

***"Having moved and being able to be quite independent."***  
**Outcomes over two years for people with neurological  
 disability and complex needs after moving into new  
 individualised apartments: An update on the journey.**

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## The importance of home



*"There is nothing like staying at home for  
 real comfort."* Jane Austen

Comfort



*"People usually are the happiest at  
 home."* William Shakespeare

Happiness



*"The truth is that the home is the  
 only place of liberty"* G.K. Chesterton

Freedom



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## The right to comfort, happiness and freedom

- ❑ Adequate housing is universally viewed as one of humanity's most basic needs. (UN, 2006)
- ❑ Our home and living arrangements have a strong influence on our quality of life. (Veitch, 2008)
- ❑ Research affirms the links between housing, health outcomes, and quality of life for people with disability. (Douglas et al, 2022; Oliver et al. 2020)
- ❑ A substantial number of people with significant disabilities are denied access to their own home and have limited choice in housing and living arrangements. (AIHW, 2007, Wiesel, 2015)



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## Goal of the Project



Systematically investigate the experience, outcomes and economic impact of people with disability moving into specialist disability accommodation housing.

Health, wellbeing, community participation, support outcomes and lived experience of people with disability are measured before moving and over 2 years after they move.

ARC Linkage LP220100293, Douglas, Winkler & Fleming).



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## Overview

### Pilot Study

#### Aim

- Investigate post-move change in outcomes for people with disability and complex needs who move into individualised housing with appropriate design, support, technology, and location.

#### Hypotheses

- After moving into an individualised housing option, participants will experience improvements in:

**Health**

**Wellbeing**

**Community integration**

**? Change in the level of support**



### Longitudinal Case Series

#### Aim

- To compare pre-move outcomes with outcomes at 1 yr and 2 yrs post-move for people with disability and complex needs who move into individualised SDA with appropriate design, support, technology, and location.

#### Hypotheses

- Reliable improvements would be demonstrated on **health, wellbeing and community integration outcomes at 1 and 2 yrs after moving into individualised SDA**, when compared to pre-move measures.



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## Pilot Study Method



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## Design

- **Mixed-methods Pilot study**
  - ❑ Qualitative: Interview evaluates individual experiences
  - ❑ Quantitative: 4 outcome measures
- **Outcome measures**
  1. Health: EuroQol-5D Visual Analog Scale (EQ-VAS) (van Reenen & Janssen, 2015)
  2. Wellbeing: Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Stewart-Brown & Janmohamed, 2008)
  3. Community Integration: Community Integration Questionnaire (CIQ-R) (Callaway et al., 2014)
  4. Support needs: Care and Needs Scale (CANS) (Tate, 2017)
- **Two time-points**
  - time 1: pre-move      time 2: post-move (minimum 6 months)



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## Participants (n=15)

### Demographics & Disability Type

<b>Age</b> (mean, range):	44.2,	20-67yrs
<b>Sex</b>		
Males	6	40%
Females	9	60%
<b>Disability type</b>		
Cerebral Palsy	3	20%
ABI	2	13.3%
Other Neurological (Friedrick's ataxia)	2	13.3%
Multiple Sclerosis	2	13.3%
Spinal Cord Injury	2	13.3%
Other	4	26.7

### Pre-Move Housing Environment

Shared Supp Acc <10	4	26.7%
Private home with partner and/or children	3	20%
Private home living with parents/relatives	3	20%
Residential Aged Care	2	13.3%
Vulnerable Housing	1	6.7%
Shared Supp Acc >10	1	6.7%
Private home living alone	1	6.7%



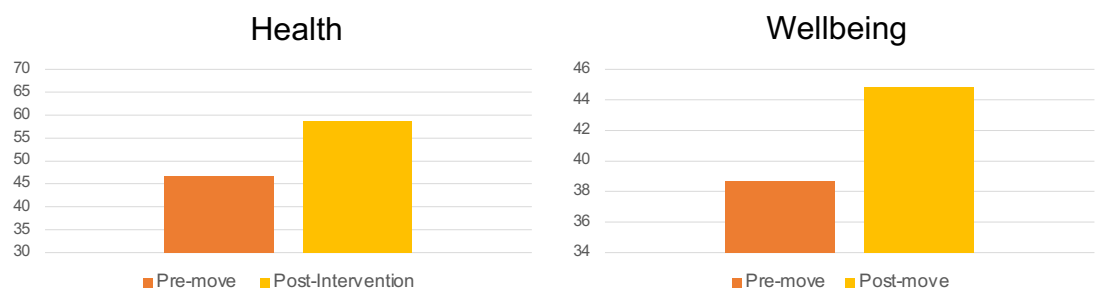
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## Results



