Digital Health in Canada: Transforming Health Care Through Innovation

eTELEMED 2017
Nice, France
March 20, 2017

Michael Green, President and CEO
@MGreenonHealth

©Canada Health Infoway 2017
Canadian Context
Canada: Large Country, Small Population

- Second largest country in the world

- Population density among the lowest in the world: (33 million people or 3.5/km²)

- Concentration:
  - Toronto area, Ontario
  - Montreal, Quebec
  - Vancouver area, British Columbia
  - Calgary-Edmonton, Alberta
Canada’s Health Care System

- Federal government sets and administers national health care principles
  - Federal health transfers cover about 23 per cent of provincial and territorial health spending
- 13 provincial/territorial governments plan, finance, manage, evaluate their health services
- ~ 80 health regions coordinate care delivery
How Much Will We Spend on Health in 2016?

Source: National Health Expenditure Database, Canadian Institute for Health Information.
Health Spending as a Share of GDP has Trended Upward Over the Last 40+ Years

![Graph showing the trend of health spending as a share of GDP over the last 40 years]

© Canadian Institute for Health Information, 2016

Sources: National Health Expenditure Database, CIHI; Statistics Canada; The Conference Board of Canada.
Where is Most of the Money Being Spent?
The share of hospital spending has declined since 1975 as shares of spending on drugs and other expenditures have increased.

Sources: National Health Expenditure Database, CIHI; Statistics Canada; The Conference Board of Canada.

© Canadian Institute for Health Information, 2016
Who is Paying for These Services?

30%
Private
Out of pocket: 15%
Private insurance: 12%
Other: 3%

70%
Public
Provincial and territorial governments: 65%
Other public sector: 5%

The public–private split has been fairly consistent since the late 1990s.

Forecasted for 2016

© Canadian Institute for Health Information, 2016

Sources: National Health Expenditure Database, CIHI; Statistics Canada; The Conference Board of Canada.
The Share of Health Spending on Seniors

Sources: National Health Expenditure Database, CIHI; Statistics Canada; The Conference Board of Canada.
How does Canada Compare Internationally?

2014
(year of most recent available data)

- United States: 16.6% of GDP, $11,126
  - Per person ($CA): 49%
  - Public: 51%
  - Private: 49%

- France: 11.1% of GDP, $5,384
  - Per person ($CA): 70%
  - Public: 21%
  - Private: 79%

- Germany: 11.0% of GDP, $6,311
  - Per person ($CA): 85%
  - Public: 15%
  - Private: 85%

- Sweden: 11.2% of GDP, $6,245
  - Per person ($CA): 83%
  - Public: 17%
  - Private: 83%

- Canada: 10.0% of GDP, $5,543
  - Per person ($CA): 71%
  - Public: 29%
  - Private: 71%

- Netherlands: 10.9% of GDP, $6,505
  - Per person ($CA): 81%
  - Public: 19%
  - Private: 81%

OECD average
9.0% of GDP
$4,463

Per person ($CA): 73%
Public: 27%
Private: 27%

Note: Total current expenditure (capital excluded). Expenditure data is based on the System of Health Accounts. Source: OECD Health Statistics 2016 (June edition).
About Infoway
Canada Health Infoway

• Established in 2001

• Independent, not-for-profit corporation

• Equally accountable to 14 F/P/T governments; the Members

• Independent Board of Directors appointed by the Members

• Since inception, $2.15 billion in capitalization from federal government
Infoway’s Vision: Healthier Canadians Through Innovative Digital Health Solutions
Three Waves of Digital Health Innovation

• Building blocks
  • Foundational infrastructure for digital health: investments in six core components of an electronic health record (EHR)

• Digital tools for clinicians
  • Electronic medical records (EMRs)
  • Expansion of telehealth
  • Public health surveillance solutions

• Empowering patients
  • We are in this wave now
  • Focus on improving the patient experience and enhancing patient safety
The First Wave

- Foundational infrastructure for digital health: investments in six core components of an electronic health record
- Leadership in architecture, standards, privacy
- Pan-Canadian strategy

- Laboratory Information Systems: 96%
- Diagnostic Imaging in Hospitals: 100%
- Dispensed Drugs: 71%
- Clinical Documentation: 100%
- Patient & Provider Registries: 100%
Progress: Electronic Health Record User Adoption Landscape

- **500,000**
  Estimated potential users of electronic health records

- **257,300**
  Estimated monthly users of one or more clinical domains

- **139,600**
  Estimated monthly users of two or more clinical domains
The Second Wave: Digital Tools for Clinicians

- Electronic medical records
- Expansion of telehealth
- Public health surveillance solutions
Family Physicians in Canada Using Electronic Medical Records: Commonwealth Fund Surveys
Estimated Aggregate Benefits of $16 Billion Since 2007
The Third Wave: Empowering Patients

- Improving the patient experience
- Enhancing patient safety
- Access
- Coordination
- Transformation
Recent Survey Results: Access to and Interest in Virtual Care Services

- **e-Request for prescription renewal**
  - % of Canadians who can access, 2014: 7%
  - % of Canadians who can access, 2016: 22%
  - % of Canadians who can’t currently access but would like to, 2016: 70%

- **Online access to medical records (e-view)**
  - % of Canadians who can access, 2014: 6%
  - % of Canadians who can access, 2016: 20%
  - % of Canadians who can’t currently access but would like to, 2016: 69%

- **e-Booking at regular point of care**
  - % of Canadians who can access, 2014: 7%
  - % of Canadians who can access, 2016: 17%
  - % of Canadians who can’t currently access but would like to, 2016: 67%

- **Consult with health care provider online (e-visit)**
  - % of Canadians who can access, 2014: 7%
  - % of Canadians who can access, 2016: 14%
  - % of Canadians who can’t currently access but would like to, 2016: 55%
Government Priorities
Federal Government Priorities

- Homecare and palliative care
- Mental health
  - Access to care
  - Youth
- Care for First Nations/Indigenous and remote populations
- Prescription drug abuse (opioids)
  - Fentanyl crisis

Health Minister Jane Philpott - family physician
Our Strategy
Summary Corporate Plan 2017-2018

Four goals:

• Promote medication safety through e-prescribing.

