Focus Reset: Adopting a consumer “first mile” mindset

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The “Inconvenient Truth”

- In 2014, healthcare spending in Canada is forecast at $214.9 billion[1]
- Annual cost of illness, disability and death due to chronic diseases reached over $80 billion[2]
- In addition..
  - Canadian seniors with 3 or more chronic conditions (~24%) account for 3 times the number of healthcare visits as other seniors – attributing to 40% of all healthcare resources[3]

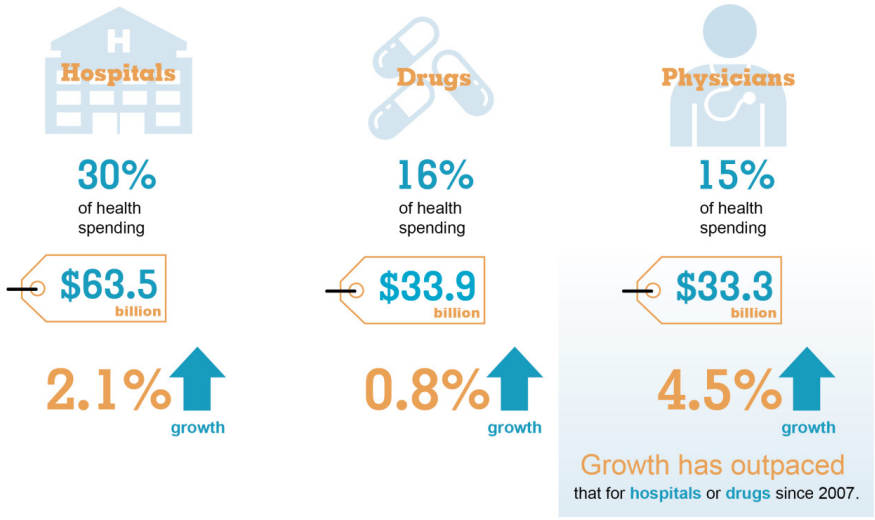
[1]CIHI, National Health Expenditure 2014
[2]http://www.conferenceboard.ca/cashc/research/2012/inconvenient_truths.aspx
[3]Global and Mail, April 20, 2015

Over the last 25 years, there have been many attempts to change the trajectory

New investment has primarily focused on efficiency & capacity within existing structures

- Quality initiatives within existing policy structures and organizations
- Right sizing (fiscal restraint)
- Adding capacity to address wait-times
- Technology solutions that connect providers

Where is most of the money being spent?



Source
Canadian Institute for Health Information, *National Health Expenditure Trends, 1975 to 2014.*

Hospitals, Drugs & Physicians consumed over 60% of total health expenditure (2014)

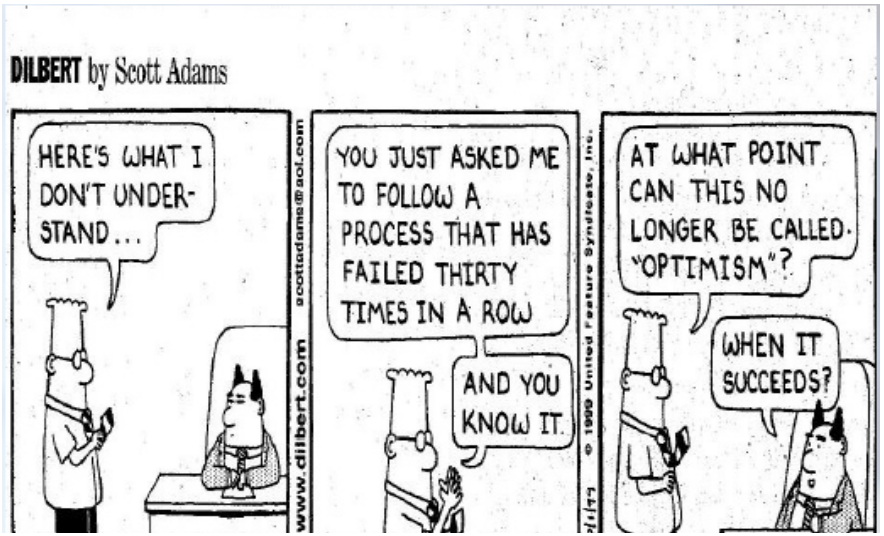
However, the return on this investment has been disappointing

