

---

**Canada  
Health  
Infoway**

# **Valuing citizen access to digital health services: Applied value-based outcomes in the Canadian context**

CHSPR 31<sup>st</sup> Annual Health Policy Conference

*Value in Canadian Healthcare*

March 7-8, 2019

Chad Leaver, Director Applied Research

<https://ca.linkedin.com/in/chadandrew>





# Presentation Overview

---

1. Canada Health Infoway - *Driving ACCESS to Care*'
2. Current citizen access to their health information and digitally enabled health services
3. Summarize current and potential value-based outcomes and economic estimates for patients and the health system in the context of 4 digital health e-services currently available to Canadians
4. Summarize key policy implications and considerations critical to the path forward



# Canada Health Infoway's *Driving Access to Care* Strategy



## Vision

Healthier Canadians through innovative digital health solutions

## Mission

Infoway will bring a pan-Canadian focus to: improving the patient experience, improving the health of populations, and unlocking value for the health care system

## Strategic Goals



Provide safer access to medications starting with PrescribEIT™, Canada's e-prescribing service



**Access Health**

Provide access to personal health information and digital health services for Canadians and their providers through ACCESS Gateway





# ACCESS Gateway

A digital health platform that connects Canadians and their health care providers with their personal health information and digital health services; supporting the digital health ecosystem and enabling innovation



## Primary Objectives

Provide a **public utility** that supports the digital health ecosystem, enabling innovation

Achieve multi-jurisdiction scale to ensure adoption by major solution providers, while reducing cost and risk for provinces

