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Enhancing triage for neurosurgical care: A provider perspective

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Background: Triage plays an important role in emergency care by ensuring timely prioritization of patients based on clinical urgency. While structured triage systems have improved outcomes in high-income settings, their implementation and adaptation for neurosurgical emergencies in low- and middle-income countries (LMICs) remain limited. Neurosurgical cases often require rapid decision-making, specialized imaging, and neurological assessments, all within resource-constrained environments. This study explores provider perspectives on neurosurgical triage in Uganda and Nigeria to identify systemic barriers, existing strengths, and opportunities for improvement, thereby addressing a critical gap in understanding and informing future training and policy efforts in LMICs.

Methods: Twenty-four semi-structured interviews were conducted with accident and emergency (A&E) and neurosurgical providers at three tertiary hospitals: University College Hospital in Nigeria, and Mulago and Mbarara Regional Referral Hospitals in Uganda. Participants included nurses, medical officers, resident doctors, and attending physicians. Data was thematically analyzed using Dedoose, with transcripts double coded to ensure reliability.

Results: Participants were equally distributed across countries and departments, with most having 1–5 years of clinical experience. All had interacted with triage systems; however, only one had received neurosurgery-specific triage training. Providers described a three-stage triage model: entry (categorization), stabilization (e.g., resuscitation, imaging and monitoring), and exit (admission, referral, or discharge). Key challenges included lack of standardized neurosurgical guidelines, delays in payment processes and power outages, inadequate staff and resources, and inter-provider communication gaps. Despite these issues, strengths identified were the existence of a structured triage system, presence of full-time emergency physicians, basic emergency resources, and improved inter-provider coordination through shared protocols and color-coded systems. Recommendations included enhancing diagnostic access, training, workforce capacity, and standardizing neurosurgical triage protocols.

Conclusion: Our findings demonstrate an existing general triage structure in our study settings, however systemic inefficiencies and resource constraints hinder its effectiveness. Context-adapted guidelines, workforce expansion, and infrastructural investment are essential to strengthen neurosurgical triage and improve patient outcomes in sub-Saharan Africa.