

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

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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

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

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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 ($n = 6$).

Going Forward: Ongoing challenges: UHC can only meet its goals with the necessary human resources. Well designed and implemented programs that address the shortcomings of the SSY may incentivize graduating medical students to complete their year in rural areas, empower them to improve the quality of care they provide, and inspire them to continue caring for the underserved throughout their careers. Unmet goals: CES plans to continue expanding the program to other states so that more students can experience a truly transformative SSY. How may future program activities change as a result? Each state in Mexico's decentralized health care system is unique, and ongoing program implementation will need to adapt to each context.

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An interdisciplinary approach to improving health research capacity in Haiti: The research training to research project model

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Program/Project Purpose: Building research capacity is pivotal to improving health outcomes and infrastructure in resource-limited countries. The Global Health Initiative at Henry Ford Health System in Detroit is contributing to longer-term health strengthening through a "Research Training to Research Project" model. In August 2014, an inaugural three-day training workshop was held at Quisqueya University School of Medicine in Port-au-Prince in response to an expressed need for increased research training. The objectives of this workshop included: 1) increasing research knowledge and infrastructure in Haiti; 2) improving international and interdisciplinary collaboration; and, 3) strengthening research capacity to facilitate implementation of a health needs assessment in Haiti.

Structure/Method/Design: The twenty-nine participants included medical students, faculty, and Community Health Workers (CHWs); presenters included representatives from Wayne State University, Quisqueya University, the Haitian Ministry of Health, the Haitian National Bioethics Committee, and the Services de Santé de Qualité pour Haïti Program. The above participants and stakeholders were recruited based on existing collaborations. Research ethics and methodologies were taught through both lectures and group activities. Evaluation included pre- and post-knowledge tests and assessments of individual lectures and overall content. The workshop also introduced a forthcoming project conducting surveys on healthcare utilization in Haiti. This provides a research project to implement the lessons learned and gather important data, ultimately demonstrating a sustainable training model.

Outcomes & Evaluation: Objectives were achieved. Evaluation data indicate knowledge about research ethics and methods increased 27.2%. In the post-test, 100% of participants accurately defined Team Science and Community-Based Participatory Research, the main workshop presentation themes. Including CHWs in the workshop

combined academics and practitioners, reinforcing the importance of community-based approaches for health research and program implementation. All participants thought the general quality of the course was 'excellent' (79%) or 'good' (21%). 87.5% found the course 'very useful' to their training and education.

Going Forward: Results indicate this training workshop effectively improved research knowledge and capacity in Haiti. Workshop costs (\$6,800.00) were low compared to these benefits. Moving forward, our plans include analyzing the cost/benefit of different delivery models of training, including a teleconferencing series, a web-based training module, and a 15-week university course on community health research. Now that approval has been obtained from the Haitian National Bioethics Committee, phase two will train these same workshop participants to launch the healthcare utilization assessment project. Additional adapted workshops are planned with the Haitian National Laboratory, in combination with training to conduct malaria surveillance studies. Additionally, the GHI plans to adapt and conduct similar workshops in other Program countries, including Guatemala and Suriname. Using this "Research Training to Research Project" model can strengthen health capacity in resource-limited settings.

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A preparatory emergency medicine and global health elective for medical students embarking on short term global health service programs in Haiti

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Program/Project Purpose: Structured preparation for medical students embarking on global health initiatives is critical. Student-led, bidirectional, peer-to-peer medical education programs in Haiti have been underway for three years at Icahn School of Medicine at Mount Sinai (ISMMS) in collaboration with Medical Students for Haiti (MS4H). One of these programs focuses on emergency medicine (EM) skills and basic life support (BLS) certification taught by American medical students to their Haitian counterparts at Université Quisqueya (UniQ). This program includes an increasingly structured preparatory elective for ISMMS peer instructors emphasizing topics in EM, culturally appropriate care, public health, and pedagogy.

Structure/Method/Design: Module topics for the EM skills instruction included the general approach to the ill or injured patient, BLS instructor certification, managing wounds and burns, and splinting fractures in the field. Curricular material was modified from a course at ISMMS for first year medical students. Principles of teaching with an interpreter and cultural topics were integrated into these sessions which were taught over a 3-month period by EM faculty. Peer instructors were required to present their assigned EM topics in an evaluated setting and the experience culminated in a one-week trip to Haiti teaching students at UniQ.

Outcomes & Evaluation: To date, 16 medical students in their 1st or 2nd year at ISMMS and 4 EM residents have participated in the preparatory educational component of this project. The students were successful in certifying 115 medical students at UniQ in BLS over a period of two years. Survey responses indicated that 100% of ISMMS students rated their overall experience as "Good" or "Excellent" on a 5-point scale ranging from "Poor" to "Excellent". 100% of students rated their preparation for the trip as "Good" or "Excellent". Feedback from students at ISMMS indicated a desire for more structured