Healthcare Performance Ranking- 11 OECD Countries

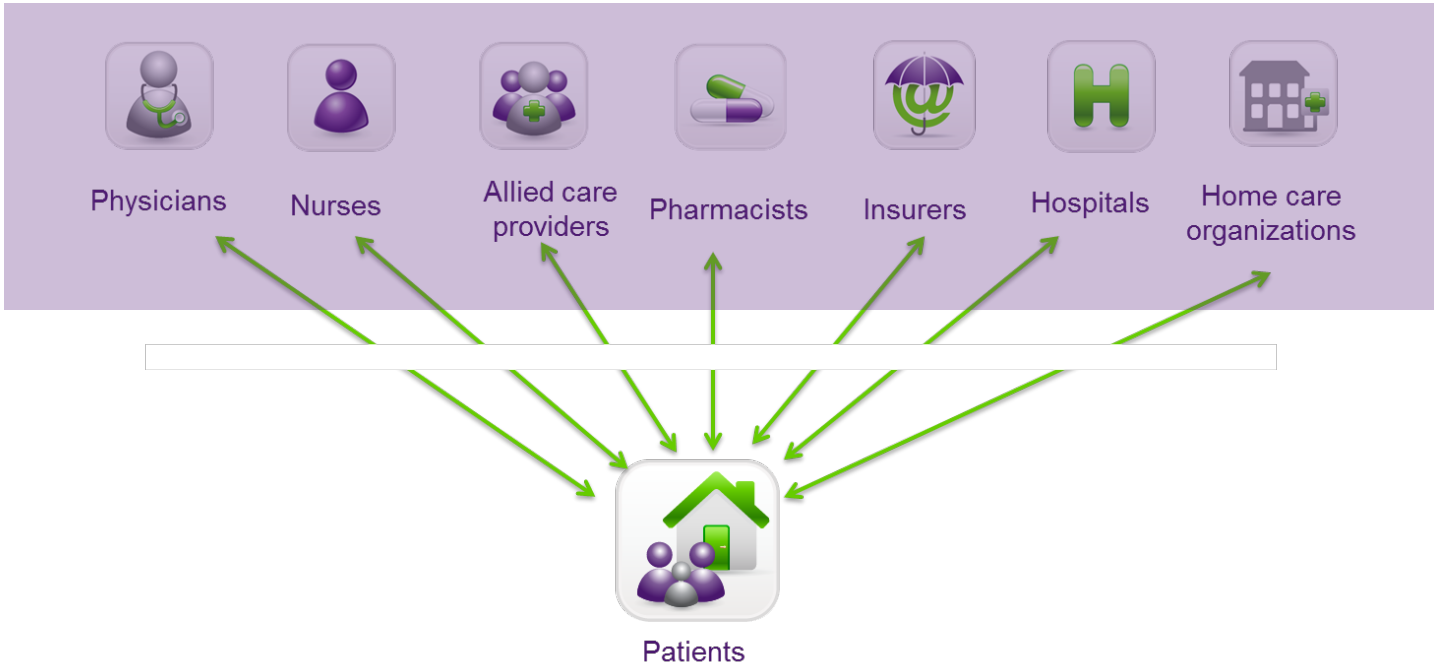
	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Overall Ranking (2013)	4	10	9	5	5	7	7	3	2	1	11
Quality Care	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
Access	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
Efficiency	4	10	8	9	7	3	4	2	6	1	11
Equity	5	9	7	4	8	10	6	1	2	2	11
Healthy Lives	4	8	1	7	5	9	6	2	3	10	11
Health Expenditures/ Capita 2011	$3,800	$4,522	$4,118	$4,495	$5,099	$3,182	$5,669	$3,925	$5,643	$3,405	$8,508

Country Rankings — Top 2* | Middle | Bottom 2*

Source: The Commonwealth Fund 2014 Update - Mirror, Mirror On The Wall: How The Performance Of The U.S. Health Care System Compares Internationally



Why? The health system is disconnected



…and the consumers are the “last mile”

What is “disruption”?

