Enhancing Patient Triage for Neurosurgical Care: A Mixed Methods Approach

Duke UNIVERSITY | BASS CONNECTIONS

Duke Global Neurosurgery and Neurology

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BACKGROUND

Emergency neurosurgical triage is the systematic process in which care is delivered to patients in urgent neurosurgical clinical settings. Various factors influence the timely allocation of neurosurgical care, including the urgency of presented cases, the number of trained physicians and nurses, available medical technology and resources, local geography, and the demographics of patient populations. The purpose of this study is to assess the current patient triage system in neurosurgical care, identifying its strengths and weaknesses and determining the key factors affecting patient triage decisions in Uganda and Nigeria.

NIGERIA

Currently, there are no specific neurosurgery triage guidelines in Nigeria, however the emergency triage guidelines in University College Hospital (UCH) Ibadan which is a modified emergency severity index containing a five level triage scale with color coding has been proven to be valid and reliable in both high and low resource settings. Factors such as inadequate emergency response systems and delays in patient transportation contribute to the complexity of the triage process. Urgent attention to these bottlenecks is crucial to ensure timely and effective emergency care.
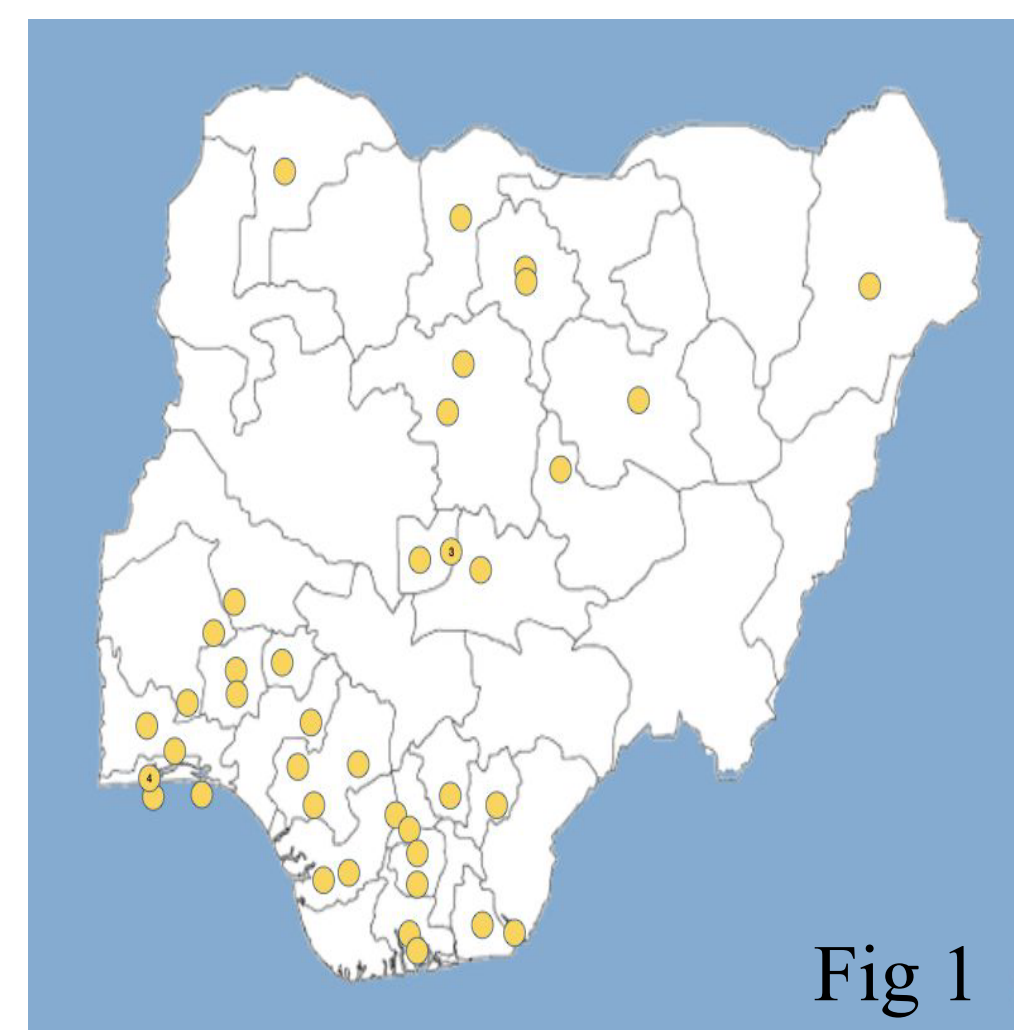