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## Pre- vs post-move comparisons: paired t-tests (n=15)

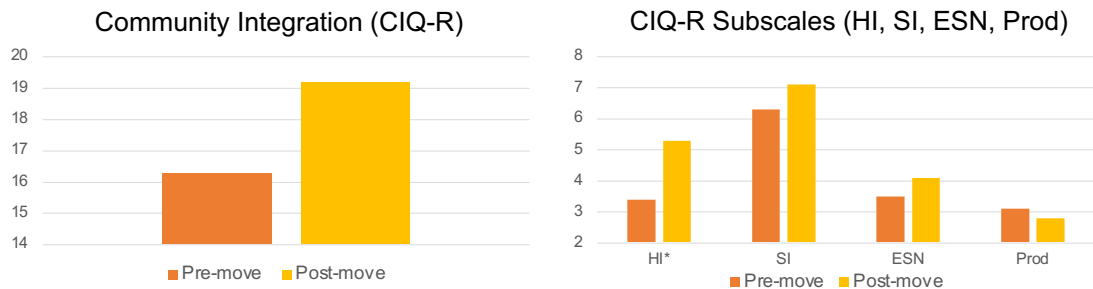


Outcome (score range)	Pre-move		Post-move		Statistical Test Values		
	Mean	SD	Mean	SD	t	p (2-td)	Effect (Eta <sup>2</sup> )
Health (EQ-VAS:0-100)	46.8	21.8	58.8	15.4	-1.91	.077 <sup>^</sup>	0.21 (large)
Wellbeing (WEMWBS:14-70)	38.7	11.0	44.8	8.4	-2.40	.031 <sup>*</sup>	0.29 (large)

Note: <sup>^</sup>p<.10; \*p<.05; \*\*p<.01; <sup>BfA</sup> Bonferroni adjusted p <.0125; #effect size Eta<sup>2</sup> Cohen 1988: .01: sm, .06: mod: .14: lg

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## Pre- vs post-move comparisons: paired t-tests (n=15)



Outcome (score range)	Pre-move		Post-move		Statistical Test Values		
	Mean	SD	Mean	SD	t	p( 2-tl)	Effect ( Eta <sup>2</sup> )
CIQ-R (0-35)	16.3	4.2	19.2	4.6	-3.09	.008**	0.41 (large)
Home Integration (0-12)	3.4	1.48	5.3	1.8	-3.44	.004 BIA	0.46 (large)

Note: \*\*p<.01; BIA Bonferroni adjusted p <.0125; #effect size Eta<sup>2</sup> Cohen 1988: .01: sm, .06: mod: .14: lg



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## Change in support needs: pre- to post-move

Trend towards reduced support needs from pre- to post-move ( $Z = -1.941$ ,  $p = .052$ )

At post-move, CANS support level

- remained the same for 5 participants
- decreased for 8 participants - lower support needs
- increased for 2 participants - higher support needs.

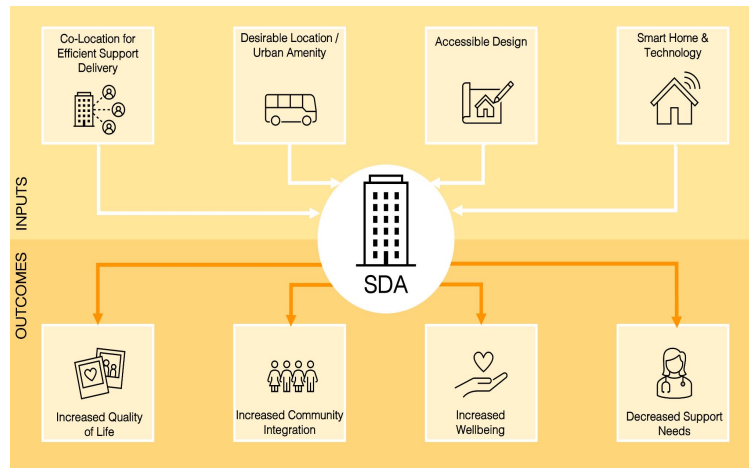
No participant had a change in support level that exceeded a single level change.

- These changes in support level reflect an overall reduction in daily support hours for the group.
- Average support hours per participant at pre-move = 19 hours per day
- Average support hours per participant at post-move = 16.6 hours per day.
- Average decrease = 2.4 support hours per participant per day.