Canada Wide Identity Services and Trust Framework



Consolidation Point for API activity



Level the Playing Field for Startups/Innovators

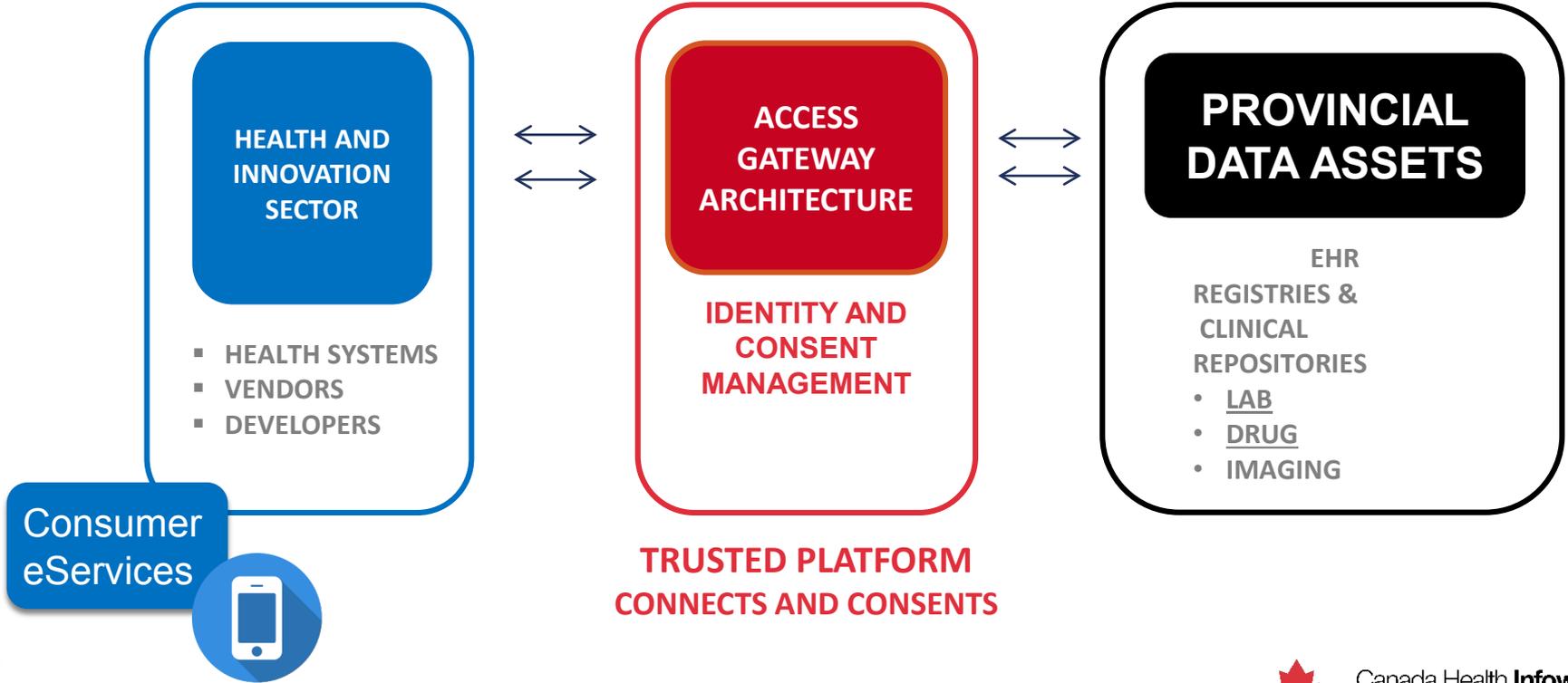


Solve Integration Problems Once



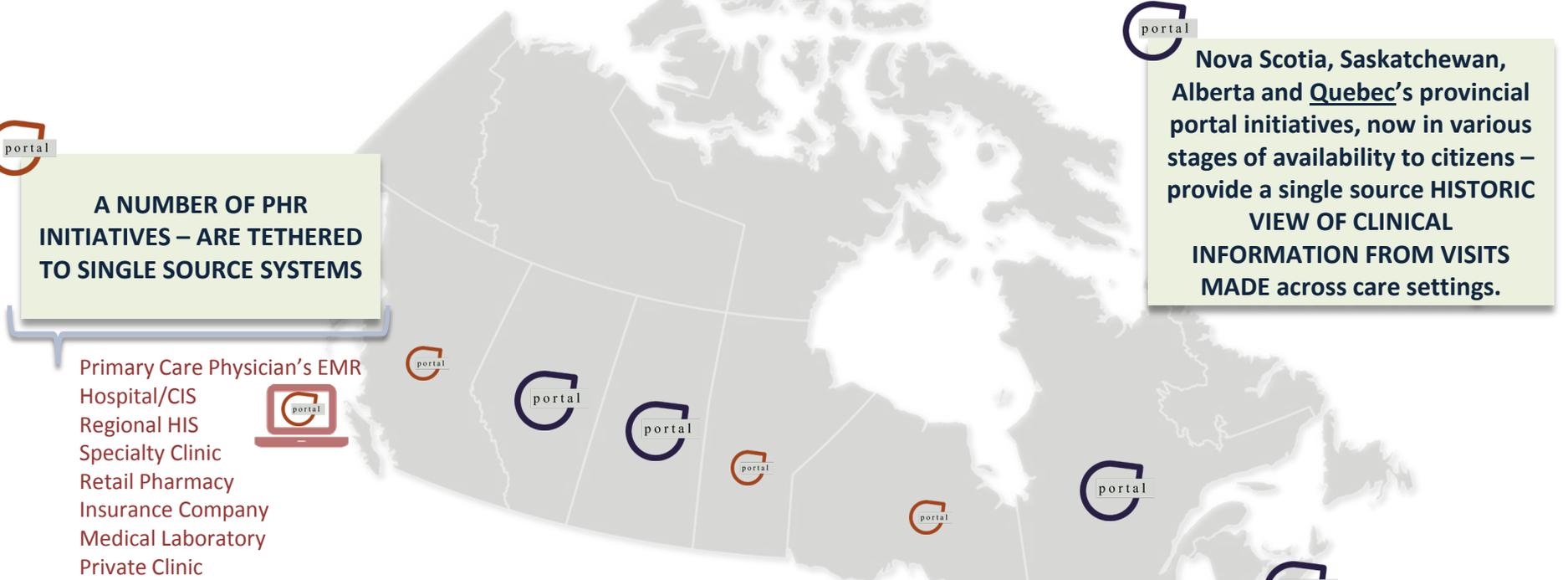


# ACCESS Gateway





# Citizen access to health information in Canada



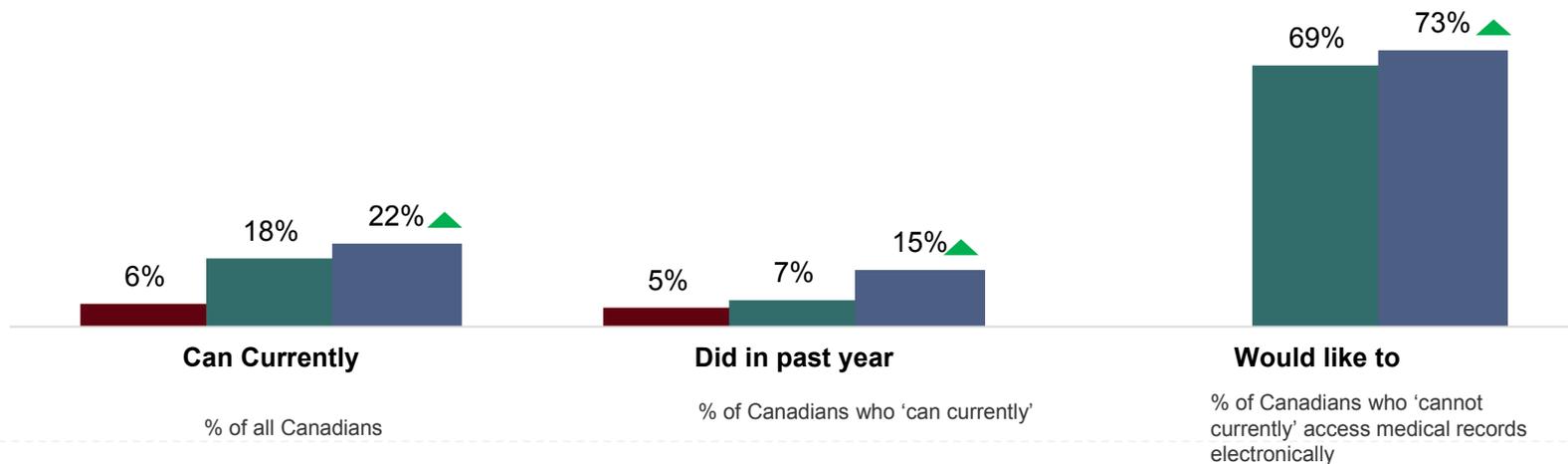
**BOTH MODELS SET A FOUNDATION FOR CONTINUITY OF CARE AND VALUE-BASED OUTCOMES.**



