

Canada Infoway Health Santé Infoway du Canada

eChart Ambulatory Project

EMR Benefits Measurement in a Tertiary Care Facility

June 3, 2014
eHealth Conference
Vancouver, BC

Presenters:

Adrienne Cousins, Change Readiness Lead, Clinical Solutions Delivery, IMITS

Anne Baldwin, MN, Change & Evaluation Specialist, Canada Health Infoway

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Information Management / Information Technology Services
One person. One record. Better health.

Proof to Serve:



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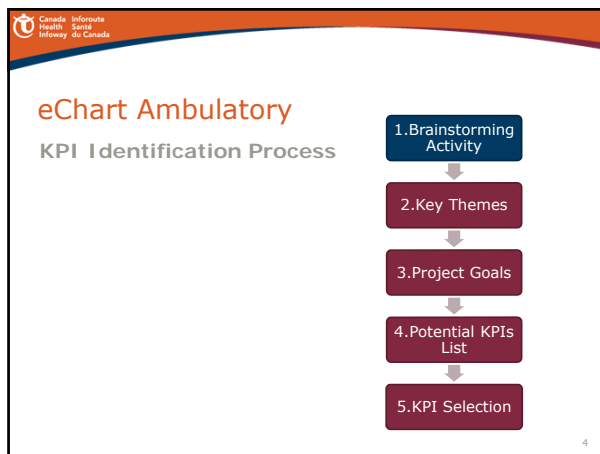
@ BC Children's, BC Women's and BC Mental Health and Substance Use Services:

Current eChart adoption:

- eChart in use to review results & reports since 2012 by ~2,500 users
- Clinical documentation by 3 inpatient areas; Mental Health, NICU and Oncology

eChart Ambulatory Project kick-off in Feb 2013:

- 18 medical clinics
- Ambulatory and Maternity Solutions:
 - Clinical assessment and documentation
 - Patient histories (social, family, procedure, etc.)
 - Medication Hx, medication reconciliation and Rx
 - Secure messaging



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IMITS & CHI Collaboration

Partnership to make the project successful

- Share expertise & resources
- Leverage lessons learned from across Canada
- Change Management activities
- BE Activities
 - Benefits Evaluation Symposium for C&W and PHSA stakeholders, April 2013

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Objectives of the BE Symposium

- Brief overview of Canada Health Infoway (CHI)
- Overview of the CHI Benefits Evaluation Framework
- Overview of the process for developing Key Performance Indicators (KPI)
- Development of a high level grid ranking Ambulatory Project KPI's
- Next Steps

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Benefits and Engagement

C&W Symposium - 27 representatives from:

- C&W Clinical Informatics
- Quality, Safety & Accreditation
- Front-line Clinical Management
- Medical Executive
- PHSA Performance Measurement & Reporting
- Planning & Performance Management, IMTIS
- Vendor partner client relations
- Project Executive sponsors from IMITS and C&W

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Canada Health Infoway

- Created in 2001
- \$2.1 billion in federal funding
- Independent, not-for-profit corporation
- Accountable to 14 federal/provincial/territorial governments

Mission:
Fostering and accelerating the development and adoption of electronic health information systems with compatible standards and communications technologies on a pan-Canadian basis with tangible benefits to Canadians. *Infoway* will build on existing initiatives and pursue collaborative relationships in pursuit of its mission.

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Infoway business strategies

- Collaborate with health ministries and other partners
- Strategically co-invest with public sector partners (75:25 formula)
- Gated Funding – Adoption Requirements
- Measure benefits and adjust
- Leverage investment
- Engage clinicians
- Privacy safeguards



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Applying the BE Framework

System quality
• Functionality
• Performance
• Security

Information quality
• Content
• Availability

Service quality
• Responsiveness

Use
• Use Behavior/Pattern
• Self Reported Use
• Intention to Use

User Satisfaction
• Competency
• User Satisfaction
• Ease of Use

Realistic yet rigorous enough to adequately evaluate benefits:

- Set of indicators developed by Subject Matter Experts
- Measure each of the indicators across the domain projects

NET BENEFITS

- Quality**
 - Patient safety
 - Appropriateness/effectiveness
 - Health outcomes
- Access**
 - Ability of patients/providers to access services
 - Patient and caregiver participation
- Productivity**
 - Efficiency
 - Care coordination
 - Net cost

