

Using patient-reported outcomes to value elective surgical procedures: experience from the field

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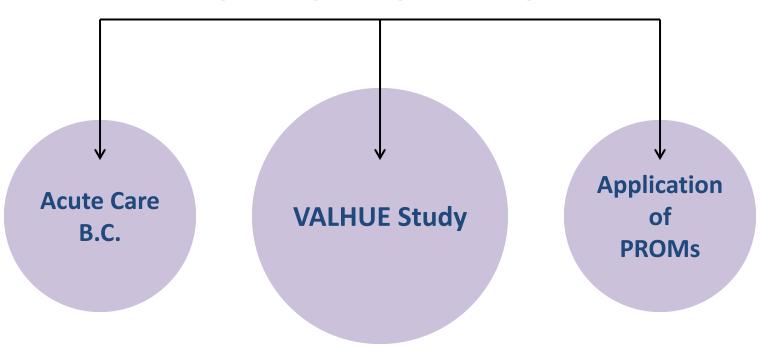
Presentation to:

Department of Population Health Sciences
University of Wisconsin-Madison
February 21, 2013





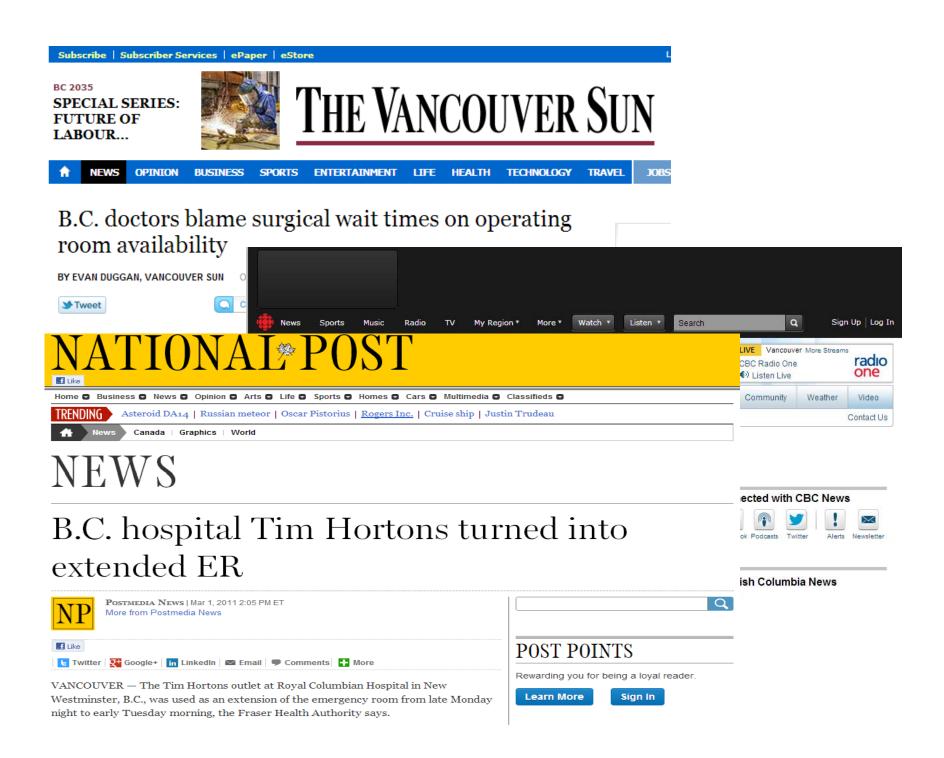
TODAY'S PRESENTATION



QUESTIONS AND DISCUSSION









The "Canadian Health Care System"