Disruptive innovation in other industries:

- How industries transform to provide increasingly affordable and conveniently accessible products and services to consumers.

Disruptive innovation in the health care sector:

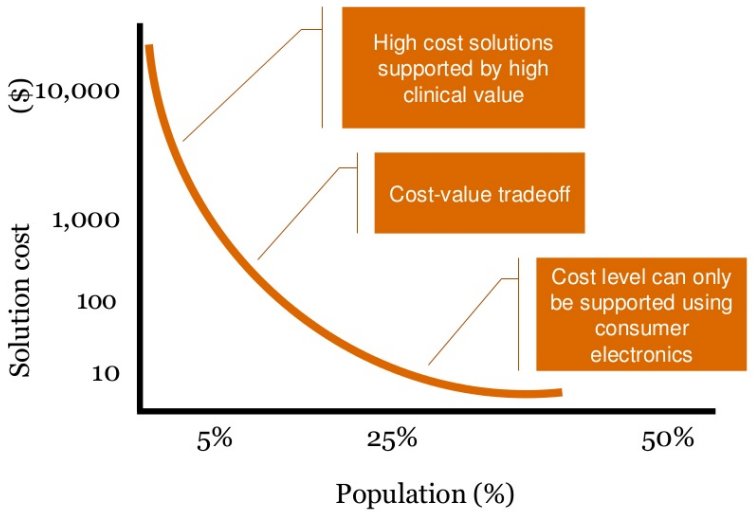
- The transference of skills from highly trained but also expensive personnel to more affordable providers, including technology-based care
- The shift away from traditional health care venues like hospitals into clinics and office settings, and, in some cases, into patients’ own home
- Enabling consumer accountability for their own disease

Adopting a consumer first mind-set

Consumer Mhealth is a disruptive innovation

mHealth can impact higher quality of care at lower costs by impacting:

- supporting citizens in making lives healthier through **wellness and prevention**
- faster diagnosis of **chronic diseases** to limit severity
- remote monitoring can support treatment and **reduce hospitalizations**
- **enhancing decision making** by making analytics more relevant and available



Virtual, more accessible care…not otherwise available

Our dilemma

- Primary focus today is doing what we do today, only better (for example, robotic surgery for the acute, while chronic disease needs are not met)
- Disruptive innovation goes against the grain – challenging status quo

Disruptive innovation is almost always driven from the outside-in

An outside-in view: the Consumer

More than 2,400 Canadians participated in our research to address the central question, "What does the future of health care delivery look like?"

79%

of patients report that they would definitely, or are likely to, use email services with their doctor

83%

of patients report that they would definitely, or are likely to, use online prescription refill services

PwC http://www.pwc.com/ca/en/healthcare/virtual-health-making-care-mobile-canada.jhtml

Consumers are demanding modernization, moving away from traditional care models

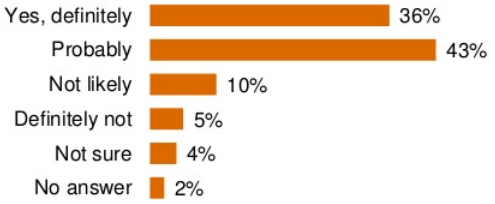
…and getting together on-line and influencing their own care path

Canadians are ready for virtual monitoring of chronic conditions

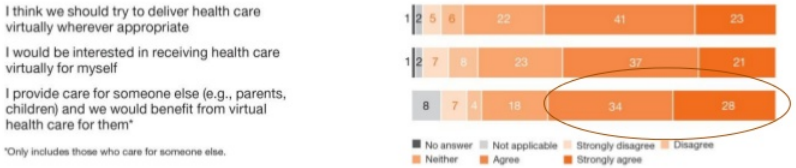
79%

of Canadians indicate that they are comfortable with virtual monitoring for chronic conditions

Most Canadians indicated they would be comfortable having a chronic condition monitored virtually…



… and 62% of caregivers indicated that virtual health care would help them to provide care for someone else (e.g. parent/ child)



