

Demonstrating the Value of Patient Reported Outcome Measures in Primary Care

Scott Oddie, Ph.D.

Director, Primary Care Research

Primary Health Care, Applied Research and Evaluation Services

Alberta Health Services

Health Research Collaborative Chair, RDC

SF12 & EQ5D Analysis Advisory Team

Rachel Wass	<i>University of Calgary Honours Student</i>
Dr. Doug Klein	<i>Edmonton Oliver Primary Care Network</i>
Donna Thompson	<i>Red Deer PCN Program Evaluator</i>
Margo Schmitt-Boshnick	<i>Rocky Mountain House PCN Evaluation Consultant</i>
Arto Ohinmaa	<i>U of A Associate Professor School of Public Health</i>
Andy Chuck	<i>IHE Director of Economic Evaluation and Analytics</i>
Tim Cooke	<i>HQCA Senior Health System Analytical Lead</i>
Jessica Schaub	<i>Southside PCN Evaluation Manager</i>
Racha Sabha	<i>Edmonton Oliver Evaluation Consultant</i>
Marion Relf	<i>Edmonton Oliver Evaluation Advisor</i>
Scott Oddie	<i>AHS Director Primary Care Research</i>

Alberta's Primary Health Care Strategy

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

Now that's some
BHAG

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:

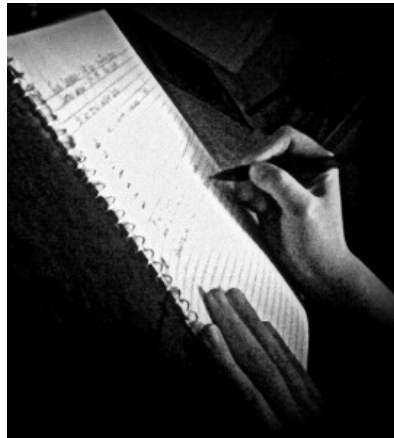
- SF12 → EQ5D crosswalk
- supports and barriers

Two Common Measures

Euro QoL – 5 Dimensions

(EQ5D):

- Mobility
- Self-Care
- Usual Activities
- Pain/Discomfort
- Anxiety/Depression



Visual Analog Score (VAS)

