Fraser Health: Health Information Strategies for Today and Tomorrow

Gregor McWalter
Interim VP, Technology, Informatics and Analytics
Agenda

• Welcome to Fraser Health
• Empower Patients
• Accelerate Primary and Community Care Innovation
• Transform Clinical and Acute Care Systems
• Advance Innovation and Analytics
• Strengthen our Digital Health Foundation
From Burnaby to Hope

- **20** Municipalities
- **32** Indigenous Communities, including 5 Métis Chartered Communities
- **12** Acute Hospitals and 1 Outpatient Care and Surgical Centre
- **130+** Communities Sites
1,829,828

Number of British Columbians served by Fraser Health
BC Population: By Health Authority, 2018

- Fraser Health: 37.6% (1,829,828)
- Interior Health: 15.7% (762,124)
- Vancouver Coastal Health: 24.5% (1,192,792)
- Island Health: 16.4% (800,132)
- Northern Health: 5.8% (281,031)
BC Population: Projected Growth, 2018-2028

Projected Growth, 2018-2028

FH: 1,829,828 to 2,132,005 (16.5%)
IH: 762,124 to 829,099 (10.9%)
VCH: 1,192,792 to 1,323,055 (10.6%)
VIHA: 800,132 to 884,570 (8.8%)
NH: 281,032 to 297,981 (6.0%)
26,000+ Professional Staff
2,900+ Physicians
4,500+ Registered Volunteers
1,000's Vendors & Contractors
Every Day

- 1,930+ ER Visits
- 8,500+ Home Support Hours
- 400+ CT Scans
- ~50 Babies Born
Our Mission
What is Our Purpose

To improve the health of the population and the quality of life of the people we serve.

Our Vision
What We Want to Achieve

Better health.
Best in health care.

Our Values
What Guides Our Behaviour

Respect, caring, and trust characterize our relationships.
Health Informatics Capabilities

Empower a transformed and collaborative workforce through the provision of innovative information management services and technology.

- **Workforce Enablement**: Fostering and enhancing progressive partnerships with vendors, service providers, business consumers, and the broader community.
- **Success through Partnerships**: Data is treated as a strategic asset that has value to Fraser Health.
- **Data as Strategic Asset**: Transparent, accountable, and informed decision making at the person, population, and organization level.
- **Technology Enabled Performance Management**: Convergence of information, methodology, and technology supporting evidence-informed decisions at the point of service.
- **Informed Decision at the Point of Service**: Single view of a person across the continuum of care.
- **Patient Centric Information**: Seamless flow of information across organizational boundaries within the province of British Columbia.
- **Information without Boundaries**: Access to health care information services wherever and whenever it is needed.
- **Health Care Anywhere**: Access to health care information services wherever and whenever it is needed.
Our Core Health Information Systems

**Acute Care**
- v5.67
- 33,000+ users
- All FH Acute sites
- 3M+ persons in MPI

**Primary Care**
- v8.2
- 630+ users
- 42 clinics
- 36,700+ clients

**Community**
- v6.2
- 3,600+ users
- 119 offices
- 263,000+ clients
Health Information Integration & Exchange

- FH Meditech Profile PARIS
- FH Other clinical / corporate systems
- FH Unifying Clinical Information Network
- FH MyChart™

FH BizTalk

- Ministry of Health EMPI
- Provincial Registries PLIS, DIR
- Excelleris
- CareConnect VCH PHSA PHC
- Other Health Authorities

Other Health Authorities
Empower Patients
Patient Experience

Dedicated department at Fraser Health

Vision:
• “Leading transformation of practice for remarkable patient and provider experiences.”

Outcomes:
• Patients and families involved in healthcare from bedside to boardroom
• Patient will experience high quality care that is centred on them
• Patient and family centred care is integrated throughout the organization
• Providers are engaged and deliver excellent care in a healthy environment
Partnering with Patients

Goals:
• Providing access for patients to their health record
• Ability to self enter personal health information
• Easy access to trusted patient education materials online

Approach:
• Patient Advisory Committee partnership
• Strategic approach developed
• Proof of concept with high interest populations
• Quantitative and qualitative evaluation processes
MyChart™ Personal Health Record

Key features to **Enable, Connect, and Inform** patients, families, and health care providers from anywhere, anytime

- Clinical Information
- Record Sharing
- Messaging
- Health Tracking
- Upload Additional Information
- 24/7 Access Anywhere

A complete online personal health management and continuity of care record solution
MyChart™ Patient Portal Impact

- MyChart™ reduces adverse drug events in outpatient settings.
- MyChart™ helps with collaborative symptom tracking between health care providers.
- MyChart™ supports transition and continuity of care.