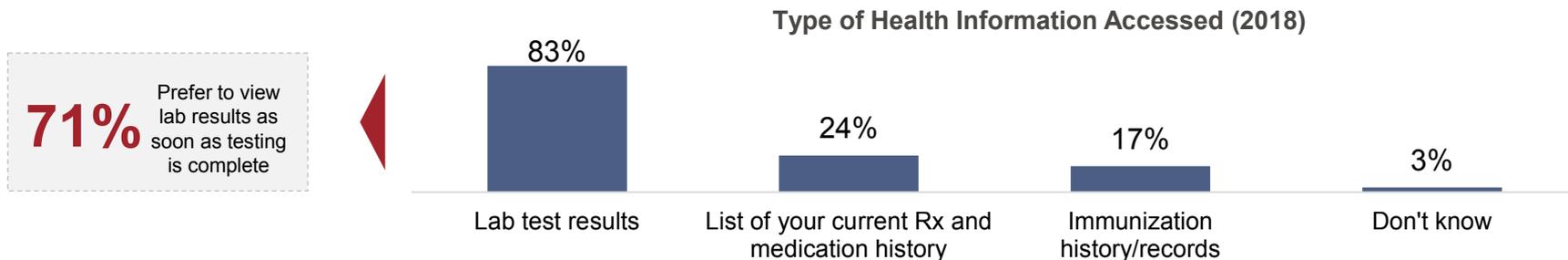
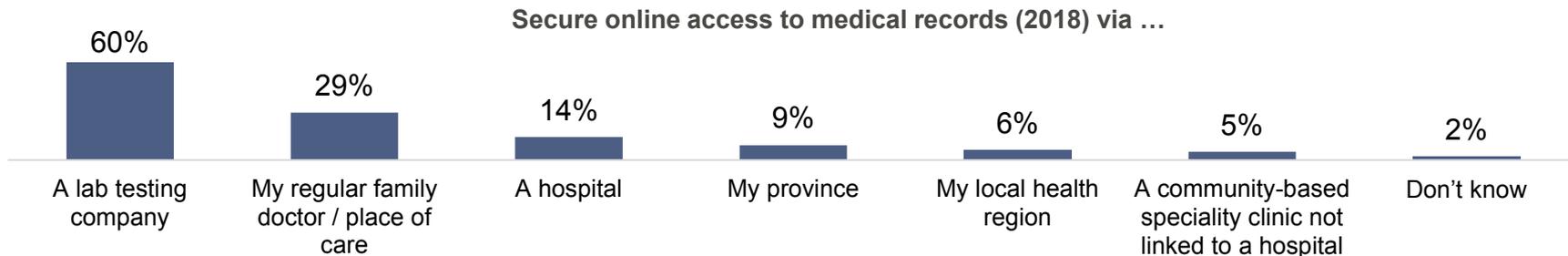
There is an increasing desire among Canadians for accessing their medical records online. Canadians who 'can currently' - and who did so 'in the last year' is trending up. Patient access to lab results in BC and Ontario are two initiatives driving this growth.



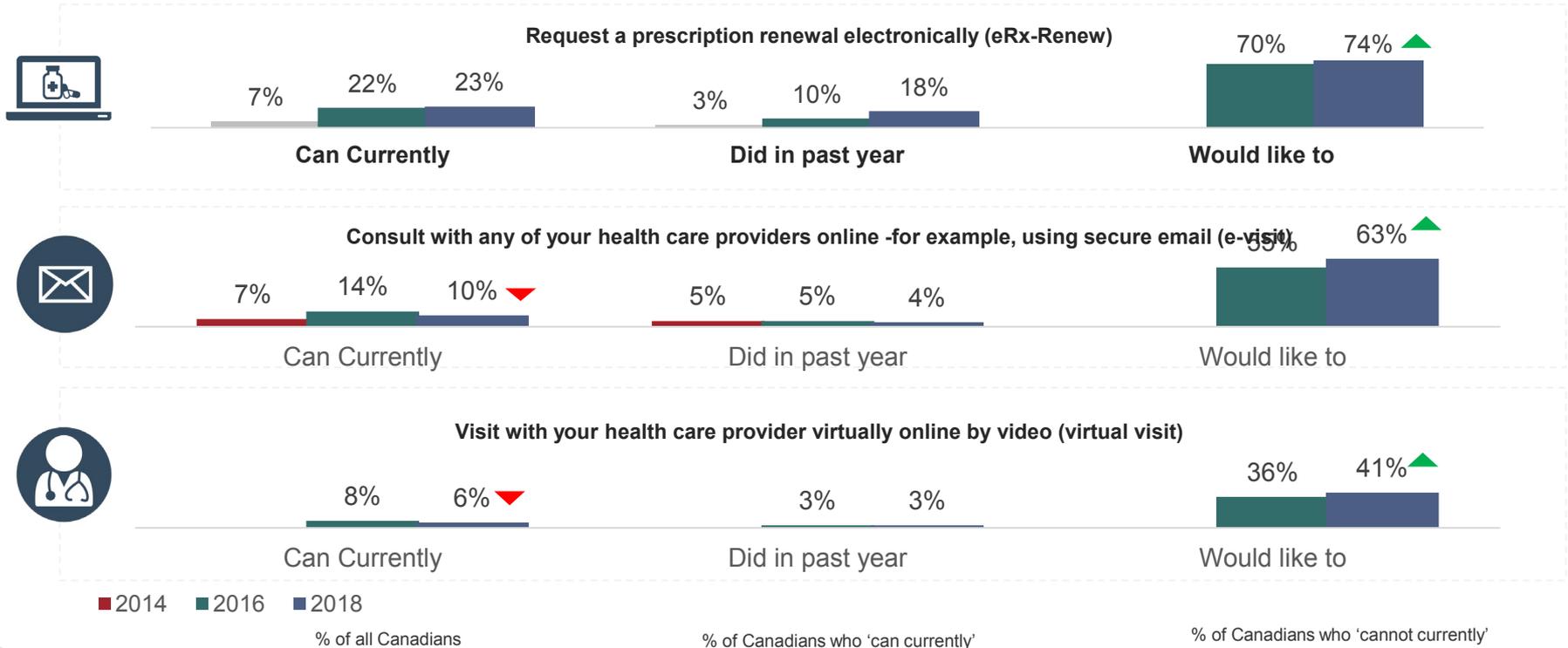
### Access your medical records electronically (e-view)