Index Score

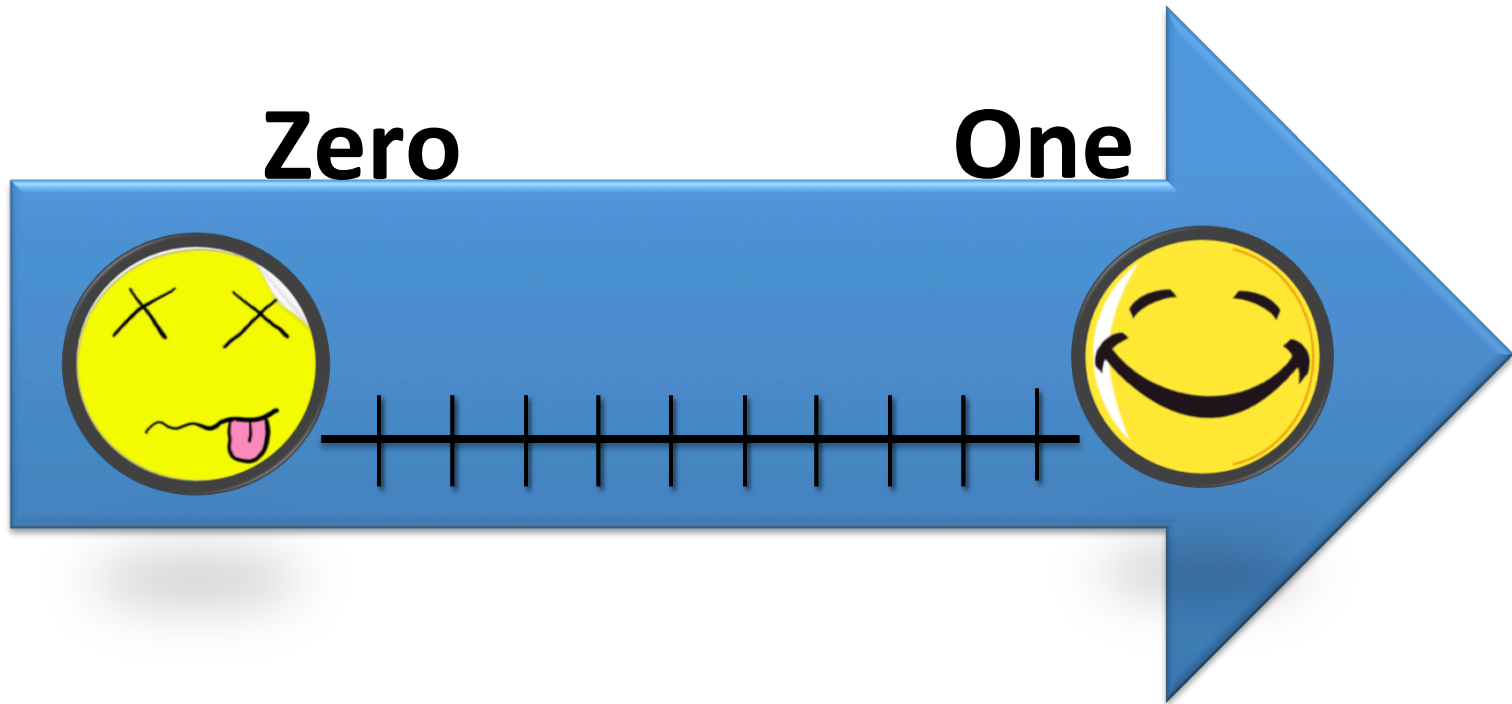
Health Survey Short Form – 12

Item (SF12):

- Physical function
- Role participation
- Pain
- General health
- Vitality
- Social function
- Emotional health
- Mental health

Physical & Mental Health Status Scores

Index Score



- Sullivan & Ghushchyan (2006) created a cross-walk calculation for SF12v2 index scores to a comparable EQ5D index score

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

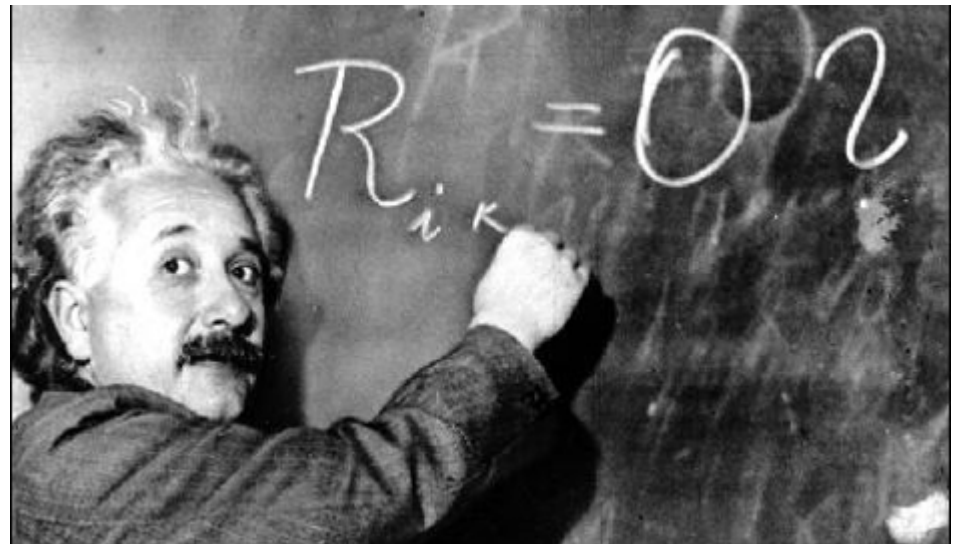


What did we do?

