THE BENEFITS OF INTEROPERABILITY TO PREVENT MEDICATION ERROR IN HOSPITAL

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ABSTRACT

Background: Healthcare Information and Management Systems Society (HIMSS) describes interoperability as the extent to which systems and devices can exchange data, and interpret that shared data. Interoperability of health information systems can improve the accuracy of diagnosis, quality of care, and patient safety. One problem in patient safety is medication errors. Medication error defined as a failure in the treatment process that has the potential to lead to harm among patients. This study aimed to analyze the benefits of interoperability to prevent medication error in hospital.

Subjects and Method: This was a systematic review study. The study were done by collecting related articles in English, published in 2014 to 2019. The databases used in this study were ProQuest, PubMed, and Sage Publication. The keywords used were interoperability, interoperable, electronic health records, data sharing, big data, health care information technology, hospitals, medication errors, medication without harm, unsafe medication, medication safety, prescribing errors, and prescription errors.

Results: There were 10 articles that met the study criteria. From the articles it were found that interoperability prevents medication errors through (1) Providing quality information with credibility; (2) Preventing the occurrence of making recipes; (3) Increasing the effectiveness of information by direct transfer between systems; (4) Preventing data duplication, (5) Updating data in real time; (6) Data access in parallel by several users; (7) Prevention of data loss, differences in interpretation, and differences in measurement unit; (8) Reconciliation of treatment between patient and hospital; (9) Evaluation of diagnoses and services to patients remotely; and (10) Prevention of medication errors at the administrative stage.

Conclusion: Interoperability increases accuracy of diagnoses, quality of care, patient safety, by increasing credibility of information. The existence of reconciliation between users, both doctors, nurses, pharmacists, service units, and patients, can prevent administrative errors and prescription making, and help doctors make decisions.

Keywords: interoperability, medication error, hospital

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