

# Faculty/Presenter Disclosure

---

- Faculty: Cindy Convey and Aneet Sahota – Fraser Health Authority
- Relationships with commercial interests:
  - None

# Disclosure of Commercial Support

---

- This program has received no financial support
- This program has received no in-kind support
- Potential for conflict(s) of interest:
  - None

# Mitigating Potential Bias

---

- Not applicable – no potential bias

# Clinical Systems Integration

Cindy Convey & Aneet Sahota  
eHealth 2015



# Agenda

---

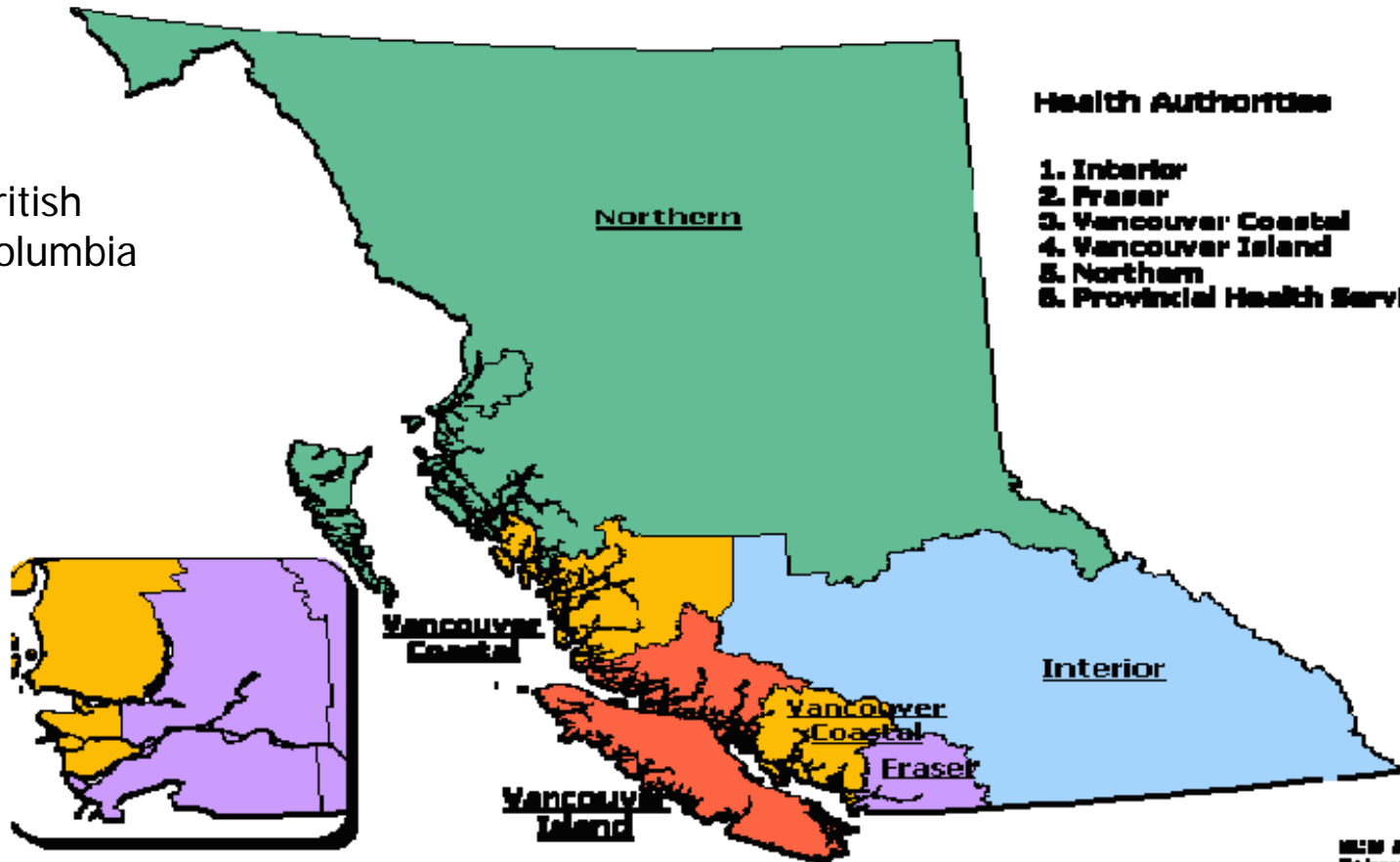
- Purpose:
  - To describe the approach to integrating Fraser Health Authority (FHA) clinical information systems
- Slide Deck includes:
  - Overview of FHA
  - Overview of FHA clinical systems strategy and environment
  - Overview of FHA Unifying Clinical Information Project