- Calculated Index scores (IS) from SF12 scores (Sullivan, 2006)

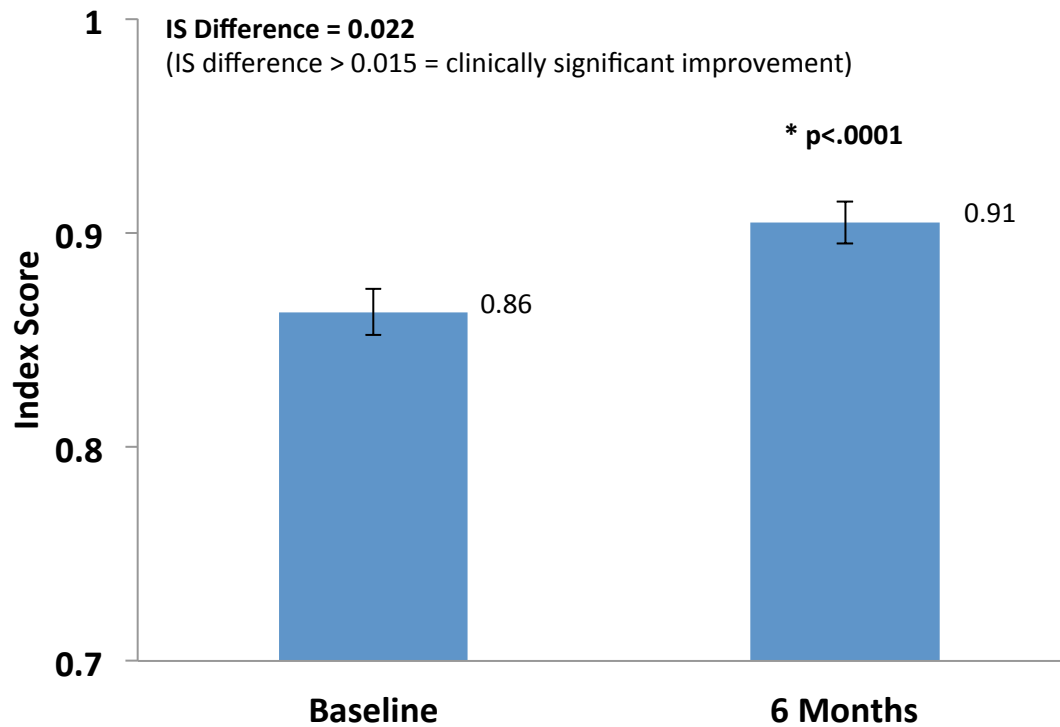
$$\text{EQ5D IS} = 0.057867 + (0.010367 * \text{PHS}) + (0.00822 * \text{MHS}) - (0.000034 * \text{PHS} * \text{MHS}) - 0.01067$$

- $\text{Index Score}_{\text{Diff}} = [6 \text{ month IS} - \text{baseline IS} * (6/12)]$
- IS changes of 0.03 – 0.05 demonstrate minimal clinically important differences (MCID)



