Matching Resources and Patient Acuity in a Revised Triage Activation Protocol Leads to Improved Utilization and Outcome

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Abstract

Background and Purpose:
Monitoring of the rapid identification and access to appropriate resource allocation of critically injured trauma patients is a critical indicator of trauma performance. UT of the severely injured may result in preventable mortality or morbidity from delays in definitive care. The purpose of this study was to evaluate the effectiveness of two key system enhancements - revisions of triage activation criteria and the presence 24 hour in-house Trauma Surgeon, by examining their impact on UT.

Study/Project Design:
Pre/post protocol revision study of injured trauma patients recorded in trauma databases. Rural Level 1 Trauma Center, 500 bed academic medical center. Pre/post study of protocol revision, 3,707 trauma admissions over 3 and a half year period (2008-2011). Cribari grids were utilized to identify those patients appropriately triaged, over triaged, and UT based on American College of Surgeon definitions. TTA criteria were moved from Level 2 TTA to Level 1 TTA April 2010. In addition, trauma surgeons were brought in-house on a 24 hour basis (January 2010).

Findings/Results:
UT significantly improved from 22-26% pre revisions to 8-10% post revisions period, while over triage rose from 6% to 11%. Trauma surgeon presence on arrival of all TTA changed from 61% to 95% in the post change period. Level 1 TTA increased from 18% to 26%, Level 2 TTA remained unchanged at 50%, and Level 3 TTA declined from 8% to 2% of all TTA.

Discussion/Conclusions/Implications:
A revised Triage Activation Protocol incorporating evidence-based guidelines and in-house Trauma Surgeons has reduced UT and improved timely oversight and patient safety of critically injured patients. Resuscitation paradigms need continuous revision, education and monitoring of variances to result in optimal care.