# Among those who currently access medical records online, lab test results are the most common type of health information accessed - primarily via a lab testing company website.



**In 2018, Canadians able to book appointments electronically with their regular place of care remains static from 2016. Access to e-visit and virtual visit eServices is down (-4% e-visits and -2% virtual visits). Interest for these eServices has significantly increased.**



# “Valuing Canadians’ Secure Access” Study demonstrates potential impact at scale



- Synthesized outcomes from benefits evaluations across care settings, PHR-functionalities, provinces and patient populations
- Used contextually specific data as well as cost and outcome data from the peer-reviewed literature
- Estimated the relative economic benefit compared to business as usual from three perspectives – health system (payer); patient and caregiver; and the economic benefit resulting from improved population health (societal perspective).





# Canadians' access to health information (e-view) and eServices: Value-based outcomes from use of PHR-functionalities



e-view



e-visit



virtual visit



e-Rx renewal

Citizen access to their health information

A PHR includes the primary function of **viewing health information**, or **e-View**

Secure e-mail with health provider/ place of care

An **e-Visit** is a patient e-service that allows patients and/or their caregivers the ability to communicate with their healthcare team through **secure e-mail or SMS messaging**

Secure face-to-face video visit with health provider

A **Virtual Visit** is a patient e-service that allows patients and/or their caregivers the ability to **meet with their health care provider via a face-to-face virtual encounter**, through functions such as video calls

