Canadian Digital Healthcare Strategies:

Insights on Common Themes, Priorities, and Calls to Action

A CHIEF Executive Forum Working Group Discussion Summary
September 2023

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Digital Health
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Background

CHIEF Executive Forum members acknowledge the critical importance of adopting a strategic approach to healthcare digital transformation in response to widespread challenges in Canada's healthcare system.

The Digital Health Canada Strategy Map (available at www.digitalhealthcanada.com) shows digital health strategies and priorities from across Canada. It was created to contribute to digital health strategy knowledge exchange, gather and maintain useful resources in one central location, and provide a trusted source for learning and knowledge sharing for digital health professionals and leaders. The goal is to increase inter-provincial collaboration, align digital health strategies nationally, and leverage regional efforts.

Following the launch of the Digital Health Canada Strategy Map, CHIEF Executive Forum members identified a need to move beyond identification and simple sharing of strategy resources, and towards analysis and assessment to enhance the alignment opportunities to identify synergies and gaps across digital health strategies in Canada.

This document summarizes the discussions and deliberations of the Pan-Canadian Digital Health Strategy Working Group ('the Working Group') which was convened to address national, provincial, and territorial digital healthcare priorities.

This CHIEF Executive Forum Working Group was active from March through September 2023. The Working Group was comprised of public sector and private sector members, and was assisted by a group of emerging professionals and students from the broader Digital Health Canada membership. (See Appendix A: Acknowledgements on page 8.)

The Working Group's primary objective was to build on existing provincial strategy groundwork and to identify common themes, key drivers, barriers, and enablers to enhance healthcare delivery and patient outcomes across all regions.

The Working Group reviewed publicly available strategy documentation from the following jurisdictions: Ontario, Nunavut, Northwest Territories, Prince Edward Island, New Brunswick, Nova Scotia, Quebec, Manitoba, Alberta, Saskatchewan, and British Columbia, as well as a summary presentation on analysis of the resources.

This document provides a summary snapshot of the discussions and deliberations by the Working Group. A presentation was provided to all CHIEF Executive Forum members at the 2023 CHIEF Executive Forum Fall Symposium in Toronto, ON.

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Common Themes

The Working Group identified five key themes in national, provincial, and territorial strategies. The following themes were found, to some degree, in every strategy.

1. **Patient Empowerment**: Prioritizing patient empowerment aimed to improve patient engagement, education, and involvement in their healthcare decisions, ultimately leading to better health outcomes.

2. **Supporting Population Care**: Understanding the determinants of health and addressing disparities to improve the physical and mental health outcomes and achieve health equity.

3. **Coordinated/Connected Healthcare**: Enhancing coordination and connectivity among healthcare facilities, community providers, and clinical systems to promote seamless care delivery and reduce fragmentation.

4. **Enhanced Analytical Capabilities**: Strengthening analytical capabilities within the healthcare sector allowed for data-driven insights and improved understanding of healthcare trends and needs.

5. **Optimized Clinical Systems**: Upgrading and optimizing foundational clinical systems played a crucial role in streamlining healthcare processes, enhancing efficiency, and supporting better patient care.

Overview and Insights

A close review of the strategy resources provided by each region led to the following insights:

- **Data use and governance**: while some strategies include elements of data governance and ownership, there is limited mention of data use. It would be beneficial to link digital strategies with population health management strategies.

- **Roadmap**: Some strategies appear to be working towards advanced digital implementation without first considering baseline digital needs. For example, patient empowerment is well worth pursuing but requires full electronic records with access. A shared roadmap may help to align and identify synergies.

- **Local requirements**: The strategies do not account for local needs and lack recognition of and flexibility for a local coordinated approach. For example, a patient portal is not useful if there is limited digital information to share and no use case for it.

- **Operating models**: Some strategies lack recognition of the clinical operating models' needs. For example, patient empowerment is not just about access to data but access to care in a different operating model.

- **Use case alignment**: Interoperability between software of two care types is a use case for when very prescriptive and standardized data sharing is needed. Software consolidation is a strategy for when two care types have advanced integrated care that is more dynamic and less prescriptive.

- **Artificial Intelligence**: Canadian digital health strategies need to consider artificial intelligence. AI promises to transform every industry, including health; generative AI tools are already being used by health organizations around the world to enhance decision-making, support data analysis and prediction, enhance communication processes, and improve operational efficiencies for the benefit of patients and practitioners. The transformative potential of generative AI technology for health cannot be ignored. AI capabilities are advancing quickly, and the field should prepare to take advantage of these tools to bolster heath practice.

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Drivers

Many strategies did not address driving forces such as digital enablement (via technology and data) or the Quadruple Aim.

Also, stated drivers do not correlate to non-digital operating model strategies that digital health is meant to support (driver to support regional initiatives such as Ontario Health Teams, for example).

The following key drivers that were identified across strategies:

- **Federal-Provincial Coordination**: Improved collaboration and coordination between federal and provincial authorities were recognized as essential to create a cohesive and effective healthcare system.

- **Data Governance and Transparency**: Emphasizing data governance and transparency ensured that reliable information is accessible to stakeholders, enabling evidence-based decision-making and resource allocation.

- **Public/Private Coordination and Partnership**: Fostering collaboration between public and private sectors facilitated innovative solutions and resource-sharing for enhanced healthcare delivery.

- **Creating Organic Demand and Accountability**: Creating organic demand and fostering accountability among healthcare providers encouraged the adoption of best practices and efficiency.

- **Promoting Interoperability**: The promotion of quality health programs and services at the individual, population and system level is dependent on health data interoperability.

The Quadruple Aim is centred on four overarching goals to redesign health care delivery systems: improving the patient experience of care; the health of populations; the health care provider experience; and value for money.

