

Are we there yet?

Our Journey Toward Integrating IMIT Systems

Overview of Provincial, Regional
IM/IT progress, challenges,
opportunities and next steps on
our journey to an integrated
system of care.

PRESENTERS' DISCLOSURE

Presenters/Panel:

Dr. Douglas Kingsford, CMIO IHA and Dr. Bill Clifford, CMIO NHA
Jeff Aitken, Executive Director, MoH and Oliver Thompson, Director, PHSA
Dr. Khati Hendry, GP Interior and Dr. Terry Chang, GP Vancouver
Brigitte Mettler, Lead, Doctors Technology Office

Facilitator: Carol Rimmer, Director Operations & Technology, Community Practice Quality and Integration

Relationships with commercial interests:

None.

Potential for conflict(s) of interest:

None.

Mitigating Potential Bias

- The information presented is based on available information and all efforts have been made to provide fair and balanced perspectives.
- If you have concerns of commercial bias, please contact Carol Rimmer, crimmer@doctorsofbc.ca

Overview:

Overview and four rapid fire presentations followed by panel and attendee Q&A:

- Preparing for this session: Environmental Scan of DoFPs
- EMR Standards. The “Why”
- An Overview of BC’s Interoperability Strategy
- Information Sharing and BC’s Privacy and Security Approach
- Integration: Improving Access and Quality
- Panel and Q&A

Preparing for this session:

Results of Doctors Technology Office Environmental Scan DoFP Initiatives

- Scan to identify projects, initiatives and resource needs.
- Engagement to provide support and inform and continue to build resource model to ensure future needs met.

What did DoFPs say?

- 1. Support exploring transitional strategies**
 - What can be done now and what can they use/is available now, while moving toward interoperability.
- 2. Support choosing technical approaches, options and tools.**
- 3. Support keeping informed & up to date** of other projects' status, progress, etc. to reduce silos and increase capacity. What are other stakeholders and DoFPs working on so they partner for learnings and opportunities.

In summary, DoFP's are looking for support and a level of comfort with their IM/IT decisions, direction and approaches.

Presentations and panel discuss:

- What are they working on/trying to solve?
- Where are we and what progress, successes have we made from last year?
- What challenges do we have to overcome and what needs to happen/change?
- What can we expect for the upcoming year?

Are we there yet?

Poll Everywhere:

Number to Text: 37607

Message to Text: 2018DTO

- **Poll Q1** - Prep - Have you used PollAnywhere before?
- **Poll Q2** - Are we there yet: Where do you think we are on the journey?
- **Note:** If you have used this software today, you need to reply **LEAVE** to start this new session.

EMR Standards – The “Why”

W.L. Clifford, MD, FCFP

April 16, 2018

Why Standards?

- **Standards** are: “Developed based on guiding principles of openness, balance, consensus, and due process. Established in order to meet technical, safety, regulatory, societal and market needs.”
-
- **Interoperability** is: “The ability of two or more systems or components to exchange information and to use the information that has been exchanged.”
- Institute for Electrical and Electronic Engineering (IEEE)



Think of Standards in Context Of:

- Processes & services: **historical, current, future**
- Necessary current action: **stop, start, continue**

Model of Care

Past	Current	Future
Sickness based – acute undifferentiated illness focused Working in silos	Highly variable practice in context of aged population with complex care needs but using a mix of old and new technologies to manage	Person and family centred delivering primary care value proposition including longitudinal, team based, comprehensive care

Model of Care

Stop	Start	Continue
<ul style="list-style-type: none">• Working in isolation• Focusing primarily on the urgent or the patient in the room	<ul style="list-style-type: none">• Forming and working in teams• Using clinical decision support tools in EMR• Think about the panel and its management	<ul style="list-style-type: none">• Service requests to colleagues and community services• Building relationships with patients and providers

Workflow

Past	Current	Future
Entirely paper based, separate lists for recall, references in books (often old). Documentation approach highly variable – dependent on who you trained with.	Mixed electronic and paper. Not much clinical decision support but some practice level reports/dashboards. Most diagnostics delivered electronically	Nearly everything electronic. Clinical decision support embedded in most processes. Workflow management throughout. Artificial intelligence applied to patient and panel

Workflow

Stop	Start	Continue
<ul style="list-style-type: none">• Mainly text notes• “History and physical” style documentation• Working in silos	<ul style="list-style-type: none">• Structured entry for important observations, evaluations & interventions• Chart building rather than document creating• Electronic communication with interprofessional team members	<ul style="list-style-type: none">• Telling the story in text notes• Providing background information in service requests• Using various modalities for communication

