

The Effect of an Emergency Medicine Resident as Team Leader on the Outcomes of Trauma Team Patients

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Introduction

Trauma is a leading cause of morbidity and mortality in persons between 1 and 44 year globally. Increasingly, emergency medicine (EM) physicians have served as Trauma Team Leader (TTL). Traditionally, a surgeon has been TTL, but previous research has not shown any difference in outcomes between the two. At the Halifax Infirmary, we utilize a resident trauma team leader (rTTL) under the supervision of a staff traumatologist, a duty shared between EM and surgical residents. We asked whether there was any difference in patient outcomes between these two groups.

Methods

This was a retrospective case-control study of data collated from the Nova Scotia Trauma Registry and the Innovian Anesthesia Database, including patients attended by the trauma team between 2014-04-01 to 2015-03-31. The primary outcome was mortality. The secondary outcomes were hospital admission, hospital length-of-stay (LOS), ICU admission, ICU LOS, ventilator requirement, OR use and time to OR.

Univariate comparisons were made using t-tests for continuous data and Fisher's test for count variables. We used logistic and linear regression to adjust for confounding. Crude and adjusted effect sizes are presented with 95% confidence intervals.

Results

571 patients were included in the analysis. 179 (31.3%) were managed by an EM resident. The remainder by a surgical resident. There was no statistical difference between the primary or secondary outcomes on the crude or adjusted estimates. 18 patients (10.1%) in the EM group died compared to 37 (9.4%) in the surgical group.

Conclusion

There was no difference in any patient outcome between EM and surgical residents. This research supports that trauma leadership can be taught safely to both groups. Further research is warranted in introducing the rTTL into other systems.