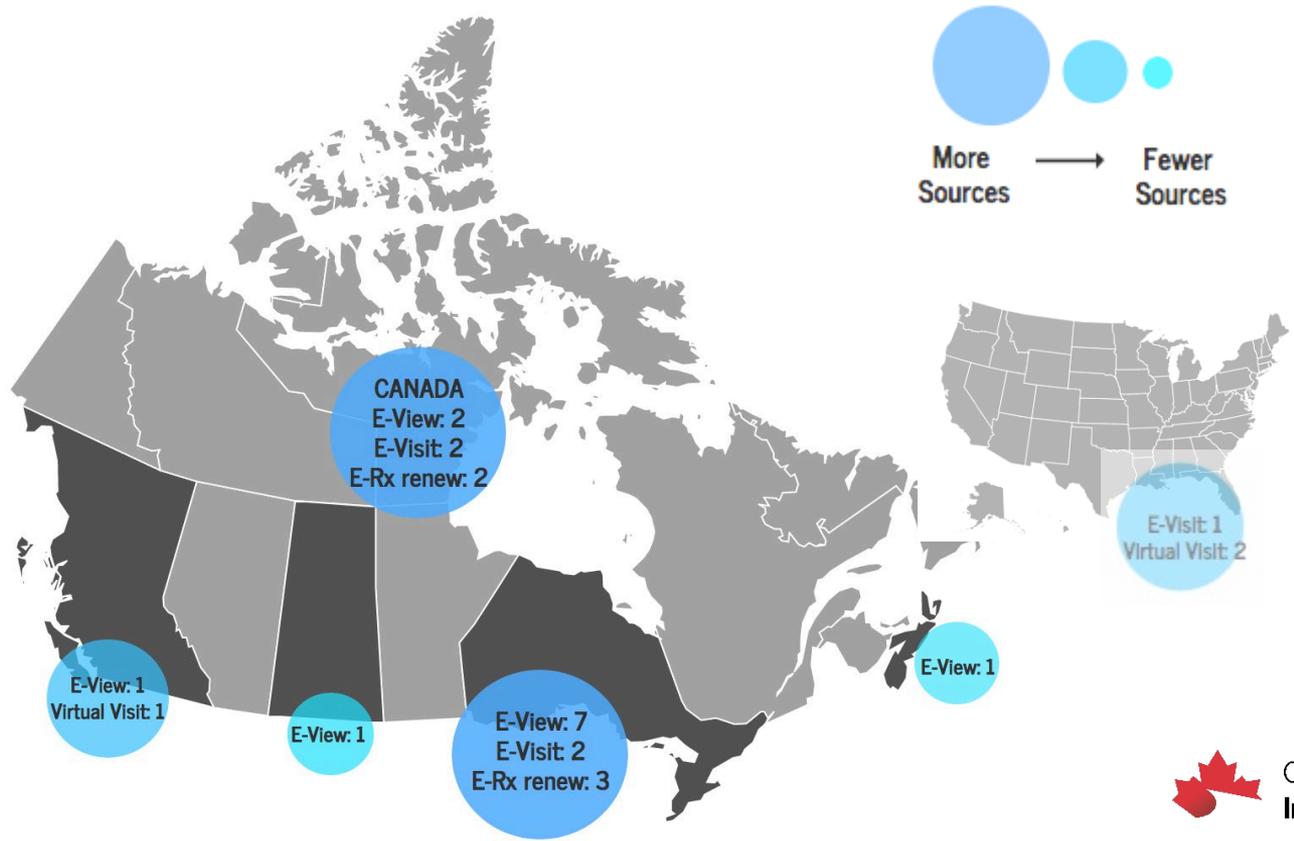
Request for Rx-renewal

**e-Rx Renew** is a patient e-service that allows patients and/or their caregivers to **renew prescriptions**





# Most sources reporting benefits were from studies in Ontario





# Indicators and Summary of Evidence: Patient and Health system value-based outcomes

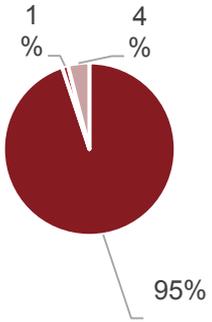
Perspective	PHR function	Value domain	Modes of Action – Value based Outcomes	Evidence-based Indicators
<b>Patient</b>	e-view e-visit e-Rx renew Virtual visit	Productivity	Resources saved by Canadians due to avoiding in-person appointments  <i>“Reduced out-of-pocket expenses related to health/ medical care”</i>	Avoided: <ul style="list-style-type: none"> <li>• Travel costs</li> <li>• Caregiving costs</li> <li>• Time spent travelling</li> <li>• Time spent arranging care</li> <li>• Time off work</li> </ul>
<b>Health system</b>	e-view	Productivity	Increased health system capacity	<ul style="list-style-type: none"> <li>• Time saved due to reduced patient requests for information (staff time)</li> <li>• Avoided phone calls</li> <li>• Avoided in-person visits to primary care</li> </ul>
	e-visit	Productivity	Increased health system capacity	<ul style="list-style-type: none"> <li>• Avoided in-person visits to outpatient hospital services</li> <li>• Avoided visit to a psychiatric facility</li> </ul>
	e-Rx renew	Productivity	Improved patient safety	<ul style="list-style-type: none"> <li>• Avoided in-person visits to primary care</li> </ul>
		Quality	Increased access by patients to medical care	<ul style="list-style-type: none"> <li>• Avoided medication-related error</li> </ul>
	Virtual visits	Access		<ul style="list-style-type: none"> <li>• Reduction in cost per patient</li> <li>• Reduction in bed-days</li> <li>• Reduction in emergency department visits</li> <li>• Reduction in hospital admissions</li> </ul>



