

Assessing iREAP over an 18 month period

Integrated – Rehabilitation and Enablement Program

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ACI NSW Agency
for Clinical
Innovation



**The
Inspiring
Ideas
Challenge**

Why we needed change?



++Single
discipline
treatments

Difficulty
discharging

Overloaded
outpatient
departments

WMH seen as a PD
specific option

Pseudo-case
management

Complexity of
clients

Lack of integrated
care available

The issues

Frailty

- 10% aged >65yo, between 25-50% aged >85yo¹
- Frail older people are 1.2-3.6 times more likely to fall than non-frail

Falls

- 30-40% community-dwelling aged >65 fall each year²
- Greatest proportion of falls resulting in hospitalisation aged > 85yo

Parkinson's Disease (PD)

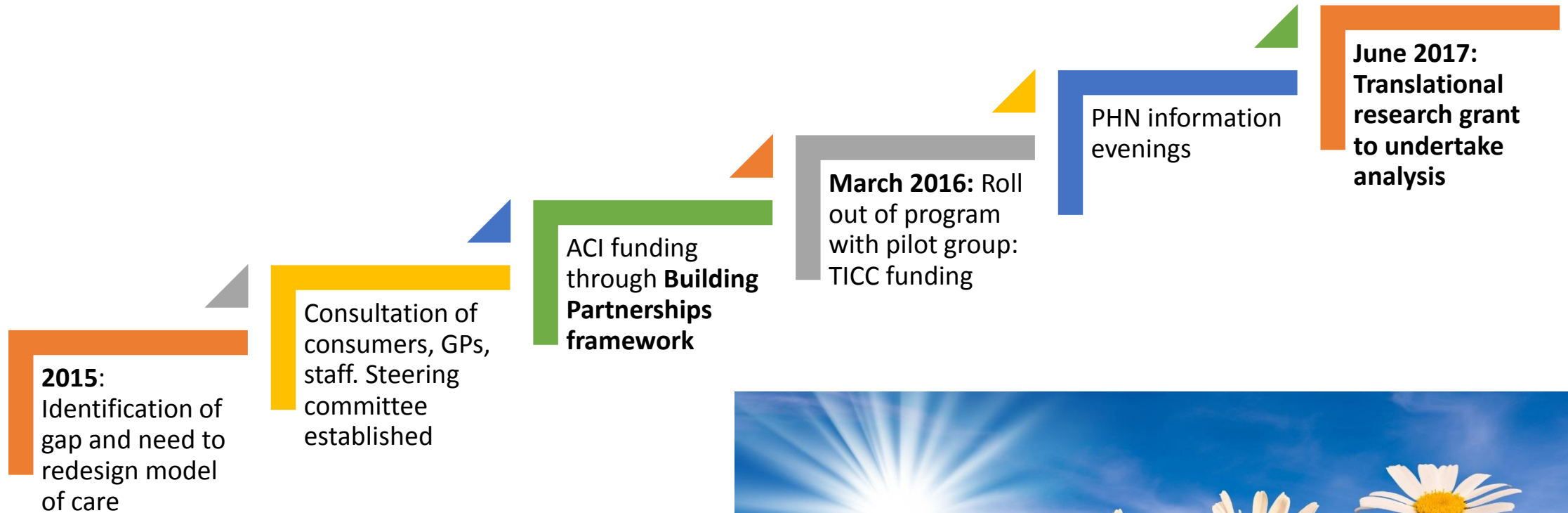
- 52,000 Australians aged ≥ 65yo have PD = prevalence of 1.7% in this age group³
- Greatest proportion of fall-related hospitalisations occurs 75-84yo

What do we know works?

- ✓ **Best Practice principles:**
- ✓ Multidisciplinary Teams (Gillespie et al, 2009)
- ✓ Integrated Care (Dorling et al 2015, Nuffield Trust 2011)
- ✓ Intensive program, reducing falls (Sherrington et al 2008)
- ✓ Patient Generated Goal Setting (ACI, 2013)
- ✓ Health Coaching (Gale J, 2014)
- ✓ Early Intervention- cost effective (Campbell and Robertson 2007)



How did we go about the change?



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What is iREAP?



