An Innovative Approach

...to Integrating PoC Systems with EHR Services for Improved Clinical Efficiency and Care Coordination

June 1st, 2015 (4:00-4:30pm)

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Brent McGaw
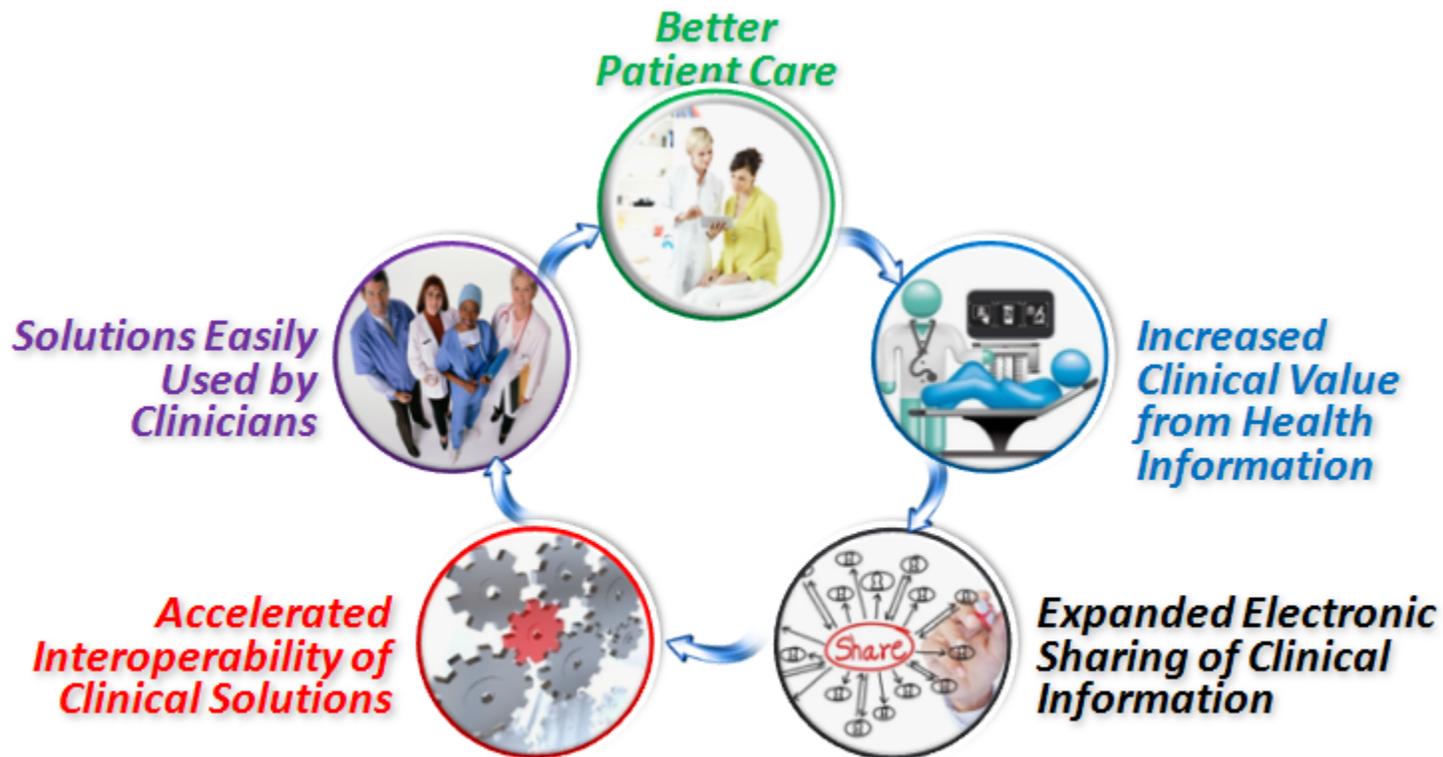 - Canada Health Infoway

Agenda

- The Project & Key Partners

- System Names & Terms

- Business Objectives & Goals

- Demonstrations (pre and post)

- Findings and Results

- Benefits and Lessons Learned

- Implications and Recommendations

The Project – What are we trying to achieve?