ORGANIZATIONAL & CONTEXT FACTORS: STRATEGY, CULTURE & BUSINESS PROCESS – OUT OF SCOPE

Based on the DeLone & McLean IS Success Model

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Benefits Evaluation Framework

eChart	User Adoption	Net Benefits
System quality (SY) • Functionality • Performance • Security	Use (U) • Use Behavior/Pattern • Self Reported Use • Intention to Use	Quality (Q) • Patient safety • Appropriateness/effectiveness • Health outcomes
Information quality (I) • Content • Availability		Access (A) • Ability of patients/providers to access services • Patient and caregiver participation
Service quality (S) • Responsiveness	User Satisfaction (US) • Competency • User Satisfaction • Ease of Use	Productivity (P) • Efficiency • Care coordination • Net cost

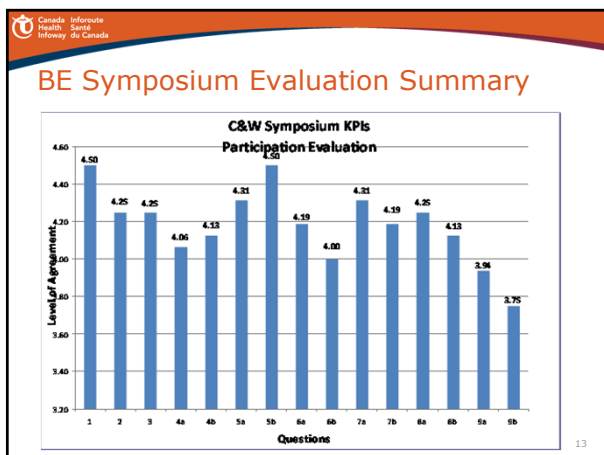
Benefits Realization Over Time

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Evaluation not Research



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- ### C&W Benefits Evaluation Working Group
- Purpose:
1. Oversee execution of the eChart Ambulatory Project Benefits Measurement Plan.
 2. Identify new operational reporting requirements (for Go-live) and any impacts to existing reports.
 3. Ensure mutual understanding of new data and how it can be used to improve efficiency and care (in future).

- ### C&W Benefits Evaluation Working Group
- Participants:
- Decision Support (co-chair), Quality & Safety, Risk, LEAN experts, accreditation teams, clinical program managers, operations managers as well as some very keen physicians.
 - What do they have in common? *They all need data!*
 - Mutual need for quality data.
 - First time a interdisciplinary group was brought together to discuss this issue.
 - *Appreciated* the opportunity to come together around a table to discuss their mutual need for quality data.

KPI Summary

Data Collection Method	# KPIs
1. Infoway System and Use Survey	6
2. System Reports	4
3. C&W One-Time KPI Projects	3
Total KPIs:	13

eChart Ambulatory Project KPIs

ID	ECHART	SOURCE
System Quality		
SY-1	Number of Clinical Documentation Tools	Report
SY-2	User Satisfaction with System Quality	Infoway Survey
Information Quality		
I-2	Data Completeness of Patient Profile	Clinic Record vs. eChart
I-4	User Satisfaction with Information Quality	Infoway Survey
Service Quality		
S-1	Go-live Communications and Training	Infoway Survey
S-2	Go-live Service Quality	Infoway Survey

USER ADOPTION		SOURCE
User Satisfaction		
US-1	Overall User Satisfaction	Focus Group
US-3	Overall User Satisfaction	Infoway Survey
Use		
U-1	User Behaviour Patterns (Objective)	Lights On Report
U-5	System Usage Assessment (Subjective)	Infoway Survey
NET BENEFITS		METHOD
Quality of Care		
Q-3	Efficacy of Medication Alerts	Lights On Report
Q-7	Patient & Family Experience	Survey
Access		
A-1	Patient Throughput (Flow)	Report
Productivity		
P-2	Overall Productivity (Time Savings)	Tally Sheet
P-6	Number of phone-visit encounters created	Report

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C&W SUS Pre-test /Baseline

- Survey sent out April 29th 2014
- 1754 eChart users who have logged on in the past 3 months
- SUS response rate of 8% (140 responses)

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System and Use Survey (SUS)

- Standardized tool used across the country
- Customizable for each jurisdiction
- Intended to be administered soon after a project has gone live
- To be repeated to determine improvement