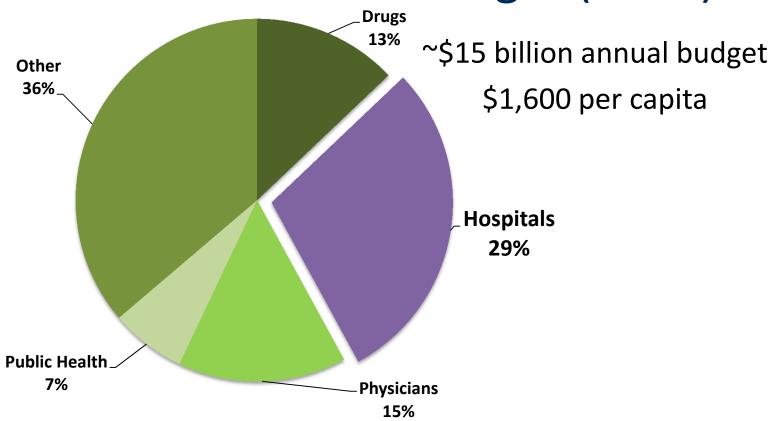
Patients receiving treatment within the benchmark across British Columbia



Canadian Institute for Health information. Wait time for priority procedures in Canada. (http://waittimes.cihi.ca/BC). February 17, 2013.



Allocation of B.C. Health Budget (2012)

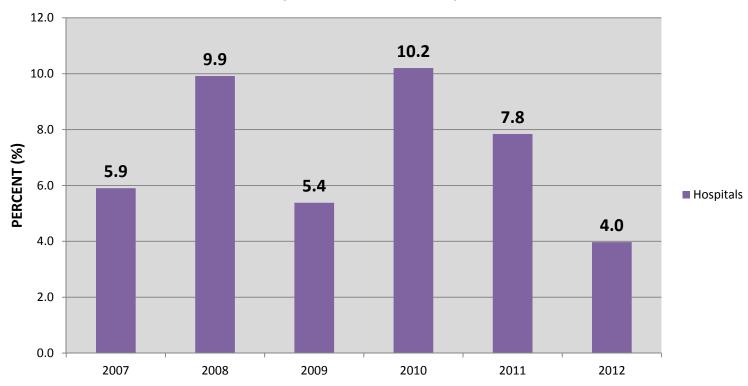


Canadian Institute for Health information. National Health Expenditure Database Run Date: February 17, 2013.





Percentage Growth in B.C.'s Health Care Spending (2007-2012)



Canadian Institute for Health information. National Health Expenditure Database Run Date: February 17, 2013.





Patient-Focused Funding

April 2010: B.C. introduces patient-focused funding (activity-based funding)

Supplement the global (capitated) budget

\$250 million to increase selected acute care activity (mostly elective), ~5% of hospital spending

Similar to U.S.' Diagnosis Related Groups (DRG)-based prospective payment system







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Patient-Focused Funding

Advantages

- û volume of care
- ↓ lengths of stay
- ☆ efficiency
- ↓ incentives to cream skim
- □ mortality (perhaps)

Limitations

Being evaluated through British Columbia Hospitals: Examination and Assessment of Payment Reform (B-CHeaPR)



Ethical

Clinical

Prioritization of procedures?
Allocation of healthcare resources?
Location of care?
Triaging of patients on wait list?

Political

Economic





Ethical

Clinical

DOES THIS HAVE ANY IMPACT ON PATIENTS' HEALTH?

Political

Economic





Objective

Relationship between wait times for elective care and longitudinal health outcomes not well understood.

- Delays in seeking care can have long term consequences for clinical outcomes (but this more for chronic conditions) (work by Prentice & Pizer)
- Waits for elective surgical procedures have no measureable effects on outcomes (but may be procedure-specific) (Derrett et al. 1999, Hoogeboom et al. 2009, Hirvonen et al. 2009)
- Very little evidence about the impact of the wait itself on changes in health status

