Clinical Transformation Enabled by Information Technology

- UVic eHealth Observatory
- BE Framework and Maturation Stages
- Rapid Response Evaluation Methods
- Physician Office EMR Evaluation Studies

What is the UVic eHealth Observatory?

- **Overall Aim**
  - Monitor effects of HIS deployment and use in Canada

- **Specific Objectives**
  - Employ models/methods/metrics to evaluate HIS adoption/use/impact
  - Engage eHealth community in KT to synthesize/share/use knowledge
  - Build research capacity in HIS implementation/evaluation

- **Program Scope**
  - Medication management, EMR/EHR integration; care providers ...
  - Secondary use in performance management

- **Contexts**
  - System related: eDrug, EMR, lab and EHR in BC and elsewhere
  - Social/healthcare related: communities, organizations, domains
Canada Health Infoway
Benefits Evaluation 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

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

Health Information System
Maturation Stages

Metric "Saturation"

Go Live

Metric expected low

Measure Baseline Analysis Design

Measure Data Accessibility

Measure System Use

Measure Clinical Behaviours

Measure Clinical Outcomes
RREM - Rapid Response Evaluation Methods

Assembling an HIS evaluation methodology toolkit

- HIS Users
  - Early Adopters
  - Advanced-users
  - Intermediate-users
  - Basic-users
  - Non-users
  - Late Adopters

- HIS Lifecycle
  - Telescopic Views

- HIS Effects
  - Usability Engineering
  - Process Evaluation
  - Impact Evaluation
  - Meta-analysis And Review

RREM - Physician Office EMR Systems

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<thead>
<tr>
<th>HIMSS Levels</th>
<th>IOM Features</th>
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<tbody>
<tr>
<td>5</td>
<td>EMR Integrated with Health System, Point of Reflection CDSS</td>
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<td>4</td>
<td>Electronic Chart with Advanced Point of Care CDSS</td>
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<td>3</td>
<td>Electronic Medical Record (more passive record)</td>
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<td>2</td>
<td>Hybrid Electronic Paper Chart</td>
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<td>1</td>
<td>Online Access to Reference Materials</td>
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<td>Paper Charts for Clinical Information</td>
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RREM - EMR Adoption Model Benchmarking

RREM - Physician Office EMR Evaluation Studies

UVic Team-1
Clinician x2
Analyst x2

Physician Office
Practice x10
(6-10 docs/site)
CoPx1

Jurisdiction-1
Coordination
Tech support

Team-2
Physician Office
Practice, CoPx2

Time Periods (6 months /period)
0 1 2 3 4

KT Impact Workflow Usability Benchmarks

Iterations

Practice
Review

Health
Information
Results
Management
Order Entry/
Management
Decision
Support
Electronic
Communication
Patient Support
Administrative
Processes

May 31, 2009