

Prevalence of Critical Illness at a National Referral Hospital in Kenya

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RATIONALE: Access to an Intensive Care Unit (ICU) is significantly limited for patients in the public sector in Kenya and sub-Saharan Africa (SSA). Still, very few epidemiologic studies to measure the prevalence of critical illness in these settings have been pursued. A more thorough description of the burden of acute illness is needed to ensure proper planning and implementation of critical care services in SSA. **METHODS:** A team of medical students independently measured the National Early Warning Score (NEWS) for all adult patients admitted to Internal Medicine (IM), General Surgery (GS), Orthopedic Surgery, Neurosurgery, and Obstetrics (OB) wards, or presenting to Casualty (the Emergency Department), at Moi Teaching and Referral Hospital (MTRH) over a 24-hour period. NEWS incorporates vital signs and mental status on a 20-point scale. Patients who scored greater than six, indicating potential benefit to ICU admission, were followed weekly for 28 days to determine if they were ever admitted to a one of three ICUs at MTRH. **RESULTS:** We enrolled a total of 450 patients during the 24-hour collection period. Of these, 66 had a NEWS greater than six. Thirty-nine percent of these patients were on the IM wards, 21.2% in GS, and 15.5% in Casualty as shown in Figure 1. At 28-day follow-up, two patients who qualified as critically ill on day one had been admitted to an ICU. One patient who presented to Casualty from home with a NEWS 12 was admitted to the main ICU three days after presentation. This patient was deceased by day 14 follow up. A second patient from the OB ward who had NEWS 11 was admitted to the main ICU five days after scoring as critically ill and remained in the hospital at day 28. As of day 28, 10 of the 66 patients (15.2%) with an initial NEWS greater than six had died in the hospital. Mean NEWS for these 10 patients was 9.5, compared to 9.0 for the cohort of critically ill patients and 3.5 for the study group overall. We were not able to collect data on post discharge mortality. **CONCLUSIONS:** To our knowledge, our study is the first to measure the prevalence of critical illness at a referral center in SSA. While this is a single-day point-prevalence study, it provides much-needed data to describe the burden of acute illness in the region.

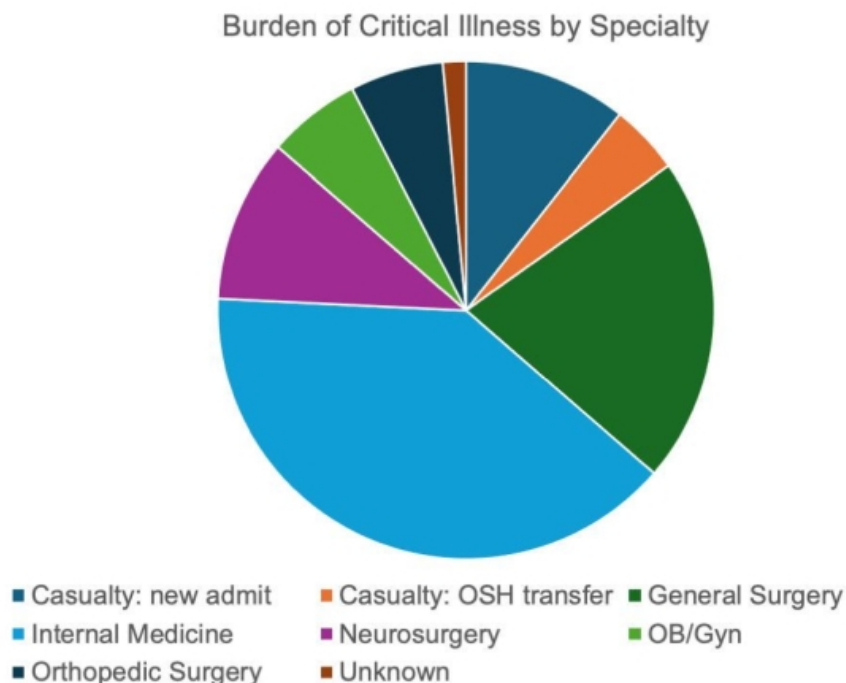


Figure 1: Burden of Critical Illness By Specialty

This abstract is funded by: T32