

Methods: All Zambian hospitals providing surgical care in 2010 were identified in cooperation with the Ministry of Health. On-site data collection was completed between October 2010 and August 2011 using an adapted WHO Global Initiative for Emergency and Essential Surgical Care survey. Data were geocoded using ArcGIS 10.3 and analyzed in Redivis, an online visualization platform. We identified the proportion of the population covered within a 2-hour travel time to facilities, as recommended by the Lancet Commission on Global Surgery.

Findings: Data were collected from on-site assessments of all 103 surgical hospitals. Visits included 495 interviews with providers and tours of the facilities. Overall, 8% of the population (1.16 million people) lived more than a 2-hour drive from any surgical facility (Figure 1a). When minimum safety standards adapted from WHO criteria were included in the analysis, access declined markedly; only 17 (16.5%) hospitals met these minimum standards, defined as the availability of a pulse oximeter, adult bag mask, oxygen, suction, intravenous fluid, sterile gloves, skin preparation solution, and a functioning sterilizer. Geospatial analysis showed that 58% of the population (8.41 million people) lived more than a 2-hour drive from these facilities with the minimal complement of equipment and supplies to maintain an airway, resuscitation and sterility for surgical care (Figure 1b).

Interpretation: A significant proportion of the population in Zambia does not have access to safe and timely surgical care. Human resources, infrastructure and supplies within these facilities are limited and must be addressed to improve safe surgical access. Geospatial visualization tools provide a unique approach to identify key areas for improvement. This type of geospatial analysis can be used for health system planning across many countries and health services.

Funding: Stanford SPECTRUM Population Health Sciences Pilot Grant.

Abstract #: 1.043_NEP

Low rates of screening and treatment of chronic hepatitis B, C, D (HBV, HCV, HDV), and hepatocellular carcinoma (HCC), associated barriers, and proposed solutions: results of a survey of physicians from all major provinces of Mongolia

J. Estevez¹, Y.A. Kim¹, A. Le¹, D. Israelski², O. Baatarkhuu³, T. Sarantuya⁴, S. Narantsetseg⁵, P. Nymadawa⁶, H. Le¹, M.F. Yuen⁷, G. Dusheiko⁸, M. Rizzetto⁹, M.H. Nguyen¹; ¹Division of Gastroenterology and Hepatology at Stanford University, California, USA, ²Center for Innovation In Global Health at Stanford University, California, USA, ³Department of Infectious Diseases at Mongolian National University of Medical Sciences, Ulaanbaatar, Mongolia, ⁴Internal Medicine Department at United Family Intermed Hospital, Ulaanbaatar, Mongolia, ⁵The Third State Central Hospital of Mongolia, Ulaanbaatar, Mongolia, ⁶Public Health Branch, Mongolian Academy of Medical Sciences, Ulaanbaatar, Mongolia, ⁷Division of Gastroenterology and Hepatology at Queen Mary Hospital, Hong Kong, ⁸Royal Free Hospital and University College London School of Medicine in London, United Kingdom, ⁹Department of Gastroenterology at the University of Torino, Torino, Italy

Background: Mongolia has the highest reported HCC incidence (78.1/100,000) in the world, in addition to some of the highest

prevalence of HBV, HCV, and HDV infection. However, it is unclear whether there is sufficient screening and access to care for these diseases. We aim to estimate rates of screening, antiviral therapy, and barriers to care in Mongolia.

Methods: Anonymous surveys of 121 physicians from major provinces of Mongolia, who attended a two-day continuing medical education and training workshop for viral hepatitis, cirrhosis, and HCC in Ulaanbaatar, on 9/2015.

Findings: A total of 70-95 of 121 (58%-79%) physicians responded to our survey questions. Most participants were female (87%), age <50 (79%), and sub-specialists (76%). The majority practiced in urban areas (61% vs. 39% rural practices). Over 80% of respondents noted significant limitations to viral hepatitis or HCC screening, such as lack of financial resources, management guidelines, and patient awareness (Figure 1). More than 50% of patients were thought to not undergo necessary screening. Financial concerns were also the main barrier for viral hepatitis patients seeking care (40-46%). Hepatitis treatment rates were very low with 83% of respondents reporting treatment of <10 patients with HCV in the past year, and 86% reporting treatment of <10 HBV patients/month. Treatment barriers were multifactorial with medication cost as the principle barrier, followed by lack of both drug availability and management guidelines consensus, if financial barriers were not a concern (Figure 2). Top proposed solutions were universal screening policies (46%), removal of financial barriers (28%), and provider education (20%).

Interpretation: Mongolian physicians, representing all major provinces, noted low screening for viral hepatitis and even lower treatment rates. Also, most surveyed physicians noted the need to remove financial barriers and increase educational efforts in order to improve access to care.

Funding: Gilead Sciences, Inc. co-supported by Mongolia Ministry of Health, Ombol, LLC, Stanford University.

Abstract #: 1.044_NEP

Prevalence and correlates of intimate partner violence among women attending child health services, Enugu State, Nigeria- 2015

C. Ezeudu¹, P. Nguku¹, Abisola¹, O. Fawole², O. Akpa²; ¹Nigerian Field Epidemiology and Laboratory Training Programme, Abuja, Nigeria, ²University of Ibadan, Nigeria

Background: Intimate partner violence (IPV) is the major form of violence against women worldwide. It is estimated that one in every five women will experience some form of violence in their lifetime. The experience of violence during pregnancy has been linked to a number of negative health outcomes including preterm labour, ante partum haemorrhage, miscarriage and foetal death. This study determines the prevalence and correlates of intimate partner violence before and during pregnancy among women accessing child health services in Enugu State.