# Care settings where current evidence-based value is generated for health systems: Summary of evidence



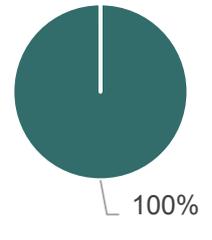
e-view



- Primary care
- Hospital care
- Mental healthcare



e-visit

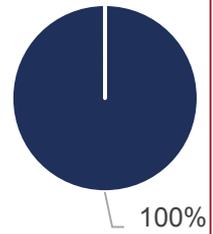


■ Mental healthcare

Primary care



virtual visit

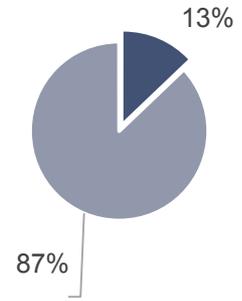


■ Primary care

Specialist care



e-Rx renew



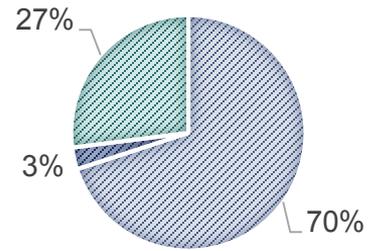
■ Hospital care

Primary care



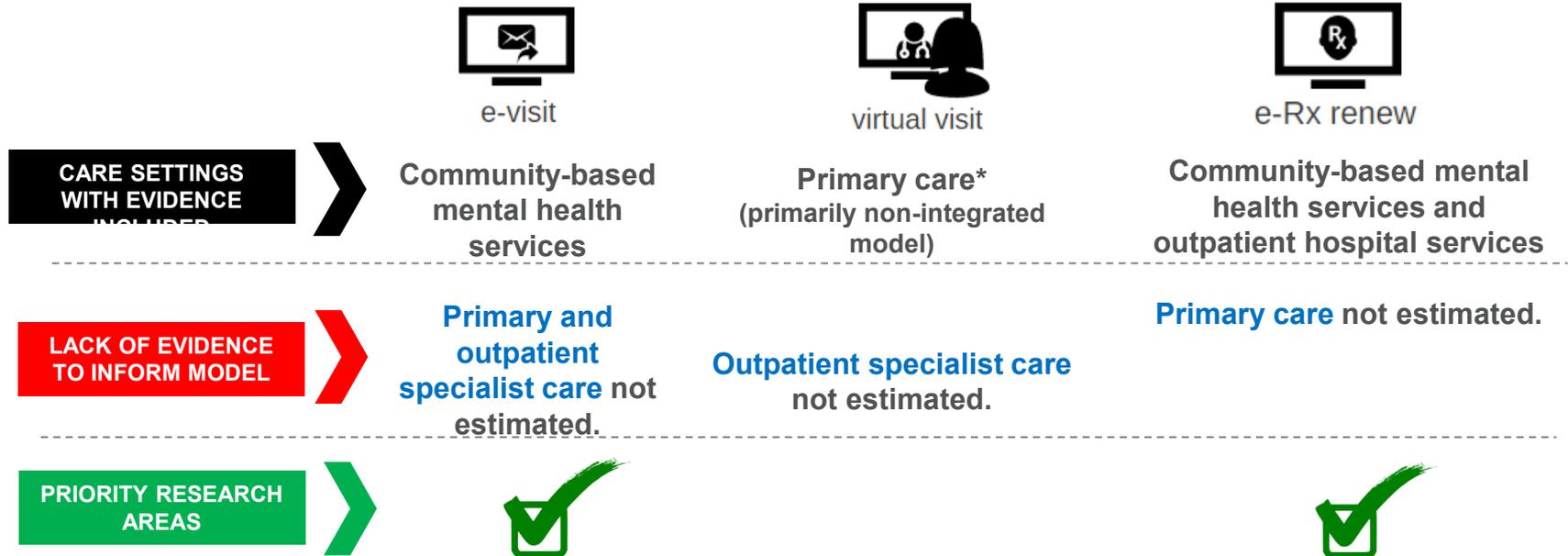
## Value generated by care setting across functions

- Primary care
- Hospital care
- Mental healthcare





# Gaps in evidence highlight important areas of value not included in health system value estimates: Summary of gaps in evidence





# Annual and Potential Value: Patient Estimates

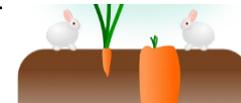
	Current Benefit <small>(UTILIZATION (2016 – 2017))</small>	POTENTIAL VALUE		
		25% Utilization	35% Utilization	50% Utilization
 e-view Viewing digital medical records	7% - 8% \$36M – \$39M	\$122M	\$171M	\$244M
 e-visit Secure e-communications (Outpatient care)	5% - 8% \$26M – \$42M	\$132M	\$185M	\$265M ↑
 virtual visit Face-to-Face Videoconference	3% - 4% \$14M – \$18M	\$110M	\$154M	\$221M ↑
 Digital e-Rx renewal renewal	10% - 12% \$42M – \$50M	\$105M	\$147M	\$210M ↑
<b>16</b> <b>Total</b>	\$119M – \$150M	\$470M	\$658M	\$940M



Primary care



Specialist care



Primary care



# Patients' potential value of almost 1\$ Billion each year



At **50%** Utilization

% of Canadians who have used solutions with access to their information or e-services

Patients and caregivers can avoid costs estimated at

**\$940M**/yr

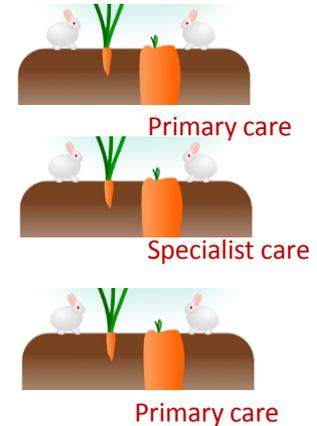
- Avoided visits > Travel and expenses





# Annual and Potential Value: Health System Estimates

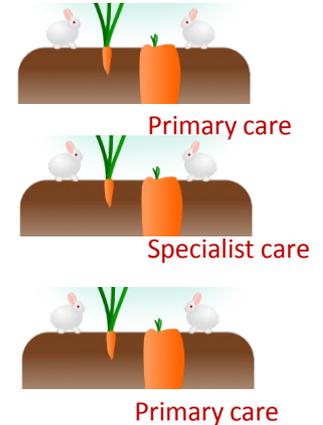
	Current Benefit ADOPTION (2016 – 2017)	POTENTIAL VALUE		
		25% Utilization	35% Utilization	50% Utilization
 e-view Viewing of digital medical records	7% - 8% \$81-96M	\$272-293M	\$381-409M	\$543-583M
 e-visit Secure e-communications (Outpatient care)	5% - 8% \$6-15M	\$19-27M	\$26-35M	\$36-46M ↑
 virtual visit Face-to-Face Videoconference	3% - 4% \$1.8-2.3M (\$27-54M)*	\$14M (\$927M-5B)	\$20M (\$1.3-7B)	\$28M (\$1.9-10B) ↑
 e-Rx renew Digital prescription renewal	10% - 12% \$18-20M	\$57M	\$79M	\$113M ↑
<b>18</b> <b>Total</b>	\$106-134M (\$131-185M)	\$362-391M (\$1.3-5.4B)	\$505-543M (\$1.8-7.5B)	\$720-769M (\$2.6-10.7B)



