

Evidence-Based Practice (EBP) - E190

Oral

Abstract Title:

The Highway to the ICU: Decreasing ED LOS for Trauma Codes

Authors:

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Background & Purpose:

Our Level One Trauma Center evaluates approximately 4,000 trauma patients within an emergency department (ED) that has over 170,000 visits annually, making throughput paramount. A review of our ED length of stay (LOS) revealed a major opportunity to improve ED throughput of all trauma patients requiring admission. A major stumbling block to the prolonged ED LOS was the inefficiency surrounding patient transport from diagnostics back to the trauma bay prior to transfer to the ICU. In addition, the telephone reporting process provided ineffective transfer of clinical information between the ED and ICU nursing staff placing patient's safety as risk.

Study/Project Design:

Baseline data was collected in 2010, implementation was in 2011, and post implementation data was collected in 2012.

Setting:

We are a large Level One Trauma Center. This was a multidisciplinary project involving our ICU, ED, and Trauma Program.

Sample:

All trauma code patients admitted to the ICU from the ED were included in this project. Baseline group consisted of 223 patient and post group had 225 patients

Procedures:

In 2011, an interdisciplinary team was formed with a primary goal to reduce ED LOS in the highest level activation trauma patients requiring admission to the ICU, while increasing collaborative communication between departments. The process of transferring the trauma patient from the ED to the ICU was streamlined in the spring of 2011 by directly transporting the patient from diagnostics to the ICU, and giving bedside report. The new process involves stabilization in the trauma bay followed by a call to the ICU charge nurse to verify bed availability. The patient is then transported to the Radiology Department with the trauma team. Once it is determined that the patient will not need immediate surgical/interventional procedures, a call is placed to the ICU alerting them of the pending arrival of the trauma patient. Once at the bedside, the ICU/ED teams collaborate and a more detailed report is provided ensuring effective communication.

Findings/Results:

The pre-implementation group consisted of 223 patients. Data revealed an average ED LOS of 248 minutes, an ICU LOS of 7.8 days, and an overall hospital LOS of 13.1 days. Post implementation group was 225 patients. Data for this group revealed an average ED LOS of 155 minutes, ICU LOS 5.5 days, and average hospital LOS of 11.2 days. This new process resulted in a 37.5% reduction ($p < 0.001$) in ED LOS for trauma codes admitted to the ICU, 2.3 day reduction in ICU LOS ($p < 0.001$) and 1.9 day reduction in hospital LOS ($p = 0.241$). The direct variable cost reduction associated with this project is approximately \$278,000. Lastly, the handoff process between the ED and ICU was much improved and allowed for a more collaborative approach to care.

Discussion/Conclusions/Implications:

This team approach to patient care enhanced communication and collaboration between the departments. Bedside reporting, nationally accepted as standard of care, was effectively implemented during this process. Evaluation of this process is ongoing and continues to promote best practice and interdisciplinary collaboration. Next steps will involve looking at specific patient outcomes to determine how reducing ED LOS impacts patient safety and promotes financial stability. In addition, future goals include utilizing the core ED trauma clinical leaders to expand this process with other high risk trauma patients not requiring the ICU.