# Fraser Health Authority Overview





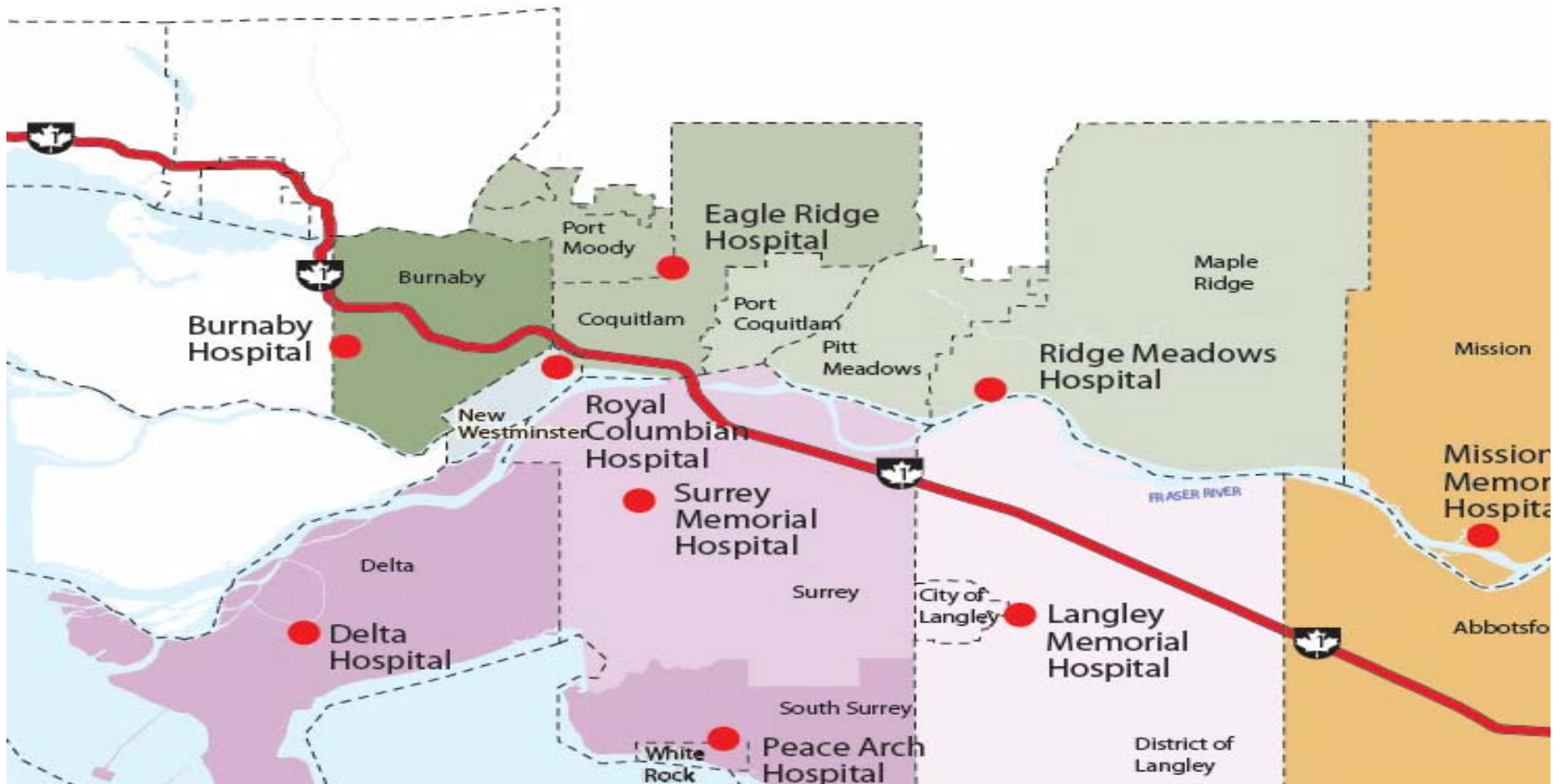
British  
Columbia



**Health Authorities**

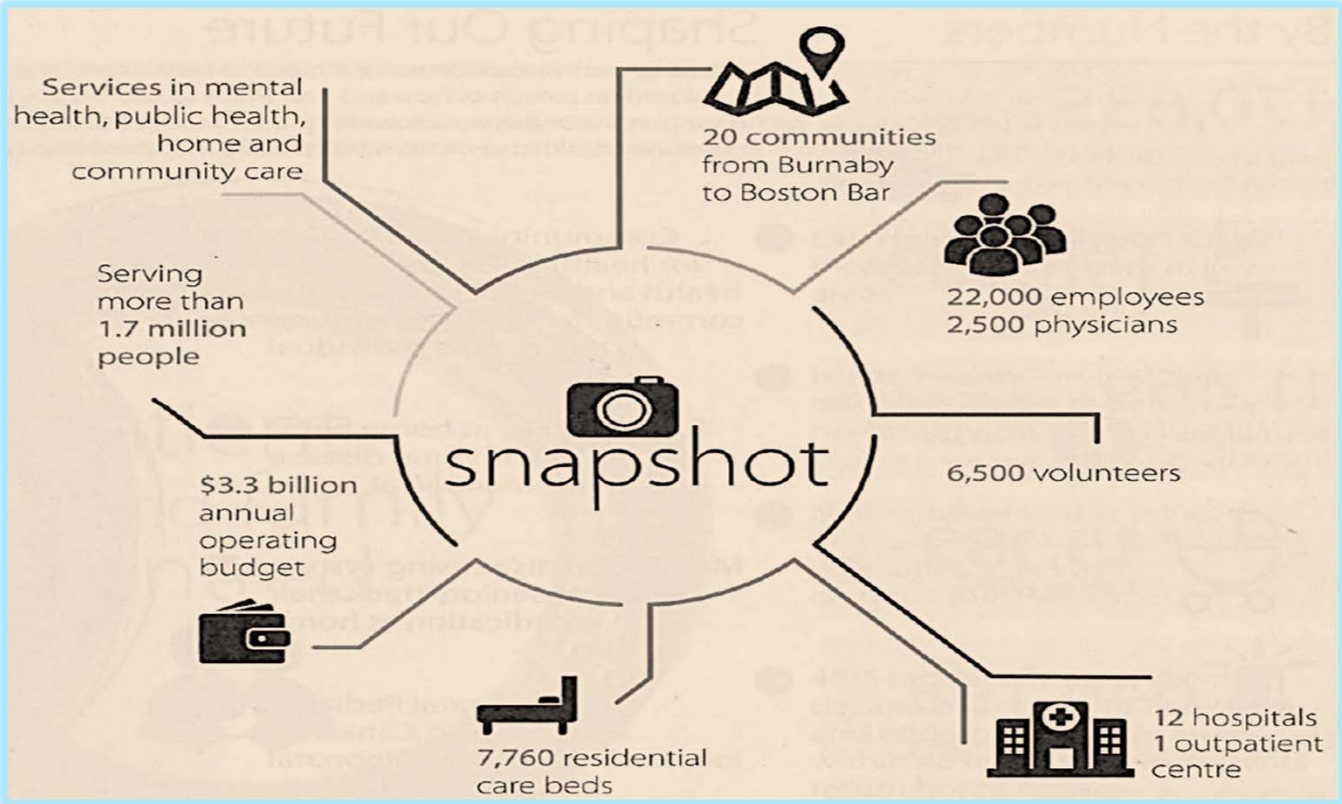
- 1. Interior
- 2. Fraser
- 3. Vancouver Coastal
- 4. Vancouver Island
- 5. Northern
- 6. Provincial Health Service

