

Evidence-Based Practice (EBP) - E151

Poster

Abstract Title:

Evaluation of an Electronic Medical Record to Trauma Registry Interface

Authors:

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Background & Purpose:

The trauma registry is the cornerstone of the trauma program. Data must be valid, reliable and concurrent to be of benefit. Manual keying of data from one electronic source into another can lead to errors and decreased efficiency. A digital interface between the electronic medical record and the trauma registry has the potential to both save time and improve data validity. The University of Kansas Hospital implemented an interface between the Epic electronic medical record and DI's Collector trauma registry. Does this interface currently produce benefits that justify its cost?

Study/Project Design:

In November of 2011, our hospital partnered with DI to create the interface. Phase 1 was completed in September of 2012.

Setting:

The University of Kansas Hospital (TUKH), a Level I ACS verified trauma center and academic medical center.

Sample:

All registry record entries between October 1 – 15, 2012 (84 records) were compared to records entered June 1- 15, 2012 (92 records).

Procedures:

Team members for this project from our hospital included the Interface Project Manager, Interface Analyst, Trauma Program Manager and Trauma Registrar. Team members from our registry vendor included a Solution Architect and Business Manager. The format utilized was HL7 v. 3. Data elements available for uploading into the trauma registry were selected and a mapping template cross-walking the data fields was developed. Phase 1 included demographic information only. Phase 2 will include the information from the electronic trauma flow sheet. A method to identify what records would be pushed into the registry was designed. Time studies were completed to quantify the time savings per record post Phase 1 interface implementation. An analysis of data validity was also completed. A projection of time savings at completion of Phase 2 was also completed based on June manual data entry times.

Findings/Results:

There are two primary advantages realized with the EMR to trauma registry interface, including data validity and time savings. Time studies for Phase 1 showed an average actual time savings of 5 minutes per record. Data validity checks showed 100% accuracy. Phase 1 included demographic data consisting of 25 data points. Phase 2 will pull 97 data points from the electronic trauma flow sheet into the registry. Projected savings based on manual entry time studies for Phase 2 were an additional 15 minutes per record. Additional time savings from an existing interface between KEMSIS, the electronic EMS database for the State of Kansas, and the trauma registry bring an 56 data points for an average time savings of 7 minutes per record. Total time savings is projected at 27 minutes per record. The primary disadvantage of the EMR to registry interface is the limited data points available to interface at this time. The interface can not map from nonspecific fields such as from notes. Additionally, our EMR consists of other non-Epic programs (i.e. ChartMax). Only the Epic portions of the chart are available at this time to interface with our registry.

Discussion/Conclusions/Implications:

The process of operationalizing an EMR to trauma registry data interface is labor intensive and hospital IT Departments have many other competing priorities. However, the cost of under \$10,000 is possible to recoup in one or two years in time savings even with limited data points. Registrar satisfaction with the interface has been high. The registrars appreciate the generation of several partially completed records with the click of a button. The time saving

advantage is exponentially more beneficial with greater numbers of data fields migrated and for those centers with large admission volumes. We feel there is potential for added benefits as the EMR becomes more sophisticated.