Better Patient Care

Increased Clinical Value from Health Information

Expanded Electronic Sharing of Clinical Information

Accelerated Interoperability of Clinical Solutions

Solutions Easily Used by Clinicians

Clinical Interoperability = "Access to Content with Minimal Disruption in Workflow"

Key Partners

Engagement for the **Ambulatory Electronic Mental Health Record (AEMHR)** system deployed at:

Mackenzie Health   and   SOUTHLAKE REGIONAL HEALTH CENTRE

Leveraging **eConnect** to launch, manage patient records, health systems and provincial assets:

B-Sharp provides the B-Care charting system for mental health ambulatory patients at both hospitals.

McKesson provides ADT, Horizon Portal (HPP) that contains electronic patient charts used by clinicians, and Relay Health which is used as an integration engine for the project.

ThoughtWire provides the **eConnect solution** which integrates the main EMR, B Care, and 2 provincial assets OLIS and DPV and eReferrals with single sign on (SAML Session Management) and context sharing.

eHealth Ontario provides ONE ID and ONE Portal and manages provincial systems including OLIS and DPV provided by Ministry of Health

Strata Health provides the Resource Matching & Referral (RM&R) System managed by the Central CCAC and hosted by University Health Network.

System Names & Terms

- **OLIS:** Ontario Laboratory Information System, managed by eHealth Ontario on behalf of the Ministry of Health & Long Term Care (Ministry). Currently contains ~80+% of all lab tests in the province.

- **DPV:** Drug Profile Viewer, managed by eHealth Ontario on behalf of the Ministry. It contains medication history for seniors and those on social assistance and represents about 25% of the population and 40-50% of the medications.

- **RM&R:** Resource Matching & Referral is a system to manage referrals from hospital to home/community care and Long Term Care.

- **SSO:** While there are different technical approaches to Single Sign On the idea is that a clinician should only have to enter their credentials (user name and password) once when they log on to their computer, and should not have to do so again as they access other systems.

- **CM:** Context Management allows a clinician to look up a patient "Mary Smith" in one system, and pass that patient context to another system without having to look up the patient again – even if these are completely separate systems! This can be unidirectional or bi-directional.

Business Objectives

– Health care clinicians wanted to access more usable clinical content stored in different locations without having to do extra or unnecessary work. They want:

## Access to Content With Minimal Disruption in Workflow

– Clinical interoperability is a pre-requisite for high quality health care and clinicians want it to happen more quickly

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Business Objectives (cont'd)

- Enhanced decision making

- Ensure security and privacy safeguards and

- Organizational flexibility to adapt as systems and technology changes
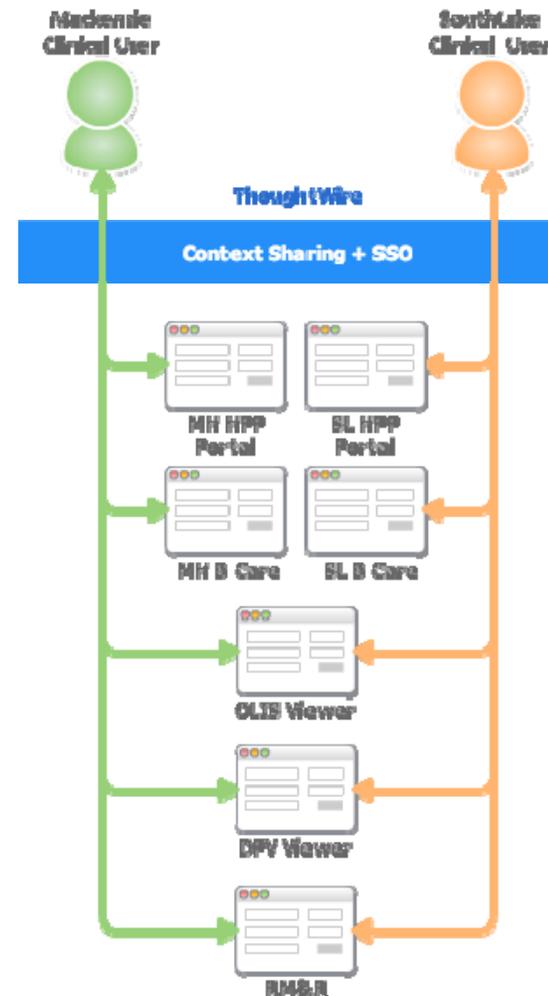
The Project Team Consulted a Wide Variety of Stakeholders

- Through extensive interviews and surveys, stakeholders' opinions were gathered to inform what benefits could be most meaningful to the clinicians.

