivers of poor job satisfaction in Sierra Leone, which may improve distribution, retention, motivation, and productivity of rural HCWs. The failure of Sierra Leone's healthcare system to contain the Ebola epidemic—in part due to rural workforce shortages and poor infrastructure/support for HCWs— underscores the urgent need to strengthen the health workforce, which is the cornerstone of any effective healthcare system.

**Funding:** University of Washington

**Abstract #:** *01ETC073*

## Revitalizing physician social service to unlock universal health coverage: First report from partners in health - Mexico

*D. Palazuelos[1], L. Palazuelos[2], P. Elliott[2], A. Van Wieren[3], H. Flores Navarro[2]; [1]Partners In Health - Mexico, Jamaica Plain, MA/US, [2]Partners In Health - Mexico, Boston, MA/US, [3]Saint Anthony Hospital, Chicago, IL/US*

**Program/Project Purpose:** Context/Period/Why the program is in place/Aim: Mexico celebrates achieving Universal Health Coverage (UHC), yet for many poor Mexicans, this coverage represents little more than an enrollment card. Young physicians completing a mandatory social service year (SSY), or pasantes, staff a third of all public primary care clinics. Their experience, however, is notoriously plagued by institutional neglect, absenteeism, and underperformance. Since 2011, Partners In Health Mexico/Compañeros En Salud (CES) has developed a transformative education-support program to revitalize rural government clinics and unlock the clinical value of the SSY.

**Structure/Method/Design:** Program Goals/Desired Outcomes: Improved clinical outcomes for rural patients; innovations in rural primary care; a revitalized workforce serving the most vulnerable patients in Mexico Participants and Stakeholders: How were they selected, recruited? CES receives and reviews applications from graduating Mexican medical students and selects candidates that express a desire to serve the poor and a demonstrated ability to live in a rural area. Beneficiary communities are chosen in conjunction with ministry of health and community leaders. Capacity Building/Sustainability: Pasantes receive support via: a monthly course in global health; monthly onsite supportive supervision; specialist mentorship; support in clinic functioning; and career mentorship. The program's future will depend on PIH's support, which is unwavering, and continued government partnership. Graduates from the program have generally opted to continue working as CES staff, and many are eager to open their own chapters.

**Outcomes & Evaluation:** Successes and outcomes achieved/M&E Results: Each of eight Ministry of Health clinics led by a CES-supported pasante provide ~3000 high quality primary care visits a year. In anonymous exit surveys, 98% of patients responded "yes"/"definitely yes" that their physician listened to them and showed respect, and 95% that s/he clearly explained their treatment ($n = 102$). 100% of pasantes reported satisfaction with their experience, and a desire to continue working with the poor and underserved in their careers ($n = 6$).