MEM 618  
February 2009





# FHA – Some Statistics



# FHA – Some Statistics

**170,635** CT scans

Ranging from abdomen to head, to down the spine and more.



**646,198**

Emergency Department visits

**139,133**

Patients admitted to hospital



**158,103**

Surgeries



**12,500**

Clients who received home support

**3,237**

Placements to Residential Care



**11,469**

Restaurant Inspections



Includes take-out facilities, mobile food carts, food stores and food processing plants.

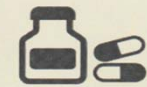


**15,182**

Babies Born

**20,300**

Mental Health and Substance Use



Number of clients in our programs.



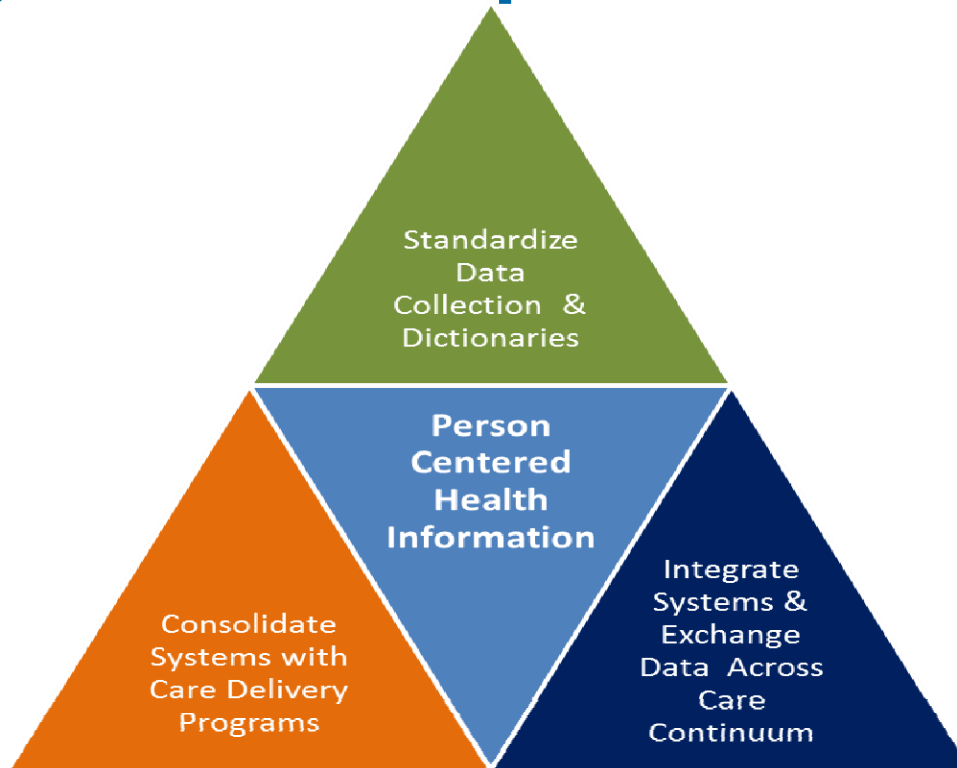
# FHA - Our Complexity

---

- 150+ physical sites (130+ community, 14 acute and corporate sites)
- Patients flow within and between these sites and associated services
- Clinical information systems track patients, record key information about their visits, and form a clinical record
- A few core systems are used for particular sites and programs
  - Meditech in Acute Care
  - Civica Paris for Home Health, Mental Health and Substance Use
  - IntraHealth Profile for Primary Health Care
  - Panorama for Public and Population Health
  - GE Centricity for perinatal care, and others

