

anticipate incorporating returned students to convey lessons learned and in the future expanding the model for post-trip debriefing to further emphasize such team skills competency development in the global health context.

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### **The management of diabetes and hypertension in nurse-led, community-based health centers in Limpopo province, South Africa: a pilot study**

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**Background:** In South Africa there is a growing concern for non-communicable diseases such as diabetes mellitus (DM) and hypertension (HTN). Because of the out-migration of nurses and physicians from rural areas, there is an increased need for community health workers (CHWs) to fill this gap. The aim of this study was to describe DM and HTN management in nurse-led community clinics in Limpopo province.

**Methods:** Individual and focus group interviews were conducted at two community clinics in Limpopo province. Forty-six health care providers were recruited using convenience sampling and assigned to interview groups based on profession (CHWs, nursing, pharmacy, nutrition and medicine). Participants provided written consent to be interviewed and audio-recorded. Audio files of the interviews were translated and transcribed. The transcripts were analyzed using thematic analysis and sociogram mapping.

**Findings:** Analysis of participant interviews revealed common themes between the groups related to the management of DM and HTN, namely, resource scarcity, the importance of inter-professional collaboration (especially in the CHW role), clinic-patient partnership and the aspects of disease management. Sociogram mapping identified a lack of interaction between CHWs and physicians.

**Interpretation:** Inter-professional collaboration and CHW involvement, knowledge and training are a necessity in rural clinics and may help close gaps in patient care and disease management by encouraging clinic visitation and treatment adherence. One major challenge to providing quality patient care in this area is the scarcity of clinic resources, including personnel, knowledge and materials. CHWs have extensive patient contact and are essential to the clinic-patient partnership, as they collaborate with nurses, dietitians and pharmacists. More research is needed to describe CHW-physician interactions and to evaluate the impact of the CHWs on DM and HTN outcomes.

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### **Electronic health records system as a catalyst for inter-institutional collaboration in international medical relief work**

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**Project Purpose:** Volunteer international health workers contribute to increases in health care coverage, but there is little evidence of the expected improved health outcomes(1). This may be attributed to the often transient nature of the care provided resulting in limited communication between volunteers, local providers, and the patients. One solution for improving communication is the coordination of international mobile clinics with each other and local health systems through the use of an EHR. We developed and successfully implemented an open source EHR, fEMR, designed specifically to accommodate mobile clinics without disrupting clinic flow. fEMR creates an intranet which can be accessed by any mobile device with a web browser. Since June 2014, fEMR has been used by three US Medical Schools and two NGO's traveling to Haiti, the Dominican Republic, India, and Ecuador, with further trips planned. Our aim is to improve the continuity of care through networking and collaboration between institutions by further developing a database of medical schools participating in international health care which could utilize fEMR to coordinate patient care, identify best practices, research available and needed resources, and provide health data to local health systems.

**Design:** Although there are databases of global health education programs and NGOs, our database will be a unique platform for coordination of international relief efforts. The database and associated website would be utilized for sharing data and improving care. Initially, we have developed a GoogleDoc aggregating information about international medical projects within medical schools including location and timing of clinics, participants, partnership organizations, and funding. Any medical schools that are associated with short-term medical work are invited to be included.

**Outcome:** At this time there are three medical schools represented and we have reached out to three other medical schools with service learning trips.

**Going Forward:** This database would facilitate institutions coordinating service learning trips operating in the same region. Institutions could realize cost savings by sharing data and resources, better plan medication purchasing, and coordinate care between institutions and local services. A potential barrier might be hesitation to include information due to perceived competing interests between institutions.

**Funding:** None.

**References:** 1) Graham WJ, McCaw-Binns A, Munjanja S (2013) Translating Coverage Gains into Health Gains for All Women and Children: The Quality Care Opportunity. *PLoS Med* 10(1): e1001368. <http://dx.doi.org/10.1371/journal.pmed.1001368>

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