

Evidence-Based Practice (EBP) - E133

Poster

Abstract Title:

Trauma Nurse Practitioner Tertiary Survey: Objectifying Criteria for Delay in Diagnosis

Authors:

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Background & Purpose:

Injuries not discovered during the initial diagnostic phase of resuscitation may result in increased length of hospital stay (LOS), complications, cost and an unexpected return to the O.R. Performance of a tertiary survey by trauma NPs has demonstrated the effectiveness of identifying missed injuries (MI) for admitted patients post resuscitation. The goal of the process improvement project was to identify casual factors related to delay in diagnosis (DD), to objectify, classify and reduce MI by establishing the performance of a re-assessment survey by trauma resuscitation and bedside nurses.

Study/Project Design:

Review of registry data for patients with a delay in diagnosis from January 2011 to December 2011.

Setting:

A community based ACS Level II Trauma Center in a major metropolitan area.

Sample:

Trauma registry search for DD revealed 939 patients with a LOS >24 hours, 40 with a DD, and 12 with a MI that required a return to the O.R.

Procedures:

A retrospective trauma registry and chart review of 40 patients with DD. Additional analysis was performed on a subset of 12 patients which required a return to O.R. after identification of the MI. Variables included: mechanism of injury (MOI), demographics, injury severity score (ISS), admission Glasgow coma scale (GCS), endotracheal intubation, positive toxicology, injuries identified, when, where and by whom injuries were discovered, the type of injury, whether sub-specialist was involved prior to identification of MI, and if the patient had an operative procedure prior to identification of MI. The goal was to analyze casual factors related to delay in diagnosis, to compare results to established benchmarks and to utilize evidence based guidelines to guide future practice.

Findings/Results:

Forty of the 939 patients had a DD. The NPs identified 50%. Seventy-five percent had a time to discovery of injury over 24 hours. In 47% a subspecialist was involved at the time the injury was identified. Using literature definitions we were able to establish objective criteria and further classify DD. Using the criteria, 12 required return to the O.R. Of the 12, all had a blunt MOI. The majority was male with an average ISS of 18, GCS of 15, and none were intubated. Orthopedic injuries were identified in 66%. There were 58% who had been to the O.R. previously; five or 72% had previously been to the O.R. for an orthopedic procedure. Thirty-three percent had an unavoidable DD (i.e., hemodynamic instability, multiple injuries), 67% were avoidable DD (i.e., inadequate diagnostics, misinterpretation of results). Furthermore, 58% had Type I MI which based on the literature are related to errors in initial assessment and screening. Similar findings were appreciated in all 40 patients.

Discussion/Conclusions/Implications:

A delay in diagnosis may result in increased LOS, costs, and risks to patients returning to the O.R. Through performance of a tertiary survey in the resuscitation room and at time of admission, nurses can assist in early identification of MI and reduce returns to the O.R. During the evaluative process it was established that there was a lack of evidence based guidelines and benchmarks to use to evaluate and guide future practice. Additionally, the literature supports more objective evaluation and interpretation of MI and DD which the current registry definitions lacked.