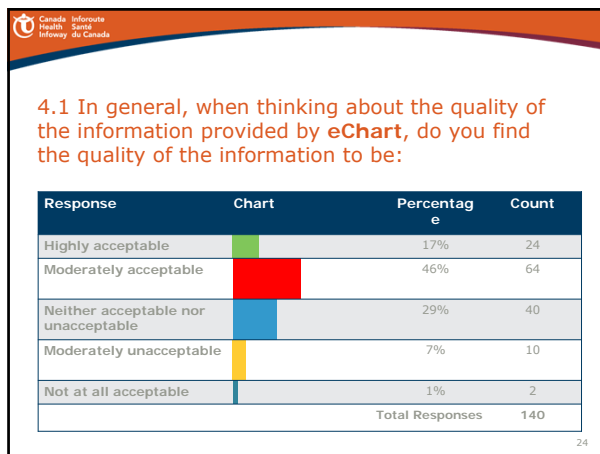
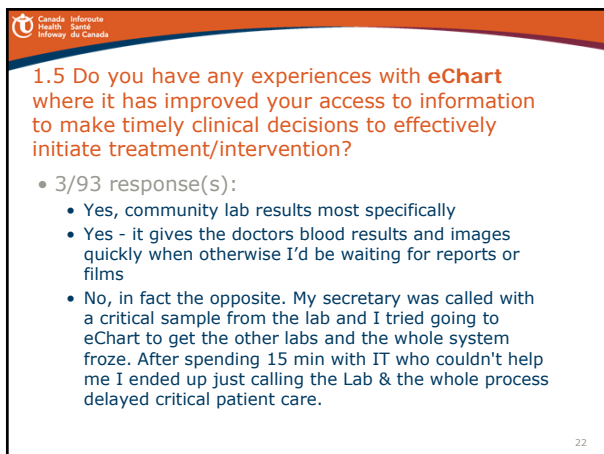
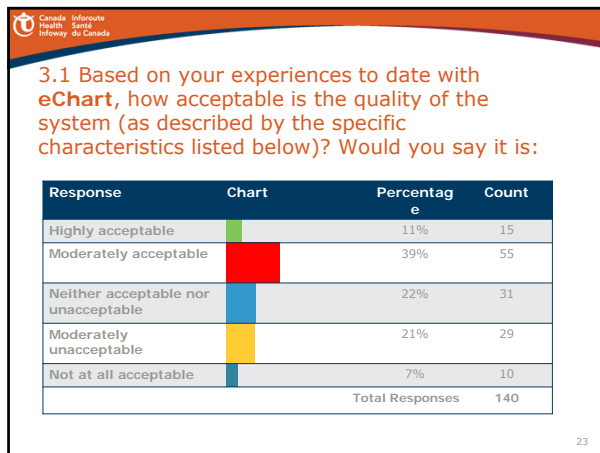
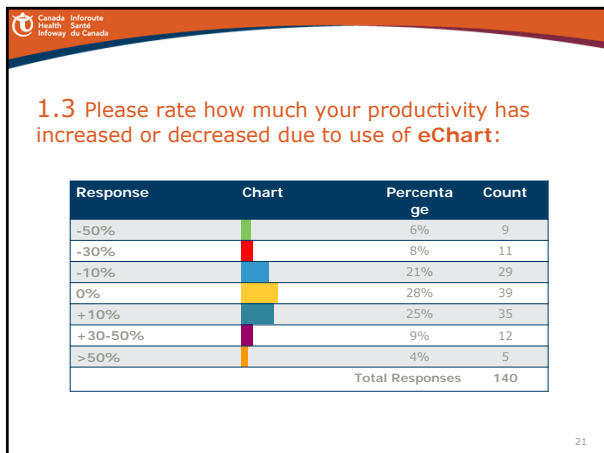
The questions that make up the survey were developed by evaluation Subject Matter Experts and *Infoway's* Benefit Evaluation team.

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1.1 In general, how satisfied are you overall with eChart? By "satisfied" we mean the ease and functionality, the quality of the information given and the quality of the services provided.

Response	Chart	Percentage	Count
Highly satisfied		8%	11
Moderately satisfied		34%	47
Neither satisfied nor dissatisfied		21%	30
Moderately dissatisfied		22%	31
Not at all satisfied		15%	21
		Total Responses	140

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Next Steps

eChart Ambulatory Project Team

- *KPI plan – Complete*
- *Baseline report – Complete*
- Collect post-implementation measures
- Produce Project KPI Evaluation Report
 - Copy will be sent to all WG participants, C&W Clinical Informatics, project sponsors and IMTIS Project Office.

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Challenges

- “New knowledge” and Organizational Readiness
- Non-critical path activity
- Ownership of measures over time
- Limited scope, they still need more data

Successes

- New relationships and partnerships
- New understanding of current and future potential
- Some quick wins, i.e. Med Rec compliance (but only for early adopter clinics)

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Next Steps

Where do clinical leaders go for information?

- eChart – For direct patient care reporting
 - E.g. Patient lists, cancelled appointments
- PHSA Data Warehouse – For retrospective reports
 - E.g. volumes and trends
- Agency Quality & Safety Committees - Review of appropriate use, quality, process, and related issues
 - E.g. Alert Fatigue, use of “other” field

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Presenter Disclosure

- Presenter – Anne Baldwin Adrienne Cousins
- Relationships with Commercial Interests – None

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THANK YOU

QUESTIONS ?

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