

Emergency Department performance before and after implementation of an electronic medical record information system

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ABSTRACT

Objective:

To measure the effect of the implementation of an Electronic Medical Record (EMR) on Emergency Department (ED) performance with respect to ED Key Performance Indicators.

Method:

A retrospective, observational study was performed. A period 4 weeks before and after the implementation of the electronic medical record was examined. Data collected included total number of presentations, total number of paediatric and Fast track presentations, number of presentations by triage category, admission rates and hospital bed occupancy. Outcomes measured were the Emergency Department Key Performance Indicators (KPIs) and included access block, triage performance benchmarks, lengths of stay in the ED, number of patients that did not wait to be seen and the number of ambulance offloads waiting more than 30 minutes.

Results:

Compared to the 4 weeks prior to the introduction of the EMR, there was a clear drop in performance with respect to the ED KPIs. There was a significant drop in performance with respect to triage benchmarks, which did not improve over the 4 weeks after implementation of the EMR. There was a significant increase in access block, length of stay within the ED, did not wait rates and ambulance offload times. However, these had improved toward the end of the 4 week study period.

Conclusions:

There was a clear drop in Emergency Department performance immediately after the introduction of an electronic medical record system. However the performance had started to improve after 4 weeks with respect to some of the outcome measures. It may be that there is a long learning curve associated with this system. Further studies need to be performed to examine this possibility.