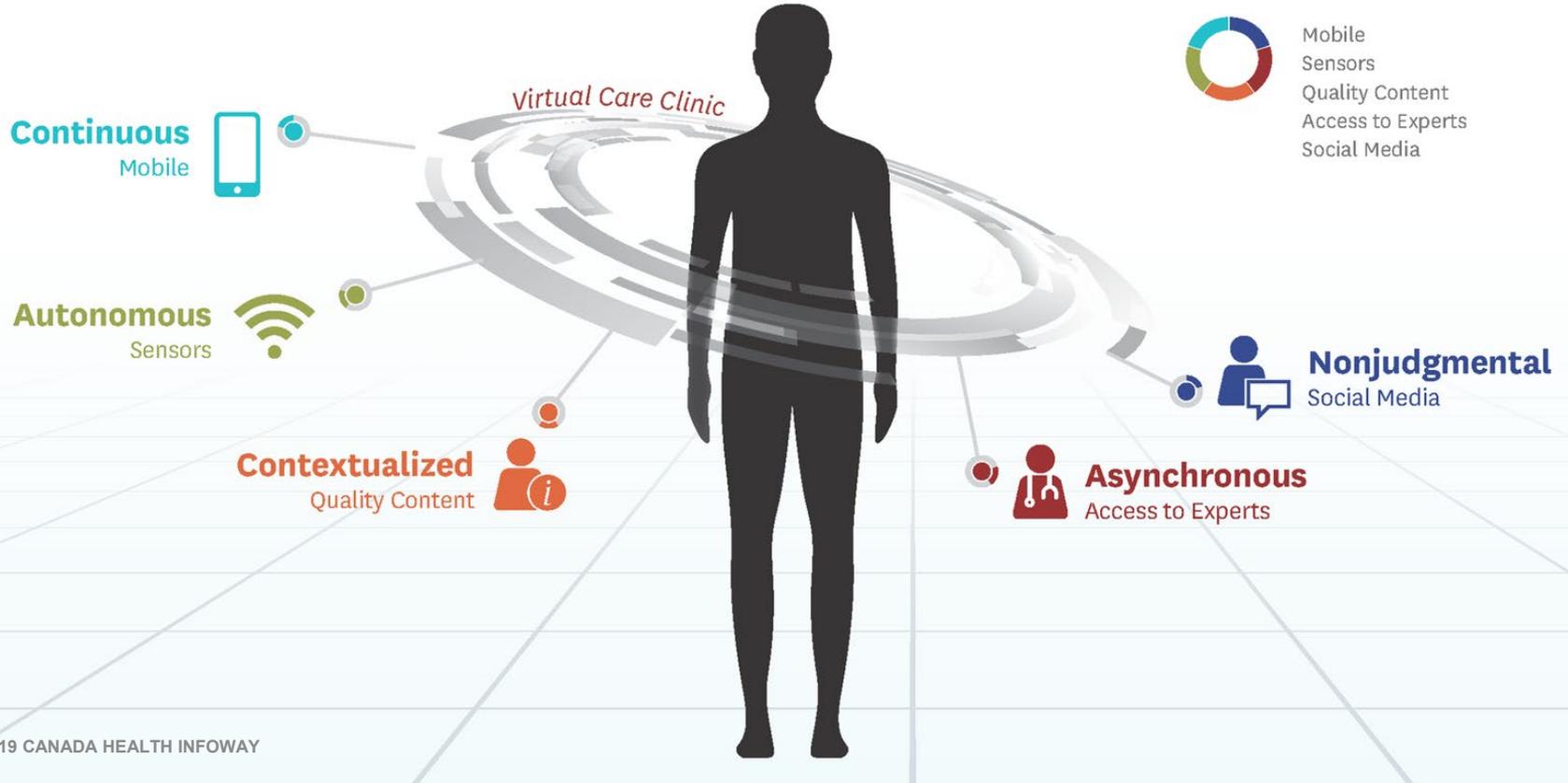


# Annual and Potential Value: BC Health System Estimates

	Current Benefit ADOPTION (2016 – 2017)	POTENTIAL VALUE		
		25% Utilization	35% Utilization	50% Utilization
 e-view Viewing of digital medical records	7% - 8% \$19-26M	\$ 38M	\$ 54M	\$76M
 e-visit Secure e-communications (Outpatient care)	5% - 8% \$747K-2M	\$4M	\$4.5M	\$6M ↑
 virtual visit Face-to-Face Videoconference	3% - 4% \$237-297K (\$8-13M)*	\$2M (\$121-653M)	\$3M (\$170-914M)	\$4M (\$243M-1.3B) ↑
 e-Rx renew Digital prescription renewal	10% - 12% \$2-4M	\$7M	\$10M	\$15M ↑
19 <b>Total</b>	\$21-32M (\$29-44M)	\$51M (\$167-702M)	\$71M (\$234-982M)	\$101M (\$333M-1.4B)



