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Background: Low- and middle-income countries carry nearly 80% of the burden of death from cardio vascular related diseases, with hypertension being one of the major pathogenic factors. Prior studies in rural Ghana among adults aged ≥ 35 found a surprisingly high prevalence of hypertension (50.9%). On the other hand, common risk factors such as high Body Mass Index (BMI), smoking, alcohol, and lack of physical activity historically have a low prevalence in this population. To better understand the disease burden of hypertension in rural Ghana, this study sought to estimate the point prevalence of hypertension in all adults and assess the association of classic risk factors in this population.

Methods: A cross-sectional survey was conducted on 845 adults aged ≥ 18 in the Barekese sub-district. Socio-demographic characteristics, modifiable and non-modifiable risk factors, blood pressure and anthropometric measurements were collected after informed consent during community-wide health screenings using standardized protocols. A multiple linear regression analysis (p -value < 0.05) was performed.

Findings: A total of 196 male and 649 female community members aged ≥ 18 with a median age of 42 (IQR 29–58) participated. The point-prevalence of isolated systolic hypertension/prehypertension and diastolic hypertension/prehypertension in the study population was 30.64%/39.19% and 21.61%/34.09%, respectively. Only 18.07% of the participants had a prior diagnosis of hypertension. A total of 85 (10.14%) participants were found to be obese ($BMI \geq 30$ kg/m²), and 224 (26.7%) were overweight ($25 \leq BMI < 30$ kg/m²). Risk factors such as age, family history of hypertension, and BMI were positively correlated with increased blood pressure among both sexes.

Interpretation: The burden of hypertension among adults in rural Ghana is high, and approximately one-third of all participating adults were found to be pre-hypertensive. A multiple regression analysis confirmed positive correlations between increased blood pressure and most risk factors. However the relatively low prevalence of overweight and obese participants in this population raises more questions than it does answers. This study did not address diet, which is a limitation. The findings indicate there is a great need for increased health education and routine screenings among this population in order to more effectively identify individuals at risk.

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Shared clinical learning in a Mozambican clinic: results of a needs and opportunity assessment of Mozambican and US medical trainees collaborating in an outpatient clinic

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Background: A growing number of US medical trainees take part in international health experiences, predominantly in low- and

middle-income countries (LMIC). Educational research on these experiences has focused on the educational objectives and outcomes of US trainees; with relatively little emphasis on the goals and expectations of host institutions and trainees.

Methods: The University of Pittsburgh Medical Center (UPMC) and the Catholic University of Mozambique (UCM) have partnered to create a shared clinical learning experience, where US residents serve as preceptors for Mozambican medical students in an urban outpatient clinic. An educational needs assessment survey was distributed to fifth and sixth year medical students from UCM and visiting internal medicine residents from UPMC following a 2–8 week ambulatory rotation at the São Lucas Clinic in Beira, Mozambique. Survey questions focused on trainees' preferred learning styles, expectations regarding the experience, and prioritization of medical competencies. The survey was administered in written Portuguese and English in Spring 2015, following the rotation.

Findings: Surveys were completed by 19/20 Mozambican students (95%) and 5/5 (100%) US residents. Both groups preferred case-based teaching. Mozambican students preferred longer teaching sessions than US residents (60 vs 30 minutes). Both groups identified history taking, physical examination skills, and formulation of differential diagnosis as the most important competencies for the rotation. Mozambican students and US residents identified similar topics to learn from each other – selecting infectious diseases and dermatology as the top competencies that US residents could learn from Mozambican students, whereas management of non-communicable diseases, interpretation of electrocardiograms, ultrasounds and laboratory data were each selected as top competencies that Mozambican students could learn from US residents.

Interpretation: Mozambican medical students and US residents prefer similar learning styles and have parallel views on knowledge and skills they can learn from each other. Both groups prioritize clinical competencies not otherwise emphasized in their curriculum: local infectious diseases for US residents and chronic disease management and test interpretation for Mozambican students. These findings suggest that shared clinical learning experiences in LMIC countries have the potential to benefit hosting and visiting students if the learning needs of both groups are identified and prioritized.

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Quality of blood pressure control in hypertensive patients attending the Kigali University Teaching Hospital (CHUK)

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Background: Hypertension is a significant health problem in Rwanda. Most Rwandans have access to treatment, but medication adherence and health literacy have never been assessed. We investigated the features of treated hypertensive patients with uncontrolled blood pressure.