Case-Study:
Home Health Monitoring in B.C

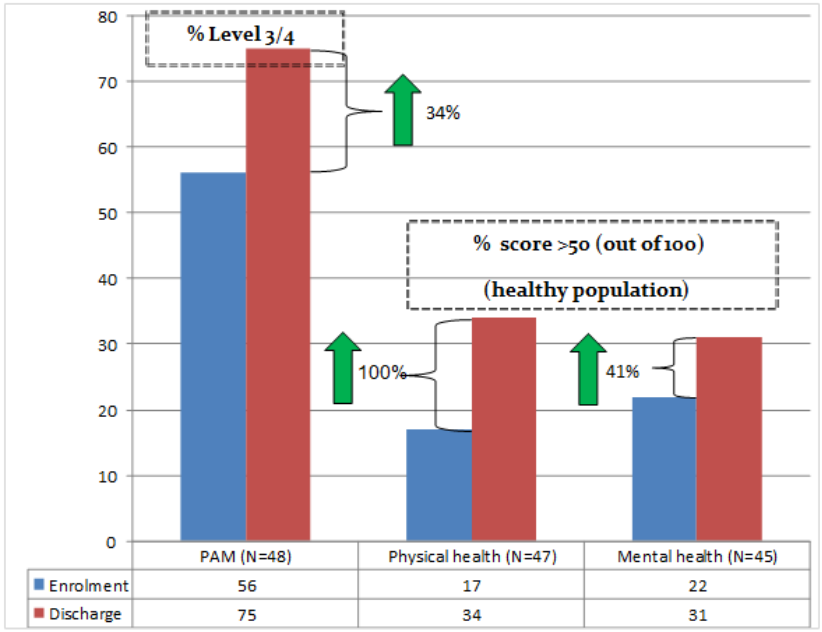
Used with permission from the BC Ministry of Health

HHM Self-Management Care Model

HHM Service	↑ Self-Management Capacity/ Activation	↑ Health Status & Quality of Life	↓ Health System Utilization
Clients monitored by RNs 37.5 hours/week • **Biometrics (BP, Pulse, O2 Sat & Weight)** • **Symptoms (Structured Questions / Patient Response)** • *Disease Knowledge Transfer to Client* • *Professional Self-Management Coaching*	**Disease knowledge** • **Symptom management** • **Coping skills** • **Confidence** *Measured by validated assessment instruments:* • *Patient Activation Measure (IHA)* • *Self Care of Heart Failure Index (VIHA)*	**Self-Accessed Health Status / Quality of Life** *Measured by validated assessment instrument:* • *Patient Reported Outcomes Measurement Information System (IHA)*	• **Inpatient Days/Costs** • **ER Visits/Costs** • **Physician /MSP costs** *Measured by comparing ER visits, Hospital Admission & MSP visits:* • *Pre HHM Service,* • *During HHM Service; and* • *Post HHM Service*

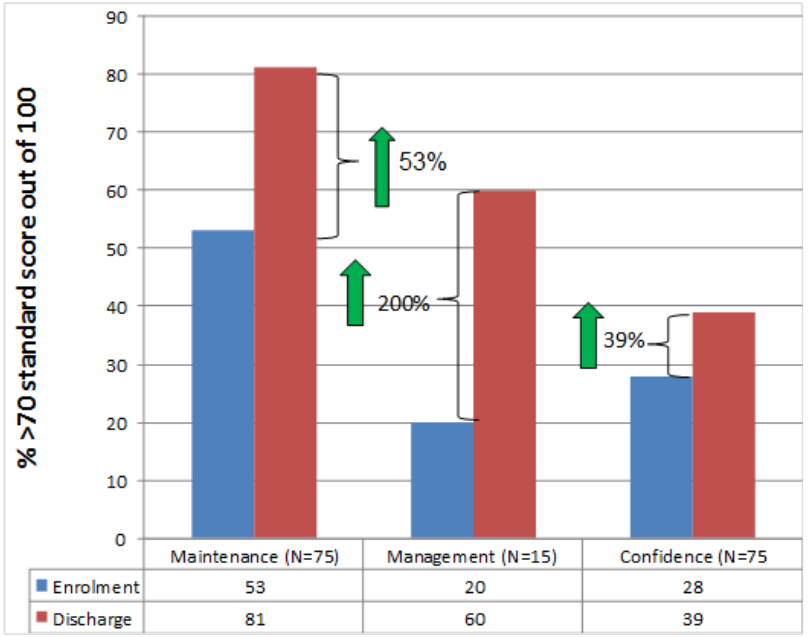
Findings: Improved Health Outcomes

PAM and PROMIS Results - IHA



	PAM (N=48)	Physical health (N=47)	Mental health (N=45)
Enrolment	56	17	22
Discharge	75	34	31