# Clinical Information Systems – Journey and Roadmap

# Journey & Roadmap



# Journey & Roadmap

Acute Care – Functions and Applications 2003

Functionality / Site	Fraser North HSDA				Fraser East HSDA				Fraser South HSDA			
	BH	RCH	ERH	RMH	CGH	MSA	FCH	MH	LMH	DH	PAH	SMH
eMPI	MEDITECH Magic				MEDITECH C/S				MEDITECH Magic	Eclipsys		
Electronic Medical Record	MEDITECH Magic								MEDITECH			
Registraton	MEDITECH Magic				MEDITECH C/S				MEDITECH Magic	Eclipsys		
Electronic Legal Record (SCA)												
Patient / Clinic Scheduling	MSM								MEDITECH			
Emergency Dept. Mngt												
Peri-natal Mngt												
OR Management	MSM				MEDITECH C/S				MSM		HBOCC	MSM
Anaesthesia Management												
Physician Workload Mngt												
Physician Documentation												
CPOE / POM												
Nursing Documentation												
Allied Health eDocumentation	MEDITECH Magic				MEDITECH C/S				MEDITECH			
Patient Order Entry	MEDITECH Magic								MEDITECH Magic			
Pharmacy	MEDITECH Magic				MEDITECH C/S							
Closed Loop Medication Mngt												
Medical Imaging	MEDITECH Magic				MEDITECH C/S				MEDITECH		MEDITECH	MRM
PACs / Specialty Modalities	GE				Agfa TeleRadiology						Agfa mp	
Laboratory	MEDITECH Magic				MEDITECH C/S				MEDITECH Magic	Eclipsys	SOFT	
Food & Nutrition Mngt	MSM				MSM					Sasquatch	Eclipsys	
Transcription Services	MEDITECH Magic				MEDITECH C/S				MEDITECH	MSM	Dictaphone	Dictaphone
Dictation	Dictaphone				Lanier	Dictaphone	Lanier		Dictaphone			
Dictation Radiology	Tapes	Tapes	Dictaphone		Lanier		Tapes	Dictaphone build & voice				

# Journey & Roadmap

Acute Care – Functions and Applications 2014

Functionality / Site	Fraser North HSDA				Fraser East HSDA				Fraser South HSDA				
	BH	RCH	ERH	RMH	CGH	ARH	FCH	MH	LMH	DH	PAH	SMH	JP
eMPI	MEDITECH C/S 5.65												
Electronic Medical Record	MEDITECH C/S 5.65												
Registration	MEDITECH C/S 5.65												
Electronic Legal Record (SCA)	2014				MT 5.66				2014				
Patient / Clinic Scheduling	MEDITECH C/S 5.65												
Emergency Dept. Mngt	MEDITECH C/S 5.65												
Peri-natal Surveillance & Mngt	GE surv.				GE surv.						GE		GE surv.
OR Management	MEDITECH C/S 5.65												
Anaesthesia Management					GE						GE		GE
Physician Workload Mngt	MEDITECH C/S 5.65												
Physician Documentation	MEDITECH C/S 5.65												
CPOE / POM													
Nursing Care & Documentation	MEDITECH C/S 5.65												
Allied Health eDocumentation	MEDITECH C/S 5.65												
Patient Order Entry	MEDITECH C/S 5.65												
Pharmacy	MEDITECH C/S 5.65												
Closed Loop Medication Mngt													
Medical Imaging	MEDITECH C/S 5.65												
PACs / Specialty Modalities	GE												
Laboratory	MEDITECH C/S 5.65												
Food & Nutrition Mngt	CBORD												
Transcription Services	mModal Outsource to MEDITECH C/S 5.65												
Dictation	mModal												
Dictation Radiology	Lanier (speech recognition)												

# Journey & Roadmap

Community Care – Functions and Applications  
2003

Functionality / Area	Fraser North HSDA				Fraser East HSDA				Fraser South HSDA			
	Bby	New West	TriCities	M. Ridge	Chilliwack	Mission	Hope	Abbots	Langley	Delta	W. Rock	Surrey
Mental Health & SU Bedded MH & SU Bedded (eDocumentation)	MEDITECH Magic											
MH & SU Community (Reg/Ref)	MoH CPIM		MEDITECH Magic		MoH CPIM				MoH CPIM			
MH & SU Com (eDocumentation)												
Residential Care (owned/op'd)	MEDITECH Magic											
Residential InterRAI												
Home Health (Reg/Ref)	MoH CCIMS / MEDITECH Magic											
Home Health (eDocumentation)												
Home Care (Reg/Sched)	Procura				Procura				Procura			
Home Care - InterRAI									Momentum			
Primary Care (Reg/Sched/eDoc)									Clinicare WOLF			
End of Life (Reg/Sched/eDoc)	MEDITECH MagiC (Reg/Sched)											
Environmental Health	Healthspace (APS)		Hedgehog Inspector		Healthspace (ASP)				Hedgehog Inspector			
CCFL	Healthspace (APS)		MoH CCFL		Healthspace (ASP)				MoH CCFL			
Public Health/Outbreak Mngt	iPHIS											



