

**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.

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### 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

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**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.

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

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**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