- 89% “MyChart™ helps me self-manage my own or my family member’s health condition.”
- 84% “I am more likely to have a test performed… to have access to results online.”
- 93% “I would grant temporary access to hospital ER physician to provide information about my health.”
Changing Paradigm

- Request for Information
  - Redaction processes currently done manually

- Pediatric population
  - Mature minors

- Changing documentation practices
  - Practices that are inherent in the culture of professions

- Disruption = Innovation
Accelerate Primary and Community Care Innovation
Primary and Community Care Redesign

- Strong partnerships established between Divisions of Family Practice and Fraser Health

- Long standing working group established to foster a strong working relationship between FH IM/IT and the various Divisions of Family Practice operating in the FH region:
  - Identify and prioritize opportunities for improvement where wider collaboration between the Divisions of Family Practice and FH is necessary to support service delivery
  - Collaboratively identify solutions aligned with each organization principles and actively pursue
  - Wider collaboration and communication to support service delivery
Provides an integrative framework with coordinated oversight to many of our current projects.

Aimed at enabling clinical areas.

To advance the Ministry of Health’s strategic transformation agenda for patient-centered integrated primary & community care.
Transform Clinical and Acute Care Systems
Fraser Health CIS Journey

• Long standing goal to create person centered health information
<table>
<thead>
<tr>
<th>Functionality / Site</th>
<th>Fraser North HSDA</th>
<th>Fraser East HSDA</th>
<th>Fraser South HSDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>eMPI</td>
<td>MEDITECH Magic</td>
<td>MEDITECH C/S</td>
<td>MEDITECH Magic</td>
</tr>
<tr>
<td>Electronic Medical Record</td>
<td>MEDITECH Magic</td>
<td>MEDITECH Magic</td>
<td>Eclipsys</td>
</tr>
<tr>
<td>Registration</td>
<td>MEDITECH Magic</td>
<td>MEDITECH C/S</td>
<td>MEDITECH Magic</td>
</tr>
<tr>
<td>Electronic Legal Record (SCA)</td>
<td></td>
<td></td>
<td>Eclipsys</td>
</tr>
<tr>
<td>Patient / Clinic Scheduling</td>
<td>MSM</td>
<td></td>
<td>MSM</td>
</tr>
<tr>
<td>Emergency Dept. Mngt</td>
<td></td>
<td>MEDITECH</td>
<td></td>
</tr>
<tr>
<td>Peri-natal Mngt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR Management</td>
<td>MSM</td>
<td>MEDITECH C/S</td>
<td>MSM</td>
</tr>
<tr>
<td>Anaesthesia Management</td>
<td></td>
<td>MEDITECH Magic</td>
<td></td>
</tr>
<tr>
<td>Physician Workload Mngt</td>
<td></td>
<td>MEDITECH Magic</td>
<td>MEDITECH Magic</td>
</tr>
<tr>
<td>Physician Documentation</td>
<td>MEDITECH Magic</td>
<td>MEDITECH Magic</td>
<td></td>
</tr>
<tr>
<td>CPOE / POM</td>
<td>MEDITECH Magic</td>
<td>MEDITECH Magic</td>
<td></td>
</tr>
<tr>
<td>Nursing Documentation</td>
<td></td>
<td>Eclipsys</td>
<td></td>
</tr>
<tr>
<td>Allied Health eDocumentation</td>
<td>MEDITECH Magic</td>
<td>MEDITECH C/S</td>
<td>MEDITECH Magic</td>
</tr>
<tr>
<td>Patient Order Entry</td>
<td>MEDITECH Magic</td>
<td>MEDITECH Magic</td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>MEDITECH Magic</td>
<td>MEDITECH C/S</td>
<td></td>
</tr>
<tr>
<td>Closed Loop Medication Mngt</td>
<td>MEDITECH Magic</td>
<td>MEDITECH Magic</td>
<td></td>
</tr>
<tr>
<td>Medical Imaging</td>
<td>MEDITECH Magic</td>
<td>MEDITECH C/S</td>
<td>MEDITECH</td>
</tr>
<tr>
<td>PACs / Specialty Modalities</td>
<td>GE</td>
<td>Agfa TeleRadiology</td>
<td>Agfa mp</td>
</tr>
<tr>
<td>Laboratory</td>
<td>MEDITECH Magic</td>
<td>MEDITECH C/S</td>
<td>MEDITECH Magic</td>
</tr>
<tr>
<td>Food &amp; Nutrition Mngt</td>
<td>MSM</td>
<td>MSM</td>
<td>Sasquatch</td>
</tr>
<tr>
<td>Transcription Services</td>
<td>MEDITECH Magic</td>
<td>MEDITECH C/S</td>
<td>MEDITECH</td>
</tr>
<tr>
<td>Dictation</td>
<td>Dictaphone</td>
<td>Dictaphone</td>
<td>Dictaphone</td>
</tr>
<tr>
<td>Dictation Radology</td>
<td>Tapes</td>
<td>Tapes</td>
<td>Dictaphone build &amp; voice</td>
</tr>
<tr>
<td>Functionality / Site</td>
<td>Fraser North HSDA</td>
<td>Fraser East HSDA</td>
<td>Fraser South HSDA</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------</td>
<td>------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>eMPI</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Electronic Medical Record Registration</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Electronic Legal Record (SCA)</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Patient / Clinic Scheduling</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Emergency Dept. Mgmt</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Peri-natal Surveillance &amp; Mgmt</td>
<td>GE surv.</td>
<td>GE surv.</td>
<td>GE surv.</td>
</tr>
<tr>
<td>OR Management</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Anaesthesia Management</td>
<td>GE</td>
<td>GE</td>
<td>GE</td>
</tr>
<tr>
<td>Physician Workload Mgmt</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Physician Documentation</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>CPOE / POM</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Nursing Care &amp; Documentation</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Allied Health eDocumentation</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Patient Order Entry</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Closed Loop Medication Mgmt</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Medical Imaging</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>PACs / Specialty Modalities</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td></td>
<td>MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Food &amp; Nutrition Mgmt</td>
<td></td>
<td>CBORD</td>
<td></td>
</tr>
<tr>
<td>Transcription Services</td>
<td></td>
<td>mModal Outsource to MEDITECH C/S 5.65</td>
<td></td>
</tr>
<tr>
<td>Dictation</td>
<td></td>
<td>mModal</td>
<td></td>
</tr>
<tr>
<td>Dictation Radiology</td>
<td></td>
<td>Lanier (speech recognition)</td>
<td></td>
</tr>
</tbody>
</table>
Clinical and Acute Care Transformation

