

**Program/Project Purpose:** The growing interest in global health electives among medical students as well as the emerging emphasis on capacity building and sustainability of global health programs necessitate the development of new models of global health education. New models will need to address the limitations of former models, which include a lack of bidirectional exchange, cultural isolation, and inadequate psychosocial support. Additionally, early exposure to global health education will be imperative to ensure that students cultivate a strong foundation of agency and commitment to the field.

**Structure/Method/Design:** We implemented a team-based approach to global health education in Harare, Zimbabwe that attempts to address these limitations. The approach is anchored by the principle of peer mentorship, which allows medical students to live and work closely with their resident and attending physician counterparts in the host-country. This model provides capacity building support to foster mutual appreciation between the host-country medical system and the visiting medical team as well as a structure capable of promoting cultural immersion and customizable global health education for elective participants.

Under the current system, global health electives are not offered to medical students until the fourth year, limiting their ability to establish a lasting commitment to long-term international work. To address this issue, our program enables students to engage in global health education throughout the entirety of their four-years in medical school.

Upon selection, students are immediately matched with mentors and participate in pre-departure training to prepare for international placement during the summer after their first-year. This is followed by two years of further training and mentorship. The program culminates in students returning to their original locations during their fourth year for a second international elective.

**Outcome/Evaluation:** This new model engenders a sense of agency amongst student participants. By bridging the gap between interest and capacity, the program fosters a deeper sense of commitment to the field and creates a platform for students to mature into global citizens and emerge as instruments of social change in order to combat the increasing healthcare disparities of society on a global scale.

**Funding:** Western Connecticut Health Network Global Health Program.

**Abstract #:** 2.091\_NEP

### **The role of transnational donor networks in facilitating access to medical equipment in Ghana and Sierra Leone**

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**Background:** Medical technologies are essential to healthcare delivery yet, in resource-limited settings there is a pervasive shortage that severely limits the capacity of clinicians to assess, diagnose, treat, monitor, and prevent diseases. There have been few attempts to address the disparity in availability of medical technologies, and fewer yet were successful. Transnational donors for example, have taken on the responsibility of providing funds for almost 80% of medical equipment in some countries, yet 70% of equipment goes unused and abandoned. This means that for every dollar spent on donations, 62.5 cents goes to waste.

The question then arises about what role donors play in facilitating access to healthcare, specifically, medical equipment, in countries such as Ghana and Sierra Leone. The study will explore how existing policies on equipment procurement and donation incorporate transparency and accountability. The study will also identify opportunities for optimizing transnational donation programs.

**Methods:** We will develop a case study based on a review of policy and guideline documents, and on survey data and semi-structured interviews of recipient facility owners, technicians, clinical staff, and staff of donor organizations. The case study methodology is appropriate for descriptive or exploratory research into complex topics and for inquiry into a new research area where existing theories lack application. We will secure copies of national and institutional policy documents from donor organizations and from the Ministries of Health. Surveys and interviews will cover knowledge of donation guidelines and policies, details of donation experiences, assessments of quality, and integration.

**Findings:** We will target 50-60 individuals for the survey and 20-25 individuals for the interviews. To eliminate the possibility of an incomplete assessment, respondents will be required to provide an answer to every question.

**Interpretation:** This study will contribute to the growing body of research at the intersection of health policy, transnational philanthropy, and development. Findings from this study will be useful to policymakers in improving utility (or value) of donated medical equipment, and subsequently enhancing health benefits.

**Funding:** Funded in part by the Canadian Institute for Healthcare Research.

**Abstract #:** 2.092\_NEP

### **Global migraine epidemiology: Systematic review and meta-analysis of 302 community-based studies involving 6,216,995 participants**

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**Background:** Community-based and centralized population-based neuroepidemiological studies are the basis to assess accurate representation of true incidence and prevalence of public health burdens. Such studies serve as a crucial source of information for planning, policy-making, and research prioritization in health care. Migraine is a common cause of neurological public health and socioeconomic burden worldwide; it is underestimated, misdiagnosed and under- or mistreated.

**Methods:** To assess global pooled migraine epidemiology, a systematic review using advanced search strategies employing PubMed/MEDLINE and Web of Science was conducted for community-based studies by combining the terms “migraine”, “community-based”, and names of every country worldwide spanning all previous years until August 31, 2015. Methods were in accordance to PRISMA and MOOSE guidelines. A meta-analysis was performed to identify pooled migraine prevalence, examine cohort heterogeneity, and study inter-generational variations.

**Findings:** A total of 302 community-based studies involving 6,216,995 participants (median age 35 years, male-to-female ratio