Other Items to Consider

- Care planning
- Structured entry in communication (i.e. “forms”)
- Working in teams
- Safety
- Privacy/confidentiality
- Panel management
- Population health
- Remuneration model
- Practice administration including data quality, billing

B.C. EMR Interoperability Strategy: An Overview

April 16, 2018
GPSC Summit

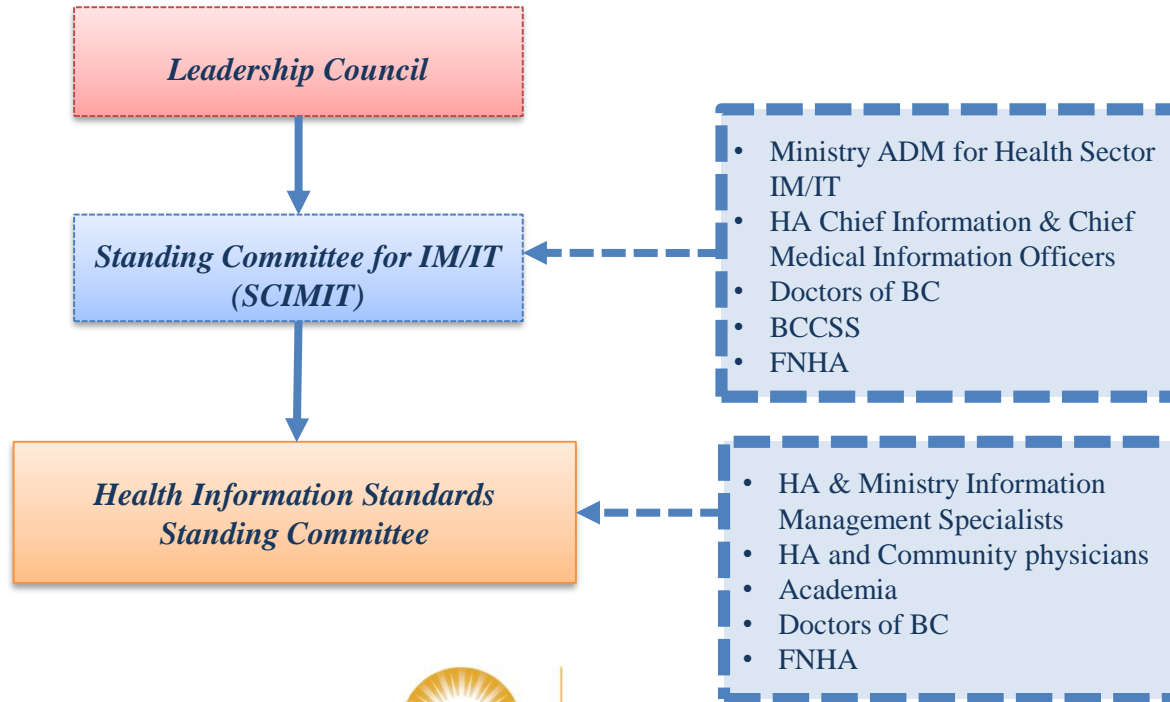


Agenda



#	Topic	Duration
1	Strategy background and scope	5 mins
2	Strategy recommendations	10 mins
3	Questions and discussion	During Panel

Strategy Governance



EMR Interoperability Strategy Overview

- Interoperability between EMRs and other clinical systems is a key IM/IT enabler for the clinical transformation that is underway across the health system.
- Despite the wide-spread adoption of EMRs and advancements in technology, there are still significant barriers to health information interoperability in B.C.
- In response, IMITSC¹ formed an EMR Strategy Working Group (2015) and tasked them with developing an EMR Interoperability Strategy.

1 – Information Management and Information Technology Standing Committee



Ministry of
Health

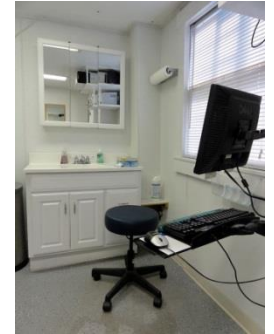
EMR Vendor Engagement

- Broad engagement during the EMR vendor partnership meetings in April and October 2016
- Had 1:1 follow-up discussions with all vendors who were willing to meet
- General topics of discussion:
 - Their primary development focus for their product(s)
 - Their strategic roadmaps
 - Issues adopting BC health information standards
 - Ongoing vendor engagement in our governance structure
 - Funding considerations and constraints