Edmonton Oliver CHANGE Program

Impact on Quality of Life



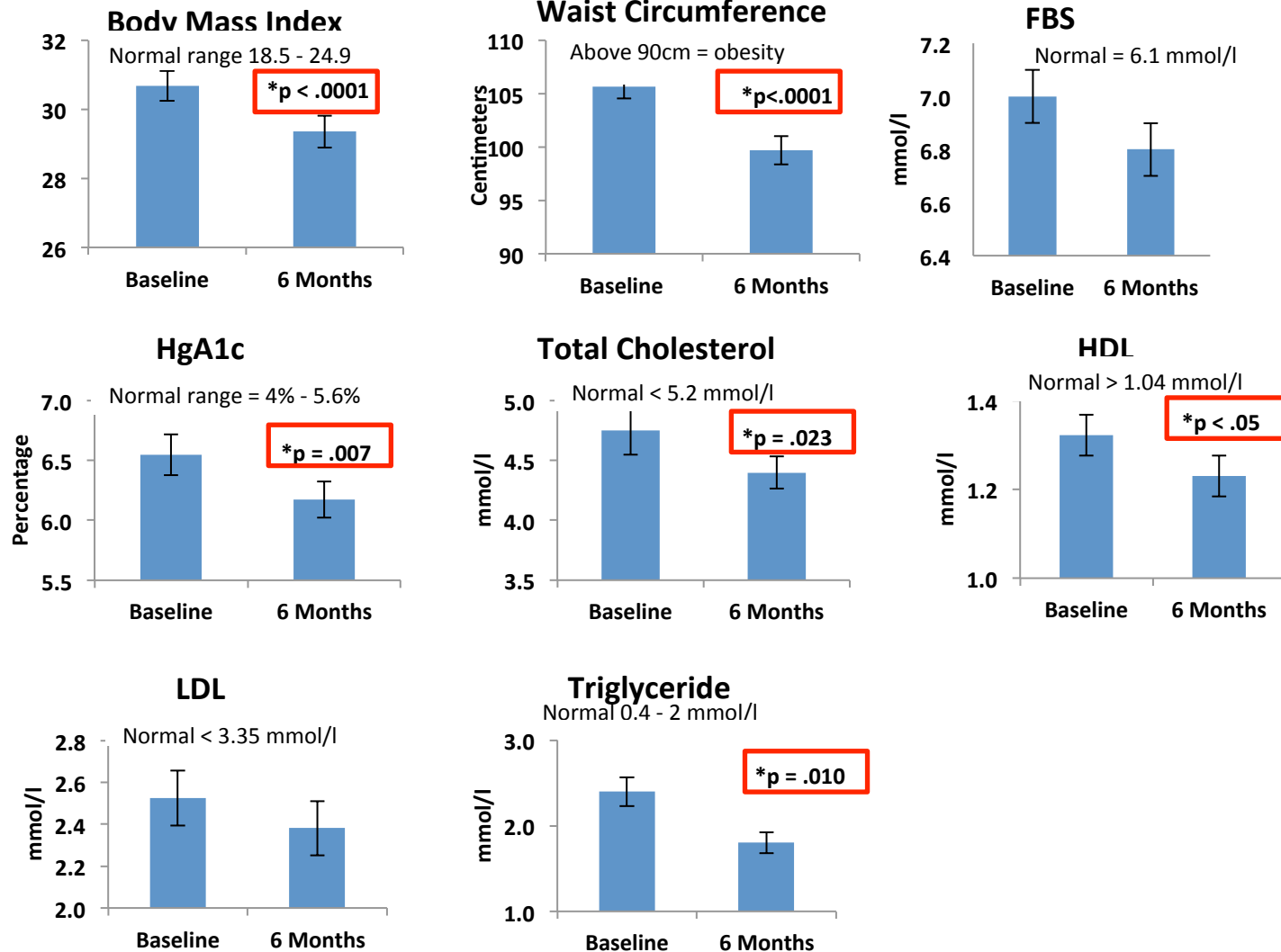
N = 78

49% Male

67% Female

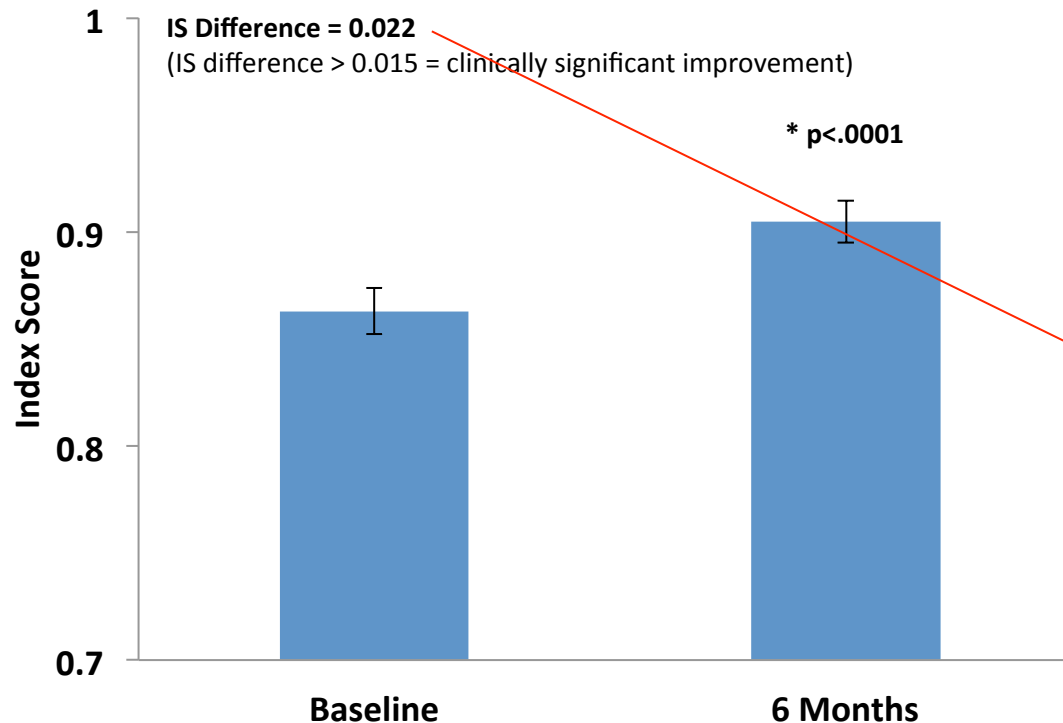
Average Age =
60 years old