Fig 1

UGANDA

Also, Uganda has no specific triage algorithms specific for neurosurgical adult or pediatric patients presenting at emergency departments. However, for adults, hospitals in Uganda use the Simple Triage And Rapid Treatment (START) algorithm for primary survey and Secondary. Assessment of Victim Endpoint (SAVE) algorithm for secondary survey. The START algorithm was developed in California in 1980. Although emergency care is seen to be largely cost prohibitive in low-income settings, investment in concise and feasible triage systems can create a large difference in patient outcomes and overall costs long term
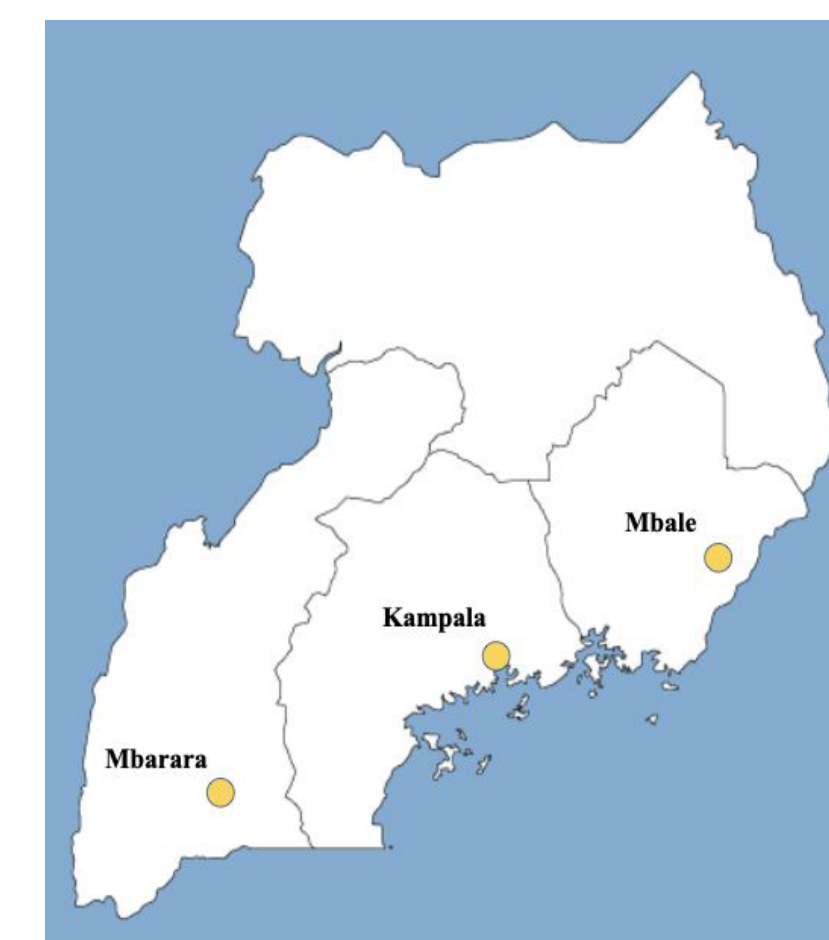

Fig 2

SUMMER RESEARCH: OBJECTIVES

1. To assess the current patient triage system in neurosurgical care and identify its strengths and weaknesses.
2. To determine the key factors affecting patient triage decisions in neurosurgical care.
3. To design a patient triage model that accounts for criticality, resource availability, and healthcare costs.

