Pan-Canadian Study on Remote Patient Monitoring

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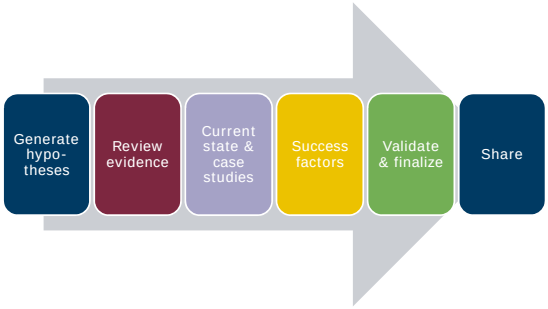
Remote Patient Monitoring Study Objectives

- Clarify the current state of RPM initiatives across Canada
- Examine the costs and benefits associated with a large-scale technology implementation of a RPM solution
- Provide guidance on options for promoting and scaling-up new care models that bring care closer to home
- Align closely with program launch and Emerging Technology Group activities

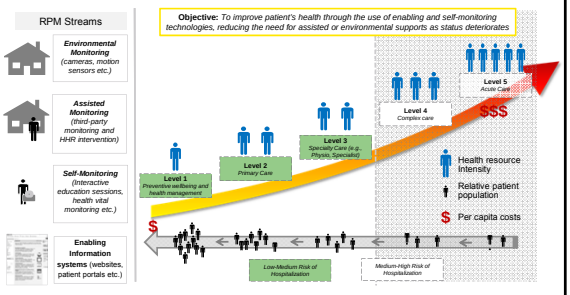
Study Approach



What is Remote Patient Monitoring?: Study

- *Delivery of care to patients **outside of conventional settings**, such as in the home, **enabled by a technological application or device**, hinging on the electronic **transmission of patient data to a provider** as part of a series of integrated services and processes.*
- *Supports delivery of care to patients regardless of geographical constraints and enables clinicians to monitor patients for extended periods of time, potentially reducing the need for more complex interventions.*

Assessing Fit for Different Patients



RPM aims to proactively pull eligible clients from higher levels of care to manage, maintain and/or improve client's health in the community

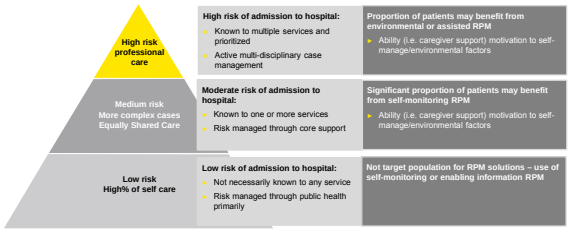
Monitoring broadly (2013 surveys/data)

~ 5,000 patients enrolled in 19 remote patient monitoring programs across seven provinces and territories

> 20% of hospitals reported providing patients with telemonitoring services in the last 12 months

1% of Canadians used medical devices that captured and transmitted data electronically (e.g., via Internet or SMS) to their health care providers for chronic disease or post-surgical discharge monitoring. (Annual Tracking Survey, conducted by Harris Decima and commissioned by Canada Health Infoway, 2014)

Kaiser Permanente Triangle of Managing Chronic Health Conditions



Kaiser Permanente Triangle of Managing Health Conditions

Current State of RPM in Canada

- Current RPM programs
  - Majority of activity in BC, Ontario and Quebec
  - Growth of 15-20% annually in large programs since 2010
- Most RPM programs are complex interventions designed for high risk patients (e.g. CHF, COPD, diabetes, post-cardiac discharge)
  - Goal: Reducing avoidable inpatient admissions and emergency department visits
- Multiple small scale, often pilot/research RPM projects also underway
  - Range of intervention complexity and type of patients

Confidential – Not for Distribution

Review of Evidence: Findings

	Hypotheses from key informants & literature review	Strength of evidence
Quality	• ↑ Patient satisfaction • ↑ Patient compliance • ↑ Quality of life • Promote integrated care	O O O ·
Access	• ↓ Caregiver burden • ↑ Access to specialists • ↑ Dissemination of health data	O · ·
Productivity	• ↓ ED visits / hospitalizations • ↓ Per client health $ • ↓ Per client care time	● O ·

Strongest evidence for ↓ hospital visits, ↑ patient satisfaction, and ↑ quality of life given appropriate patient selection into program

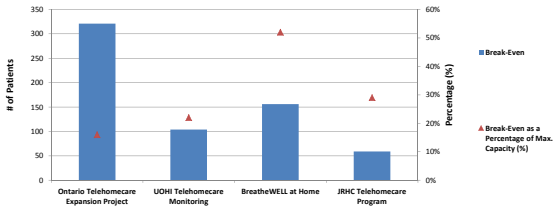
Case Studies - Results

- Focused on larger programs
  - All showed pre/post reductions in ED visits &/or acute inpatient days
  - Cost analysis assessed # patients to "break even" at system level
    - Broadly, solution costs vs. hospitalization costs
    - ~ 50-350 patients depending on the program
  - Some additional outcome measures also available