Clinical Indicators



Edmonton Oliver CHANGE Program

Impact on Quality of Life



N = 78

49% Male

67% Female

Average Age =

60 years old

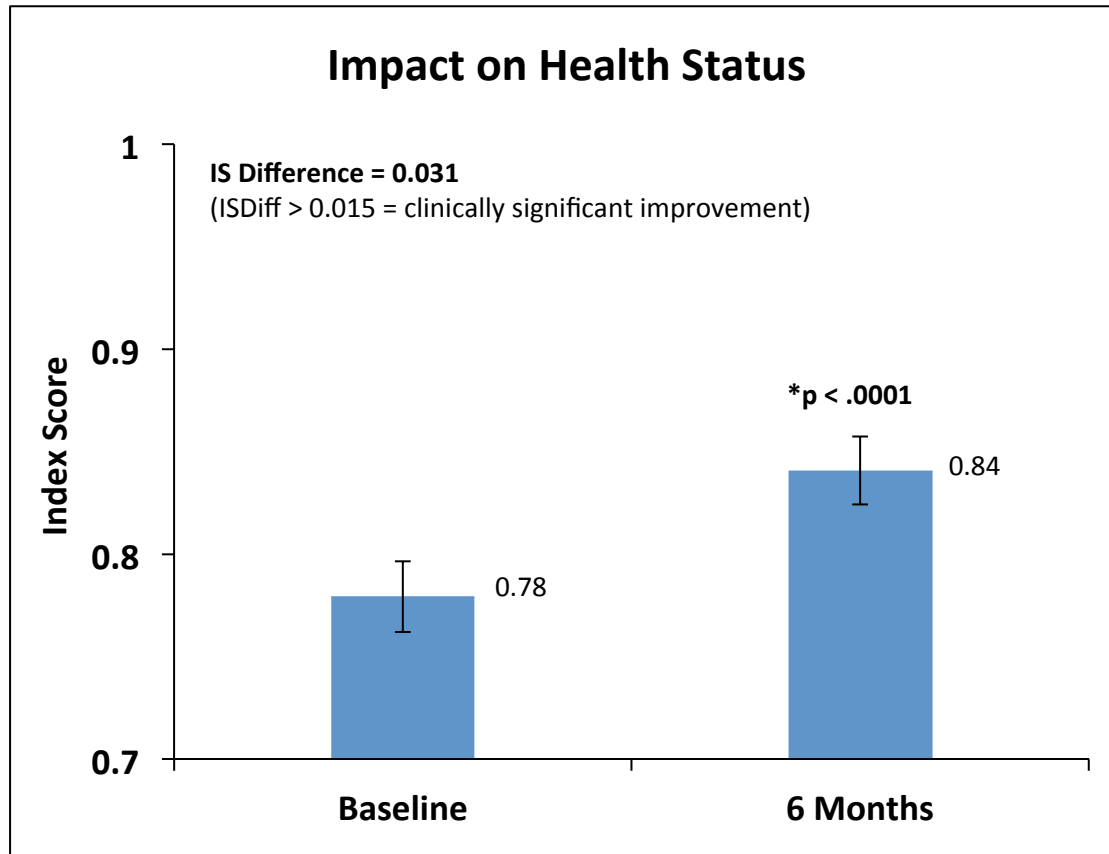
QALY = 0.044 (1 year)