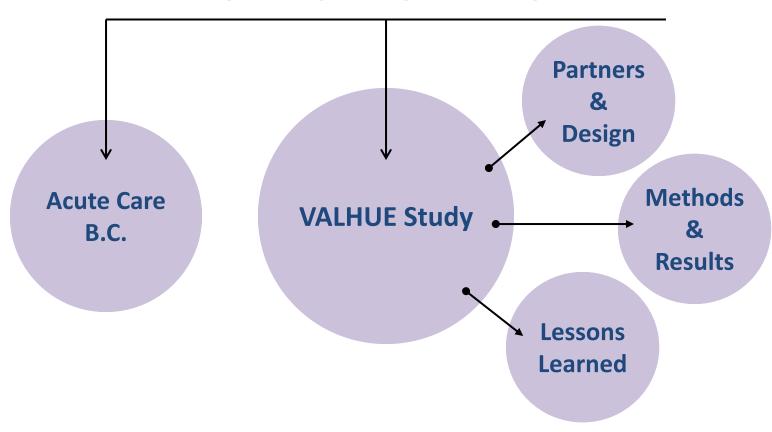
Motivation:

To quantify the impact wait time for elective surgery has on patients' health status





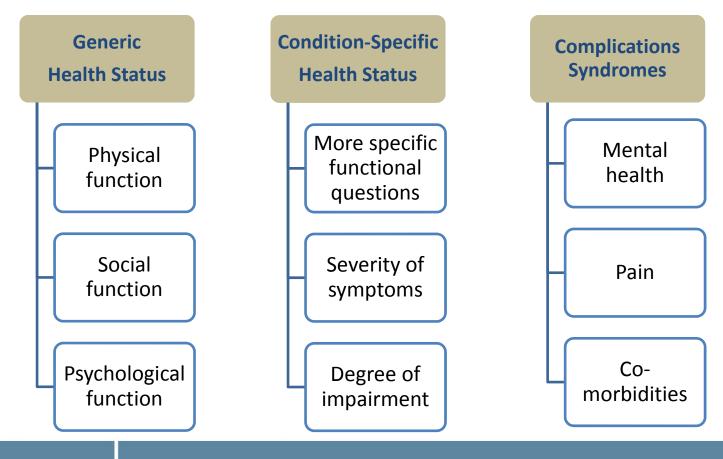
TODAY'S PRESENTATION







Patient Reported Outcome Measures (PROMs)







Value and Limitations in Hospital Utilization and Expenditures (VALHUE)

Funded October 2011, ~\$200,000/year

3-year operating grant funded by Canadian Institutes for Health Research (CIHR)

Principal investigator: Jason Sutherland

The largest longitudinal PROMs project underway in Canada

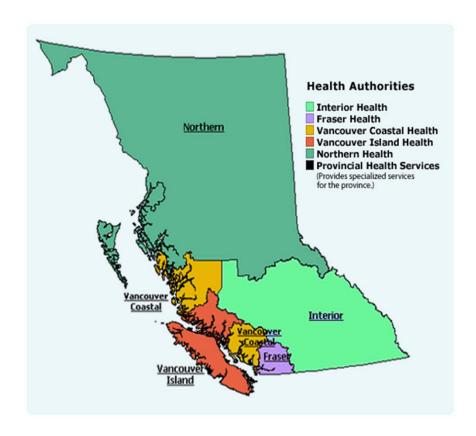
Setting:

Vancouver, BC





Vancouver Coastal Health









Design

All patients undergoing one of 641 elective surgical procedures, including those targeted with ABF

General surgery Otolaryngology (ENT)

Gynaecology / obstetrics Plastics
Neurosurgery Thoracic
Orthopedics Urology

Self-administered (mail) surveys over their episode of care





Design











Wait time registration

Surgical procedure

Recovery

Analysis 1

Analysis 2



Instruction

To help people say how good or bad a health state is, we have drawn a scale (rather like a thermometer) on which the best state you can imagine is marked 100 and the worst state you can imagine is marked 0.

We would like you to indicate on this scale how good or bad your own health is today, in your opinion.

Please do this by drawing a line from the box below to whichever point on the scale indicates how good or bad your health state is today.

> Your own state of health today



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Section 1: General Health

Instructions

By placing a tick in one box in each group below, please indicate which statements best describe your own health state **today**.



