

in LMICs. Findings from this study will lead to the development of a team-based health intervention that addresses hypertension in rural populations in low and middle income countries.

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Simulation-based training of obstetric providers in Nicaragua

Abstract Opted Out of Publication

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Cardiometabolic risk factors in Human Immunodeficiency Virus infected patients on 2nd line anti-retroviral therapy in Nairobi, Kenya

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Background: The association of protease inhibitors (PIs) in antiretroviral therapy (ART) and development of cardiovascular disease (CVD) in HIV patients is well established in developed countries. In Kenya, the prevalence of these abnormalities in patients on PI based 2nd line ART is unknown. The objective of this study is to characterize CVD risk factors in patients receiving 2nd line ART in Kenya.

Methods: A cross-sectional study was conducted on 263 patients on 2nd line ART at Mbagathi Hospital in Nairobi, Kenya. After appropriate IRB approval and informed consent was obtained, patients 15 years and older on 2nd line ART for at least 6 months were included. For those below the age of 18, informed consent was obtained from a parent or legal guardian. Patients with diabetes, taking lipid-lowering medications, and medications that affect metabolism were excluded. Eligible patients were screened for metabolic syndrome by evaluating central obesity, lipodystrophy, blood pressure, and glucose levels as defined by the International Diabetes Federation. The primary sample size was determined using Fisher's formula. Statistical analysis was performed using SPSS.

Findings: 53 patients out of 231 (22.9%) met the criteria for metabolic syndrome. There was no correlation of response to HIV therapy with the presence of metabolic syndrome. Alcohol consumption, smoking, and sedentary hours were not correlated with metabolic syndrome. The presence of clinical lipodystrophy did have a statistically significant difference between those with and those without metabolic syndrome (ANOVA of <0.01).

Interpretation: Patients on 2nd line ART have CVD risk factors. Interventions need to be utilized to minimize preventable NCD risks in these patients. Study limitations included small sample size, the lack of previously established data and guidelines in this patient population, and the loss of 32 patients to follow-up. Further studies need to compare patients not on HIV therapy, on 1st line ART, and on 2nd line ART to understand whether CVD risk is affected by HIV infection, treatment, or both.

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Developing team skills competencies for the global health context: interprofessional predeparture training for health science students engaging in global health projects at the University of Florida

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Program/Project Purpose: The University of Florida (UF) Health Science Center prioritizes interprofessional training of its composite colleges' students—Medicine, Nursing, Pharmacy, Dentistry, Veterinary Medicine and Public Health and Health Professions. A natural component of such interprofessional training is pre-departure training for students engaging in interdisciplinary and interprofessional global health projects to focus on team skills competency development.

Structure/Method/Design: The goal of the pre-departure training is to expose the students to the personal, professional, and cultural standards required by all health professionals working in global settings. Health Science Center students participating in global health electives, service learning trips or field-work participate in a one-day interprofessional pre-departure seminar. Training consists of panel presentations by faculty, small group case studies, and facilitated, large group discussions with faculty members from the six colleges. Students are provided with knowledge and skills on safety measures, appropriate behaviors, interprofessional collaboration, and professional limitations, which prepare them for success in their various international travels. Training focuses on the interprofessional aspects of global health work, and aims to foster student understanding and appreciation of interprofessional work.

Outcome & Evaluation: One hundred thirty seven UF students participated in the second annual 2015 training. Quality improvement surveys revealed that the 2015 workshop better met students' needs by incorporating additional vignettes, case discussions, and faculty panels. Students reported increased awareness of cultural sensitivity, personal safety, and the impact of one's behaviors on working in global contexts. Students also found the workshop valuable for improved knowledge of working within one's professional limits and understanding of other professions' roles and interprofessional collaboration. Teams felt more ready to work together to utilize the skills of their colleagues to solve global health problems.

Going Forward: Interprofessional pre-departure training shows promise for cultivating team skills competencies for global health education. We will continue to strengthen pre-departure training emphasizing cultural sensitivity, student safety, and collaboration with local teams in the context of interdisciplinary teams. We

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.

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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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