

Findings: Analysis of the data from the training on diabetes revealed that at almost every visit: 96% worked with a person with diabetes, 92% counseled a patient on diabetes, 94% talked with a diabetic patient about taking their medications, 63% inspected a patient's feet, 83% made a referral to a hospital/clinic, and 96% used the diabetes action plan. The knowledge retention and application scores were high for the hypertension content as well. On almost every visit, 100% worked with someone who had hypertension, 96% counseled a person on improving their diet, 96% talked with patients about refilling medications or taking BP meds, 75% referred a patient to hospital or clinic, and 96% used the hypertension action plan. However, only 30.4% measured BP on almost every visit.

Interpretation: One year after completion of a training program the CHWS retained knowledge and applied it in the care of their patients with hypertension and diabetes. The 100% retention rate after 12 months affirms the commitment of the participants and increases the likelihood of project sustainability. Challenges: Lack of equipment to take blood pressures did not give the CHWS the chance to practice or gather important data for the medical team. Going Forward: Future research studies will be expanded to include home visits to observe the CHWS interacting with their clients as they apply knowledge from the training, funding for BP monitors, and the collection of patient level data to directly link education and training to outcomes for individuals and communities.

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Prevalence of and risk factors for peripheral neuropathy in Rakai, Uganda

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Background: Peripheral neuropathy (PN) is a common and potentially debilitating neurologic complication of HIV infection. Systematic studies of PN in sub-Saharan Africa are lacking. This study aimed to identify the prevalence of and risk factors for PN in rural Uganda.

Methods: A sample of participants in the Rakai Community Cohort Study were selected for this study. Eligible participants were >18 years old, HIV-positive (HIV+), antiretroviral (ARV) naïve, and had CD4 counts either between 351 and 500 cells/mm³ or 3. Age- and gender-matched HIV-negative (HIV-) participants were also selected. Written informed consent was obtained from all participants who then underwent a detailed neurological evaluation including assessment of demographic characteristics, subjective PN symptoms, and a neurological examination by a trained medical officer. PN was defined as > 1 sign on examination (e.g. decreased pinprick or vibration in the fingers or toes, distal weakness, or reduced/ absent ankle reflexes) and > 1 subjective symptom (e.g. paresthesias, numbness, or pain in the hands or feet). PN risk factors were determined by comparing characteristics of participants with and without neuropathy using *t*-tests for continuous variables and chi-squared tests for categorical variables. This study was approved by the Johns Hopkins University and Uganda Virus Research Institute Institutional Review Boards.

Findings: 538 participants were enrolled: 200 HIV+ participants with moderate immunosuppression (CD4 count 351-500), 107 HIV+ ARV-naïve participants with advanced immunosuppression (CD4 count < 0.001) than those with moderate immunosuppression. PN was more

prevalent among HIV+ than HIV- participants (24% vs. 8%, *p* < 0.001) and showed a trend toward statistical significance among HIV+ participants with advanced immunosuppression versus those with moderate immunosuppression (30% vs. 20%, *p*=0.05). In addition to HIV status and level of immunosuppression, older age (mean: 38 years vs. 35 years, *p*=0.03) was also a significant predictor of PN, but BMI (*p*=0.45), alcohol use (*p*=0.78), and prior isoniazid use (*p*=0.06) were not. PN severity was worse in HIV+ than HIV- participants as assessed by the Modified Total Neuropathy Scale (*p*=0.003).

Interpretation: PN is prevalent in rural Uganda and is more common in HIV+ individuals, with a trend toward increased prevalence in those with advanced disease. PN prevalence also increases with age. This highlights the need for early diagnosis and treatment of HIV to prevent this potentially debilitating complication and the necessity of close monitoring for PN as the HIV+ population ages.

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Effect of parity on the epidemiologic profile of Malawian women presenting for obstetric fistula repair: A cross sectional study

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Background: Obstetric fistula remains a debilitating condition in low-income countries. Previous descriptive studies of fistula patients report a majority as being young and primiparous at the time of fistula formation. The population of women who are multiparous at the time of fistula formation has rarely been described. Our objective is to describe the patient population presenting for obstetric fistula repair at the Fistula Care Centre at Bwaila Maternity Hospital in Lilongwe, Malawi and to identify potential risk factors that may contribute to fistula formation, particularly among multiparous women.

Methods: We completed a cross-sectional analysis of baseline data from women who presented for obstetric fistula repair between September 2011 and September 2014. After providing informed consent, these women completed an admission form that included questions about their demographics, obstetric history, and physical exam findings. Women with non-obstetric fistula and those who did not know their number of deliveries were excluded from the analysis. The primary outcome of the study was to compare the demographic characteristics of women who had obstetric fistula form during their first pregnancy versus during a subsequent pregnancy. Chi-square, Fischer exact, and Mann-Whitney tests were used. IRB approval was obtained from the Malawi National Health Sciences Research Committee and the University of North Carolina IRB.

Findings: During the study period, 513 women presented to the Fistula Care Centre, of which 459 (89.5%) had obstetric fistula and were included in the analysis. Of these, 195 patients (42.5%) were primiparous and 258 (56.2%) were multiparous at the time of fistula formation. The median parity for multiparous patients at the time of fistula formation was 3 (IQR 24). Multiparous patients were more likely to be currently married (68.9% vs 53.4%, *p*=0.001), to have a liveborn infant at that delivery (29.7% vs 15.9%, *p*=0.001), to labor less than 24 hours (55.8% vs 40.0%, *p*=0.001), and to have a Caesarean