



THE VALIDITY OF HOURLY NEUROLOGIC ASSESSMENTS IN THE INTENSIVE CARE UNIT FOR PATIENTS WITH TRAUMATIC BRAIN INJURY.

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Introduction

Traumatic brain injury (TBI) is a leading cause of disability and mortality worldwide. The standard of care at many trauma centers is to admit patients with TBI to the Intensive Care Unit (ICU) for hourly neurologic assessments.

However, there is a proven discrepancy between documented GCS (Glasgow Coma Scale score) and the presence of significant organic intracranial injuries and their clinical impact. Additionally, unnecessary ICU stay incurs significant financial costs to and resource utilization, and may adversely affect patient outcomes. There is no consensus regarding the optimal duration or frequency of hourly neurologic assessments.

Methods

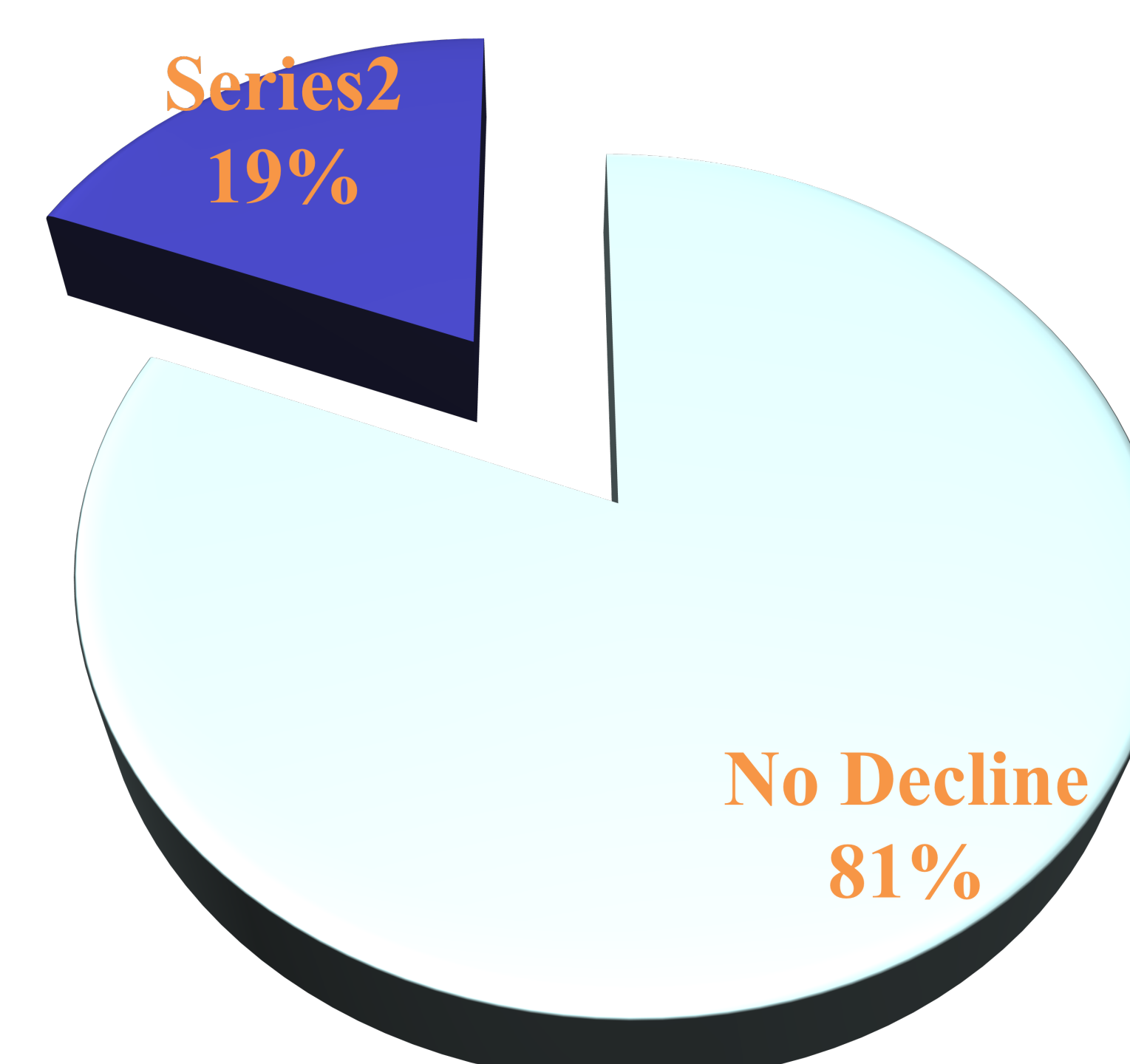
As a feasibility study we retrospectively reviewed data from the trauma registry at our urban, level I trauma center over a 2-month period.

