Impact of a Trauma Response Nurse Deployment to Cat-1 Trauma Activations in a Level I Academic Trauma Center

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Purpose

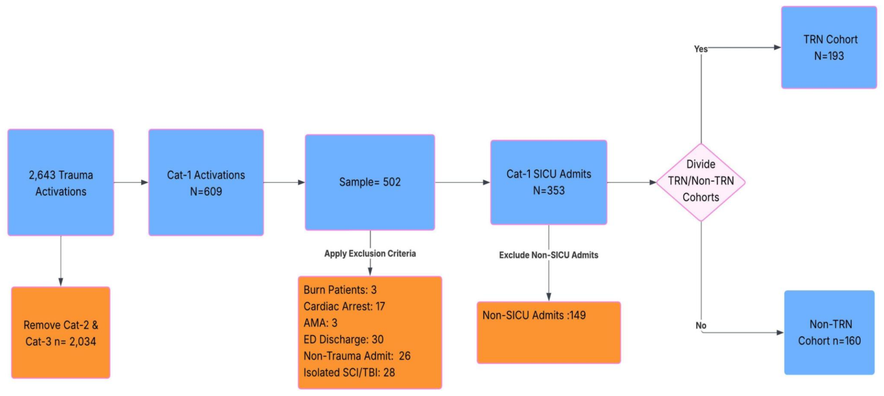
This program evaluation examined the outcomes of a TRN program within Cat-1 trauma activations in the ED of a Level I Trauma Center.

Background

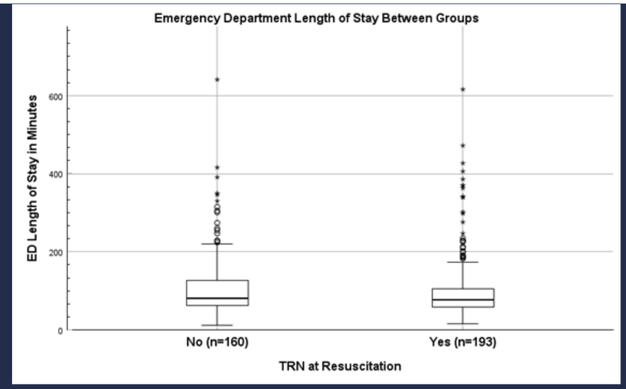
- Trauma Response Nurse (TRN) role implemented via the surgical intensive care unit (SICU).
- Experienced SICU nurse attended into the Cat-1 trauma activations to help bridge the experience gap due to high nurse turnover within the ED.
- Goals:
  1. Provide guidance and mentorship for novice nurses managing these critically injured patients, esp. with Massive Transfusion Protocol (MTP) and Arterial line hemodynamics.
  2. Provide increased continuity of care across settings because TRN stayed with patient from ED arrival to transfer to definitive care.

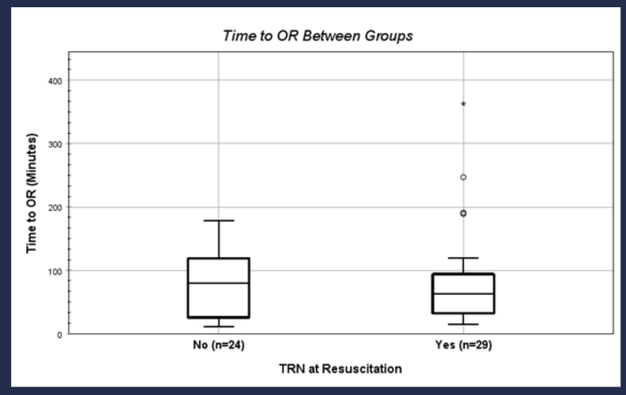
Methods

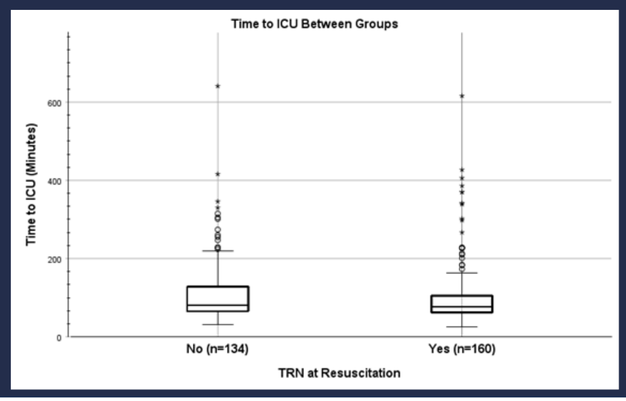
- Retrospective data was collected using the trauma registry
- The time frame is from July 2022 (program start) to July 2024



Results







Discussion & Limitations

- Clinically significant findings, not statistically significant
- The most significant improvement seen was time to OR between our groups; the TRN group had a faster median (IQR) time to OR at 63 minutes (32-94.50) versus the non-TRN group's 80 (24.75-120.5) minutes
- ED LOS for the TRN group was 77 minutes, compared to 81.5 minutes for the non-TRN group (4.5 minutes lower). Literature suggests that reducing ED LOS reduces mortality
- Median (IQR) time to ICU was lower in the TRN group at 77 minutes (62.5-105), compared to 81 minutes (65-129.25) in the non-TRN group (p=.87)
- **Limitations**: Unable to directly measure MTP adherence and performance or set up and calibrate the a-line hemodynamic monitor. The TRN was engaged with these interventions and assessing the impact would have been helpful to the program evaluation

Conclusions

- Positive reductions in times were noted when the TRN was present in the most critically injured patients, despite a response rate of only 55%.
- Findings highlight benefits of the TRN during Cat-1 trauma activation.
- Suggest opportunities to explore further enhancements and expansion of the role to improve care for all trauma patients.

PRISMA/Literature Table/References

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