to each of the PHCs and a post intervention evaluation was done from July- September 2015. Percentages and t-test was used for analysis.

Outcome & Evaluation: At baseline, only 15% of CHEWs at the 59 PHCs had standard of practice with a score of >70% while 85% scored <70%. Post intervention, CHEWs who had standard of practice with score >70% increased to 75%. Nurse Mentors TA was significant at p< 0.001 (t=16.7, df= 58).

Going Forward: Provision of technical assistance by Nurse Mentors is an effective approach to improve standard of practice for PMTCT service delivery by CHEWs working at PHCs.

Abstract #: *1.027_HHR*

Epidemiology of Poisoning Patients Presenting to the Emergency Center of Princess Marina Hospital in Gaborone, Botswana

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Program/Project Purpose: The burden of disease secondary to toxicologic insults in Africa is difficult to assess. No reliable epidemiological data exists due to poor documentation, scarce resources for reporting, and diagnostic challenges. Only 10 of 58 countries African countries have Poison Control Centers to direct care and compile epidemiologic data. Botswana currently does not have a poison control center. In fact, there is only one clinically trained toxicologist serving the entire country of over 2 million. Official estimates of toxicologic cases for Botswana are often extrapolated from other surrounding countries such as South Africa. Though variably reliable, the estimates are still a public health concern. The purpose of this project was to conduct a retrospective observational audit of medical toxicologic cases presenting to Princess Marina Hospital (PMH) in Gaborone, Botswana. No formal clinical toxicologic audit has ever been performed in this setting.

Structure/Method/Design: A database was created to record anonymous data on all patients with toxicologic insults presenting to the Emergency Department (ED) at PMH from January 1, 2016 to June 30, 2016. The deidentified variables extracted from patient files included age, date of presentation, sex, comorbidities, vital signs, treatment received, disposition, HIV status, and severity assessment using the Acute Physiologic and Chronic Health Evaluation II (APACHE II) and Poisons Severity Score (PSS).

Outcome & Evaluation: In total, toxicologic complaints comprised about 2% of patients presenting to the ED at PMH during this time period. The most common complaints were paraffin, paracetamol, ibuprofen poisonings, scorpion and snake bites. The percentage of female toxicology patients varied proportionally with age with 38% female from age 0-15 to 67% from age 16-55. The percentage of poisonings that were intentional also increased with age with 6% intentional between ages 0-15 to 83% between ages 16-55. The route of exposure was overwhelming

oral (86%) and about 60% of patients admitted to the hospital for further monitoring.

Going Forward: This descriptive study is important for directing the allocation of resources towards medical toxicology, prevention campaigns, patient and medical education, and clinical guideline development with the goal of ultimately improving patient outcomes in Botswana. This study is also important in furthering the field of clinical toxicology research.

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Should Large Urban Centres Decide How Best to Use Health Care Services: Exploring Alternative Approaches to Estimating Inpatient Hospital Use Based on Need in Canada

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Background: Needs-based approaches for assessing key healthcare policy issues must define how need should be measured and a standard level of healthcare resource use given need should be estimated. Different population choices can be used to establish this standard, though the implications of this choice on estimates historically has been ignored.

Objectives: A need-based approach is widely used to examine health equity issues. It estimates need-expected use based on a standard level of use given need. We assessed how need-expected inpatient hospital use differ depending on whether the standard was estimated for all Canadians, Canadian regions, or high income Canadians.

Methods: Data used was the 2009/2010 Canadian Community Health Survey. The measure of health care was self-reported inpatient hospital use. Using zero-inflated negative binomial regression, we modeled inpatient hospital use separately based on the choices of population, Canadians (counting each individual in the population equally), Canadian regions (counting each region in the population equally by giving equal weight), and high income Canadians (modeling among the above average income groups). We adjusted for demographic, health behaviour, health status, socioeconomic, and health care supply factors. We then estimated need-expected inpatient hospital use and compared the estimates across individuals and by income and province.

Findings: Overall, parameter estimates from the three models with different choices of population were similar. Choice of population resulted in small differences in the estimates of average need-expected hospital inpatient use by province or income group. Differences were larger in the income comparison than the provincial comparison. Differences in the estimates of average need-expected use were the most pronounced among the low income group. Across the provinces, differences due to choices of population were the smallest for Alberta and largest for Quebec. While choice of population did result in some small differences, how provinces rank in need did not alter.

Interpretation: Choice of population defining standard resource use given need is an important consideration if it alters winners