Source: Canadian Institutes of Health Research

Barriers

The digital healthcare strategies examined offer no systemic framework for health data interoperability. In an ideal world, an interoperability framework integrates all the determinants of an optimized system design—both human factor and technical.
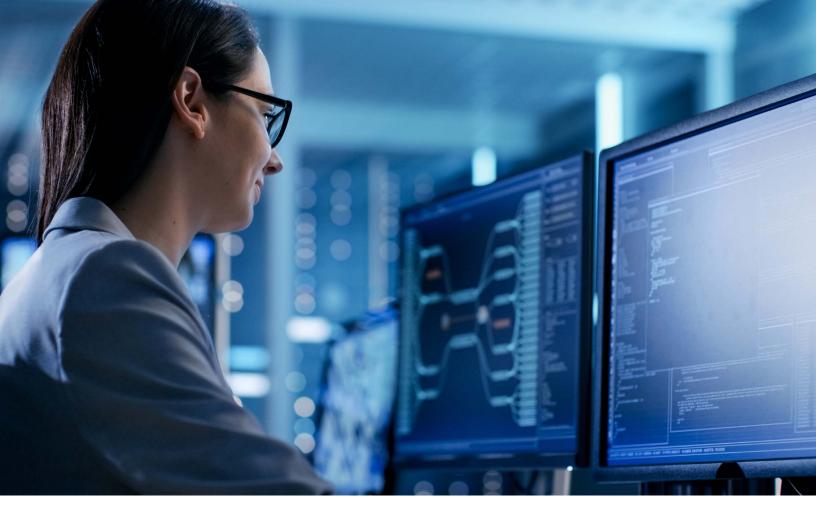
It is the system-level relationships that affect collaboration amongst operators interacting through technology in healthcare. No one is in charge or responsible for developing, implementing, or evaluating the systemic framework.

Human factors barriers like governance, legislation, policy, regulation, data literacy, communication, culture, and trust hamper digital health strategies to a greater degree than technical factors such as data standards, data exchange standards, and internet connectivity.

The Working Group identified several barriers that could impede the successful implementation of the proposed healthcare strategies:

- **Funding**: Inadequate funding limits the execution of essential healthcare initiatives and hinders progress. Funding is invariably program or solution-specific, which limits a region's ability to be strategic; a more flexible innovation budget could help advance big-picture digital health goals.

- **HHR Crisis**: The existing Healthcare Human Resources (HHR) crisis impacts service delivery and makes new technology implementation a challenge given the need to pull participating staff from front-line care delivery.

- **Aging Population**: The aging population is putting increased pressure on the healthcare system, necessitating innovative approaches to address age-related healthcare needs.

- **Lack of Integration**: The integration pathway for provincial digital health assets is often inconsistent and difficult to navigate even within a jurisdiction, not to mention across jurisdictions. The absence of a dedicated team at the provincial level to support integration (e.g., drafting and maintaining standard specifications, conformance testing) for all provincial digital health assets hampers interoperability progress. The Working Group asked: 'why are we leaving the integration work up to the separate teams supporting each solution?'

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Enablers

To overcome the identified barriers and drive progress, the Working Group identified the following enablers:

- **Expand Data Sets/Information**: As Canada's technical infrastructure continues to grow, data sets can provide valuable insights and facilitated evidence-based decision-making.

- **Leverage Health IT System Experience**: Leveraging the experience and expertise of healthcare organizations with health IT systems supports the adoption of new technologies and innovations elsewhere. This requires sharing of lessons learned and adoption insights amongst the digital health community.

- **Increased interoperability**: A systemic framework for health data interoperability.

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Conclusion

The Working Group has made significant strides in analyzing national and provincial healthcare strategies based on the identified drivers, themes, barriers, and enablers. These strategies prioritize patient empowerment, coordination, analytical capacity, and foundational clinical systems, aiming to address the pressing healthcare challenges faced by the nation and provinces.

As the strategies are implemented and refined, it is expected that they will foster an integrated, patient-centered, and sustainable healthcare system capable of meeting the evolving needs of the population.

Calls to Action

- **Reach across silos of excellence**. The health sector is dominated by silos of excellence—robust data solutions that support individual programs quite well, but don't talk to each other— a practice that might be endangering patients and precluding shared insights that would benefit both the holistic care of individuals and health system improvements.

- **Leverage modern technology** such as APIs and AI over dated technology like fax machines which increase administrative burdens on providers.

- We need to **break down the barriers** between systems in a semantically interoperable and digitally actionable way, so that we don't need a human to read a patient's entire chart at each encounter.

- **Prioritize investment** in digital health solutions that "play well with others" over technologies that seek to monopolize market share and lock users in a silo.

- **Mandate funding-contingent compliance** with established terminology and messaging standards (FHIR) for all regional digital health assets.

- **Create a working group** to create the systemic framework for health data interoperability.

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Acknowledgements

Digital Health Canada

Digital Health Canada connects, inspires, and empowers those enabling digital healthcare in Canada. Our members are a diverse community of accomplished, influential professionals working to make a difference in advancing healthcare through information technology. Digital Health Canada fosters network growth and connection; brings together ideas from multiple segments for incubation and advocacy; supports members through professional development at the individual and organizational level; and advocates for the Canadian digital health industry.

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Digital Health Canada's CHIEF Executive Forum provides a place for senior professionals and leaders in digital health and healthcare to collaborate, exchange best practices, address professional development needs, and offer their expertise in setting the agenda for the effective use of information and technology to improve health and healthcare in Canada. Members contribute their active participation, industry experience, and in-depth insight to working groups, publications, and health informatics discussions at the semi-annual CHIEF Symposia, and throughout the membership year.

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