# Journey & Roadmap

Community Care – Functions and Applications 2014

Functionality / Area	Fraser North HSDA				Fraser East HSDA				Fraser South HSDA			
	Bby	New West	TriCities	M. Ridge	Chilliwack	Mission	Hope	Abbots	Langley	Delta	W. Rock	Surrey
Mental Health & SU Bedded	MEDITECH C/S 5.65											
MH & SU Bedded (eDocumentation)	MEDITECH C/S 5.65											
MH & SU Community (Reg/Ref)	PARIS											
MH & SU Com (eDocumentation)	PARIS											
Residential Care (owned/op'd)	MEDITECH C/S 5.65											
Residential InterRAI	Goldcare											
Home Health (Reg/Ref)	PARIS											
Home Health (eDocumentation)	PARIS											
Home Support (Reg / Sched)	Procura											
Home Support - InterRAI	Goldcare											
Primary Care (Reg/Sched/eDoc)	IntraHealth Profile				Profile				Profile			
End of Life (Reg/Sched/eDoc)	PARIS											
Environmental Health	Healthspace (ASP)											
CCFL	Healthspace (ASP)											
Public Health/Outbreak Mngt	Panorama											





## Success created a challenge

- FHA clinicians do not have easy access to parts of the patient record that reside outside the clinical information system that they use

## And an opportunity

- Clinical decision making is better supported with the provision of a complete patient record

# Unifying Clinical Information Network – Project Overview

# Clinical Use Cases

**Example #1:** A home health worker checks if a client has been admitted to hospital, prior to making a home visit

**Example #2:** An ER clinician reads a patient's mental health history (typically part of a case file in PARIS) to support clinical decision making at the point of care

**Example #3:** Home and mental health workers access acute care records to support follow up and continued care planning

**Example #4:** Critical Care Indicators from Meditech and Alerts from PARIS are passed from one setting to another to protect patients and staff

# UCI Project Overview

---

## Clinical requirement:

- Information in different FH clinical systems must be available to support clinical decision making, and tightly integrated into clinical workflow
- The UCI project is delivering the FHA health information exchange solution to achieve this

## Opportunity:

- To leverage the provincial Health Information Access Layer (HIAL) and Provincial Lab Information System (PLIS) to extend the data available to FHA clinicians in Meditech and Paris point of service systems

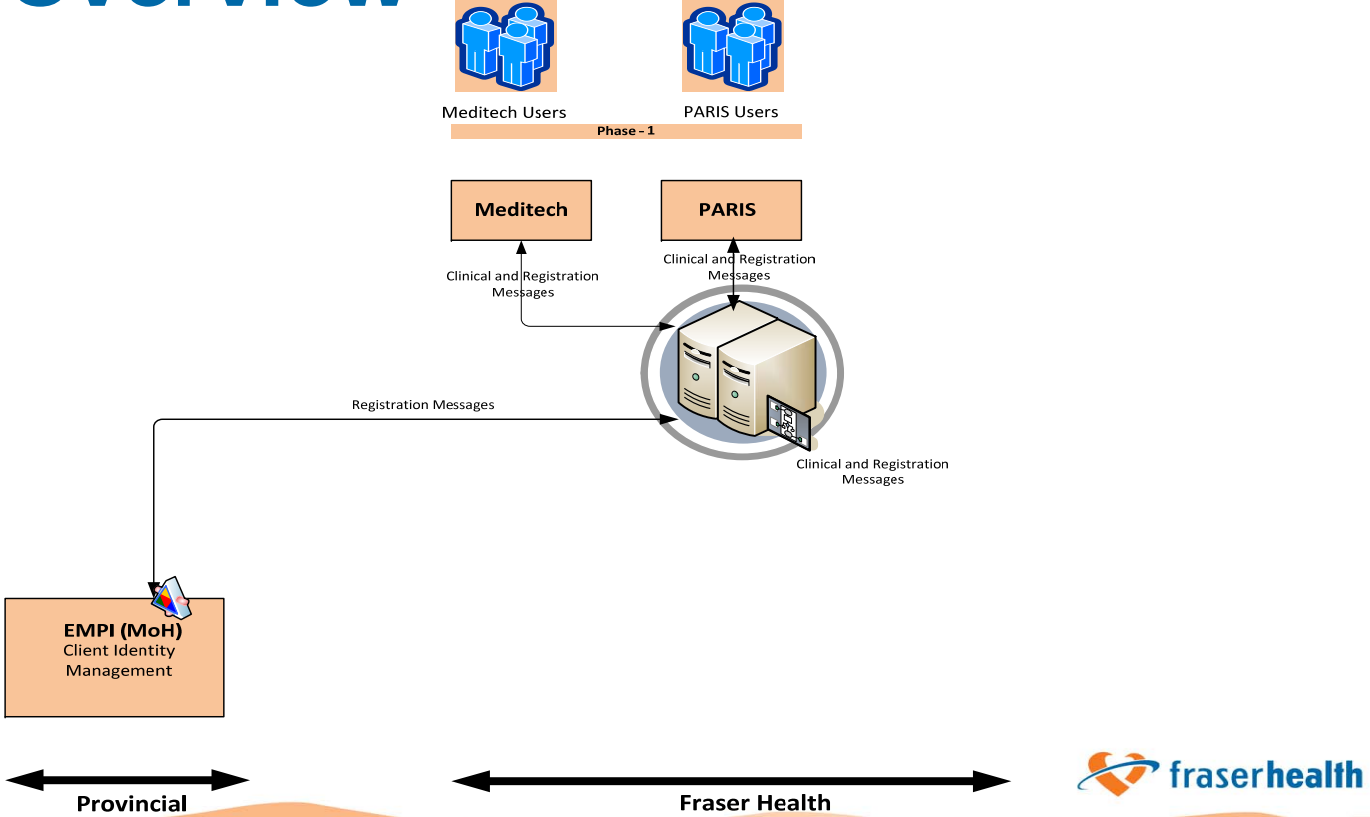
*“All relevant clinical information is available to support clinical decision making at the point of care, with no additional sign-in or patient search, with minimal keying or clicks, and without forcing clinicians to leave their home systems”*