Referral criteria: Falls frail group

- 65 years and older
- Patient questions / presenting symptoms:
 - Have you been feeling weaker lately?
 - Do you feel tired?
 - Are you going out less than before?
 - Are you losing weight for no apparent reason?
 - Are you walking slower and slower?
- 1 or more falls in the last 12 months or at risk of falls
- Multiple presentations to GP or ED in the last 12 months



Referral criteria: neurodegenerative group

Recent diagnosis of PD (1-2 years) or Hoehn Yahr Criteria 1 to 3

Client answers yes to the following questions:

1. Are your movements getting slower and smaller?
2. Have you or others noticed if your posture has changed?
3. Is your balance worse now than before you had Parkinson's Disease?
4. Do you need help to complete activities like dressing or getting up?
5. Are you feeling more fatigued so doing less outside your home?
6. Are you willing and able to participate in an intensive 8 week day rehab programme?

Aim

- To determine effect of the iREAP intervention through analysis of pre- and post-intervention measures of;
- Frailty
- Physical function
- Quality of life
- A patient's "activation"
- Frequency of falls

Demographics

- 111 clients through (March 2016 - Sep 2017)
- 99 clients' data analysed
- 45 clients from FF group, 51 from Neurodegenerative group
- Sex: 55 male, 41 female
- Age: Mean 76.79 (Range 60-91)
- 12 dropped out; e.g. ankle # (prior), UTI, VP shunt repair, Fall > Hip # (during), illness, did not meet expectations.

Measures



- Frailty: Rockwood Clinical Frailty Score (CFS)
- Physical measures: Timed up and go (TUG), 6 Minute walk test (6MWT), 10 metre walk test (10MWT) and Berg balance scale
- Quality of life measures: QOL-Bref, PDQ39
- Patient Activation Measure (PAM): knowledge, confidence and motivation in managing one's own health
- Follow up measure: self-reported falls and hospitalisations at 3 month, 6 months, continued enablement

Rockwood Clinical frailty scale

Clinical Frailty Scale*



1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.



2 Well – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.



3 Managing Well – People whose **medical problems are well controlled**, but are **not regularly active** beyond routine walking.



4 Vulnerable – While **not dependent** on others for daily help, often **symptoms limit activities**. A common complaint is being "slowed up", and/or being tired during the day.



5 Mildly Frail – These people often have **more evident slowing**, and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.



6 Moderately Frail – People need help with **all outside activities** and with **keeping house**. Inside the home, they often have problems with **shopping** and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.



7 Severely Frail – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).



8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



9 Terminally Ill – Approaching the end of life. This category applies to people with a **life expectancy <6 months**, who are **not otherwise evidently frail**.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.