• Scale and spread innovative solutions.

• Connect Canadians with their health information.

• Provide digital health leadership.
E-Prescribing
• Enable community-based prescribers to electronically transmit a prescription to a patient’s pharmacy of choice

• Reduce the use of paper prescriptions, optimize existing drug information system investments

• Enhance patient safety, improve continuity of care, and facilitate better health outcomes

Infoway’s Objective

To create, operate and maintain a financially self-sustaining e-Prescribing Service that will be the long time “go to” solution of choice for e-transmission of prescriptions for government, prescribers, and pharmacies for the ultimate benefit of the patient. Benefits derived from the service will be meaningful to all key stakeholders.
Health Canada’s Action Plan On Opioid Misuse

“Supporting better prescribing practices:
• Promote prescription monitoring programs
• Examine pharmacy records
• Share information with PT licensing bodies
• Canada Health Infoway e-prescribing solution”
Consumer Health Investment Program

Infoway is investing in consumer health solutions that Canadians are most likely to use and those with high patient and health system value

- **e-Booking**, allowing patients to choose appointments convenient for them, receive reminders, and make changes when needed
- **e-Visits**, including secure messaging and video visits
- **e-Renewals**, so patients can request prescription renewals online
- **Online access to health records**, e.g., laboratory test results, children’s immunizations, and other components with high value
- **Telehomecare**, allowing the electronic transmission of patient data (e.g., symptoms, vital signs) from a patient’s home to a health care provider for monitoring and support over a specified time period
Positive Outcomes from Telehomecare in Ontario

- **General Satisfaction**: 98.3% responded positively
- **Quality of Health Care, Teaching and Coaching**: 98.9% responded positively
- **Decrease in Need to Visit Emergency Department**: 85.9% of patients indicated less need to visit an emergency department
- **Decrease in Need to Visit Primary Care Provider**: 79.0% of patients indicated less need to visit a primary care giver

Source: Ontario Telemedicine Network, Patient Experience Survey
# MyHealthNS

## Medications

<table>
<thead>
<tr>
<th>Drug</th>
<th>Directions</th>
<th>Last Modified Date</th>
<th>Status</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amloiten (5 mg)</td>
<td>1 x 5 mg per day</td>
<td>Jan 31, 2014</td>
<td>Taking</td>
<td>Provider</td>
</tr>
<tr>
<td>Penicillin G benzathine</td>
<td>Intramuscular syrg 1,200,000 unit/2 mL</td>
<td>Oct 19, 2016</td>
<td>Taking</td>
<td>Patient</td>
</tr>
<tr>
<td>Thyroxin (7.5 MG)</td>
<td>1 x 7.5 mg per day</td>
<td>Jan 31, 2014</td>
<td>Taking</td>
<td>Provider</td>
</tr>
</tbody>
</table>

## Allergies - Medication

<table>
<thead>
<tr>
<th>Allergy</th>
<th>Reactions</th>
<th>First Occurrence</th>
<th>Status</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfa Drugs</td>
<td>Breathing Problems, Dizziness</td>
<td></td>
<td>Active</td>
<td>Provider</td>
</tr>
</tbody>
</table>

## Allergies - Environmental or Food

<table>
<thead>
<tr>
<th>Allergy</th>
<th>Reaction</th>
<th>First Occurrence</th>
<th>Status</th>
<th>Source</th>
</tr>
</thead>
</table>

The patient has no known environmental or food allergies, updated Mar 16, 2016. Re-confirm Status.
Big White Wall

- **Post a Talkabout**: Talk to other Big White Wall members who may be experiencing the same thing as you.
- **Assess Yourself**: Take assessments to set goals and track your progress.
- **Find Useful Stuff**: With over 200 articles on Big White Wall, you can understand more about how you are feeling.
- **Create a Brick**: Express your feelings by creating a Brick using pictures and images.
- **Join a Program**: Register for on-line guided support courses using recognized therapies.
- **Make Friends**: Connect with other Big White Wall members who feel like you so you can support each other.
Youth Mental Health – SAS

Feeling
d
Bullied again at school
Dialogue

Better health for your employees, anytime, anywhere.

Dialogue is a comprehensive, virtual care platform that offers Canadian employers a range of services to keep their teams engaged, healthy, and performing at their highest potential. We have your employees' wellness and health at heart.
Our Vision
Our vision is to enable Canadians to hold and share their health information, empower them to take control of their own health, and create a more seamless interaction with their care team.

Enabling Canadians to hold and share their own health information will have a transformative effect on health care delivery in Canada by improving the flow of information and delivering more effective clinical decision-making.
Enabling Innovation in Care Delivery

Digital Health Foundations
- Laboratory Information Systems
- Drug Information Systems
- Diagnostic Imaging Repositories
- Telehealth
- National Public Health Surveillance
- Health Information Registries
- Electronic Medical Records

Enhanced Health Data Analytics

Innovative Health Future
- Multi-Jurisdiction e-Prescribing Service
- Home & Palliative Care
- Mental Health
- Indigenous Communities
- MyHealth C2C Connected Care
THANK YOU!