SCFHI results - VIHA



	Maintenance (N=75)	Management (N=15)	Confidence (N=75
Enrolment	53	20	28
Discharge	81	60	39

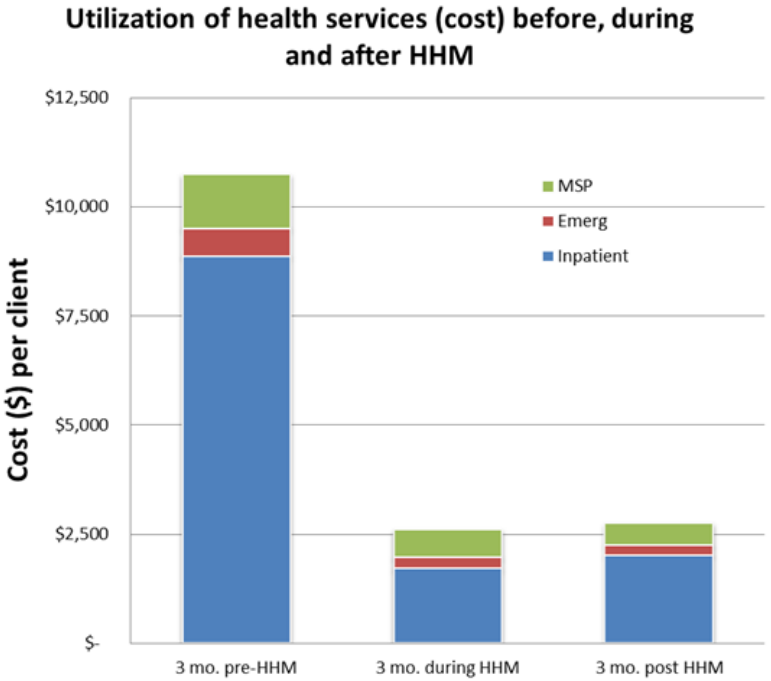
Limitations:

- No control group
- Separate assessment instruments adopted by IHA & VIHA prevent comparisons across organizations

Glossary:

PAM = Patient Activation Measure
PROMIS = Patient-Reported Outcomes Measurement Information System
SCHFI = Self care of Heart Failure Index

Findings: Significant Utilization Impact



- Health system utilization decreased by 76% during HHM Service
- Reductions: Acute inpatient days (81%); Emergency visits (60%); MSP billings (49%)
- Hospital Length of Stay was not significantly impacted

Limitations:

- No control group
- Decreasing N after 3 months post HHM Discharge
- Utilization for ER, Acute and MSP is based on 'all causes'
- Sustained longer -term utilization impact unknown

The monitoring technology “use case” is now expanding rapidly …

- Traditional use has been predominately centric to Heart Failure and to a much lesser extent, COPD and Diabetes patients:
  - COPD and Diabetes programs are now expanding
  - New, large scale, Hypertension programs are launching
  - Integrating Behavioral Health/Depression screening and management into monitoring programs
- The traditional participant in monitoring programs had recently been discharged from the hospital and is a high acuity patient:
  - New, large scale, Wellness Programs (Population Health Management) for Lower Acuity participants are being launched (Mobility Solution Centric Model)
- More Patient Educational Tools are now likely to be included in the monitoring model

Some final thoughts…

- Clinical leadership is essential – changes in clinical workflow
- Population health & analytics – to identify potential patient population
- Flexibility required to address “we don’t know what we don’t know” (new delivery models)
- Business model – value but someone has to pay for it
- ….and technology
  - Device kits will become cheaper
  - Integrating with clinical information systems
  - Moving away from propriety hardware platforms
  - Moving off the server model and transitioning to the cloud for data collection

…technology is but only one of the enablers

Thank-You!