Successes and Failures of Trauma Resuscitation Documentation in an Electronic Medical Record

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What is the problem or challenge you identified?
In 2012, Tarrant County’s Level I trauma center adopted the use of an electronic medical record (EMR). The trauma center’s emergency department had approximately 100,000 annual patient visits and admitted over 2500 injured patients. Prior to instituting the EMR, trauma resuscitations were recorded on a paper flow sheet and compliance with internally defined documentation standards was 94%.

Upon transition to the EMR, documentation completeness suffered significantly and decreased from 94% to 79%. Perceived challenges to achieving complete documentation of trauma resuscitations included the design of the EMR system and the frequency of exposure time nurses had to the electronic documentation tool, the Trauma Narrator. Endpoint users were polled and the perception was that navigating the Trauma Narrator was more time-consuming than the paper flow sheet. Additionally, shift rotations resulted in emergency nurses working with an assignment in the trauma area an average of 3-5 shifts per month. Due to this infrequent exposure to the Trauma Narrator, the staff did not gain proficiency in trauma documentation.

Describe the intervention you developed/change you implemented to address the problem:
A committee of stakeholders was established to determine: 1) specific barriers in efficient use of the EMR system and 2) methods necessary to eliminate those barriers and improve documentation compliance. The committee included leadership from Trauma Services and Emergency Services, endpoint users, and an EMR consultant.

Upon validation of the decline in documentation compliance, group education and one-on-one counseling were provided to endpoint users.

How did you measure the effects of the change?
Documentation indicators were tracked monthly through the quality review process and reported from the trauma registry. Documentation statistics were analyzed monthly by the Trauma Services Manager and incremental changes recommended by the committee were implemented. The rates of improvement and documentation compliance were measured.

After several months of EMR use, documentation compliance dropped to 79% and showed no signs of improving. Education and counseling alone resulted in no improvement in documentation statistics. Data analysis resulted in four revisions of the trauma narrator over an 18-month time frame. The aim of the revisions was to improve access to key documentation elements. After the first three revisions of the Trauma Narrator, documentation compliance rose to 83%. Finally, the Trauma Services staffing model was adjusted to allow Trauma Nurse Clinicians (TNC) to respond to activations and function as the documenting nurse. No actions were taken to adjust emergency nursing assignments or increase the frequency of documenting trauma resuscitations. 12 months after the fourth Trauma Narrator revision and initiation of TNC participation in resuscitations, there was trending improvement in overall documentation compliance to the rate of 88%, while documentation completed by TNCs had a compliance rating of 99-100%. Upon recent American College of Surgeons verification visit, the trauma program
was verbally commended for designing a functional Trauma Narrator and having success with utilization of the electronic documentation tool.

**How did you sustain the change?**
Despite the desires of many endpoint users return to paper flow sheet documentation, trauma resuscitation documentation remains in the electronic Trauma Narrator after 36 months. Compliance with documentation indicators continues to improve with ongoing education, daily auditing of records, weekly one-on-one counseling of endpoint users, monthly reporting, and TNC documentation of resuscitations.

**Future Implications:**

There is a need for further improvement in documentation indicators. Given the significant improvement in documentation compliance observed when completed by TNCs, expanding TNC presence in resuscitations is recommended to improve limitations in documentation compliance that may be observed during implementation of an EMR system.