Demonstrating the Value of Patient Reported Outcome Measures in Primary Care

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Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Vision
“A primary health care system that supports Albertans to be as healthy as they can be.”
Alberta Health Primary Health Care Indicators

Attachment
• % patients returning to the same provider at the clinic for a subsequent visit
• % patients that are returning to the same clinic for a subsequent visit

Access
• Third next available appointment with a primary health care provider

Improved Quality
• % patients answering satisfied or very satisfied to the question – Overall, how satisfied are you with the care you get from the clinic?

Better Outcomes
• % recommended screens that the clinic has offered to paneled patients
• % paneled patients with a chronic disease who were offered self-management supports during the fiscal year
• % paneled patients with a CD who report maintaining or improving quality of life as measured by the EQ-5D/SF12 tool during the fiscal year

Teams
• % identified team members responding to a team effectiveness survey
Demonstrate the potential of these measures in primary care settings.
Project Objectives

Demonstrate value:

• relevance, effectiveness and efficiency
• guide to clinical practice and care planning.

Examine:

• SF12 $\rightarrow$ EQ5D crosswalk
• supports and barriers
Two Common Measures

Euro QoL – 5 Dimensions (EQ5D):
• Mobility
• Self-Care
• Usual Activities
• Pain/Discomfort
• Anxiety/Depression

Visual Analog Score (VAS)

Index Score

Health Survey Short Form – 12 Item (SF12):
• Physical function
• Role participation
• Pain
• General health
• Vitality
• Social function
• Emotional health
• Mental health

Physical & Mental Health Status Scores

Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
• Sullivan & Ghushchyan (2006) created a cross-walk calculation for SF12v2 index scores to a comparable EQ5D index score

Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Methods

1. Alberta PCNs shared de-identified pre- and post-program SF12v2 and/or EQ5D & other clinical outcomes data (e.g., BMI, lab data, etc.)
2. Calculated Index Scores
3. Created Data & Graph templates for PCN reporting
4. Focus Groups to determine supports and gaps
CDM Programs

• CHANGE - Edmonton Oliver PCN
  – Canadian Health Advanced by Nutrition and Graded Exercise
• Health Basics - Red Deer PCN
• Diabetes Education - Rocky Mountain House PCN
What did we do?

- Calculated Index scores (IS) from SF12 scores (Sullivan, 2006)
  \[
  EQ5D\ IS = 0.057867 + (0.010367 \times PHS) + (0.00822 \times MHS) - (0.000034 \times PHS \times MHS) - 0.01067
  \]
- Index Score_{Diff} = \[6\ \text{month IS} - \text{baseline IS} \times (6/12)]
- IS changes of 0.03 – 0.05 demonstrate minimal clinically important differences (MCID)
Demonstrating the Value of Patient Self-Reported Functional Health Status Measures

Edmonton Oliver CHANGE Program

Impact on Quality of Life

IS Difference = 0.022
(IS difference > 0.015 = clinically significant improvement)

N = 78
49% Male
67% Female
Average Age = 60 years old

Baseline

6 Months

0.7
0.8
0.9
1

Index Score

Baseline: 0.86
6 Months: 0.91

* p<.0001

(IS difference > 0.015 = clinically significant improvement)
Clinical Indicators

**Body Mass Index**
- Normal range: 18.5 - 24.9
- *p < .0001

**Waist Circumference**
- Above 90cm = obesity
- *p < .001

**FBS**
- Normal = 6.1 mmol/l

**HgA1c**
- Normal range: 4% - 5.6%
- *p = .007

**Total Cholesterol**
- Normal < 5.2 mmol/l
- *p = .023

**HDL**
- Normal > 1.04 mmol/l
- *p < .05

**LDL**
- Normal < 3.35 mmol/l

**Triglyceride**
- Normal 0.4 - 2 mmol/l
- *p = .010

Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Edmonton Oliver CHANGE Program

Impact on Quality of Life

IS Difference = 0.022
(IS difference > 0.015 = clinically significant improvement)

N = 78
49% Male
67% Female
Average Age = 60 years old

QALY = 0.044 (1 year)
100 Patients
$55000 per QALY

$190000 cost avoidance to health system

Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Impact on Health Status

IS Difference = 0.031
(ISDiff > 0.015 = clinically significant improvement)

*p < 0.0001

Baseline: 0.78
6 Months: 0.84

23% Male
77% Female
Sample Size = 35
Average Age = 52 years

Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Red Deer Clinical Indicators

23% Male
77% Female
N = 35
Average Age = 52 years old

Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Red Deer Health Basics Program

Impact on Health Status

IS Difference = 0.031
(ISDiff > 0.015 = clinically significant improvement)

*p < .0001

QALY = 0.062 (1 year)
36 Patients
$55000 per QALY
$122760 avoided costs to health system

Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Demonstrating the Value of Patient Self-Reported Functional Health Status Measures
Reliability

Edmonton Southside provided both SF12 and EQ5D measures in 248 patients.

✓ Analysis showed that the SF12 was reliable and valid in predicting EQ5D index scores.

\[
\begin{align*}
SF12 \text{ IS} &= 0.81 \\
EQ5D &= 0.76 \\
R^2 &= 0.72, \ p<.0001 \\
SF12 \text{ PHS} &= \\
R^2 &= 0.65, \ p<.0001 \\
SF12 \text{ MHS} &= \\
R^2 &= 0.56, \ p<.0001
\end{align*}
\]

Need to examine if IS difference is similar at post test.
Quality Adjusted Life Years

• In the US, $50,000 per QALY is used as a decision rule used to guide interpretation of cost effective analyses (Braithwaite et al., 2008)

• With additional cost information, QALYs can be used to conduct cost effective analyses.

\[
\text{Incremental Cost Effective Ratio} = \frac{\Delta \text{Cost}}{\Delta \text{Outcome}}
\]
Focus Group Themes

Management supports:
“Supports from the management level because we always want to be evaluating what we are doing... Provincially too... Looking for what we can do that is comparable across the province”

Time is a barrier:
“The time, understanding, using the information clinically, feedback and getting the information back to the family nurse to use it clinically”

Value:
“In evaluation, they ask people to record measures but they don’t have any clinical relevance for the health professionals, but this one does”

“Quality of life, at the end of the day is the most important thing”
Key Messages

✓ PROMs show impact on health
✓ Index scores → examine Clinical and Program Relevance, Effectiveness and Efficiency
✓ Data Analysis & Report Templates → Value for physicians, AHS and the government
✓ QALY & Cost effective analyses
Thank you!

Questions?

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