Quality of Life as an Outcome for Community Based Care Services

Jack Allen
2 March 2015
Overview

• Introduction to Silver Chain
  – A little bit about the organisation
  – Approach to outcomes measurement

• Measuring the impact of community care project
  – Overview and results
  – What we have done since
<table>
<thead>
<tr>
<th>Length of stay</th>
<th>Package CACP</th>
<th>Package EACH</th>
<th>Package EACH-D</th>
<th>Package CACP</th>
<th>Package EACH</th>
<th>Package EACH-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;4Wks</td>
<td>886</td>
<td>342</td>
<td>172</td>
<td>4.4%</td>
<td>7.3%</td>
<td>6.5%</td>
</tr>
<tr>
<td>4−&lt;8 Wks</td>
<td>1118</td>
<td>380</td>
<td>231</td>
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<td>15.3%</td>
<td>15.3%</td>
</tr>
<tr>
<td>8−&lt;13 Wks</td>
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<td>452</td>
<td>264</td>
<td>17.0%</td>
<td>24.9%</td>
<td>25.3%</td>
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<tr>
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<td>871</td>
<td>557</td>
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<td>43.4%</td>
<td>46.5%</td>
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<tr>
<td>26−&lt;39 Wks</td>
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<td>56.5%</td>
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<tr>
<td>39−&lt;52 Wks</td>
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<td>464</td>
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<td>66.3%</td>
<td>71.7%</td>
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<tr>
<td>1−&lt;2 Yrs</td>
<td>4053</td>
<td>817</td>
<td>436</td>
<td>69.7%</td>
<td>83.6%</td>
<td>88.3%</td>
</tr>
<tr>
<td>2−&lt;3 Yrs</td>
<td>2218</td>
<td>356</td>
<td>168</td>
<td>80.8%</td>
<td>91.2%</td>
<td>94.6%</td>
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<tr>
<td>3−&lt;4 Yrs</td>
<td>1345</td>
<td>205</td>
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<td>95.5%</td>
<td>98.0%</td>
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<tr>
<td>4−&lt;5 Yrs</td>
<td>807</td>
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<td>43</td>
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<td>97.7%</td>
<td>99.6%</td>
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<tr>
<td>5−&lt;8 Yrs</td>
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<td>103</td>
<td>10</td>
<td>97.3%</td>
<td>99.9%</td>
<td>100.0%</td>
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<tr>
<td>8+Yrs</td>
<td>539</td>
<td>7</td>
<td></td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
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</table>
Silver Chain at a Glance

• Community based services
  – Palliative care
  – Home and Community Care
  – Home care packages
  – Community nursing
  – Hospital at home

• Organisational purpose:
  – To build community capacity to optimise health and wellbeing
Approach to outcomes measurement

- Desire
- Understanding
- Capability
- Lack of alignment of incentives
- Ad hoc
- Varied
Beneficiary Performance Indicator Project

Develop and implement a measure of benefit that:

• Provides a benchmark for organisational performance over time,
• Becomes an aide to strategic decision making and resource allocation, and;
• Is useful as a tool to drive operations.
How do our services achieve these “health and wellbeing” outcomes for clients?

• Different services achieve outcomes in different ways:
  – HACC services
  – Continence services
  – Remote clinics
  – Palliative care
## Preliminary Outcomes Framework

<table>
<thead>
<tr>
<th>Program</th>
<th>Needs</th>
<th>Program Objectives</th>
<th>Inputs</th>
<th>Processes</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Indicators</th>
<th>metrics</th>
<th>Indicators</th>
<th>metrics</th>
<th>Indicators</th>
<th>metrics</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>HATH</td>
<td>Reducing demand on hospitals</td>
<td>There are significant pressures on the hospital system, and a means of reducing the demand for hospital beds is to deliver hospital level care within the community, where it is safe to do so.</td>
<td>DOH WA funding, staff, capital</td>
<td>Service models, work instructions, clinical governance</td>
<td>Number of clients, Volume of care</td>
<td>Short term</td>
<td># of HATH clients being admitted to a traditional hospital during their service episode</td>
<td># of clients with positive service outcomes</td>
<td>Better health and wellbeing</td>
<td>Lower levels of Hospital acquired infections within the community</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>Reducing the impact of a hospitalisation on a person's life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>medium term</td>
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<td>long term</td>
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<td>Indicators</td>
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<td>indicates</td>
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<td></td>
</tr>
</tbody>
</table>