- **Clinician** and **Professional Practice led** program that supports clinical transformation through the:
  
  - Creation of one accessible, individualized, and integrated plan of care across the care continuum for all professions involved in supporting patients/clients/residents
  
  - Upgrade of the core acute healthcare information system to the newest version, MEDITECH Expanse, with Advanced Clinical Systems to optimize quality and safety
Integrated Plan of Care

Objectives:
• Creation of a unique person-centered and point of care electronic healthcare information system
• Improving data capture, data quality, and consistency of documentation
• Embedding decision-making support into clinical tools
• Reducing redundant documentation

Enables:
• Transition from paper to electronic charting in Meditech Patient Care System (PCS) module
• Standardized documentations for multiple professions all in one place
Facility Spotlight:
Royal Columbian Hospital, est 1862

- Cardiac Care
- Neurosurgery
- High-risk Obstetrics
- Neonatal Intensive Care
- Acute Mental Health

1 of only 2 Level 1 Adult Trauma Hospitals in BC

- 15,000+ Trauma Cases
- 940+ Open Heart Surgery
- 260+ Air Ambulance Flights
Advance Innovation through Analytics
Becoming an Insight Driven Organization

- Dedicated Integrated Analytics Team supporting operational and performance reporting within Fraser Health
- In 2017, Fraser Health Executive and members of the Leadership Team established a vision for integrated data and analytics with the objective for Fraser Health to become an Insight Driven Organization
Guiding Principles

1. Information is managed as a key health sector asset
2. Analytics supports strategic and operational needs of Fraser Health
3. Information and analytics is governed using clear roles and responsibilities minimizing the spread of accountability
4. Information and analytics is made accessible to support internal and external sharing and use
5. Single source of truth for data and analytical insights
# Integrated Data and Analytics Objectives

