

Areas (EAs) were selected to represent the national population. Seventy four Districts and Kampala Capital City Authority were represented. At the District level, we used Moran's I index to determine the spatial autocorrelation of the following study variables: unmet surgical need (a prevalence proportion), Hub Distance (distance from EA to surgical center), Area of Coverage (geographic catchment area of each surgical center), and Tertiary Facility Transport (average household time traveled to tertiary facility). We then used Local Indicators of Spatial Association (LISA) to identify any significant clustering of these study variables among the Districts.

**Results:** The survey enumerated 4,248 individuals. The prevalence proportion of unmet surgical need was estimated for each EA and varied from 2.0 to 45.0%. Of the 4 Regions, prevalence was highest in the Northern and Western Regions. Moran's I bivariable analysis indicated a positive correlation between unmet surgical need and Hub Distance ( $I = 0.09$ ,  $p = 0.03$ ), as well as between unmet surgical need and Area of Coverage ( $I = 0.11$ ,  $p = 0.02$ ). This association was consistent nationally. The LISA analysis showed a high degree of clustering among sets of Districts in the North (Gulu, Lamwo, Lira, Pader) and Southwest Sub-Regions (Kiruhura, Mbarara, Ntungamo).

**Discussion:** This study demonstrates that there is a statistically significant association between distance to surgical center and unmet surgical need. If investment in surgical care must be prioritized to specific Districts, we have identified the North and Southwest Sub-Regions as higher priority areas.

**Abstract #:** 2.079\_NEP

### Optimizing surgical care delivery in Uganda to address untreated abdominal surgical conditions

E.K. Butler<sup>1</sup>, T.M. Tran<sup>2</sup>, A.T. Fuller<sup>2,3</sup>, S. Luboga<sup>4</sup>, M.M. Haglund<sup>3,5</sup>, F. Makumbi<sup>6</sup>, M. Galukande<sup>7</sup>, J.G. Chipman<sup>8</sup>; <sup>1</sup>Department of Surgery, University of Washington, Seattle, WA, USA, <sup>2</sup>Duke University Global Health Institute, Durham, NC, USA, <sup>3</sup>Duke University School of Medicine, Durham, NC, USA, <sup>4</sup>Department of Anatomy, Makerere University, Kampala, Uganda, <sup>5</sup>Division of Neurosurgery, Duke University, Durham, NC, USA, <sup>6</sup>Makerere University School of Public Health, Kampala, Uganda, <sup>7</sup>Department of Surgery, Makerere University, Kampala, Uganda, <sup>8</sup>Department of Surgery, University of Minnesota, Minneapolis, MN, USA

**Background:** Surgical disease is of increasing priority for the global health agenda. The first step in improving surgical care delivery in low- and middle-income countries is to fully describe the burden attributable to surgically-treatable conditions. Hospital-based data excludes individuals who are unable to access care. The aim of this study was to define the burden of abdominal surgical disease in Uganda via household survey to inform the Ministry of Health in directing efforts to improve surgical care.

**Methods:** Enumerators sampled 4,248 individuals in 2,315 households across 105 randomly selected clusters stratified by 10 geographic sub-regions throughout Uganda. Using the Surgeons Overseas Assessment of Need (SOSAS) survey, each head-of-household answered demographic and household death questions and two randomly selected individuals answered questions to elicit surgical conditions in each anatomic area. All individuals reporting

an abdominal condition were included in this analysis. Descriptive analysis was performed to determine prevalence of each type of abdominal condition. Chi square and t-tests determined variables contributing to presence of an untreated abdominal condition.

**Results:** Of the 4,248 individuals interviewed, 841 (19.8%) reported having a surgical condition at some point in their life, 461 of which (10.6%) had 1 or more untreated conditions at the time of the survey. Of reported conditions, 18.3% of lifetime (154/841) and 14.2% (75/528) of untreated were abdominal conditions. Mean age of those with abdominal conditions was  $35.2 \pm 20.1$  years and 65.3% were female. There was no association between age and whether a condition was treated. Men were more likely to have an untreated abdominal condition than women (male 59.6%, female 44.9%,  $p=0.01$ ). The most frequent types of conditions were obstructed labor (23.4%), abdominal masses (21.4%), abdominal pain (16.9%), and hernias (14.3%). Obstructed labor was more likely to be treated (80.6%), than abdominal masses (33.3%), abdominal pain (30.8%), and hernias (45.5%) ( $p<0.001$ ).

**Conclusions:** Abdominal conditions make up a significant proportion of the surgical need in Uganda. Although obstructed labor is the most common surgical condition, it is more likely to be treated than abdominal masses, abdominal pain, and hernias. World Health Organization efforts have focused on reducing maternal and child mortality, particularly by increasing access to Cesarean section. It is evident, that these efforts have been successful, however, other abdominal surgical conditions remain largely untreated.

**Abstract #:** 2.080\_NEP

### Mongolian Women's Experiences of Mental Health During Pregnancy and After Childbirth

J. Trop<sup>1</sup>, M. Withers<sup>1</sup>, M. Bayalag<sup>2</sup>, J. Rinchin<sup>2</sup>; <sup>1</sup>University of Southern California, Los Angeles, CA, USA, <sup>2</sup>National Centre for Maternal and Child Health, Ulaanbaatar, Mongolia

**Background:** Postpartum depression (PPD) is defined as depression occurring during pregnancy or within 4-6 weeks after childbirth. Understanding the culture-specific and individual aspects of PPD is critical in promoting the health of mothers, children, and families. Little information exists, however, on the ways in which PPD manifests in the Mongolian cultural context. This project aims to explore how postpartum Mongolian women experience PPD and how patients and health care providers understand, identify and treat PPD.

**Methods:** We conducted 3 interviews and 3 focus group discussions (FGDs) with health care providers at the Mongolian National Centre for Maternal and Child Health (N=16) in order to explore the following domains in the context of PPD: 1) awareness and views about etiology 2) clinical experience and the impact on the patient 3) lay perspectives 4) recognition, treatment, and availability of services. Transcripts of the interviews and FGDs were transcribed and analyzed for emergent themes.

**Findings:** All providers were aware of PPD, though none reported having had substantial experience working with PPD patients. Views regarding etiology ranged from unplanned pregnancy and breast-feeding difficulty to volatile emotions and family conflict,