100 Patients

\$55000 per QALY

\$190000 cost
avoidance to health
system

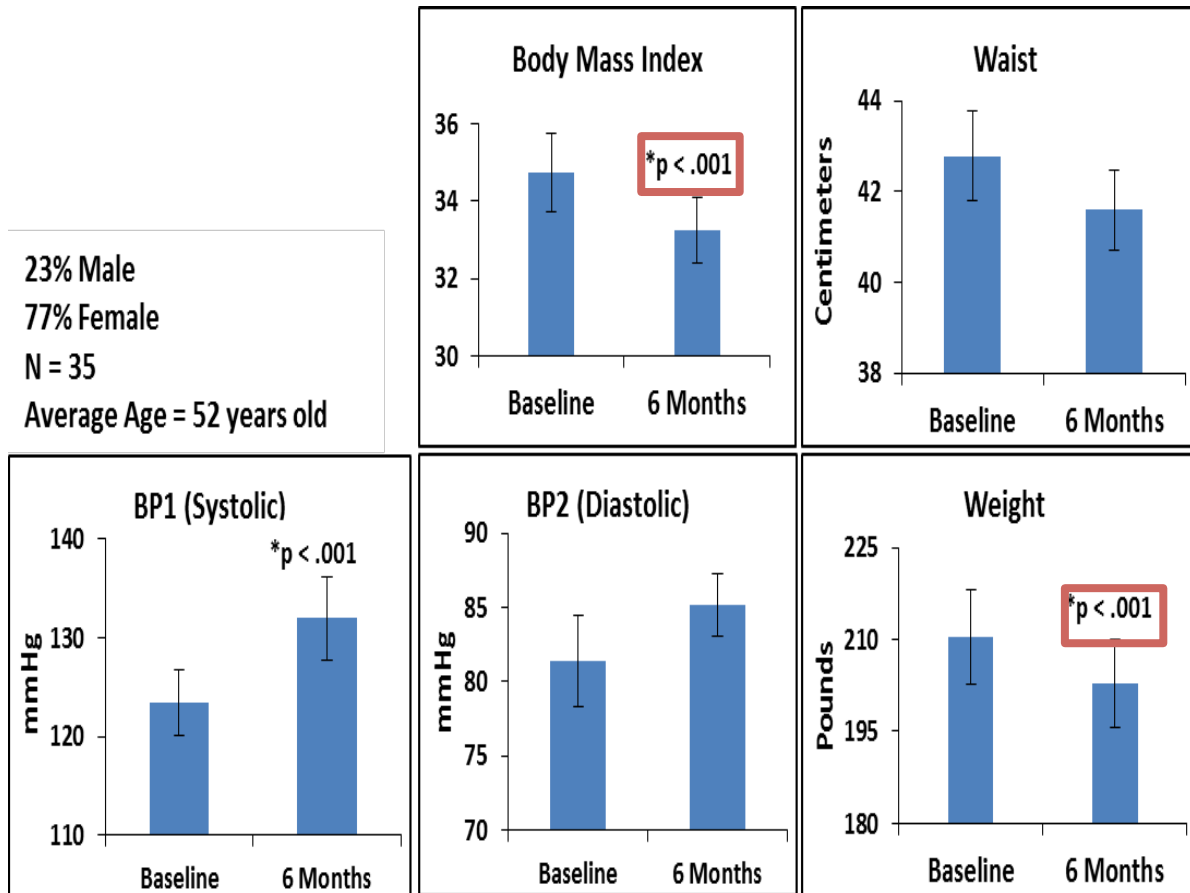
Red Deer Health Basics Program



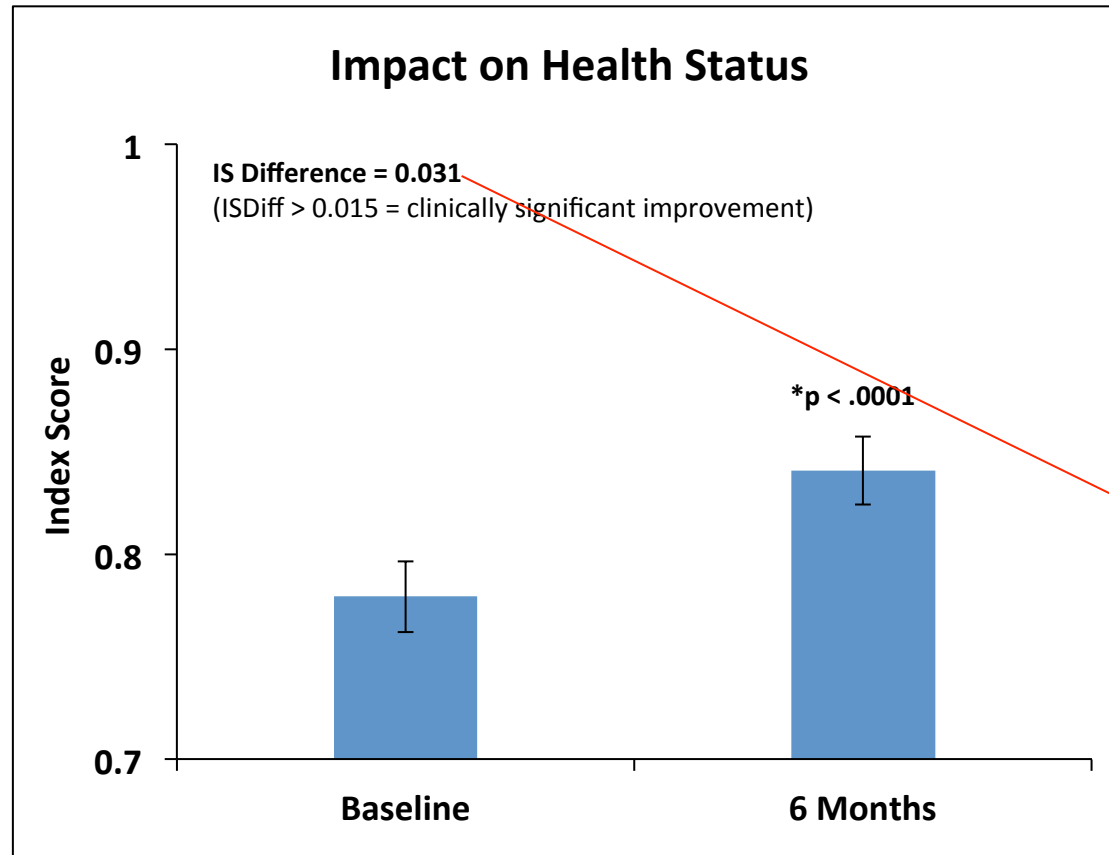
23% Male
77% Female
Sample Size = 35
Average Age = 52 years

Red Deer Clinical Indicators

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



Red Deer Health Basics Program



QALY = 0.062 (1 year)