1. Mobility

- ☐ I have no problems in walking about
- ☐ I have some problems in walking about
- □ I am confined to bed

2. Self Care

- ☐ I have no problems with self-care
- I have some problems washing and dressing myself
- ☐ I am unable to wash or dress myself

$\textbf{3. Usual Activities} \ (e.g., work, study, housework, family or leisure activities)\\$

- ☐ I have no problems with performing my usual activities
- ☐ I have some problems with performing my usual activities
- ☐ I am unable to perform my usual activities

4. Pain/Discomfort

- □ I have no pain or discomfort
- ☐ I have moderate pain or discomfort
- ☐ I have extreme pain or discomfort

5. Anxiety/Depression

- ☐ I am not anxious or depressed
- I am moderately anxious or depressed
- □ I am extremely anxious or depressed







Inst	Section 1:	9. Cancer diagnosed or treated in the	12. Generalized anxiety disorder
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		10. Depression	□ No
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		11. Post traumatic stress disorder	□ No
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		□ Yes	□ I don't know
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	3. Usual Activ		
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	4. Pain/Disco		
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	5. Anxiety/De		

Section 2: Medical Problems

Instruction

Please indicate if a doctor or another health care worker has diagnosed you with or treated you for one of the following chronic medical problems in the **past 3 years**.

emphysema, or chronic	Angina, heart failure, or other type of heart disease				
No		No			
Yes		Yes			
I don't know		I don't know			
ood pressure or hypertension		seizures, Parkinson's disease			
No	or another	neurological condition			
Yes		No			
I don't know		Yes			
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No	7. Liver dis	sease			
Yes		No			
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or rheumatism					
tion of the joints)	8. Kidney	or renal disease			
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Vancouver CoastalHealth









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		1			No	or anoth	er	neurological condition		
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	3. Usual Ac	tiv						I don't know		
		1	3. High	blo	od sugar or diabetes					
		1		3	No	7. Liver	dise	ease		
		1			Yes			No		
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		1			or rheumatism					
		1	(inflam	mat	ion of the joints)	8. Kidne	y o	r renal disease		
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	5. Anxiety/	De			I don't know			I don't know		
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Section 3: Depression

Instructions

Over the past 2 weeks, how often have you bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things.				
2. Feeling down, depressed or hopeless.				
3. Trouble falling asleep, staying asleep, or sleeping too much.				
4. Feeling tired or having little energy.				
5. Poor appetite or overeating.				
6. Feeling bad about yourself—or that you're a failure or have let yourself or your family down.				
7. Trouble concentrating on things, such as reading the newspaper or watching television.				
8. Moving or speaking so slowly that other people could have noticed. Or, the opposite—being so fidgety or restless that you have been moving around a lot more than usual.				
9. Thoughts that you would be better off dead or of hurting yourself in some way.				

 $Patient \ Health \ Questionnaire \ (PHQ9) \ developed \ by \ Drs. \ Robert \ L. \ Spitzer, \ Janet \ B.W. \ Williams, \ Kurt \ Kroenke \ and \ colleagues.$







Inst	Section 1:	Section 2
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Section 4: Pain

1. What number best describes your pain on average in the past week?

0	1	2	3	4	5	6	7	8	9	10
No	pain									Pain as bad as you could imagine

2. What number best describes how, during the **past week**, pain has interfered with your enjoyment of life?

0	1	2	3	4	5	6	7	8	9	10
No	pain									Pain as bad as you could imagine

3. What number best describes how, during the ${\bf past}$ week, pain has interfered with your general activity?

0	1	2	3	4	5	6	7	8	9	10
No p	oain									Pain as bad as you could imagine

PEG pain scale developed by Drs. Erin Krebs, Karl Lorenz, Matthew Bair, and colleagues.