# UCI History

---

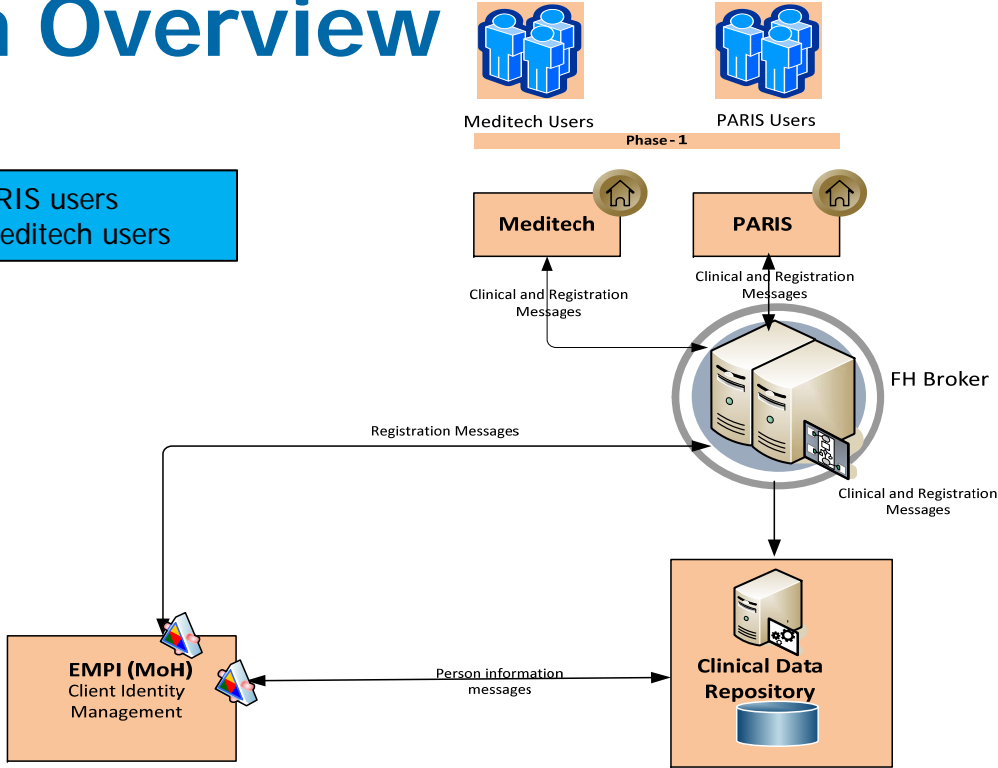
- Long standing, strategic requirement for FHA clinicians
- Allscripts dbMotion selected via RFP as Health Information Exchange (HIE) solution
- Ministry of Health request for FH to lead lower mainland discussions re HIE
  - Involved MoH, FH, Provincial Health Services Authority