Clinician and Business Engagement

- Targeted engagement in 2016/17 through several teleconferences and in-person presentations
- Groups that we met with included:
 - DoBC IM/IT Clinical Advisory Working Group
 - DoBC's Practice Support Program (PSP)
 - Vancouver Island Primary Care Informatics (PCI) group
 - Clinical HISSC members
 - Ministry of Health Primary Care Group
- General topics of discussion surrounded:
 - Feedback on HISSC's standards priorities
 - How clinicians should be engaged when implementing standards initiatives
 - Feedback on EMR vendor training preferences and use of standards in their products
 - Practice change management considerations



EMR Interoperability Strategy Scope

- Enabling the adoption and use health information standards across the sector is seen as the most effective option to address the current challenges with achieving interoperability.
- As a result, the **scope** of the strategy includes **tools and tactics** to increase the adoption of health information standards for:
 - **Users:** who need to adapt to changes with how they send, receive, view, and enter standardized health information
 - **EMR vendors:** who are required to make changes to their products
 - **Standards developers:** who develop, publish and maintain standards
- IMITSC has endorsed the EMR Interoperability Strategy (June 2017)



Priority Health Information Standards

Data Standards:

- Diagnosis and Health Concern reference set with mapping to ICD9 and ICD10
- Adverse reaction reference set
- Procedures reference set
- Provincial document hierarchy

Clinical Document Standards:

- Discharge Summary
- Care Plan
- Patient Summary Report
- Medical Imaging
- Immunization administration and history
- General Referral and Consultation Documents

Provincial EHR Standards:

- Client Registry (for demographic data exchange)
- Provider Registry (for demographic /work location data exchange)

Building an EMR core dataset

Using CDA and FHIR standards

Strategy Recommendations

The strategy outlines 7 recommendations related to EMR interoperability:

1. Strengthen governance around provincial health information standards and integration
2. Create a standards support organization
3. Prioritize standardization and health information exchange initiatives
4. The DoBC, in partnership with EMR vendors, to develop a practice change management program focused on interoperability
5. Establish a vendor and physician funding incentive model
6. Provide EMR vendor training
7. Improve communications with stakeholders



Next Steps

- Implementation of the recommendations:
 - ❑ Some of the governance related recommendations are already being worked on
 - ❑ Other recommendations will required funding or projects to implement
 - ❑ It is expected that implementation of the recommendations may take several years to be completed



Poll Everywhere:

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- **Poll Q3** - What do you see as the biggest barrier to interoperable systems?



BC Privacy & Security Update

GPSC Summit 2018

Dr Douglas Kingsford

CMIO, Interior Health Authority

Co-chair Information Privacy & Security Standing Committee

IMITSC, HISSC, JCC IM/IT CAWG

Evolving Operational Context

Coming soon:

- Primary Care Networks
- Community, HA, FN staff working in one another's clinics, closely collaborating in patient care
- Virtual care interactions with multidisciplinary teams – community and HA providers, distributed data
- Mash-ups: views into data from disparate systems – users are community/HA/PH providers, patients
- Loose coupling of systems subject to different legislation
- Core provincial infrastructure including eHealth repositories, PharmaNet, Panorama, identity registries
- Need for secondary use capability for PCN local QI, evaluation and planning activities

Key Legislation

- FIPPA (Freedom of Information and Protection of Privacy Act)
 - applies to public bodies, professional bodies, etc
 - applies to custody *or control*
 - based on prescribed authorities and notification, not consent
 - concept of “consistent purpose”
 - storage *and access* must be in Canada
- PIPA (Personal Information Protection Act)
 - applies to everyone else (some exclusions apply)
 - based on implied consent, opt-out, limitations of consent
- eHealth (Personal Health Info Access and Protection of Privacy) Act
 - applies to designated “information banks” under defined rules/conditions
 - PLIS, client registry, provider registry
 - patients can restrict access via “disclosure directives”
- Pharmaceutical Services Act
 - PharmaNet access rules

PIPA, FIPA, GHISA, eHealth Act, PIPEDA,
Pharmaceutical Services Act, Public Health Act,
Ministry of Health Act, Medicare Protection Act

Community Regulated Professions

Paper Files

**Patient Portal
Provider Portal**

Pharmacist

Chiropractor

Midwife

Telehealth clinic,
Walk-in clinic,
PCN

FNHSO

NP

EMR

GP

NP

EMR

GP

Specialist

Mash-Ups:

Data aggregated
from multiple systems

Integrated programs
Primary vs Secondary Use
Relationship with patient
Patient permissions
Access controls