Data points included:

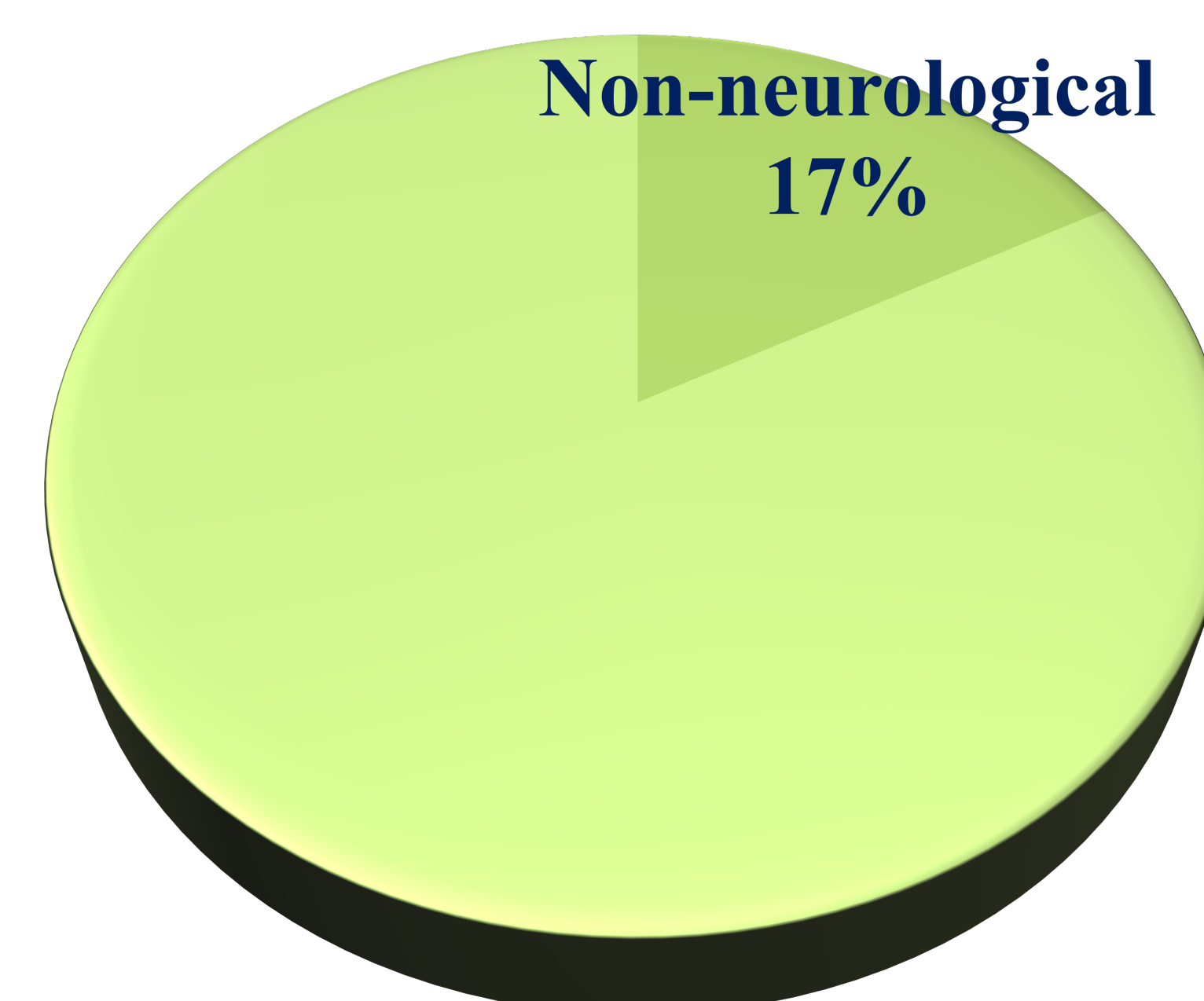
- head injury type,
- admission GCS,
- lowest GCS within 24 hours of admission,
- lowest GCS during hospitalization,
- ICU length of stay,
- total length of stay;
- and unplanned surgical, medical, or diagnostic intervention prompted by a decline in GCS.

Results

Incidence of decline in GSC in 24hrs post admission



Reason for decline in GCS after 24Hrs



- ❖ Of the 18% that did experience a decline within 24 hours, none prompted an unplanned intervention in their previously management plan.

Conclusion

- All patients with TBI may not require hourly neurologic assessments in the ICU.
- The majority of patients in our review did not experience a decline in GCS.
- Additionally, those that did decline did not trigger a significant change in clinical management.
- Further data is required to elucidate certain patient or injury criteria to separate patients that truly require hourly neurologic assessments from those that can be monitored in a lower acuity setting.

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