# Solution Overview



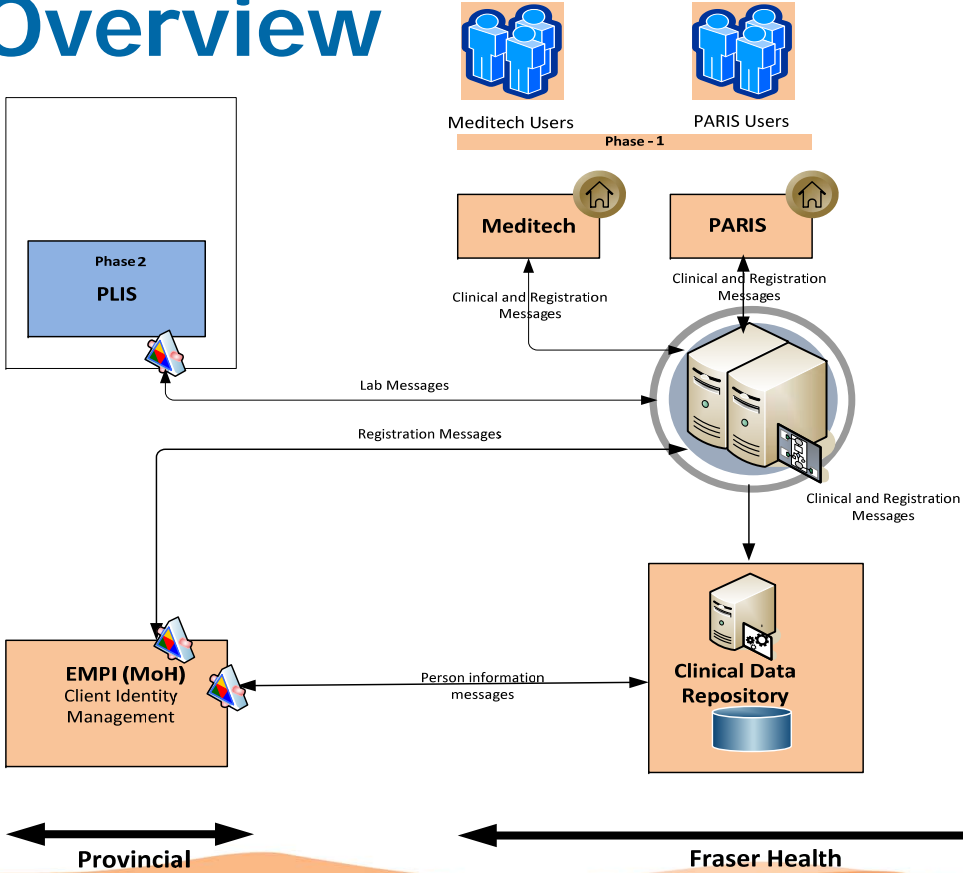
# Solution Overview

- 3,500 PARIS users
- 20,000 Meditech users

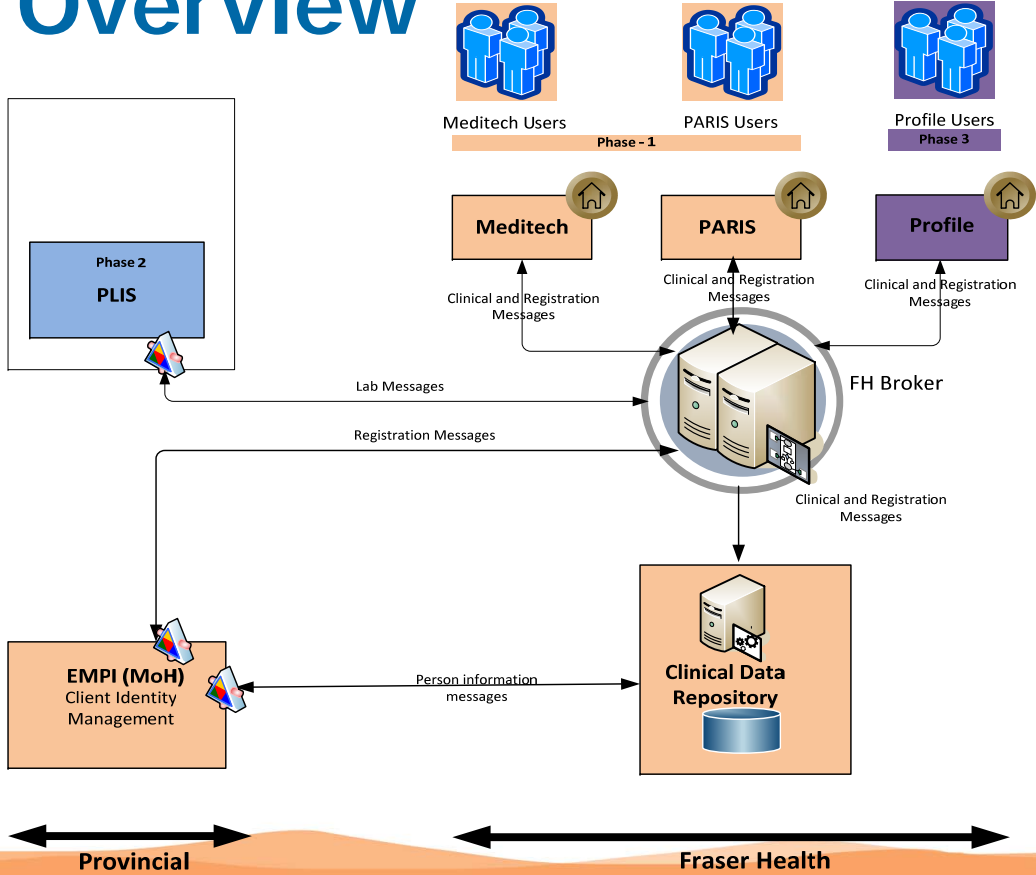




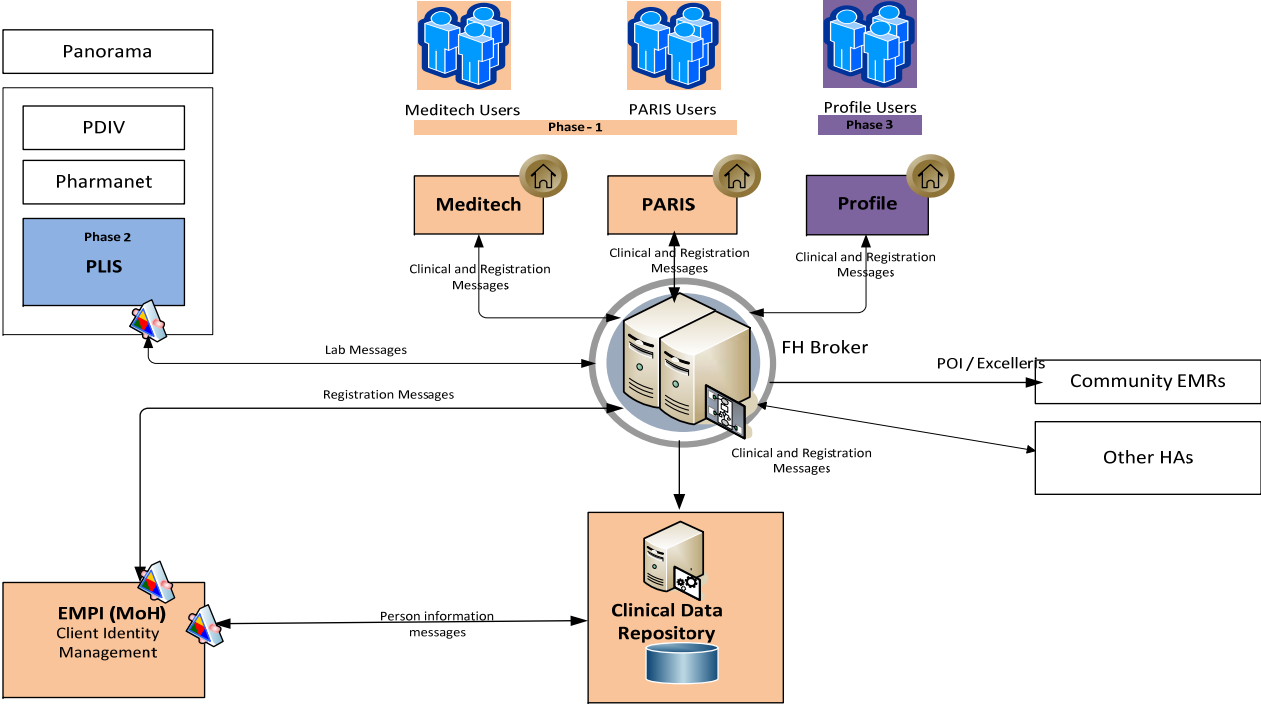
# Solution Overview



# Solution Overview



# Solution Overview



Provincial

Fraser Health

Other organizations



# Project Status

---

- **Phase 1A: Meditech data available to PARIS users:**
  - Connectivity to the MoH EMPI for Patient Centric Provincial Identification: *COMPLETE*
  - Roll-out to PARIS users: *COMPLETE*
  - Support and training to users: *COMPLETE*
- **Phase 1B: PARIS data available to Meditech users:**
  - Environment and message mapping: *COMPLETE*
  - Clinical functional testing: June 2015
  - Roll-out to Meditech users: July 2015
- **Phase Two: PARIS and Meditech users viewing PLIS data**
  - Connectivity to PLIS test: *COMPLETE*
  - Middleware design/development: *COMPLETE*
  - Testing: May/June 2015
  - Roll-out: July 2015

# Early User Feedback

---

- *"Tried it once, was very easy and got what I needed. It was a current info I needed"* MHSU
- *"Its easy to use"* HH CCP
- *"I have 2 clients currently in hospital so it has been super helpful so far. Will give more feedback after I've used it more."* MHSU
- *"Good presentation. Am glad to see an initiative that will make life easier!"* HH RN
- *"Love it! I have only used it a couple of times but it was useful"* MHSU
- *"I used the system and it actually worked! Could access a discharge summary from RCH that was not on the community team chart"* MHSU Physician

# Lessons Learned

---

- Support from all levels of leadership
  - Executive and clinical
- Stakeholder management
  - Importance of setting up an escalation forum with all vendors/stakeholders present
  - Clinical working group essential to assist in key decision making