  Stakeholders' opinions helped define the most appropriate Benefits Evaluation Realization for the hospitals.
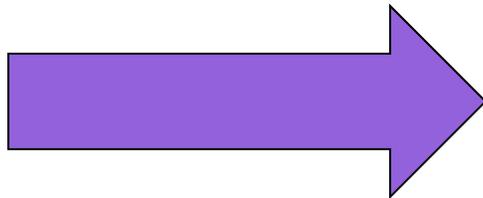
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What works well with clinical interoperability?

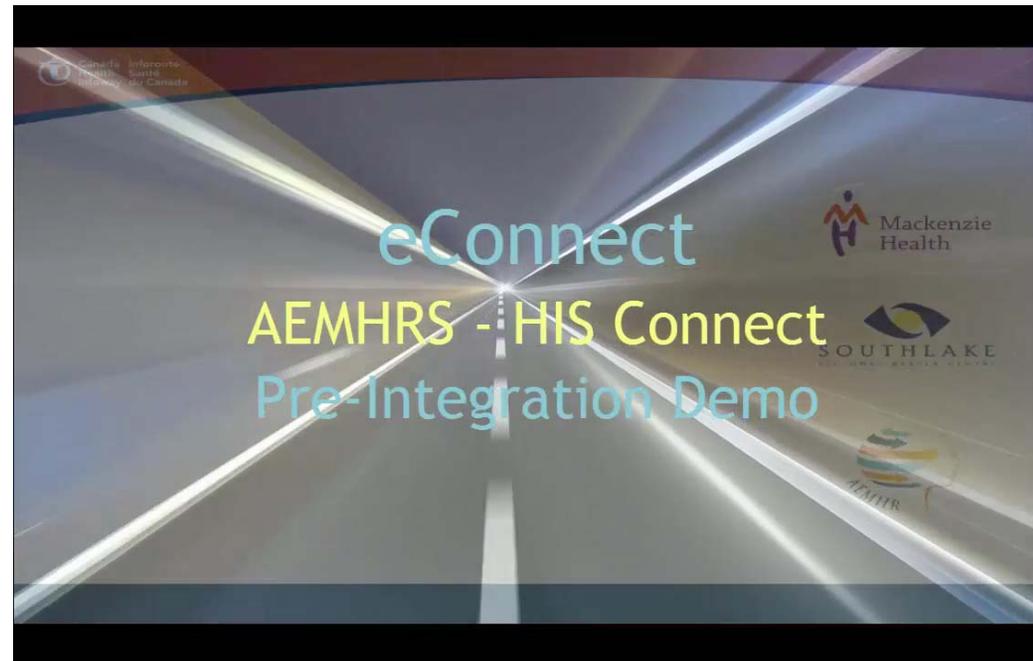**What are the problems with clinical interoperability?**

How can we accelerate the pace of clinical interoperability?
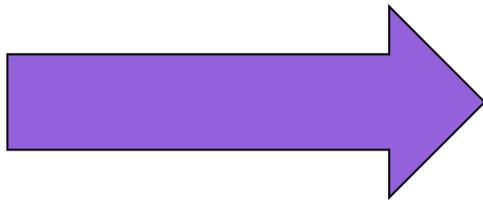
Demo #1: Pre-Integration

This shows how a user would log on without SSO and Context Management and look up their patient.

Demo #2: Post-Integration

This shows how the system works with SSO* and Context Management.

*Not yet with full SSO with eHealth Ontario.

eConnect Post Federation Demo

Findings and Results

Indicator	Pre-Integration	Post-Integration (SSO & Context)
Number of Screens	~45 (A major source of clinical distraction and risk!)	11 (1 is OneID) (76% reduction)
Number of Key Strokes	~120 (This is using browser caching of credentials!)	36 (ONEID is now 3 clicks only both DPV & OLIS) (70% reduction)
Number of Credentials	4	1 (75% reduction)
Time Required (to look up first patient and get their results in 5 separate systems)	230 sec	80 sec – 1st patient (65% reduction) 20 sec – 2nd patient (91% reduction)
User Experience	Frustrating Distracting	Seamless Patient-Focused

Benefits

- **Faster Access:** So easy!

- **Robust Functionality:** Portal framework is not just a "viewer"

- **Improved Decision-making:** To the <u>right</u> information, on the <u>right</u> patient, at the <u>right</u> time all with just a single click

- **Security:** Credentials managed and stored securely . Full audit logging

- **Privacy:** Patient context is set by local applications

- **Flexibility:** Ability to adapt as other provincial services become available

- **Automation:** The portal supports "policy enforced" workflows

Lessons Learned

- **User Experience:** Every click/screen adds up!