Allied Health
Lab
DI
Residential

Specialist

PLIS

**PLR, EMPI
CareConnect
PharmaNet
Panorama**

**Admin data
Health System
Matrix registries**

NP

Emerg

EMR

CIS

Patient Portal

Clinical Data Repositories

Research databases

CDM Clinic

A/N Clinic

Public Health
Nurse

Communication:

In person Telehealth
Phone Portal
Email EMR-to-EMR
SMS Paper

Fax Data sovereignty
Transmission vs storage
Relationship with patient
Patient permissions
Access controls
Encryption

Hospitals

HA 1° Care Clinic

Frail Seniors

Home Health

MHSU

Health Authority, Ministry of Health

Shelters

Housing

Patient,
family,
supports

MOA

RCMP

Social Services

Home carers

ICBC

WSBC

Devices

Cloud systems

PHR

Apps

Third party systems

Eg. Loblaww, Airpoints

**Non-Health or
Unregulated
Entities**

Pressing Needs

- Interactions between HA's/MoH, community providers
- Interactions with FNHA clinics/providers (same issues?)
- Harmonization of authentication & access models
- Consistent role-based security & access model that can evolve to be under patient control
- Network, applications defense in depth
- Data governance model for secondary use
- Governance in general
- ... and more

Key Problems

- Need legal authority – to collect, use or disclose.
- Health authorities need Information Sharing Agreements, but these do not in itself establish legal authorities – they only sets out rules for privacy compliance when the legal authorities already exist.
- Distinction between primary and secondary use.
- Different rules apply to data from different sources.
- How to do QI, evaluation and planning across PIPA and FIPPA organizations.
- Regional variation:
 - in privacy & security policies, interpretation of rules
 - what can/ can't be shared with whom, with/without consent
 - expectations when completing PIAs, STRAs on how risks assessed
- Decentralized data governance.

Privacy & Security Governance in BC

IMITSC	Information Management Information Technology Standing Committee
IPSSC	Information Privacy & Security Standing Committee
HIPSOC	Health Information Privacy & Security Operations Committee
TSSC	Technology Standing Committee
STF	Security Task Force
OIPC	Office of the Information and Privacy Commissioner
DTO	Doctors of BC's Doctors Technology Office

Privacy & Security Governance in BC

STF

1. Strong authentication
2. Vulnerability Management and Patching
3. Incident Response
4. Asset Management
5. Architecture/Standards to Interconnect
6. Integrating IM/IT Risk Management with Organizational Risk Management

Privacy & Security Governance in BC

IPSSC

- Balance information protection with care, decision-making, better outcomes
- Integrate privacy & security into business activities
- Oversee & promote accountable info sharing
- Harmonize approach to privacy & security, support consolidated privacy & security assessments

Working groups:

Communications | Access & authorization | Secondary use | First Nations information sharing

PRIME

(PharmaNet Revisions for Information Management Enhancements)

- Currently under development.
- Introduces a single, standardized, centralized process for granting, managing, monitoring access to PharmaNet.
- Pharmaceutical Services Act makes MOH the single point of accountability for access to PharmaNet.
- Specific requirements follow from legislation.

GHISA

(General Health Information Sharing Agreement)

- Common framework for information sharing between health authorities, Ministry of Health and certain other providers (from 2016).
- Directly covers MOH, VPP, FHA, IHA, NHA, VIHA, but not FNHA.
- Covers physicians delivering services on behalf of HA, others must sign ISA containing applicable GHISA terms; affiliated organizations can agree to be bound by applicable terms in GHISA.
- Relies on Common Access Management Framework, information security policies, procedures for handling data for secondary use.
- Automatically applies, so no need for separate ISA.
ISPs replace ISAs where data exchanged for 2^o use.
- Still need PIA to document info flows, identify legal authorities, establish privacy & security protocols.

CPA

(Common Program Agreement)

- Agreement under FIPPA that enables information sharing across a distributed team incorporating public and private providers, including sharing for direct care, quality improvement and program planning and evaluation.
- Clarifies legal authorities, standard information sharing rules for privacy compliance, consent and notification requirements.
- Currently under development to support PCN model.
- Does not resolve challenges around security, connectivity between and shared use of community and health authority IT systems.
- Does not address regulatory implications for health professionals participating in a PCN.

Future

- Sector-wide work on Security & Access models
 - Enhanced security, defense in depth.
 - Enhanced proactive response to emerging threats.
- “GHISA 2”?
 - A proposal to extend GHISA framework to cover PIPA organizations, universities, PCNs, FNHA, public health initiatives, R&D, etc.
 - Would harmonize relevant IMIT & privacy policies and standards.
- HIMA (Health Information Management Act)
 - Harmonize the various Acts covering health info into one Act.
 - Common rules, policies, protocols.
 - A longer-term option.