Fig 3

METHODOLOGY

Fig 4

PROGRESS

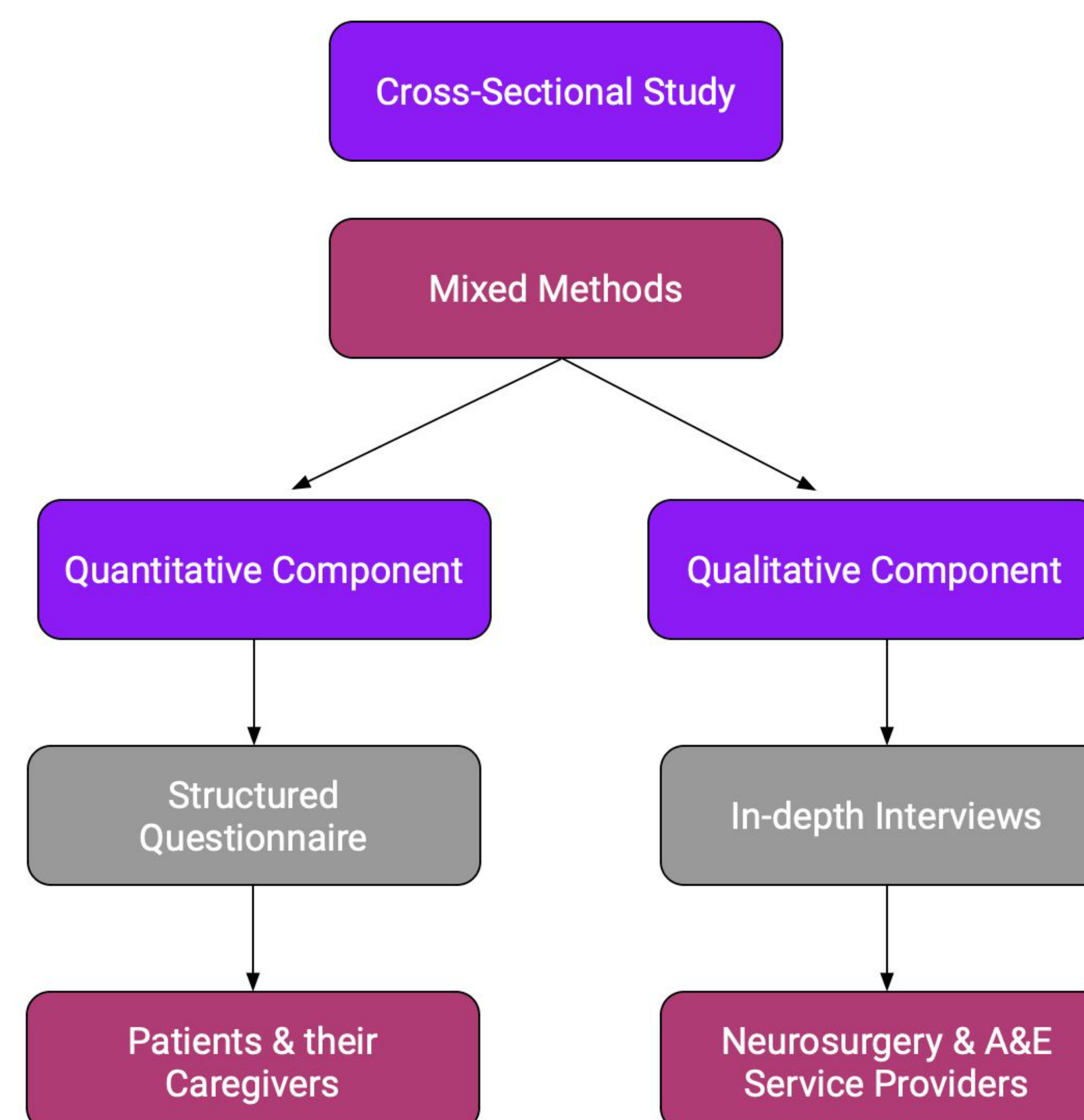Literature Review → Study Proposal → Study Tools → IRB Approval → Data Collection

NEXT STEPS

Distribution of surveys to patients and patient caregivers to assess the current patient triage systems in Nigeria and Uganda. Additionally, interviews will be conducted on neurosurgeons, neurosurgical residents, accident and emergency care physicians, and neurosurgery and emergency nurses.

Fig 5

Neurosurgeon & Patient Interviews / Survey → Transcript / Memo Generation & Coding → Data Analysis, Manuscript → Expansion of Baseline Barrier Research into other SSACs

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