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## Summary of Findings: Pilot Study (n=15)



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## Longitudinal Case Series

 Method

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## Design

- **Subset of results**
  - First 7 participants who completed pre-move, 1- and 2-yr post-move evaluation
- **3 outcome measures**
  - **Health:** EuroQol-5D Visual Analog Scale (EQ-VAS) (van Reenen & Janssen, 2015)
  - **Wellbeing:** Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Stewart-Brown & Janmohamed, 2008)
  - **Community Integration:** Community Integration Questionnaire (CIQ-R) (Callaway et al., 2014)
- **3 timepoints**
  - time 1: pre-move                      time 2: 12 months post move                      time 3: 24 months post move
- **Analysis**
  - Reliable Change Index: amount of change a client must show on a specific psychometric instrument between measurement occasions for that change to be reliable (larger than that expected due to measurement error).



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## Participants (n=7)

### Demographics & Disability Type

<b>Age</b>	Mean	44.3 yrs
	Range	37-59 yrs
<b>Sex</b>	Females	4
	Males	3

### Disability type

Cerebral Palsy	2
ABI	2
Other Neurological	2
Multiple Sclerosis	1

### Pre-Move Housing Environment

Sm Gp Home <10 residents	3
Private home living with Parents	2
Residential Aged Care	1
Lg Gp Home >10 residents	1

### Support level (CANS, Tate 2017)


(Can be left alone for....)



Level 2 (almost all week)	4
Level 3 (a few days a week)	2
Level 4 (part of the day & overnight)	1



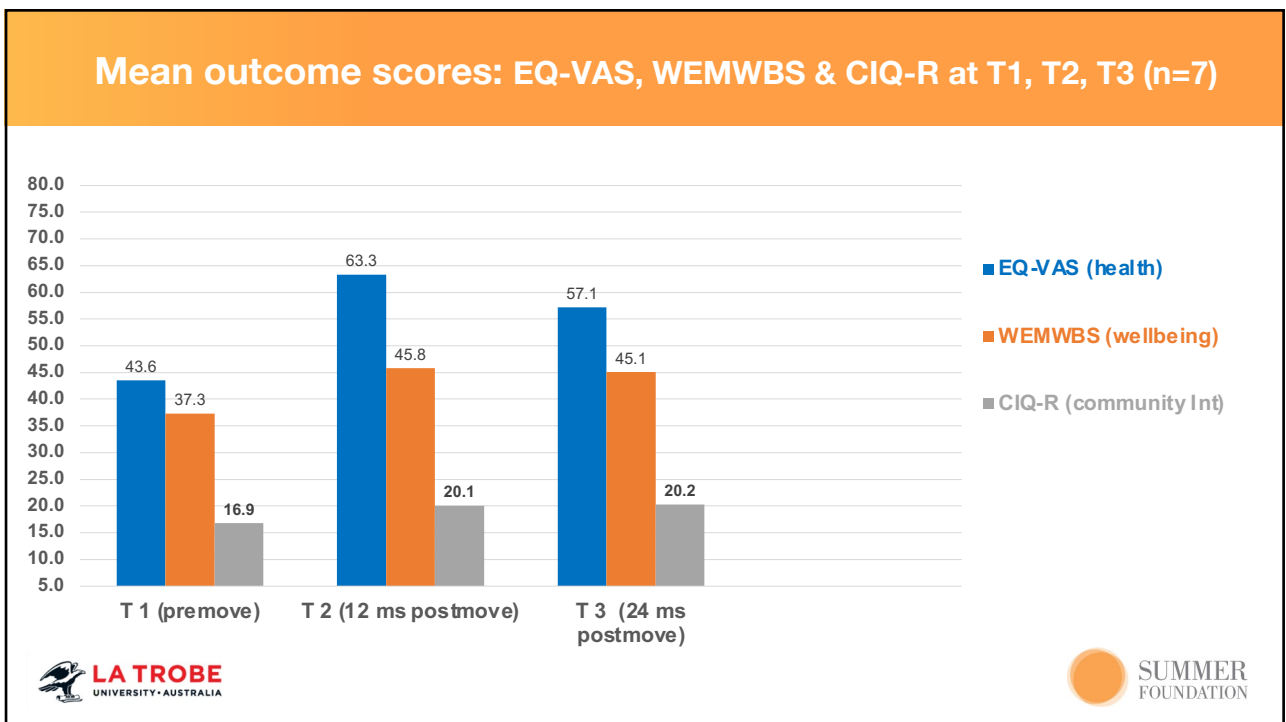
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# Results