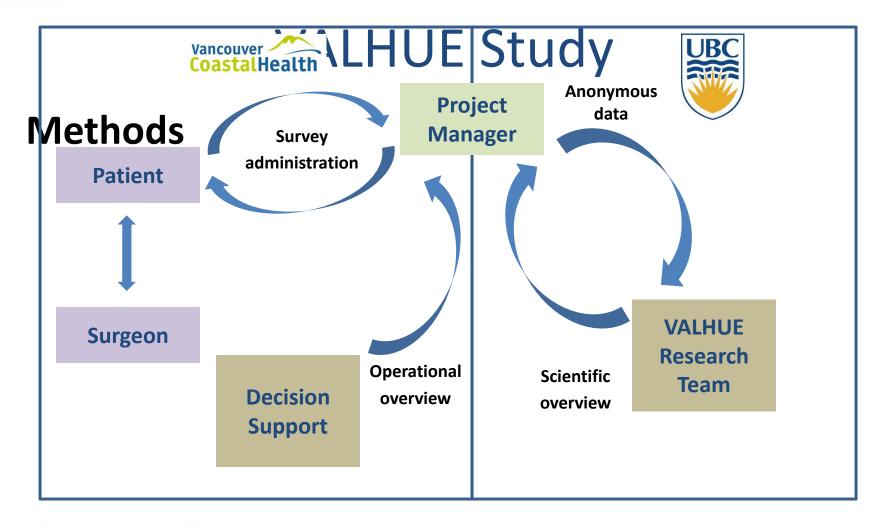






Inst To l	Section 1:	Section 2	Section 3:	Section 4:
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	2. Self Care		2. Feeling dow	your enjoyment
		2. High blood	3. Trouble falli sleeping too m	0 1 No pain
		0 "	4. Feeling tired	
	3. Usual Activ	3. High blood	5. Poor appeti	3. What numbe
			6. Feeling bad	your general act
	_ I		family down.	No pain
	4. Pain/Disco	4. Arthritis o	7. Trouble con as reading the	
		(inflammatio	television.	
	5. Anxiety/De		8. Moving or s other people c	
	5. Anxiety/De		opposite—bei	
			than usual.	
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			consigner	









(Very) Early results

 T_0

Called	Verbal consent	Unwilling to participate	Participation rate	Surveys received	Response rate
486	236	90	49%	165	34%

 T_1

Mailed	Received	Response rate
22	15	66%





Lessons learned: Ethical

Problem

Underestimated the privacy and confidentiality issue Identification and recruitment of participants more difficult that anticipated

Accessing the wait list registry to recruit patients – reveals health information

Solution

Had to come up with a creative project design

Wait list data considered VCH, can access for Quality Assurance purposes

Lesson

Bring in institutional review board(s) early in the study design





Lessons learned: Methodological

Problem

Identification and selection of PROMs instruments potentially more controversial than the study itself

Fryback (2010) noted the politics involved in selecting generic health status instruments

Solution

Developed an logical rational and criteria for assessing and selecting instruments

Lesson

Be explicit about the selection of instruments and incorporate stakeholders in the development of the selection process





Lessons learned: Logistical

Problem

Misjudged the interest from all stakeholders involved in this project both directly and indirectly

- Initially only engaged VCH in the conceptualization and operationalization of project
- Led to pushback from surgical groups