- **Indicators**
  - Number of clients
  - Volume of care

- **Comparative length of stay**
  - Comparing LOS of HATH clients with LOS of traditional hospital clients (by DRG) - eg. Cellulitis

- **Quality of life/wellbeing at cessation**
  - Subjective measures (quality of life/wellbeing)

- **Client satisfaction with service provision**
  - Client satisfaction surveys

- **Reduced health care costs associated with increased community treatments**

- **Reduced excess demand for hospital beds**

- **Ambulance ramping rates**

- **Increased community acceptability of HATH services**

**Number of clients**

**Volume of care**

**Improved Health and wellbeing**

**Silver Chain**
What did we learn developing these?

• Varied aims and objectives of services
• Quality of life, Wellbeing and Independence commonly identified as important outcomes across all services, but,
• QoL not always the most important outcome, nor the perceived focus of the service!
Measuring the Impact of Community Care

• Attempt to try and explore how outcomes measures could be used within the Home and Community Care Program in WA.
HACC Program Objectives

• “Promote each client’s opportunity to maximise their capacity and quality of life” 1

• “Support people to be more independent at home and in the community, thereby enhancing their quality of life” 1,2

• To provide services “which contribute to a person’s wellbeing” 1

• To “improve functioning and support independence of clients living in the community” 2

1 Commonwealth HACC program Manual (2012), p2-3
Purpose/Vision/Mission

**Brightwater**
- To Enable **Wellbeing** - We strive to empower all people to engage in their communities with purpose, dignity and peace of mind by providing outstanding quality care and support

**Volunteer Task Force**
- Our Vision - Excellence in enhancing **independence**, inclusion and **quality of life** for people in their communities

**Southcare**
- Services that support the **well-being** of people in need in the local community
- Mission : To offer caring services to the residents of the local community, assisting them to enhance their **quality of life**

**Southern Cross care**
- To enhance the **quality of life** of those who use our services.

- “Neither the DSC nor the DOH could show that their home-based services were improving their clients’ quality of life”
- Recommended that the department:
  - “Adopt key effectiveness measures that are directly linked to improvement of the wellbeing and quality of life of people in home-based services”
# HACC Client Quality of Life Survey

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tr>
<td><strong>Total N</strong></td>
<td>869</td>
<td>934</td>
<td>951</td>
<td>925</td>
<td>975</td>
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<tr>
<td><strong>Number/proportion of care recipients that agreed that the HACC program helped them to be more independent</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>N</td>
<td>638</td>
<td>694</td>
<td>756</td>
<td>725</td>
<td>756</td>
</tr>
<tr>
<td>%</td>
<td>73.42%</td>
<td>74.30%</td>
<td>79.50%</td>
<td>78.38%</td>
<td>77.5%</td>
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<tr>
<td><strong>Number/proportion of care recipients who agreed that the HACC program improved their quality of life</strong></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>774</td>
<td>802</td>
<td>868</td>
<td>817</td>
<td>892</td>
</tr>
<tr>
<td>%</td>
<td>89.07%</td>
<td>85.87%</td>
<td>91.27%</td>
<td>88.32%</td>
<td>91.5%</td>
</tr>
</tbody>
</table>
Silver Chain Client Satisfaction survey

This service improves your quality of life

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree
MICC project

- Can we measure some of the more subjective outcomes of HACC services in WA in a more quantifiable way.
- How would we go about doing this?
Research Objectives

• Development of a set of agreed outcome measures both qualitative and quantitative for measuring the impact of community care.

• What outcome measures are appropriate for services delivered within a wellness model and how can these be incorporated into reporting models?

• How effective is the wellness approach to improving quality of life as well as health and functional status?
Methodology

• Client interviews
  – Sample of existing HACC clients (N=55)
  – Completed survey
  – Qualitative feedback on instruments

• Quantitative component
  – Sample of clients commencing HACC services
    • Baseline (shortly after HACC face to face assessment)
    • Follow-up (three months after baseline survey)
## Survey Instruments Selected For Pilot Project