- **Deployment:** Avoid multiple releases.

- **Start Small & Expand:** Initial deployment on ~200 ambulatory EMR users.

- **Test Environments:** Need stable identical environments and consistent test data.

- **Policy Framework:** Each application often governed by different organizations = unnecessary complexity

- **Privacy & Security:** LPIA/LTRA completed & mitigation plan executed.

- **Complexity:** Agile software development advantages for clinician guided software development

Implications and Recommendations

Allow All Stakeholders To Have A Voice In Clinical Interoperability

*Stakeholders want a favourable environment in which they can work together
to advance clinical interoperability*

1. *Actively Engage Key Stakeholder Groups* – including clinicians, patients, digital health programs, vendors and others, and as a starting point, agree on a shared vision and strategy for clinical interoperability.

2. *Establish New Governance Models* – new governance models are needed at local, regional, and provincial levels complete with accountability mechanisms for clinical interoperability.

3. *Enable an Online Environment for Improved Communication and Collaboration* – establish online and other communication/collaboration mechanisms for stakeholders to continually interact and access content on clinical interoperability.

4. *Establish Leading and Best Practices* – on all aspects of clinical interoperability and share with all stakeholders.

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In closing
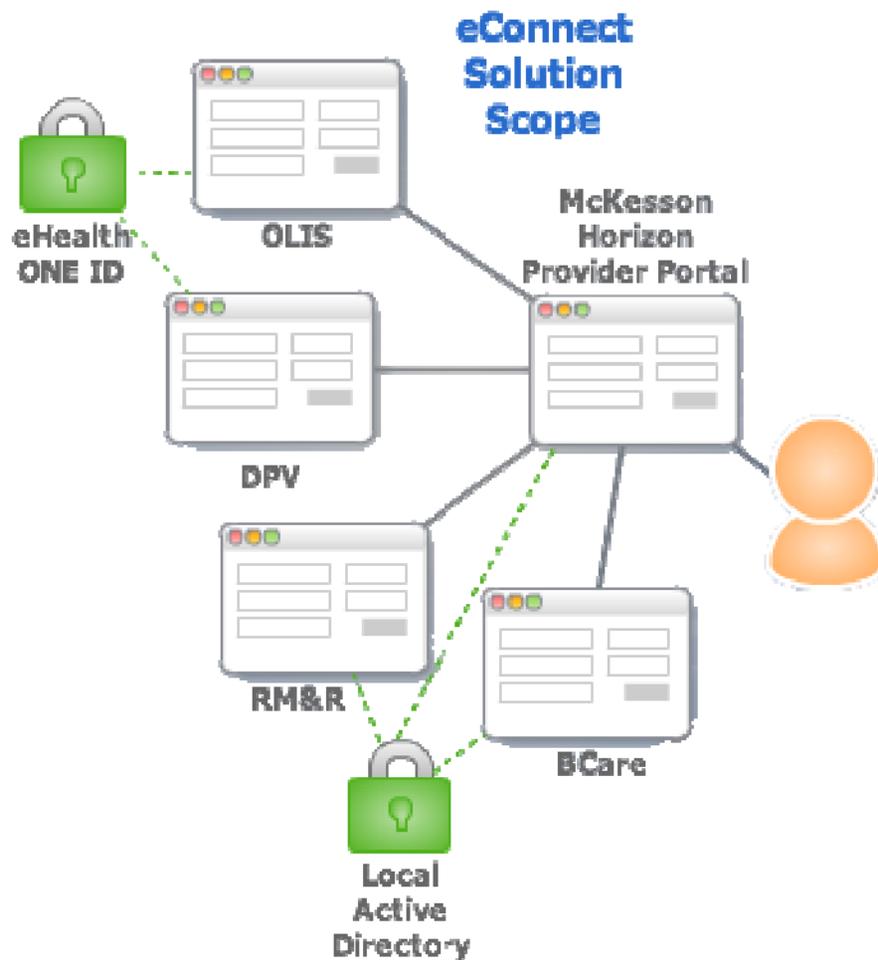
- SSO reduces the manual effort of logging in separately across multiple applications.

- Patient context enabled a clinician to see 'same' patient results by moving between systems

- Using the initial eConnect deployment significant savings in time can be re-directed to patient interaction and care

- ***If we make it easy, Clinicians will use it !!***

Thank you

Questions?

Mackenzie Health

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