

Decreasing the need for intra-hospital transportation of the critically injured patient: a successful intervention

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INTRODUCTION

- Critically injured patients are placed in the Trauma Neurosurgical Unit (TNU) to receive very close monitoring and care by critical care nurses.
- Patients are constantly monitored and receive prompt interventions as appropriate.
- When they are transported out of the TNU for required diagnostic imaging, the patient is at risk for adverse events which can be very detrimental.
- Patients also require the same level of care as they received while in the ICU; therefore the patient is transported with several staff members to provide that level of care.



OBJECTIVE

- To determine if decreasing the need for intra-hospital transportation of patients in the TNU would impact the occurrence of adverse events

METHODS

- The team met to review data and investigate the use of a portable head CT.
- A review was conducted: Conventional CT vs. Portable Head CT scanner – specifically identifying risks vs. benefits.
- Complication and outcomes data was collected in the pre and post periods
- Data was collected between September 2015 through August 2018
- Categories reviewed included:
 - diagnostic quality,
 - need for repeated scans,
 - interruptions in mechanical ventilations or inadvertent extubation,
 - accidental tube disconnections,
 - change in patient condition (i.e. hypoxia, hypotension, decreased LOC, etc.),
 - medication issues (life sustaining medication run dry or IV dislodged, interruption/delays of medication administration) and,
 - staffing issues (removing critical care nurses, respiratory therapists, and nursing assistant off of the unit).

RESULTS

- Between September 2015-August 2018, a total of 124 ICU patients were included in the study (Pre: 48; Post: 76).
- Of the 48 pre-intervention patients, 29% (14) experienced adverse events related to the study involving hypotension, tachycardia, increased intracranial pressure, emesis, oxygen desaturations, bradycardia, hypertension, and line/tube dislodgement.
- Following the introduction of the portable head CT in the TNU, 76 patients underwent diagnostic imaging in the unit with no adverse events related to the study noted ($p < 0.001$).

CONCLUSIONS

- It was determined that the risk outweighed the benefits of transporting patients out of the unit to have scans completed at the TNU.
- We noticed adverse events occurring during patient transport from the TNU to Diagnostic Imaging – specifically CT Scanning.
- This process was noted a success, eliminating all adverse events related to transport to Diagnostic Imaging. We will continue to monitor patient outcomes with relation to this process.



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