<table>
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<tr>
<th>Measure</th>
<th>Construct</th>
<th>items</th>
<th>Dimensions</th>
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<tbody>
<tr>
<td>Self Rated Health</td>
<td>Perceived health status</td>
<td>1</td>
<td>Current general health</td>
</tr>
<tr>
<td>EQ-5D-5L</td>
<td>Health Related Quality of Life</td>
<td>6</td>
<td>Mobility, Self-Care, Usual Activities, Pain/Discomfort, Anxiety/Depression, Overall health item (Visual Analogue Scale)</td>
</tr>
<tr>
<td>AQOL - 4D</td>
<td>Health Related Quality of Life</td>
<td>12</td>
<td>Independent living, Self-care, Mobility, Household tasks, Relationships, Friendships, Isolation, Family role, Mental health, Sleeping, Worrying, Pain, Senses, Seeing, Hearing, Communication</td>
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<tr>
<td>ICECAP-O</td>
<td>Capability</td>
<td>5</td>
<td>Love and friendship, Thinking about the future, Doing things that make you feel valued, enjoyment and pleasure, Independence</td>
</tr>
<tr>
<td>Ascot</td>
<td>Capability</td>
<td>9</td>
<td>Control over daily life, Personal cleanliness and comfort, Food and drink, Safety, Social participation, Occupation, Accommodation cleanliness and comfort, Involvement, Dignity</td>
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<tr>
<td>Personal Wellbeing Index</td>
<td>Wellbeing</td>
<td>8</td>
<td>Overall life satisfaction item, Satisfaction with standard of living, Satisfaction with health, Satisfaction with achievement in life, Satisfaction with personal relationships, Satisfaction with feelings of safety, Satisfaction with feeling part of the community, Satisfaction with future security</td>
</tr>
</tbody>
</table>
Overview

- Final numbers
  - Surveys
    - 223 Baseline surveys returned
    - 180 Follow-up surveys returned
  - Interviews
    - 55 Interviews completed
What does the term quality of life mean to you?

The term quality of life means to me that I've got half a bed to sleep in, three meals a day and a loving partner and that's all I want.

It's happiness, love, those two things you must have and health.

Being able to make things, be creative in a way that I enjoy doing things…as long as I can still do the things I enjoy doing, be loved, be respected.

How did you find answering the questions?

I thought, how do I enumerate this? some moments I'm satisfied and some moments I'm less satisfied.

It's not easy to quantify some things, you know, "how satisfied are you with life?" - well, I'm as satisfied as I possibly could be, but that doesn't mean that I'm 100% satisfied - I had question marks in my mind while I was ticking the boxes.

As far as I'm concerned these sorts of things are an absolute waste of time because you can't derive anything from them… how can you put it down to a few simple questions?
Self-Rated Health
Descriptive Statistics – Item/Instrument Level

- Mobility
- Self-care
- Usual activities
- Pain/Discomfort
- Anxiety/Depression

Graph showing the percentage distribution of different levels (Extreme, Severe, Moderate, Slight, None) across mobility, self-care, usual activities, pain/discomfort, and anxiety/depression.

Graph also shows the comparison between baseline and follow-up for mobility, self-care, usual activities, pain/discomfort, and anxiety/depression.
Descriptive Statistics – Summary Level

![Graph showing AQOL - Adjusted summary score and AQOL utility value - baseline distributions.](chart)
## Descriptive Statistics - Utility/Index Values

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Weighting / Value Set / Tariff</th>
<th>Mean Baseline</th>
<th>Mean Follow-up</th>
<th>Median Baseline</th>
<th>Median Follow-up</th>
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</thead>
<tbody>
<tr>
<td>EQ-5D-5L</td>
<td>UK</td>
<td>0.596</td>
<td>0.600</td>
<td>0.641</td>
<td>0.649</td>
</tr>
<tr>
<td></td>
<td>US</td>
<td>0.700</td>
<td>0.703</td>
<td>0.728</td>
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<td>Australia</td>
<td>0.535</td>
<td>0.552</td>
<td>0.560</td>
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<td>AQOL</td>
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<td>0.515</td>
<td>0.505</td>
<td>0.551</td>
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<td>ICECAP</td>
<td>UK</td>
<td>0.830</td>
<td>0.816</td>
<td>0.868</td>
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<td>ASCOT</td>
<td>UK</td>
<td>0.819</td>
<td>0.845</td>
<td>0.853</td>
<td>0.886</td>
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<td>PWI</td>
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<td>0.690</td>
<td>0.707</td>
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<td>0.743</td>
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</table>
## Correlation Between Surveys

