



# **Innovating within Healthcare:**

## **An Analysis of Electronic Health Records in Canada**

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## Executive Summary

This report will explore in-depth objectives centralized around analyzing Electronic Health Records (EHR) in Canada. This includes exploring the historical landscape, barriers to innovation in the space, global case studies, important emerging technologies, and recommendations for the future of EHRs in Canada.

Analysis stemming from the objectives above generated several key insights. Modern health systems often centralize their IT strategies around electronic health records (EHRs), a product of the technological revolution. Unfortunately lagging development and adoption has left Canada ranking last compared to its cohort of countries in the Organization for Economic Cooperation and Development (OECD) for the implementation of EHR. The combination of provincial efforts with private and start-up vendor solutions in the digital health space contribute to a rising level of fragmentation when looking at industry-wide efforts as a whole. Current barriers facing the innovation of EHRs in Canada can be categorized as stakeholder-based, resource-based, and technology-based. Case studies of the Bahamas, Australia, and the USA generated key insights that are applicable to the Canadian context. Emerging and disruptive technologies including cloud computing, artificial intelligence, and blockchain show promise as value creating technologies to be incorporated into future innovative efforts. Considerations for the impact of the current COVID-19 pandemic on EHRs are discussed.

Based on these findings, it was concluded that EHRs in Canada associate with a complex network of stakeholders, generally siloed at the provincial level, and there is a general disconnect between current expectations and performance of these electronic record systems in the medical space (EMRs, EHRs, iEHRs, etc.).

Key recommendations for the future of EHRs in Canada were generated, summarized as follows. It is recommended that:

1. Canada Health Infoway oversees the selection, improvement, and promotion of a single, highly interoperable national EHR that allows stakeholders to access and securely share data for all patients, and benefitting a national database, and employs the capabilities of leading technologies including cloud computing, AI, and blockchain. Provinces require autonomy to adapt this EHR to their own provincial-level needs

2. Form provincial Process Improvement Teams (PIT) to develop a continuous improvement strategy and launch stringent standards for private EHR developers and vendors
3. Implement a certification system for provinces, managed at the federal level, to grade the quality of EHR technologies, generating a source of trust and reliability for physicians and a non-financial incentive for vendors to innovate
4. Restrict healthcare practices and hospitals to one platform that is interoperable with the provincial and ultimately the national EHR
5. Dedicate a national consulting team with strong knowledge management capabilities to drive continuous innovation at the provincial level