Summary/Conclusion: While laypersons and hospital personnel may receive and feel comfortable administering basic resuscitation techniques, further data must be collected to see if this intervention improves mortality. Analysis of the newly implemented trauma registry will evaluate mortality.

## Esophageal cancer in Northern Tanzania: Geographical distribution and case characteristics

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Structure/Method/Design: This was a descriptive retrospective study of histologically confirmed cases of esophageal cancer diagnosed at the Kilimanjaro Christian Medical Centre, and identified through its Cancer Registry and/or endoscopy unity, from 1998 to 2008. Demographic data (age, sex, village) were obtained from hospital records and a risk-factor questionnaire was administered to patient's relatives.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): 802 patients were diagnosed with esophageal cancer during the study period, the majority of which was squamous cell carcinoma. 59% of cases were male. Mean age at diagnosis was 60 years (inter-quartile range 50-70). The age-standardized incidence rates (ASR to world population per 100,000) were 6.8 and 3.8 in men and women respectively. Large geographical variations were observed. ASRs were over 9 in men in Moshi Urban, Moshi Rural, and Hai and less than 3 in Rombo, Mwanga and Same districts. 96% of male cases and 92% of female cases had drank alcohol regularly; 38% and 5% had consumed strong illicit moonshine spirits (gongo). Amongst drinkers, drinking started at mean age of 13 years, with 25% having started by age 8 and mean lifetime years of drinking was 50 (SD 15.6). 87% of male and 36% of female cases had smoked tobacco regularly.

Summary/Conclusion: Within the high esophageal cancer area of the Kilimanjaro region, the south and western districts adjacent to the Kilimanjaro mountain peak have over 3-fold higher incidence rates than other districts in the region. Prevalence of alcohol and tobacco consumption is higher among cases than in previous population surveys. These findings need further investigation in a broader analytical study.

## Leveraging PEPFAR-funded HIV programming to enhance to delivery of NCD care in southern Botswana

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Background: Botswana's HIV prevalence is 19%, with antiretroviral drugs available to all eligible citizens. Through the President's Emergency Plan for AIDS Relief (PEPFAR), the Botswana-UPenn Partnership (BUP) has provided HIV support to rural hospitals across the country since 2006. Since the program's inception, BUP's outreach has extended support to outpatient care for noncommunicable diseases (NCDs) to both HIV-infected and HIV-uninfected adults. Little data exists on how PEPFAR programming in Africa impacts on the care for NCDs. We sought to describe the burden of disease referred to HIV specialists on outreach to hospitals in southern Botswana.

Structure/Method/Design: We collected data on patients seen by HIV specialists on outreach to nine hospitals in southern Botswana. At each site, specialists saw outpatients referred by local general practitioners. Data collected from each encounter included HIV status and the reason for the encounter. Statistical analysis included descriptive analyses and  $\chi 2$  test for categorical variables.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Between March 2011 and February 2012, outreach physicians recorded 400 outpatient encounters. 56% (224/400) of encounters occurred at primary hospitals and 44% (176/400) at district general hospitals.

The majority (69%) of patients seen by specialists presented with two or more medical problems. The most frequent medical problems encountered included hypertension, (17.5%, n=70), diabetes mellitus (8%, n=32), and congestive cardiac failure (5%, n=19). Cardiovascular diseases accounted for 29% of all diagnoses, neurological diseases 15%, and endocrine diseases 12%. There was no difference in either the spectrum of disease or the complexity of medical problems seen at district versus primary hospitals.

27% of encounters were with patients with confirmed HIV infection, the remainder had either unknown HIV status (32%, n=129) or were HIV-uninfected (40.3%, n=161). Among individuals with confirmed HIV-infection, 41% (n=41) of consultations related to HIV management. The other most frequently encountered diagnoses among HIV-infected individuals included hypertension (10%), tuberculosis (7%), diabetes (5%), and meningitis (5%).

Summary/Conclusion: Over a 12-month period, physicians in BUP's outreach program saw a significant number of patients with NCDs at nine Botswana outreach facilities. Most patients were not HIV-infected and the most frequent conditions seen by physicians were hypertension, diabetes, and congestive cardiac failure.

This study is limited by referral bias. Nevertheless, the analysis demonstrates how PEPFAR funding ensured access to physician consultations for NCDs as well as HIV. The data also supports growing evidence that Botswana faces a double-burden of infectious and non-infectious diseases. Given this epidemiologic transition, leveraging PEPFAR funded HIV-programing to expand access to care for patients with NCDs is increasingly important. While long-term follow up is necessary to assess the impact of PEPFAR on NCD services in Botswana, there is also an urgent need to build NCD capacity across the country.

## Double-dipping: When your research answers unintended questions

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Background: Global health research invests tremendous human and material resources into resource-poor settings. The scientific model and the nature of IRB approval demand specific research hypotheses, measured and carefully applied methods, and protection of participatnts and their health information. However, frequently the study of specific diseases leads to the collection of information that may be relevant to other health problems. The investment to study disease in often marginalized or hard-to-reach populations is substantial, and the potential to use data collected, and resources created, for other purposes is an important consideration.

Structure/Method/Design: Our team has developed a community-based research project in 2003 in a large urban slum of 14,000 residents, called Pau da Lima, on the periphery of Salvador, the