Methods: A cross-sectional survey of 702 women accessing child health services in secondary and primary health facilities in Enugu State, using a multi stage sampling technique was done. Quantitative and qualitative data collection methods were adopted to

generate data using semi-structured interviewer administered questionnaire and key informant interview guide respectively. Descriptive and analytical statistics were done. Bivariate analysis and multivariate logistic regressions were done at 0.05% level of significance to identify independent predictors of IPV in pregnancy.

Findings: Respondents mean age was 27.71±5.14 years. Majority were married (93.2%), in monogamous relationships (91.5%) and Christians (97.4%). Prevalence of IPV a year before most recent pregnancy was 43.3% while the prevalence during pregnancy was 37.2%. The prevalence of physical, sexual, emotional and economic violence before pregnancy were (50.5%, 50.5%, 67.4%, and 41.4% respectively) compared to (42.5%, 47.9%, 65.9% and 39.8% respectively) during current pregnancy. Independent predictors of IPV before pregnancy were partner's controlling behaviour (AOR 2.37; 1.62-3.48), partner's past history of witnessing maternal abuse (AOR 2.96; 1.56-5.64) and partner's involvement in physical fights (AOR 2.67; 1.69-4.20). Partner's controlling behaviour (AOR 3.05; 2.06-4.52), single/cohabiting (AOR 1.30; 1.03 -4.10), bride price not paid (AOR 1.61; 1.03-2.50), other wives/lover (AOR 2.40; 1.16-5.00), not wanting the pregnancy (AOR 1.79; 1.21-2.65) and history of husband involvement in physical fight with other men (AOR 2.32 ;1.47-3.68) were independent predictors of intimate partner violence during pregnancy.

Interpretation: Partner's controlling behaviour, being single/cohabiting, bride price not paid, partner's infidelity, unplanned pregnancy and history of partners' involvement in physical fights were risk factors associated with IPV during pregnancy. Laws prohibiting violence against women should be enforced.

Funds: None.

Abstract #: 1.045_NEP

Exploring data sources for road traffic injury in Cameroon: capture and completeness of police records, newspaper reports, and a hospital trauma registry

C. Juillard¹, M. Kouo Ngamby², M. Ekeke Monono³, G.A. Etoundi², R.A. Dicker¹, A.A. Hyder², K.A. Stevens⁴; ¹Center for Global Surgical Studies, Department of Surgery, University of California, San Francisco, ²Ministry of Public Health, Yaoundé, Cameroon, ³World Health Organization, African Regional Office, Brazzaville, Congo, ⁴Department of International Health, International Injury Research Unit, Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland

Background: Road traffic injury (RTI) surveillance systems are a fundamental component of organized injury prevention and trauma care efforts. Which data source provides the best capture of RTI events in low- and middle-income country (LMIC) contexts is unclear. We assessed the number of events captured and the information available in Yaoundé, Cameroon from three previously-described LMIC injury data sources: hospital trauma registry, police records, and newspaper journals.

Methods: Data were collected from a single-center trauma registry, police records, and the six most widely circulated newspapers in Yaoundé over a 6-month period in 2009. The number of RTI

events, mortality, injury context, and other variables commonly included in injury surveillance systems were recorded. Sources were compared using descriptive analysis.

Findings: Hospital, police, and newspaper sources captured 1686, 273, and 480 road traffic injuries, respectively. The hospital trauma registry provided the most complete data for the majority of variables explored; however the newspaper data source captured two mass-casualty train crash events that went unrecorded in the police and hospital systems. Police data provided the most complete information on first responder to the scene, missing in only 7%. Excluding train crash victims, 57 (73%) of newspaper RTIs and 107 (39%) of police records RTI were also captured in the trauma registry.

Interpretation: Investing in the hospital-based trauma registry may yield the best surveillance for road traffic injuries in Yaoundé, Cameroon; however police and newspaper reports may serve as alternative data sources when specific information regarding mass casualty events or prehospital context are needed.

Funding: None.

Abstract #: 1.046_NEP

Assessment of barriers to use of preventative screening tests for women in Trujillo, Peru

A. Fishler, K. Zappas, S. Benson; University of Utah, Salt Lake City, USA

Background: Cervical cancer and breast cancer are the most common causes of female cancer in Peru. Screening tests such as: the papanicolaou smear test, clinical breast exams, and mammograms, can help to prevent cervical and breast cancer by detecting the cancer early and starting the individual on an effective treatment. The purpose of this study was to assess knowledge and use of these screening tests and identify possible barriers to accessing preventative care for women in the peri-urban area of Trujillo, Peru.

Methods: Researchers surveyed women door-to-door in the peri-urban area of Trujillo, Peru. Women were asked questions about their access to healthcare, sexual relations, use of contraceptives, and preventative women's healthcare. Survey data was analyzed using Excel.

Findings: Ninety-eight Peruvian women were surveyed and their answers regarding women's preventative healthcare were analyzed. It was found that 96% of women surveyed had knowledge of a papanicolaou smear test and the majority have received the screening test, however, only 69% of women know of a clinical breast exam and 56% of women know of a mammogram. The majority of women have not had a clinical breast exam and/or mammogram. All women who were surveyed reported barriers to accessing healthcare.

Interpretation: There are a number of barriers that prevent women in the peri-urban area Trujillo, Peru from receiving sufficient healthcare. By better understanding these barriers, the healthcare system can address these obstacles in order to improve early detection of both cervical and breast cancer.