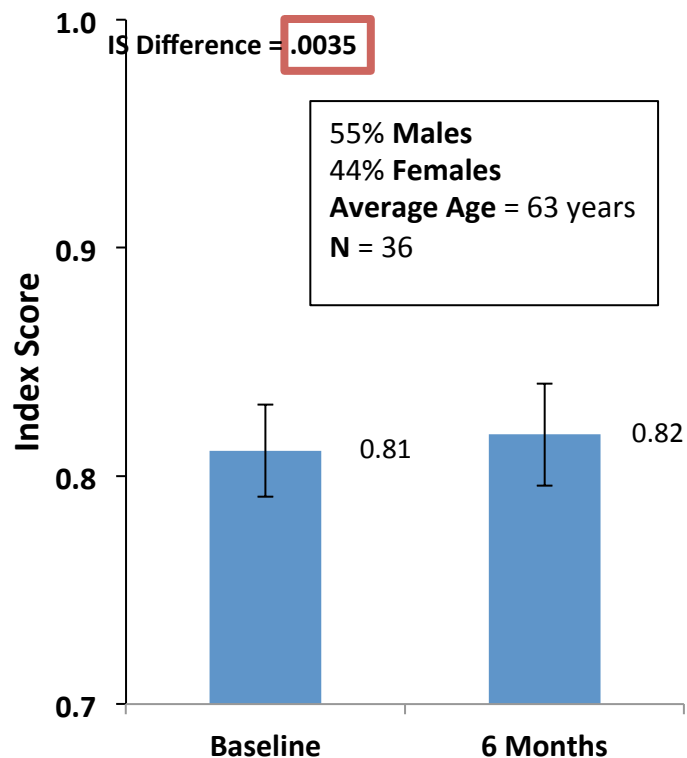
36 Patients

\$55000 per QALY

\$122760 avoided costs
to health system

Rocky Mountain House Diabetes Education

Impact on Health Status



Requires Case Management

Patient ID	Difference Scores
1	-0.023
2	-0.039
3	-0.042
4	-0.105
5	-0.027
6	-0.039
7	-0.032
8	-0.031
9	-0.026
10	-0.033
11	-0.012
12	-0.055
13	-0.012
14	-0.064

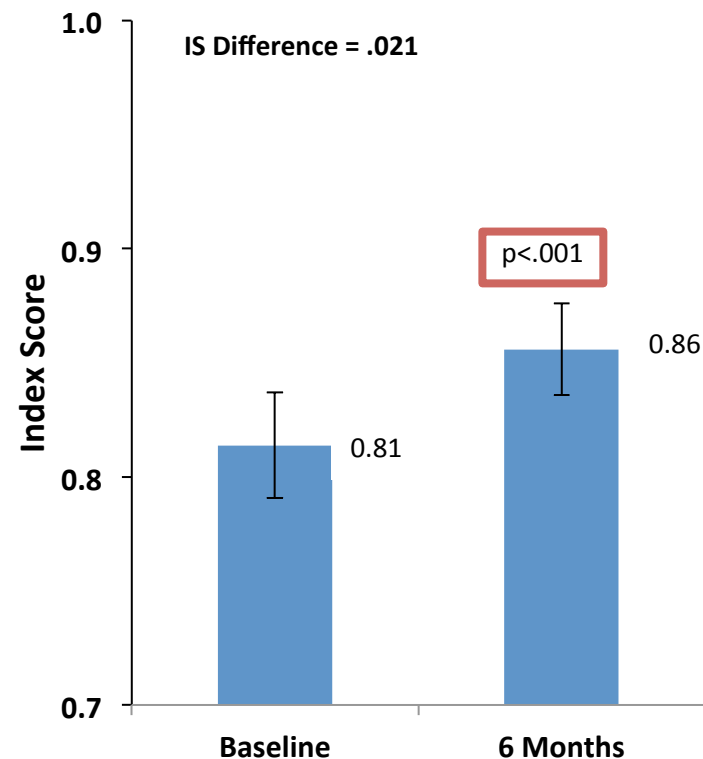
Improving Difference

Scores = 61%

Not Improving Difference

Scores = 39%

Impact on Health Status



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.

SF12 IS = 0.81

EQ5D = 0.76

$R^2 = 0.72, p < .0001$

SF12 PHS

$R^2 = 0.65, p < .0001$

SF12 MHS

$R^2 = 0.56, p < .0001$

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?

Scott.oddie@albertahealthservices.ca