- Resources (internal and external)
  - Defined project roles with assigned responsibility for project components
  - Required more resources than initially anticipated
- Competing initiatives
  - Source system upgrades
  - Dependency upon Person Identity Project

# Lessons Learned...

---

- Complexity of integration initiatives
  - Environment set up and reliance upon third party vendor
  - Reliance upon Ministry of Health (EMPI)
  - Source systems interconnected with UCI – upgrades/changes
  - Data mapping/integrity – fixing source system data issues
  - Conformance standards (PLIS)
- Communication
  - Understand and target communication based upon user groups
- Timeline and expectation management
  - It will take longer than you expect...

# Lessons Learned...

---

- Operational support
  - Transition to support is challenging without appropriate training, documentation and resources
    - Working with dbMotion support tools
- Training of implementation and support staff on entire solution
  - Vocab mapping, system architecture



# Next Steps

---

- Expand dbMotion platform
  - Upgrade to latest version
  - Collaborate
  - Agent
- Connect with additional internal systems
  - As identified and prioritized by the UCI Clinical Working Group

# Next Steps

---

- Connect with additional external systems
  - Provincial repositories (Panorama, Pharmanet, PDIV)
  - Other HA repositories
  - As identified and prioritized by the UCI Clinical Working Group
- Make FH data available to external stakeholders
  - Consistent with the HIE strategy work underway in BC

# Thank you!



# Contact Us

---

- Cindy Convey – [cindy.convey@fraserhealth.ca](mailto:cindy.convey@fraserhealth.ca)
- Aneet Sahota – [aneet.sahota@fraserhealth.ca](mailto:aneet.sahota@fraserhealth.ca)