*DISCUSSION DOCUMENT:* **Recommendations on Ontario eHealth Assets**

## Background

The eHealth landscape in Ontario has seen great successes however, it has not yet broken through to propel the health care system forward into a 21st century digital environment. Over time, the Province has developed and built multiple digital assets yet lack of connectivity of these assets remains the fundamental challenge which prohibits access to and use of data across the health sector.

My specific reflections include:

- Hospitals typically have fairly robust information systems, though they continue to have many paper-based processes (particularly within outpatient areas) or redundant paper/electronic processes;
- The home care sector is more complex; CCACs work in a moderately electronic environment with homecare provider organizations having varying levels of digital data capture capabilities;
- Most primary care providers are using electronic records though many standard functions such as ordering lab tests, diagnostic imaging studies or writing prescriptions remain largely paper-based;
- Community support services and mental health & addictions agencies are predominantly paper-based; and
- Virtual care is burgeoning across province with pockets of promising activity.

Very few health care organizations or sectors are completely electronic. Those that are, often are not meaningfully connected with other providers across the care continuum or with consumers. This lack of integration hinders coordination of care, quality of care delivery and improvement to population health. Further, it perpetuates the challenge of systems being organized around providers and not consumers, who are at the heart of every transaction.

## Future State

eHealth assets can enable the collective ideal of healthcare achieving health and wellness at a population health level.

The contrasting experiences of the current state and proposed future state articulate the gaps within the current system.

| Current State | Future State |
|---|---|
| • A majority of data and information is paper-based or captured on paper before translation into electronic form | • The majority of data is captured in electronic form at the point of care |
| • Various eHealth assets being developed in siloed fashion with limited connectivity | • Rationalization and meaningful utilization of existing assets |
| • Quality and safety outside of eHealth assets | • Quality and safety embedded and promoted by eHealth solutions |
| • Information deprived consumers and | • Informed and empowered consumer and |

| | |
|---|---|
| caregivers | caregivers |
| • Integration and connectivity is provider-centric | • Integration and connectivity is consumer-driven |
| • Primary care and other sector data is housed in separate databases | • Creation of regional hubs to capture data |
| • Lack of health promotion and prevention facilitated by technology | • Health promotion, prevention and population health facilitated by consumer and provider systems |
| • Limited utility of data | • Data is used to improved decision making at point of care and for health system planning purposes |

**eHealth Priorities**

The following three priorities identify key areas of need within the health care system. The first two focus efforts on consumers and primary care, and are linked. These have the greatest impact on achieving the proposed future state.

1. *Focus on the Consumer*

Put consumers at the centre of health care by building and organizing eHealth and system assets around them and their caregivers, to provide easy access to information they need to manage their health, and ultimately improve population health.

**Priority actions**:

a) Facilitate consumer access to information via a portal of the consumer's choice; include the ability to have access to all relevant information and transactions, such as scheduling appointments
b) Provide ability for eConsult through video technologies
c) Modify primary care appointment booking models to facilitate integrated consultations or visits with multi-providers/care team from primary care locations

**Considerations:**

- Engage regional patient groups to define information needs and determine how to meaningfully present the information
- Incorporate virtual care solutions that support the delivery of care or maintenance of health within the community and at home
- Ensure provider compensation (including institution funding models) supports provider adoption of new models of care that are enabled through technology

## 2. *Focus on Primary Care*

Greater emphasis on primary care has the potential to improve population health and health system performance. As the cornerstone of the health care system and the holder of a significant portion of health information, this sector should be prioritized. A digitally connected primary care sector can further support access to more appropriate services and reduce health inequities. Regionalization of data holdings from primary care also presents an exceptional opportunity to drive data-informed decision making at the point of care (i.e. care pathways) and, over time, evidence-based practices and impact system level planning.