2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

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Outcomes - CFS

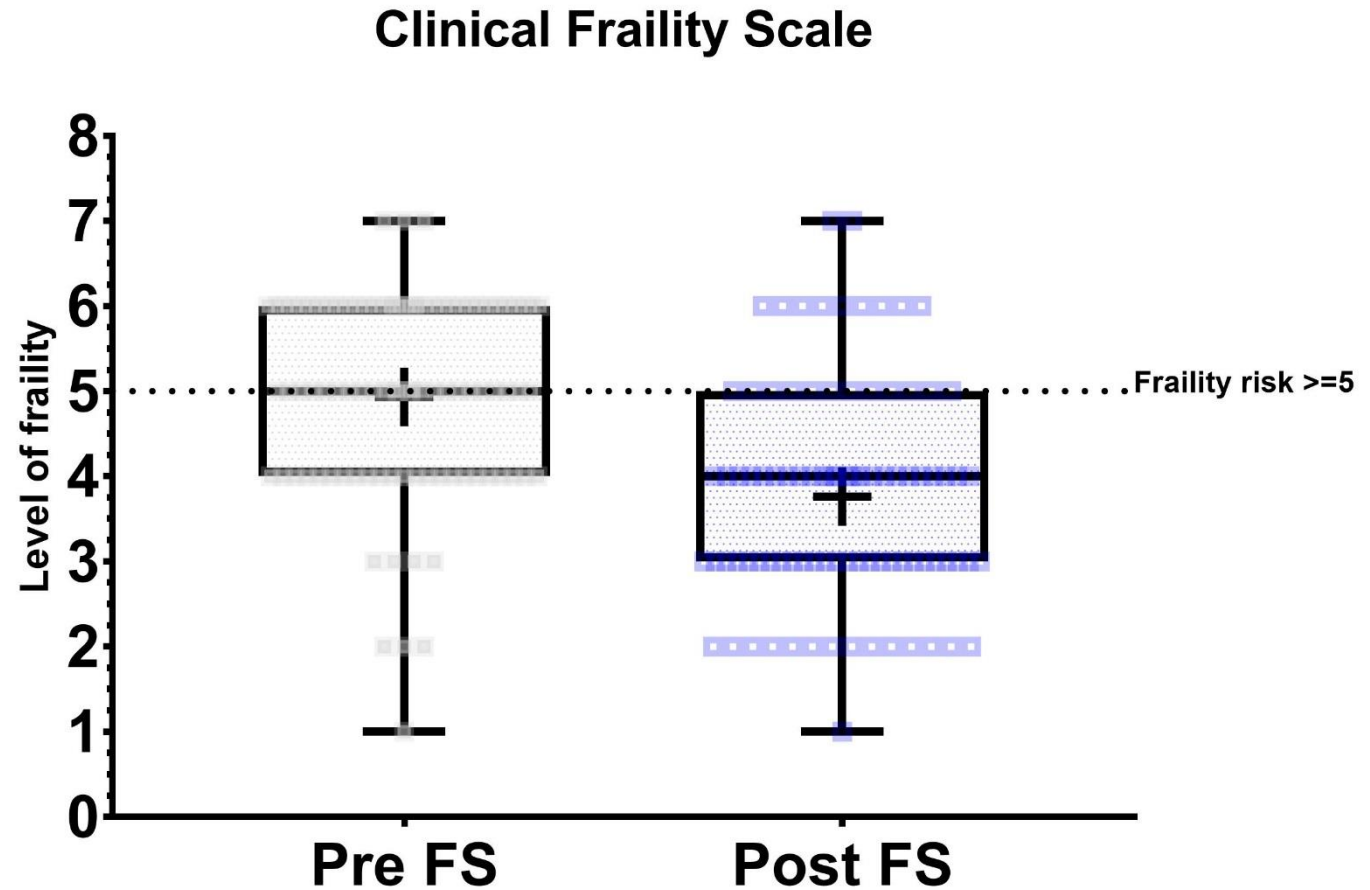
Clinical Frailty Scale

Administered by Care coordinator

- Full data set on 85 clients
- Mean: 4.93 → 3.76
- P-value: 0.0001 (sig. set at 0.05)

Would frailty be better assessed with a battery of tests?

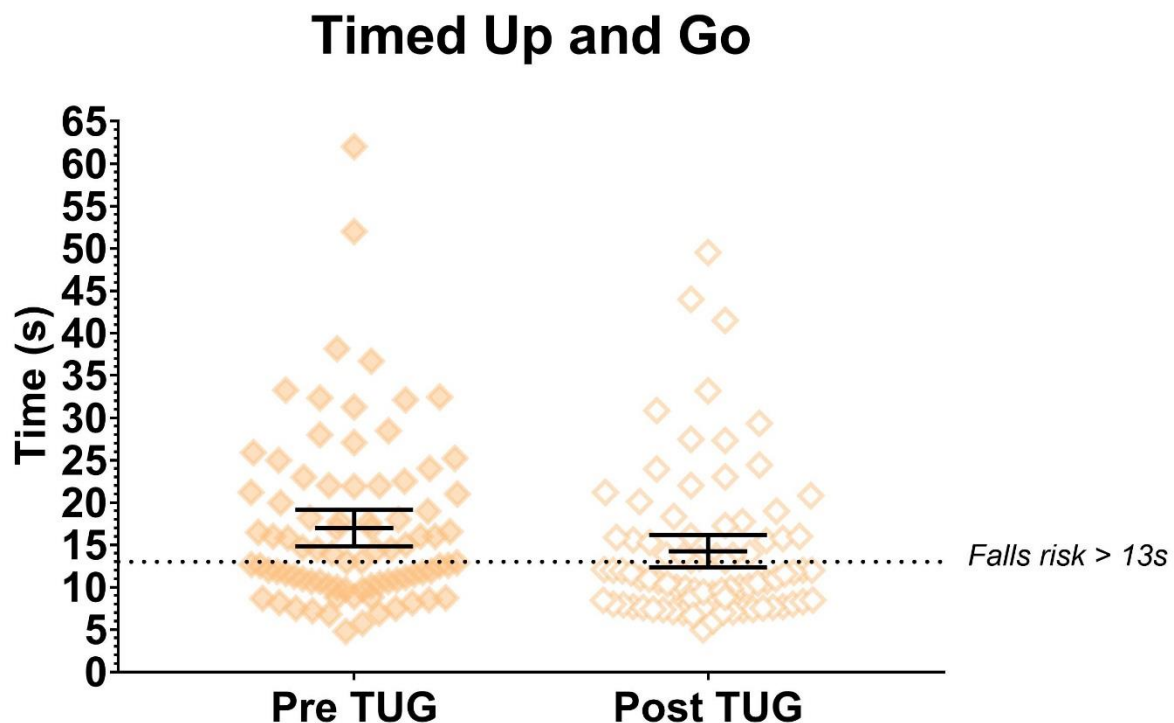
Clinical meaning?



