A Systematic Review of International Electronic Health Records (EHR) Activities

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Abstract:

The compelling rationale to use interoperable electronic health records (EHRs) for many governments worldwide is to improve the quality and safety of health care services and to reduce cost. These countries, including Canada, are striving to develop workable models.

Internationally, the health care market situation for EHR systems is maturing rapidly and provides information that can assist in the design and development of an interoperable EHR in Canada. However, there are a limited number of attempts to discover and contrast international interoperable EHR activities and to examine what has been achieved to improve health care quality to date.

Our study summarizes and contrasts where Canadian EHR efforts stand in comparison to five OECD countries: Australia, New Zealand, the European Union, the United Kingdom and the United States.

Findings from our primary project indicated that external barriers from diverse health care groups in Canada hindered Canada Health Infoway's efforts to implement integrated health information technology (HIT) in Canada. Therefore, we conducted a second study to identify significant HIT integration opportunities and to bring together diverse health care groups to work on a successful project.

Conclusions:

Our study examined two different HIT models: the interoperable EHR and PACS/RIS systems. We showed that EHR has a high implementation and adoption rate in countries that use clear strategies for implementation, set the HIT standards and provide economic incentives. Similarly, PACS/RIS systems integration was successful because the industry, standard organizations and end users adopted a common standard and most governments provided the financial support for implementation.

Our comparison of these two models provided us with evidence that a nationally coherent approach supported by an economic incentive model would help to ensure a successful implementation and adoption of the interoperable EHR system.

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