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Poll Q4 - What support is needed at the physician and /or DoFP level?

April 16, 2018

Improving Access and Quality

Presentation at GPSC Summit



Oliver Thompson
Director, Provincial eHealth Project, IMITS

imits

Information Management / Information Technology Services

One person. One record. Better health.

Proud to Serve:



Presentation Focus

- Improving Access to Clinical Data
 - CareConnect Deployment to Private Practice
- Improving the Quality of Data sent to Private Practice

Improving Access to Clinical Data

What is CareConnect?



CareConnect is the Provincial eHealth Viewer

- a secure, view-only Electronic Health Record (EHR) that delivers patient-centric information to support healthcare providers in their delivery of patient care
- offers authorized healthcare providers 24/7 access to an integrated, provincial view of clinical information

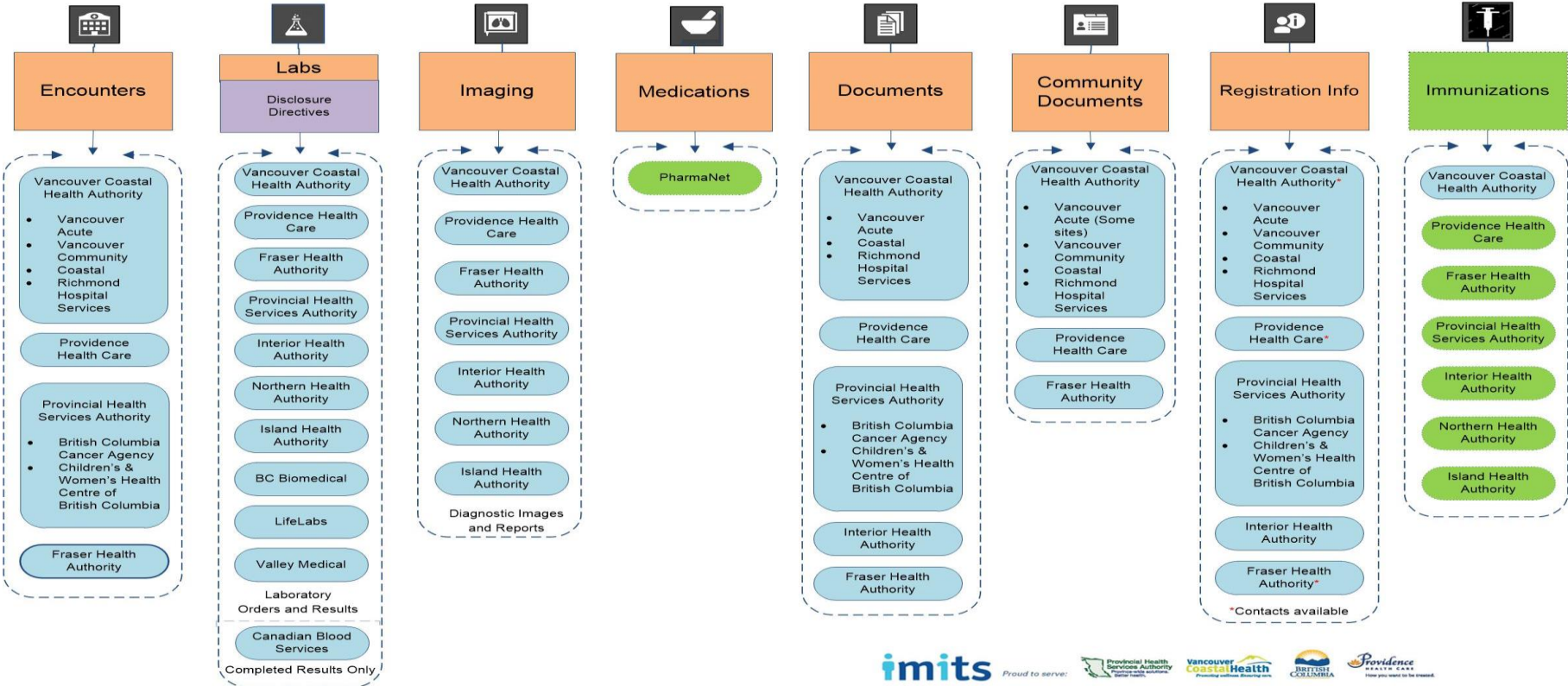
The eHealth Viewer (CareConnect)

Available Data as of April 2018

Legend:

