

Current Roles and Applications of Electronic Health Record in the Healthcare System



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LECTRONIC health record (EHR) has been shown to play major roles in the healthcare system. The main drivers for the increasing roles and applications of EHR in healthcare systems include the need to improve efficiency in healthcare service delivery, patient safety, access to health care services, and more importantly, the need to reduce the costs of medical expenditures. The main goal of this paper is to review current trends in the roles and applications of EHR in the healthcare system.

Methods: A literature search was conducted on the PubMed and OvidSP electronic databases. The Google scholar search engine was also utilized. Relevant books were also employed. In order to facilitate the search, the following keywords were adopted: clinical application of electronic health record, uses/roles/applications of electronic medical record, and administrative applications of electronic health record. Original papers, review articles, and articles available in full text published in English in the last twelve years were included. Sixtyseven papers were initially retrieved. However, only 13 met the inclusion criteria and were finally reviewed.

Results: Currently, the roles and applications of EHR in the healthcare system include clinical care application/functions,¹⁻³ financial function,⁴ clinical research function,⁴ reporting,⁵ and administrative function.^{2,3,6} EHR provides clinical functions which are health information and data, test results management.^{4,5,7,8} order entry and support, and decision supports.^{5,9-15} It has also played a significant role in the healthcare system in the aspect of clinical research using the query and surveillance facilities in the computer stored records. The query systems can be used to identify patients who meet the eligibility requirements for prospective clinical trials.⁴ Administratively, EHR can be used to schedule hospital admissions, in-patient, and outpatient procedures, and visits which, therefore, improves the efficiency of healthcare systems and also offers better and more timely service to patients.²⁻⁷ The application of EHR in health care financing is an important area to discuss especially during this period of federal healthcare reform with the goals of maintaining balance among access, costs, and quality of care. Based on cost-accounting applications in other industries, health care cost-accounting systems, adapted from cost-accounting applications in other industries, have been adopted widely.⁴ EHR has also been very useful in disease reporting and population health management.^{4,5}

Discussion: EHR is not just a digital form of a paper medical record, but it provides the following clinical functions: physician order entry, integrated view of patient information and data, access to knowledge resources, clinical decision supports, and integrated communication. However, in hospices, the use of EHR has been limited to administrative and clinical functions. In the reviewed article, there was no mention of the use of EHR in regards to clinical research and reporting.

Conclusion: EHR has been very useful in various ways in the healthcare system ranging from clinical care application to the administrative function to clinical research function, to financial application, and reporting in the healthcare system. Further research is needed on the clinical research use of EHR at home health and/or hospice care.

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