

Evaluation of interventions to improve inpatient hospital documentation within electronic health records: A Systematic Review

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Introduction

Despite increased use of electronic health records (EHRs), EHR documentation quality remains poor. Consequently, EHR data quality is also negatively affected. Many services, including disease surveillance and health services research, utilize EHR data. Accordingly, several studies have attempted to improve EHR documentation quality in the inpatient setting using various interventions.

Objectives and Approach

The purpose of this systematic review was to synthesize the literature, and assess the effectiveness of interventions seeking to improve inpatient EHR documentation quality. To identify relevant experimental, quasi-experimental and observational studies, a search strategy was developed based on elaborate inclusion/exclusion criteria using four main themes: EHR, documentation, interventions, and type of study. Four databases, Cochrane, Medline, EMBASE, and CINAHL, were searched. Study quality assessment and data extraction from selected studies were performed using a Downs and Black and Newcastle-Ottawa Scale hybrid tool, and a REDCap form, respectively. Data was then analyzed and synthesized in a narrative semi-quantitative manner.

Results

An in-depth search of the identified databases, grey literature and reference lists, revealed a final 20 studies for inclusion in this systematic review. Due to high heterogeneity in study design, population, interventions, comparators, document types and outcomes, data could not be standardized for a quantitative comparison. However, statistically significant results in interventions and affected outcomes were further presented and discussed. A higher number of studies reported significantly improved EHR documentation when using the interventions: 'Education' and 'Implementing a new EHR Reporting System'. When implementing two or more interventions, more outcome measures were affected. There was no association between study quality or study design and number of

interventions used. Only one of the 20 studies found EHR documentation worsened with the interventions used.

Conclusion/Implications

Interventions implemented to enhance EHR documentation are highly variable and require standardization. Emphasis should be placed on this novel area of research to improve communication between healthcare providers, enhance continuity of care, reduce the burden in health information management, and to facilitate data sharing between centers, provinces, and countries.

