

Interpretation: The Global Initiative for Children's Surgery was supported by multiple funding mechanisms, including several children's surgery sub-specialties. Support across disciplines and types of organizations reflect the wide range of stakeholders. Key stakeholders preferred to sponsor LMIC providers to whom they were closely connected, emphasizing the existing networks that must be mobilized to develop a strategic voice for children's surgery. Tracking funds will help to marry interests with needs and funding resources, help realize gaps in funding and promote transparency. This approach may help support surgical capacity building.

Source of Funding: None.

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Use of Ultrasound in an Outpatient Primary Care Clinic in Mozambique

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Program/Project Purpose: Ultrasound is a valuable inpatient diagnostic tool in developing countries, where other types of imaging may not be available. It is not known how ultrasound technology contributes to patient care in a limited-resource, outpatient primary care setting. This information is vital to developing appropriate training programs for practitioners in this setting. This study aimed to quantify the number, type, indication and usefulness of ultrasound at an urban health center in Beira, Mozambique.

Structure/Method/Design: We conducted a two-month observational study at the Sao Lucas Health Center, a government health center supported by the Catholic University of Mozambique in collaboration with the University of Pittsburgh, from February–April 2016. Ultrasound operators were the clinic director, Mozambican physicians, and global health residents from the University of Pittsburgh, all of whom received formal ultrasound training. Using a Siemans Acuson X000 machine a log-book was used to record the age and sex of patients, indication for exam, type of exam and findings. Operators were asked to assess if ultrasound contributed to: (1) confirmation of a diagnosis/gestational date, (2) exclusion of a potential diagnosis, or (3) revealed unexpected findings.

Outcome & Evaluation: During 44 clinical days, 369 ultrasounds were performed. Most patients were female (88%) and median age was 26 years. A majority of exams evaluated women's health complaints, including amenorrhea/suspected pregnancy (23%), gestational age/fetal position in gravid women (24%), pregnancy complications such as bleeding and absence of fetal movement (5%), and other gynecologic complaints (6%). Other indications for exam were abdominal complaints (24%). Less common indications were cardio-pulmonary, urologic, soft tissue, breast and ENT symptoms. Ultrasound was used to confirm a suspected diagnosis in 163 cases (44%), most often pregnancy and gestational age. The exam was used to rule-out a diagnosis in 115 cases

(32%) and to reveal an unsuspected diagnosis in 91 cases (25%). Unsuspected diagnoses included intramuscular abscess in patient with cellulitis, ectopic pregnancy in patient with amenorrhea, and pericardial effusion and ascites in a patient with chronic cough.

Going Forward: Ultrasound is a valuable outpatient primary care tool in limited-resource settings, and is particularly useful in the evaluation of obstetric and gynecologic complaints. Clinical training in primary care should include acquisition and interpretation of ultrasound images.

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Demographics and Mortality Outcomes of Neurotrauma in Guatemala City

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Background: In Guatemala, trauma is the leading cause of productive years of life lost and the fourth leading cause of death, but no published data is available on the incidence of neurotrauma. This study was conducted to obtain basic demographic information on traumatic brain injury (TBI) patients at the second highest-volume hospital in the country; determine whether TBI severity and other demographic variables correlated to poor outcomes; and place this information in the context of neurotrauma worldwide.

Methods: Case series study of TBI patients who were admitted to Hospital General San Juan de Dios in Guatemala City, Guatemala from May 2013–April 2015. Data was collected from nursing logs in the hospital's trauma bay and reports submitted to the Ministry of Health. Age, gender, and severity of TBI were compared to hospital length of stay (LOS) and in-hospital mortality. TBI severity was graded as mild (GCS=13–15), moderate (GCI=9–12), and severe (GCI=3–8).

Findings: 360 patients aged 15–91 years were included. The mean age was 39.2 years (SD=18.4). Patients were predominantly male (n=310, 86.1%). 119 patients (33.1%) received a TBI diagnosis of mild, 105 (29.2%) moderate, and 136 (37.8%) severe. Men were more likely to receive a severe TBI diagnosis (p=0.006, 40.3% men vs. 22.0% women). Overall mortality rate from TBI was 43.9% (n=158). Mortality rates increased with age (p=0.002) and severity grading (p<0.001). Mortality rates for mild, moderate, and severe grading were 21.0% (n=25), 41.0% (n=43), and 66.2% (n=90), respectively. Demographic variables, however, did not affect hospital length of stay (R²=0.00044). The median LOS was six days; most patients were discharged within one day (n=86, 23.9%).

Interpretation: Neurotrauma in Guatemala is linked to significantly higher mortality than in comparable countries. A 2009 study examining TBI outcomes in 46 countries participating in the CRASH trial found similar patient demographics but a mortality rate of 26.2% in other lower-middle income countries. Hospital