Available

Coming Soon

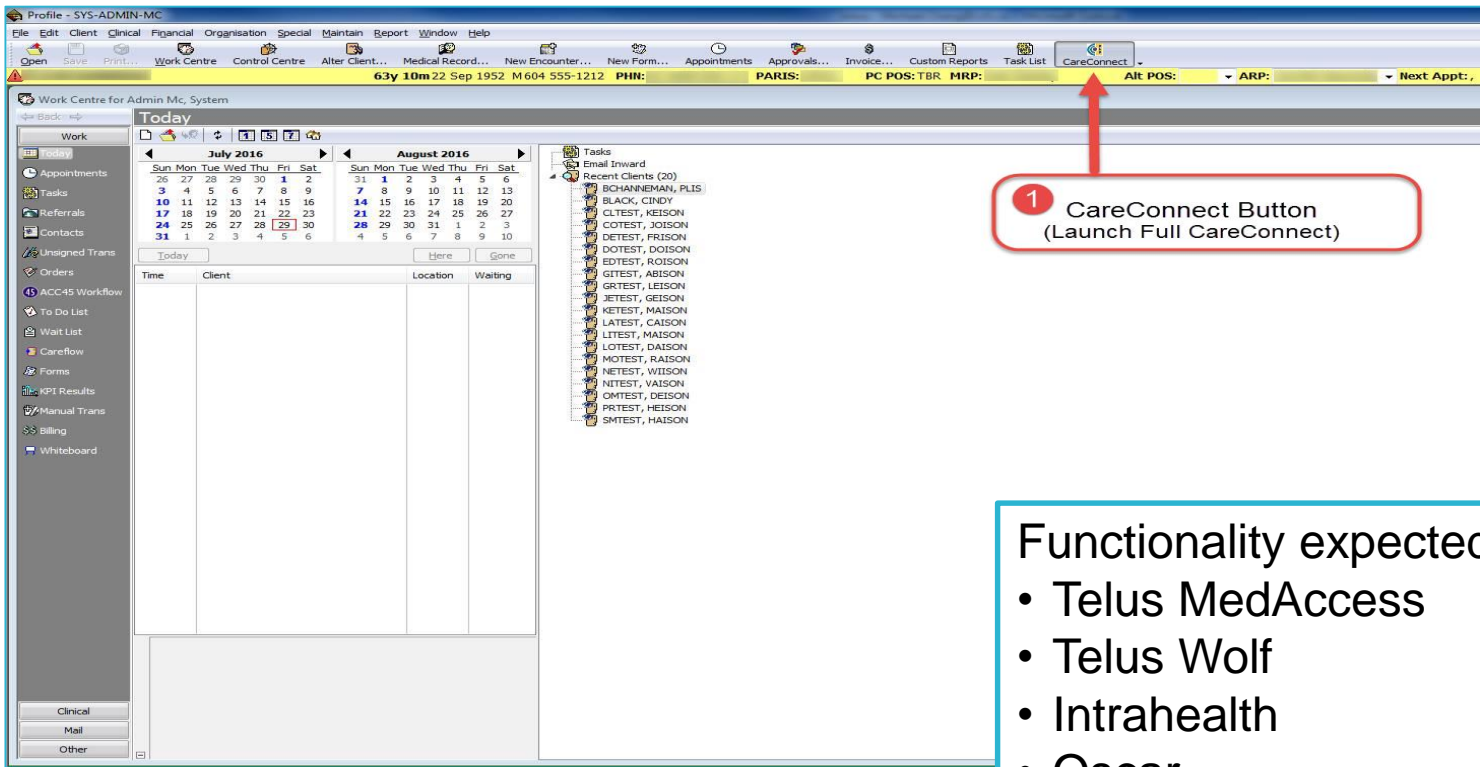


imits

Proud to serve:



Rapid Access from YOUR EMR



1 CareConnect Button
(Launch Full CareConnect)

- Functionality expected soon in:
- Telus MedAccess
 - Telus Wolf
 - Intrahealth
 - Oscar
 - Plexia
 - Accuro



What Does Rapid Mean?

The screenshot displays a medical software interface for Michael Cheng PHY. The top menu bar includes options like 'File', 'Edit', 'Client', 'Print', 'Financial', 'Organisation', 'Special', 'Report', 'Window', and 'Help'. Below the menu, there are various toolbars and a status bar showing patient information: PHN: PARIS, PC: MRP, AIE: AP, and Next Appt: .