<table>
<thead>
<tr>
<th>Spearman’s rank correlation (rho)</th>
<th>EQ-5D-5L summary score</th>
<th>AQOL summary score</th>
<th>ICECAP-O summary score</th>
<th>ASCOT summary score</th>
<th>PWI summary score</th>
<th>EQ-5D-5L Utility - UK</th>
<th>AQOL utility</th>
<th>ICECAP-O index score</th>
<th>ASCOT index score</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQ-5D-5L summary score</td>
<td>-</td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>AQOL summary score</td>
<td>0.771</td>
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<td>ICECAP-O summary score</td>
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<td>0.674</td>
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<tr>
<td>PWI summary score</td>
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<td>0.620</td>
<td>0.721</td>
<td>0.671</td>
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<td>EQ-5D-5L Utility - UK</td>
<td>0.929</td>
<td>0.755</td>
<td>0.551</td>
<td>0.549</td>
<td>0.586</td>
<td>-</td>
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<tr>
<td>AQOL utility</td>
<td>0.743</td>
<td>0.936</td>
<td>0.658</td>
<td>0.635</td>
<td>0.625</td>
<td>0.729</td>
<td>-</td>
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<tr>
<td>ICECAP-O index score</td>
<td>0.601</td>
<td>0.685</td>
<td>0.942</td>
<td>0.732</td>
<td>0.680</td>
<td>0.565</td>
<td>0.662</td>
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<td>ASCOT index score</td>
<td>0.576</td>
<td>0.654</td>
<td>0.726</td>
<td>0.957</td>
<td>0.658</td>
<td>0.569</td>
<td>0.619</td>
<td>0.729</td>
<td>-</td>
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</table>
Mean Scores By Self-Rated Health Category

Utility / Index values

Self-Rated Health

Excellent Very Good Good Fair Poor

EQ-VAS
PWI Index
EQ-5D-5L utility (Aus)
AQOL utility
ICECAP utility
ASCOT utility
Validity – Responsiveness / Change Scores

-0.25 -0.2 -0.15 -0.1 -0.05 0 0.05 0.1 0.15 0.2 0.25

ASCOT utility
ICECAP utility
AQOL utility
EQ-5d utility - AUS - D
EQ-5d utility - AUS - C
EQ-5d utility - AUS - B
EQ-5d utility - AUS - A
EQ-5d utility - US
EQ-5d utility - UK
PWI mean score
EQ-5d sum score
AQOL sum score
ICECAP sum score
ASCOT sum score
Deterioration in SRH
No change in SRH
Improved SRH

Silver Chain
Validity – Responsiveness / Change Scores

- EQ-5D-5L sum score
- AQOL sum score
- ICECAP-O sum score
- ASCOT sum score
- PWI Index
- EQ-5D-5L UK utility
- AQOL-4d utility
- ICECAP-O index
- ASCOT utility

-0.25 -0.2 -0.15 -0.1 -0.05 0 0.05 0.1 0.15 0.2 0.25

- Deterioration in life satisfaction
- No change in life satisfaction
- Improvement in life satisfaction

Silver Chain
Comparisons with External Values

General Australian population

Mobility
Self-care
Usual Activities
Pain/discomfort
Anxiety/depression

Cardiovascular disease
RA/Arthritis
Stroke

Extreme/Unable
Severe
Moderate
Slight
None
Comparisons with External Values

<table>
<thead>
<tr>
<th>Item</th>
<th>General Australian population</th>
<th>MICC study</th>
<th>Cardiovascular disease - Janssen et al.</th>
<th>RA/Arthritis - Janssen et al.</th>
<th>Stroke - Janssen et al.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Self-care</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Usual Activities</td>
<td></td>
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<td></td>
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<tr>
<td>Mean scores</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pain/discomfort</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety/depression</td>
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</tbody>
</table>

The diagram illustrates comparisons of item mean scores across different populations and conditions, including General Australian population, MICC study, Cardiovascular disease, RA/Arthritis, and Stroke.
Variability in the Utility Values

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>Follow-up</td>
</tr>
<tr>
<td>EQ-5D-5L</td>
<td></td>
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</tr>
<tr>
<td>UK</td>
<td>0.596</td>
<td>0.600</td>
</tr>
<tr>
<td>US</td>
<td>0.700</td>
<td>0.703</td>
</tr>
<tr>
<td>Aust</td>
<td>0.535</td>
<td>0.552</td>
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<td>0.515</td>
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<tr>
<td>PWI</td>
<td>0.690</td>
<td>0.707</td>
</tr>
</tbody>
</table>
Key Results

- There are many measures that can be used.
- Many different measures show adequate psychometric properties.
- Different measures are related, but are not direct substitutes for one another.
- Measuring outcomes is not necessarily straightforward...
Where to from here?

• Exploring other ways of using the data
  – Combining with assessment data to model impact
  – Cost-utility analysis

• Second phase of project
  – How effective is a new short term reablement approach to HACC assessment at improving quality of life as well as health and functional status?
Thankyou

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