Timed-up and Go (TUG)

- 75 clients with full data set
- Completed by PTs; involves STS, 3m walk and return
- Mean: 16.99 → 14.24
- Consideration of clinical meaning; >13 secs = high falls risk¹

Time	Pre	Post
< 13 secs	36	44
14sec-29.9 secs	30	26
30+ secs	9	5
p = 0.007		



QOL-BREF and PDQ-39

WHO-QOL-Bref: 26 questions exploring 4 QOL Domains: Physical health, Psychological health, social relationships and environment

Looking at specific domains; there were statistically significant changes in the;

- Physical domain $p < 0.05$
- Environmental domain $p < 0.05$
- Potentially in these domains due to heavier PT/OT focus in iREAP

PDQ-39: 39 questions looking at 8 domains

- Complete data on only 32 clients
- PDQ-39 Single index: 0-100, where lower score = better health
- Changes statistically significant $p = 0.004$

PDQ39 – mean single index score

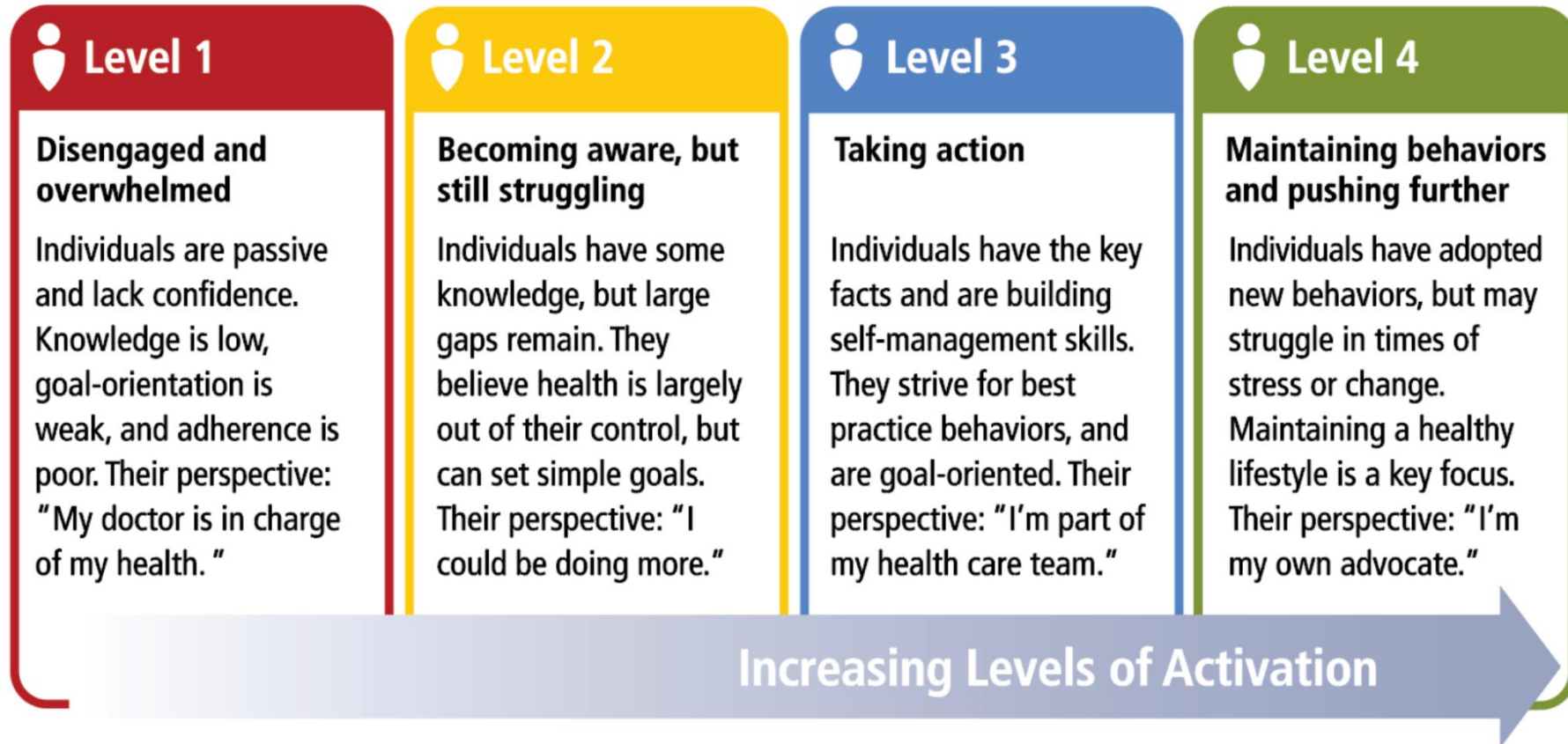
Pre	27.4435
Post	20.8561

Patient Activation Measure (PAM)