<table>
<thead>
<tr>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-align core clinical and business data assets and data analytics resources across FHA that will operate under a new <strong>Target Operating Model</strong></td>
</tr>
<tr>
<td>Establish robust <strong>Enterprise Data Strategy</strong> with foundational data collection, management, access, and use capabilities that will enable consistent and coordinated use of data analytics infrastructure and delivery capabilities</td>
</tr>
<tr>
<td>Adopt a coordinated approach to <strong>analytics service delivery</strong> with common standards, robust analytics practices, and a transparent coordination of priorities across business and clinical areas</td>
</tr>
<tr>
<td>Establish new <strong>Governance Structure</strong> overseeing data collection, management, access, and use to ensure that the data and analytics investments deliver maximum value for FHA and the community.</td>
</tr>
<tr>
<td>Develop and prioritize value-based <strong>use cases</strong> that support FHA strategic and operational objectives</td>
</tr>
<tr>
<td>Refresh and enhance <strong>technology infrastructure</strong> to provide enablement of data warehouse and Meditech data repository applications with additional self service enhancements</td>
</tr>
</tbody>
</table>
Strengthen our Digital Health Foundation
Wi-Fi Enablement across Fraser Health

Guests
- Complete: All acute sites + corporate office by 2018

Acute
- In Progress: Campus-wide Voice-grade
- All FH acute sites by 2021

Non-Acute
- Planning
  - 2018: Proof of Concept at 3 sites
  - 2019-2020: 65 community sites

FH Team
- Define and manage project
- Liaise and consult with business areas
- Engage facilities management

PHSA Tech Services
- Manage network core, edge switches, routers
- Design, survey, deploy, and monitor Wi-Fi
**Enterprise Mobility Management**

**CONTINUING MISSION:**

“To achieve successful foundations and platforms that enable widespread and high-value use of modern mobile devices in Fraser Health.”

<table>
<thead>
<tr>
<th>END USERS</th>
<th>APPLICATIONS</th>
<th>DEVICES</th>
<th>CONNECTIVITY</th>
<th>SECURITY</th>
<th>MIDDLEWARE</th>
<th>INFRASTRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FH Staff</td>
<td>Clinical and Business Apps</td>
<td>Smartphones</td>
<td>Corporate Wi-Fi</td>
<td>2-Factor Authentication</td>
<td>Mobile Device Management</td>
<td>Mail Exchange</td>
</tr>
<tr>
<td>FH Physicians</td>
<td>Productivity Apps</td>
<td>Smart Tablets</td>
<td>Access from the Internet</td>
<td>Verified Secure Access</td>
<td>Mobile App Catalogue</td>
<td></td>
</tr>
<tr>
<td>FH Contractors</td>
<td>Network and Collaboration</td>
<td>iOS</td>
<td>Access from the Internet</td>
<td>AES 256-Bit Encryption</td>
<td></td>
<td>Enterprise Systems</td>
</tr>
</tbody>
</table>
The establishment of an Enterprise Mobility Management platform allows Fraser Health users to have the option for a Choose Your Own Device program:
Secure Messaging Project

Through MicroBlogging MD

What It Is
Fraser Health’s *only* approved secure text messaging service

Goals
Communicate confidential information *easily* and *securely*

Added Value
Enhance timely coordination of care, clinical workflows

Current Status
Roll-out in progress
Moving Forward

- Fraser Health is working toward a transformed healthcare delivery system - where patients and families are meaningfully engaged and empowered to manage their care
- Enable clinical areas for patient-centered integrated primary & community care
- Implementation of Advanced Clinical Systems to support the changing health care paradigm
- Continue driving Integrated Analytics strategy and roadmap
- Continue to support integration and interoperability to strengthen our foundation
- Continue to align with the Digital Health Strategy
Thank You

Gregor McWalter
Interim VP, Technology, Informatics and Analytics
gregor.mcwalter@fraserhealth.ca

https://www.linkedin.com/company/fraser-health-authority/
https://www.facebook.com/FraserHealthAuthority/
https://twitter.com/fraserhealth
Disclosure Regarding Image Use

Images have been sourced from:

- Images.google.com labeled for ‘non-commercial reuse’
- Previously published images from publically-facing Fraser Health resources such as fraserhealth.ca
- Royalty-free and copyright-free images from Wikimedia Commons and other publicly available non-commercial sources

Fraser Health staff mosaic has been provided and authorized for use by Fraser Health’s Talent Acquisition and Onboarding Team