The case studies

OTN	UOHI	BreatheWELL	JRHC
CHF, COPD	CHF	COPD	CHF, COPD, Diabetes
• Aged 18 + • History of ED visits and/or hospitalization • Few current supports • Difficulty managing medications and their condition(s) • Frequent primary care visits	• 1 CHF readmission /1 month or 2 in 6 months • New CHF diagnosis • Recovering from cardiac surgery • Requiring vital signs, arrhythmia monitoring	• COPD exacerbations in last year resulting in: • 2 ED visits and at least 1 hospital admission or • 3 + ED visits	• Serious chronic condition requiring frequent home visits • Have regular physician • Not suffering from psychological or psychiatric disorders

Sustainability of Large-Scale RPM Programs

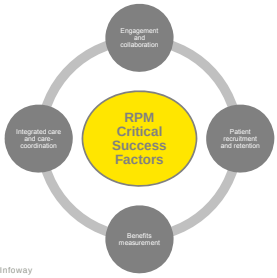


Emerging Experiences

- Profiles of additional innovative solutions
  - Tend to involve smaller # of patients and less mature benefits evaluation
  - Utilizing innovative approaches to emulate the benefits of mature RPM programs
    - mDAWN (BC), WelTel (BC), Virtual Cardiac Rehabilitation Program (BC), MyHomeHealth Program (AB)
  - Typically relying on readily available technology, such as smartphones and internet access.

Critical Success Factors

Findings from the Case Study and Emerging Solution reviews have identified 4 interrelated factors that should be considered by RPM program managers, providers, vendors and patients to support the appropriate design, implementation and uptake of RPM programs across Canada.



Key Study Findings

- RPM growing, both in more traditional programs and grass-roots initiatives for less complex patients
- Significant benefits seen in hospital use, patient satisfaction, and quality of life
  - Other hypotheses have limited-medium evidence
  - Appropriateness and cost-effectiveness for moderate risk patients/other conditions must be further evaluated
- Start-up costs significant but ROI suggests RPM feasible even for small jurisdictions

More Information…

Learn about the benefits, key success factors for expanding Remote Patient Monitoring program in Canada.

Please sign up for a Webinar:
Tuesday, June 10, 2014
1:00 – 2:00 p.m. ET

Details at www.infoway-inforoute.ca

Ontario Telehomecare Expansion Program

Laurie Poole, Ontario Telemedicine Network

Telehomecare Expansion Program Overview

- A **coaching intervention** for patients with significant chronic illness, based on guidelines that are evidence based, including RNAO best practice guidelines, and approved by an external clinical advisory committee
- Initially directed to patients with COPD and CHF who have had a recent ED and/or hospital admission
- Delivered by a RN/RT with specialized training in disease management and health coaching
- Family physician (or MRP) supports decision making as required
- Supported by remote monitoring technology
- Time-limited intervention (~6 month)

Telehomecare Expansion Program

Investment from the province, Canada Health Infoway and the Early Adopter LHINs has resulted in a comprehensive, evidence-based program, with demonstrated benefits, ready to be rolled-out province wide:

- Telehomecare is well-aligned with health system priorities. It offers a lower cost intervention that results in reduced ED visits and Inpatient admissions for enrolled patients with COPD and HF – priority patients for Health Links, QBPs and patient-based funding
- A robust Telehomecare infrastructure has been established for Ontario:
  - OTN has implemented a high quality, evidence-based clinical program including training, business processes and change management model for LHIN/Hosts to start-up and maintain a new Telehomecare program, supported by a core, scalable technology solution
  - Seven LHINs have implemented telehomecare with 8 host organizations (hospitals, CCACs and HealthLinks), a core team of over 40 clinicians with essential telehomecare expertise and over 2500 enrolled patients
  - Together, the LHINs, Hosts and OTN have built an effective, patient-centred program and a team with expertise, experience and passion for program delivery, innovation and continuous improvement
- Early evidence demonstrates that the anticipated health system benefits are being achieved

Adoption Planning and Management - Framework

Introducing a new type of patient care that depends on integration within a complex, multi-stakeholder health system requires a coordinated, multi-faceted approach that is managed and adapted over time.

Build Awareness & Buy-in • **Create a "willing environment"**	**Make it Easy** • Integrated within care systems • Embedded in workflow
Target for Success • High value, high profile/influence • High prospect of success	**Demonstrate Results / Value** • Assess outcomes • Publish/share results

Adoption Strategies and plans have been aligned with this framework to:

- Define strategies, roles and responsibilities, tactics and plans for LHINs, partners, OTN
- Identify gaps, dependencies and opportunities for collaboration
- Measure and manage and repeat

Thank you

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