The main window is titled 'Work Centre for Michael Cheng PHY' and contains several components:

- Calendar:** Shows a calendar for January and February 2017. The dates are color-coded, and there are navigation buttons for 'Today', 'Home', and 'Goto'.
- Tasks List:** A list of tasks on the right side of the window, including 'Assigned Transactions (0)', 'Recent Clients (20)', and a list of names such as 'ARTEST, VOISON', 'ALTEST, HOISON', 'SCHANNENNA, PLIS', 'BLACK, CINDY', 'CHTEST, CLISON', 'COTEST, DONISON', 'BTEST, DOBISON', 'GATEST, ANISON', 'JATEST, HANISON', 'KATEST, DEISON', 'LTEST, ALISON', 'OLTEST, BRISON', 'PATEST, BEISON', 'RETEST, BRISON', 'ROTEST, CHEISON', 'RYTEST, CISON', 'SCTEST, MEISON', 'TRTEST, HUISON', 'WETEST, ROSSON', and 'WHTEST, LEISON'.
- Table:** A table with columns for 'Time', 'Client', 'Location', and 'Waiting' is visible below the calendar.

A large text box at the bottom of the screenshot reads: **Concept: Intrahealth EMR Integration to CareConnect**

Improving the Quality of Data sent to Private Practice

Changes to Report Distribution

1. Improved Report Categorization

- ✓ Faster searching

2. More Discrete Data

- ✓ Faster searching, more values to trend, decision support, automated workflows

Improved Report Categorization

Current HIM Report Type Categories

Consultation Note
Anesthesiology Consultation Note
Obstetrics + Gynecology Consultation Note
Psychiatry Consultation Note

Cardiac Catheterization Study Report
Diagnostic Study Note
Discharge Summarization Note
ECG Study Report
ECT Study Report
EEG Study Report
EMG Study Report
ETT Study Report
Hereditary Consultation
History and Physical Note
Holter Monitor Study Report
Letter
MIBI Study Report
Outpatient Clinic Consultation Note
Diagnostic Report - PET Scan
Pacemaker Study Report
Procedure Note
Progress Note
Surgical Operation Note
Televisit Encounter Note
Transfer of Care Referral Note

CST HIM Report Type Categories (example)

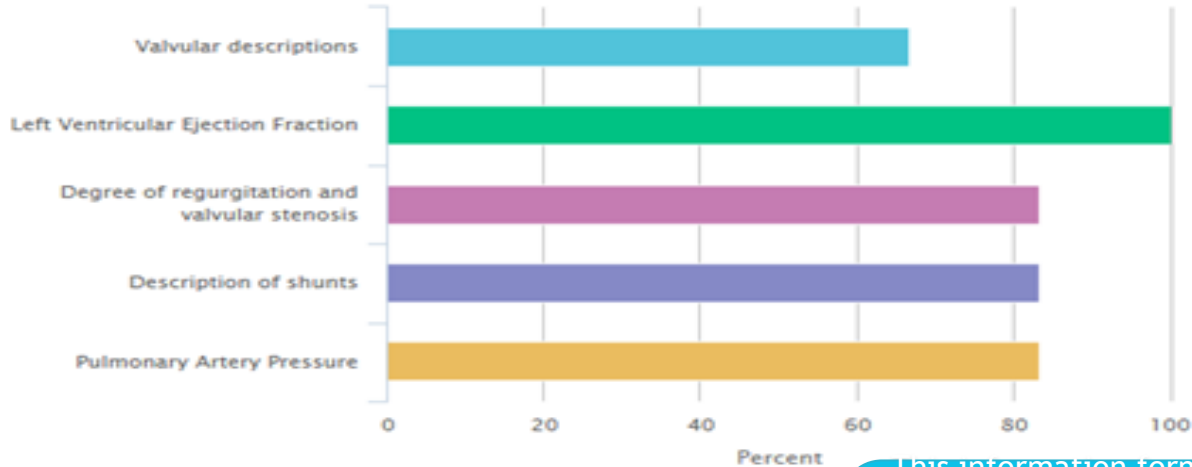
Consult Notes

Admission Notes
Allied Health Documentation
Anesthesia Records
Clinic Notes
Clinical Pharmacy Notes
Communication Notes
Discharge Documentation
Gastroenterology Procedures
Genitourinary Procedures
Neurology Procedures
Rehabilitation Notes
Respirology Procedures