**Priority actions:**

a) Rationalize data holdings by moving from discrete physical databases to regional hubs
b) Develop asset comprised of data within EMR databases to feed consumer and provider portals
c) Implement community-based computerized physician order entry (CPOE) for lab, diagnostic imaging and prescriptions
d) Require online appointment booking to be incorporated into Consumer Portals

**Considerations:**

- Promote standardization of practices within primary care to improve meaningful use of existing technologies, perhaps building on LHIN sub-region infrastructure
- Eliminate paper options to drive utilization and increase quality through clinical alerting
- Provide remuneration where appropriate to support provider adoption

## 3. *Framework for Other Sectors*

Create an environment and conditions to allow sectors and regions to rationalize existing data holdings and assets in parallel with the first two priorities, to help provide the complete data story for patients and communities. The data from various sectors can be used to create integrated data sets to inform regional and system level planning.

**Priority actions:**

a) Develop a framework and provide necessary collateral to create hubs for health service providers
b) Continue to create an environment for the other sectors (e.g. hospitals, home and community care, mental health and addictions) to invest wisely in IT, rationalize assets and participate in consumer portals

**Considerations:**

- All health care providers must be associated with a hub
- Address modifications and exemptions required within BPS guidelines to support hub approach or the extension of existing solutions (e.g. extending the use of an existing instance of system procured by another health care service provider)

**Key Enablers / Considerations**

There are several key enablers and considerations to support the execution/implementation of the above three priorities.

*Regional Governance Models*

- Define regional governance structures to facilitate development of hubs, as many challenges related to regional eHealth initiatives stem from inadequate governance
- Develop incentives for hub role (e.g. hosting, particularly the integration engines)

*Leverage Existing Tools*
- Ruthlessly avoid creating new assets until the full utility of existing assets is exploited because most instances large portions of the infrastructure already exists
- Address procurement barriers related to leveraging existing assets

*Communities of Practice*
- Implement on local and regional basis to ensure adoption and utilization

*Funding models*
- Develop funding models for individual practitioners and institutions to incent behaviour and acceptance. Note, this does not necessarily mean additional spending; rather it is to ensure funding incentives align to desired behaviours

*Privacy and Security Framework*
- Create one provincial framework with a standardized privacy and security approach that explicitly addresses questions of liability
- Address legislative and regulatory obstacles that inadvertently create technology barriers for sharing information within a circle of care
- Create an IM/IT environment that is inclusive of all providers

*Avoid Big Builds and "Mega Projects"*
- Avoid perpetuating the current model of siloed builds
- Reduce the risk of total failure and avoid "mega-projects" by promoting multiple regional instances that can be developed concurrently

*Health Equity*
- Minimize the risk of excluding any groups of Ontarians from digital strategy/virtual care model
- Identify at-risk segments of the population and address concerns through collaboration and meaningful engagement

*Data Analytics*

- Embed the ability to leverage data at the consumer, provider/sector and system level within the execution of the proposed priorities
- Maximize data holdings to inform health system planning and inform evidence-based care pathways

**Opportunities for Unlocking Value**

Currently public and private sectors both play a role in managing eHealth assets. The reflections below outline the business models that have worked well and elements where alternatives need to be examined to unlock value.

### Hardware & Operating Systems

Economies of scale and private sector expertise are very well recognized with respect to computer hardware and operating system management.

*Opportunities for Exploration*

- Health service providers and related public entities should not be in the business of directly managing hardware and operating system; they should enter into managed service or cloud service contracts
- IT vendor management is not typically a core competency for most health care providers; consolidating management of outsourced relationships which can also promote regional standardization should be considered

### Software

Smaller, niche application providers (e.g. those that do not represent a large enough market to be managed by a large private corporation) are generally managed well by health care providers while large commodity software that is common in the market place (e.g. SAP, Epic, Meditech) is effectively managed by vendors.

*Opportunities for Exploration*

- In the case of common software, same opportunities as noted above

### Databases

Data analytics are best managed by health care providers as they are equipped to contextualize the data.

*Opportunities for Exploration*

- Outsourcing technical aspects such as database management as noted above.