# Person-centred digitally enabled models of care





# Improved health outcomes likely greatest value

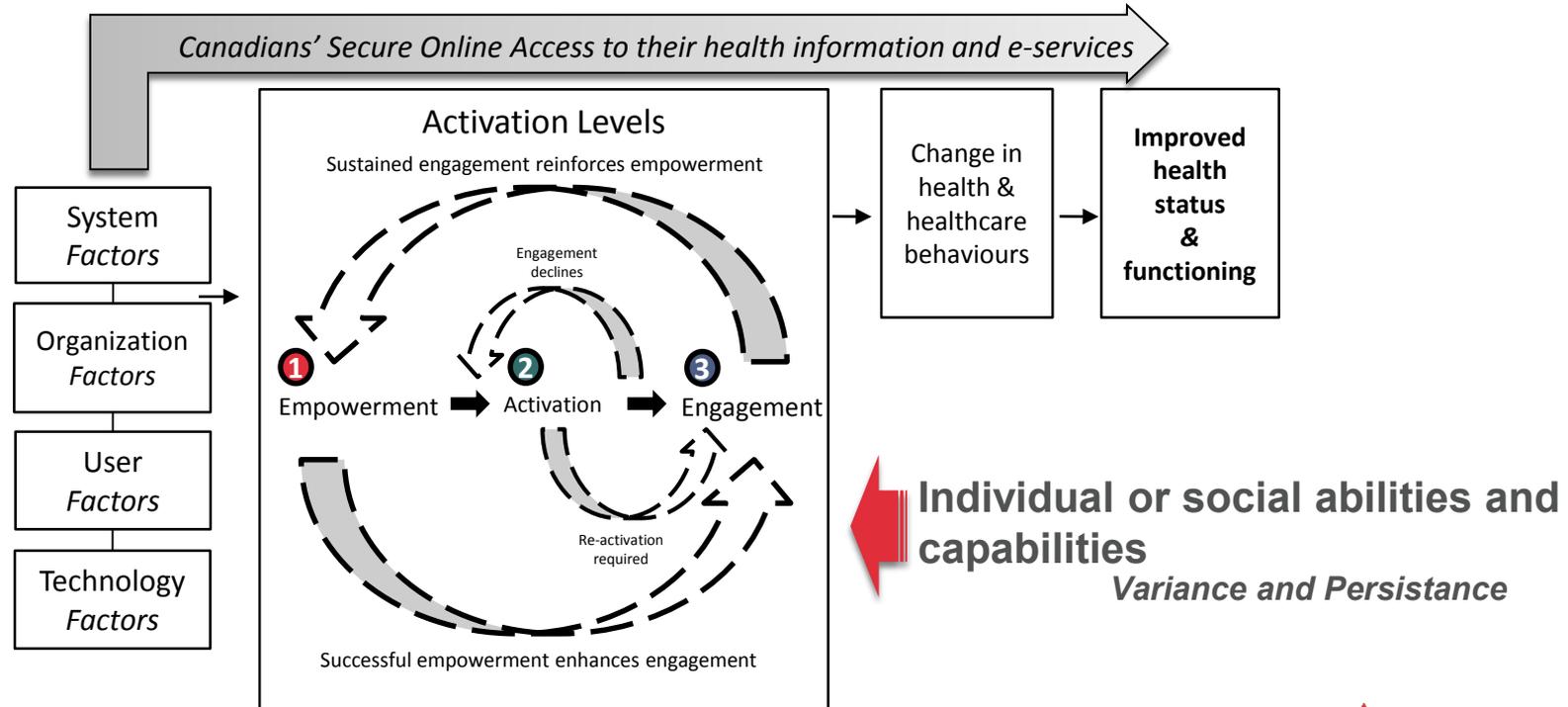




# How Digital Health Technology and Patient Activation Interact: A Conceptual Framework

Precursors

Outcome





# Linking health outcomes to health system value



e-visit



virtual visit



e-Rx renew

Secure e-mail with  
health provider/  
place of care

Secure face-to-face  
video visit with health  
provider

Request for Rx-  
renewal

Annual value to  
health systems in  
Canada

\$552-672M

\$116-179M

\$127-183M

THE ESTIMATED VALUES OF E-RX RENEW AND E-VISIT FUNCTIONALITIES RESULTED FROM:

- INCREASED LIFE SATISFACTION
- IMPROVED HEALTH STATUS
- INCREASED POSITIVE HEALTH BEHAVIOURS



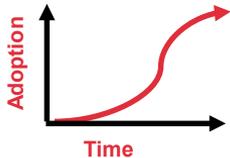


# Policy considerations



- *Investments in PHR initiatives across provinces and organizations are showing promise – success depends on developing clear guidelines and policies about:*

- *information sharing (privacy & security),*
- *communication and parameters of clinical encounters*
- *virtual care practice optimization and*
- *provider remuneration*



- **Integration incentives, clinical and practice model guidance and requirements to support for PHR enabled e-services into primary care and specialist practice models.**
- **Strategies to monitor and inform citizen health literacy in the context of digital health, patient engagement and outcomes**





# Current Climate and Policy Challenges

Innovation

*Sustainability*

Quality /Positive

Outcomes

*(system and technology)*



# Balance, Transformation & Performance & Health Outcomes



Education, training, practice across sectors



Evidence, policy and measures that matter to people



# Questions/Discussion





**Thank you!**

Chad Leaver

[cleaver@infoway-inforoute.ca](mailto:cleaver@infoway-inforoute.ca)

**VISIT THE WEBSITE**

[www.infoway-inforoute.ca](http://www.infoway-inforoute.ca)

**LET'S CONNECT ON LINKEDIN**

[www.linkedin.com/company/canada-health-infoway/](http://www.linkedin.com/company/canada-health-infoway/)

**LET'S CONNECT ON TWITTER**

[@infoway](https://twitter.com/infoway)