- Knowledge, confidence and motivation to manage one's own health
- Pre and post measure
- Higher level indicates higher "activation"
- Also used to tailor care → health coaching guide

	1	2	3	4	0	Score each row
	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
1. When all is said and done, I am the person who is responsible for taking care of my health	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
2. Taking an active role in my own health care is the most important thing that affects my health	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
3. I am confident I can help prevent or reduce problems associated with my health	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
4. I know what each of my prescribed medications do	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
5. I am confident that I can tell whether I need to go to the doctor or whether I can take care of a health problem myself	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
6. I am confident that I can tell a doctor concerns I have even when he or she does not ask	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
7. I am confident that I can follow through on medical treatments I may need to do at home	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
8. I understand my health problems and what causes them	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
9. I know what treatments are available for my health problems	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
10. I have been able to maintain (keep up with) lifestyle changes, like eating right or exercising	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
11. I know how to prevent problems with my health	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
12. I am confident I can figure out solutions when new problems arise with my health	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
13. I am confident that I can maintain lifestyle changes, like eating right and exercising, even during times of stress	Disagree Strongly	Disagree	Agree	Agree Strongly	NA	
TOTAL SCORE =						

Patient Activation Measure – Levels



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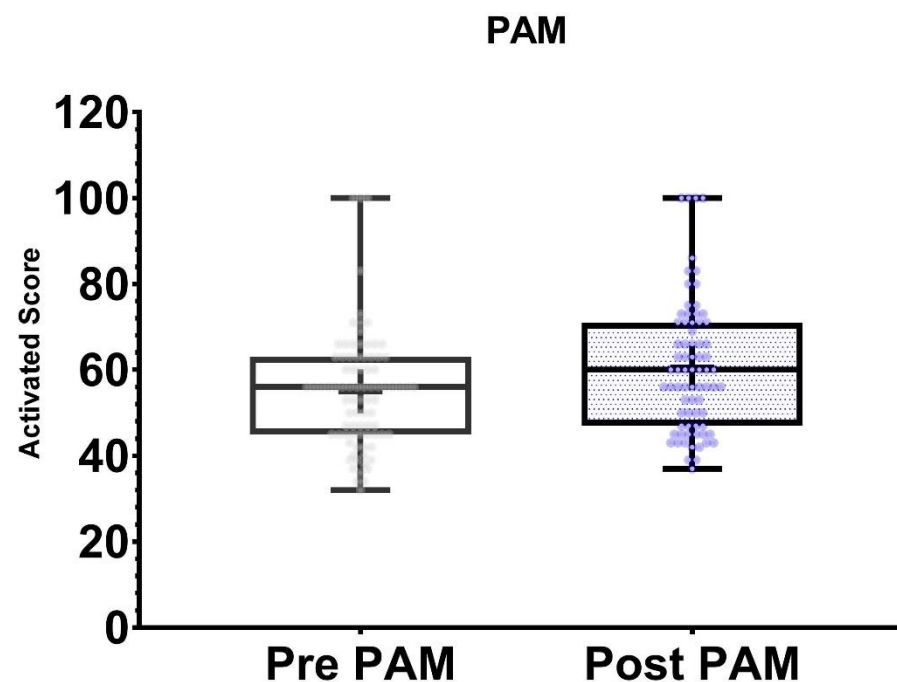


PAM results

- Analysis on 74 clients' full data set
- Form completed by clients
- Mean: 55 → 61
- $p < 0.001$

A Single Point Change in PAM Score is Valuable

Each point increase in PAM score correlates to a 2% decrease in hospitalization and 2% increase in medication adherence.



Health Coaching

- Adapted from GROW model used by SESLHD
- Individually; initial and f/u
- As group session

Health Coaching session

Goal <ul style="list-style-type: none">• What do you want to get out of i-REAP?	Reality <ul style="list-style-type: none">• What is the situation now?	Options <ul style="list-style-type: none">• What's currently working?	Wrap-up <ul style="list-style-type: none">• How can you make this work?• What are some next steps

Where to next?

- Ongoing running of program as standard business
- Ongoing collection of data
- Full analysis to occur with multiple corrections and correlations
- Write up of results and program as observational study
- Potential for carrying out RCT if funding available; small site allows trial of novel programs



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