Allergy Immunology Consult	Gynecology Consult	Ophthalmology Consult
Anesthesiology Consult	Hematology Consult	Orthopedic Consult
BMT Consult	Infectious Diseases Consult	Pain Consult
Cardiology Consult	Internal Medicine Consult	Palliative Medicine Consult
Cardiothoracic Consult	Interventional Radiology Consult	Pediatrics Consult
Cardiovascular Surgery Consult	Laboratory Medicine Consult	Perinatology Consult
Colorectal Surgery Consult	Long Term Care Consult	Pharmacist Consult
Consult Note Other	Neonatal Consult	Physical Med and Rehab Consult
Critical Care Consult	Nephrology Consult	Plastic Surgery Consult
Dental Oral Surgery Consult	Neurology Consult	Podiatry Consult
Dermatology Consult	Neurosurgery Consult	Psychiatry Consult
Endocrinology Consult	Obstetrics Consult	Respirology Consult
ENT Consult	Occupational Medicine Consult	Rheumatology Consult
Family Medicine Consult	OMFS Consult	Sports Medicine Consult
Gastroenterology Consult	Oncology Gynecologic Consult	Thoracic Surgery Consult
General Medicine Consult	Oncology Hereditary Consult	Trauma Consult
General Surgery Consult	Oncology Medical Consult	Urology Consult
Genetic Consult	Oncology Radiation Consult	Vascular Surgery Consult
Geriatric Medicine Consult	Oncology Surgical Consult	

More Discrete Data - Echocardiogram

3. Of the available measures, which are valuable to be viewed quantitatively (e.g. values over time)?



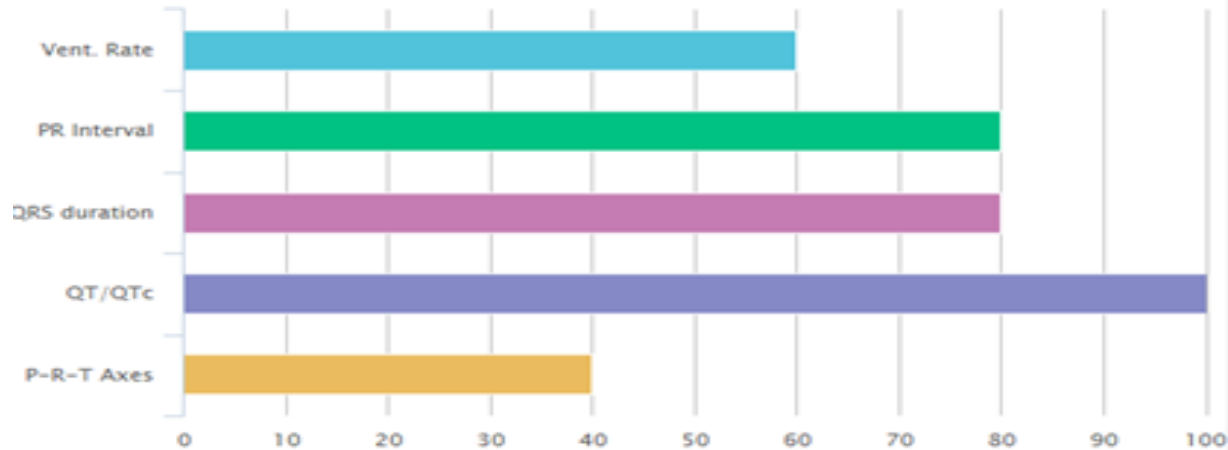
This information forms part of the patient's record. When making a referral for the patient, some of these conditions may need to be known, and it's nice to be able to see them individually.

As a physician, I want to know if any of these items are deteriorating on any particular report. We need the full scope of data to see all of these values every time. When things are filed automatically in the correct place in the chart, errors are decreased.

This information forms part of the patient's record. When making a referral for the patient, some of these conditions may need to be known, and it's nice to be able to see them individually.

More Discrete Data - ECG

2. Of the available measures, which are valuable to be viewed quantitatively (e.g. values over time)?



Everything should come in electronically. The next step is that the EMR picks up on the fact that there is a QT interval prolongation and when we ePrescribe, it gives a warning if a medication also prolongs it.

The QT/QTc interval result would be useful in Clinical Decision Support rules. Having this number allows for a rule to be triggered.

All of this information is useful

and it forms part of the patient's chart.

Receiving this information discretely means that I don't have to hunt through the reports to find the information I need.

Questions

...for more information, please contact:

Oliver Thompson

Oliver.Thompson@phsa.ca

Panel and Q&A

1. Tables pick & write down top 3 questions.
2. Each table picks a speaker
3. Speaker to ask top question to panel that has not been asked yet.

Wrap up!

Poll Everywhere:

Number to Text: 37607

Message to Text: 2018DTO

Poll Q5 - What is the next most important step we need to take?

For more information, guidance or support contact:

Doctors Technology Office

604-638-5841

DTOinfo@doctorsofbc.ca

Thank you!