Solution

Re-trenched and started to identify and build support from all the stakeholders

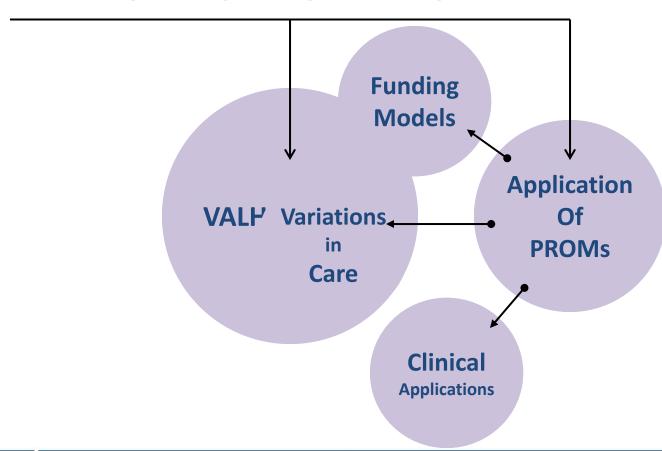
Lesson

All stakeholders should be involved from the early stages of the project





TODAY'S PRESENTATION



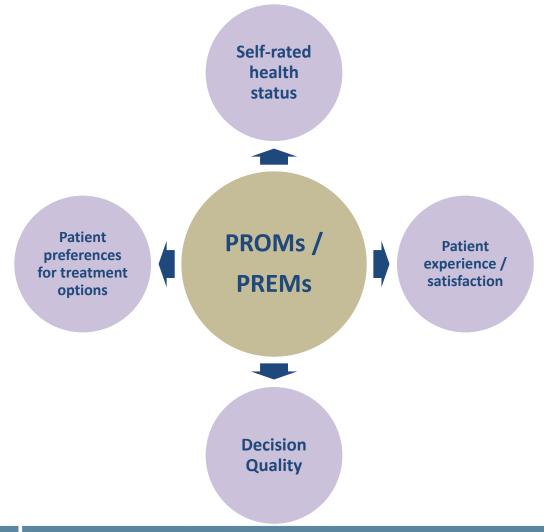




Self-rated health status











Policy

Funding models are moving towards remunerating care on a longitudinal basis

Developing "episodes of care" that span across the continuum

Need to better understand how patients' health and experiences change with different providers across this continuum

Could design a longitudinal study that surveys patients during these episodes to:

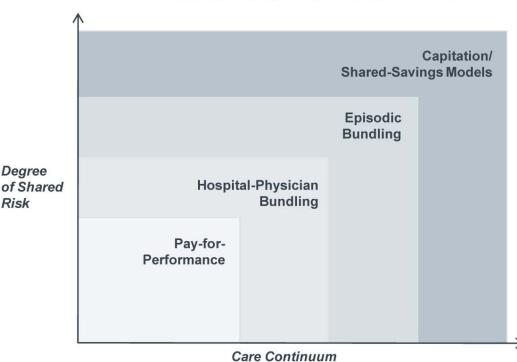
- Measure expected changes in health status during the episode
- Characterize deviations from expected clinical pathways
- Inform improvements in the funding model to incent the right behaviors (and not penalize them)





Payment Reform Shifting Risk to Hospitals, Health Systems

Performance Accountability Expanding Across the Care Continuum



Roades C. The new imperative of patient engagement for hospital and health systems. Feb 15, 2013. http://goo.gl/L60II





Methodological

Variations in the utilization of care have been observed across regions

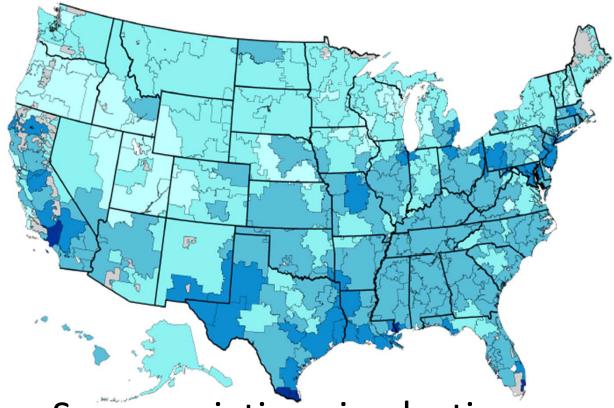
- Particularly pronounced in the area of preference-sensitive care
 - More than one clinical intervention available, neither of which offer potential benefits that overwhelmingly outweigh the potential harms

How do we discriminate between warranted/unwarranted variations in preference-sensitive care?

Could design cross-regional cohort studies using a combination of PROMs and decision quality to characterize the kind of care that's being provided







Some variations in elective care may be enwaranteed.





Clinical

PROMs may have different applications/interpretations in different settings along the continuum of care

Need to better understand what PROMs means (if anything) for these at different settings

-e.g., primary care

Could work closely with different clinical groups to design studies aimed at interpreting PROMs for their practice and the care of their patients





Wrapping Up

B.C., like other jurisdictions, are rethinking the way they fund health care

PROMs could offer a way to help evaluate and inform these changes

Our study collecting PROMs from a community of patients on a longitudinal basis offer some early lessons

These lessons can be applied to other studies using PROMs to investigate a number of pressing issues





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