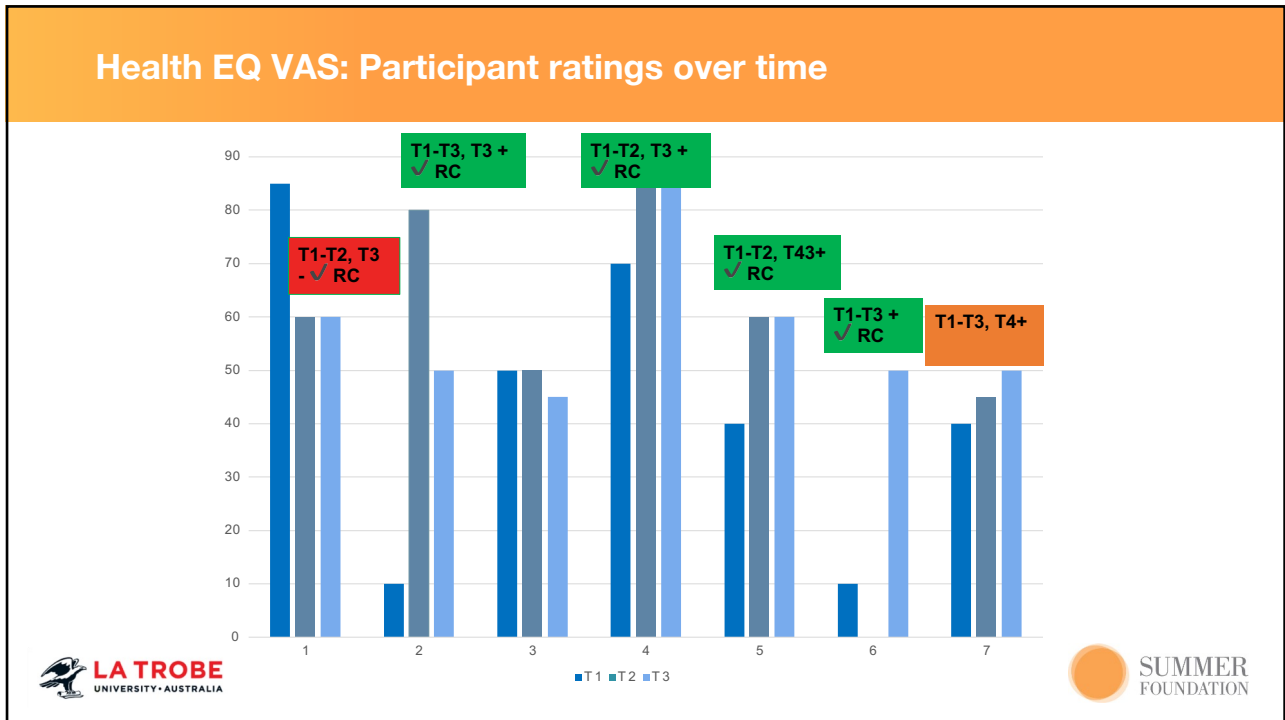


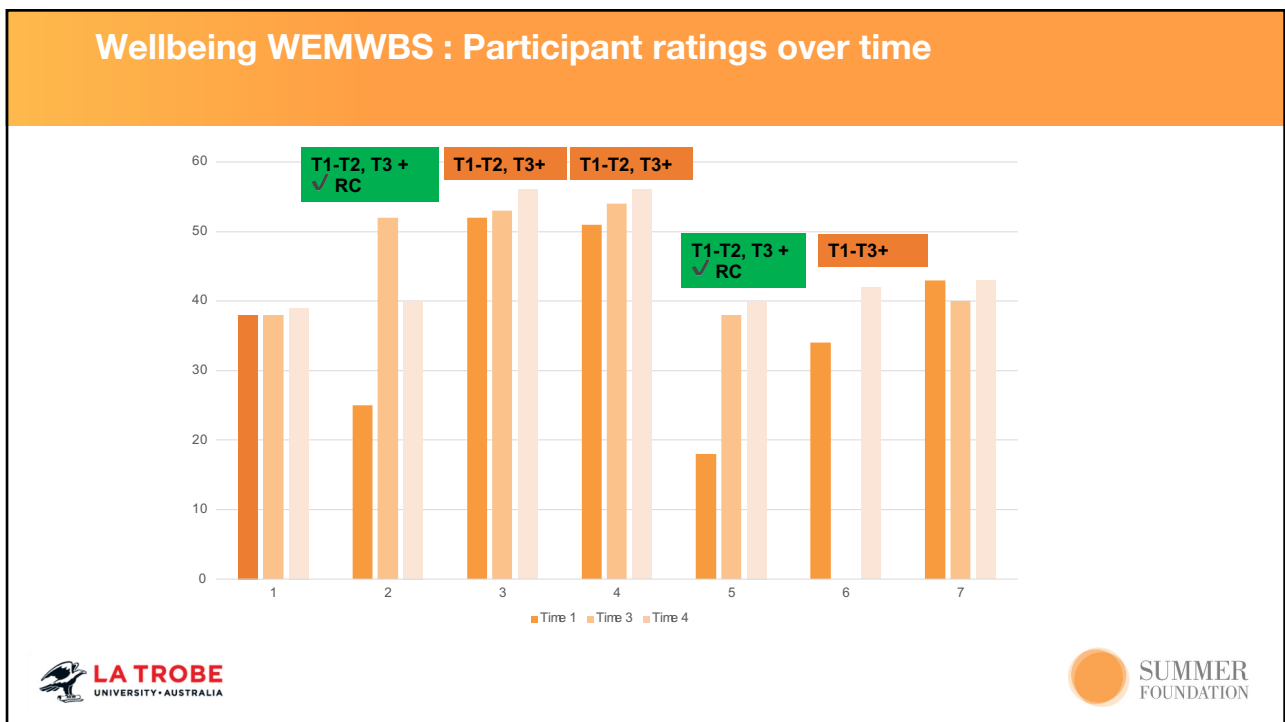
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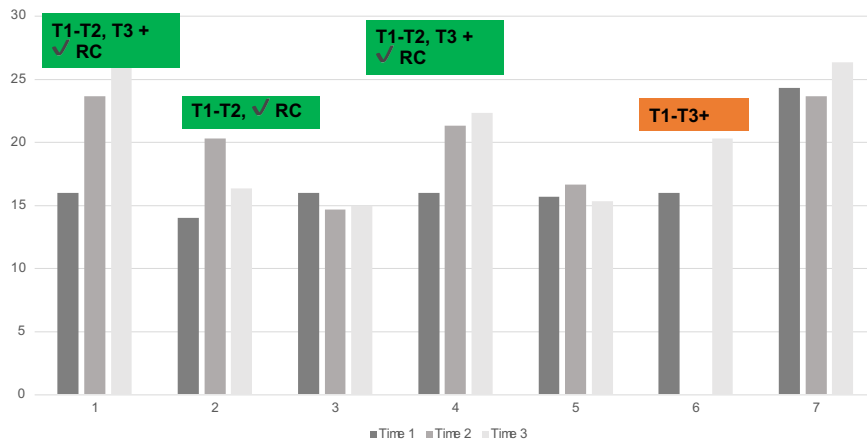


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## Community integration CIQ-R: Participant ratings over time



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## Reliable change: Summary

Timepoint Postmove	EQ-VAS Health	WEMWBS Wellbeing	CIQ-R Community Integration
1 year	<ul style="list-style-type: none"> <li>4/6 increased (3/4 RC)</li> <li>1/6 no change</li> <li>1/6 decreased (RC)</li> </ul>	<ul style="list-style-type: none"> <li>3/6 increased (2/3 RC)</li> <li>2/6 no change</li> <li>1/6 decreased</li> </ul>	<ul style="list-style-type: none"> <li>4/6 increased (3/4 RC)</li> <li>2/6 no change</li> </ul>
2 years	<ul style="list-style-type: none"> <li>5/7 increased (4/5 RC)</li> <li>2/7 decreased (1/2 RC)</li> </ul>	<ul style="list-style-type: none"> <li>4/7 increased (2/4 RC)</li> <li>3/7 no change</li> </ul>	<ul style="list-style-type: none"> <li>5/7 increased (2/5 RC)</li> <li>1/7 no change</li> <li>1/7 decreased</li> </ul>

*"Things are much more settled. In terms of support work, in terms of – I don't know how to phrase it. Just the general daily living stuff. You've got the normal stresses that might come with that, but it's not – it's just life now"*

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## Implications and Future Research

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## The value of a framework: Future research

"My life has changed since moving into my apartment. It's just so wonderful to have people coming to my place. It's wonderful to go out with them too, but just to sit down at my table and have a cup of tea or just talk, just talk in a normal environment. One of life's simple pleasures."  
**Helen's comfort, happiness & freedom**

Develop an evidence base regarding the specific impact of the built form, technology and support provided

Afford people with disability the basic right to choose where they live or who they live with

Further investigate cost effectiveness and cost utility metrics from a services and social perspective

Scale up data collection and include contemporary housing options beyond SDA apartments

Understand the trajectory of individuals and subgroups of people with diverse disability types.

Maximise potential for more independence, increased wellbeing and community participation.

Identify who is likely to flourish in different models of housing & support tailored to specific needs.

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### Pilot Study Reference

Douglas, J. Winkler, D; Oliver, S; Liddicoat, S; D'Cruz, K. (Open access,2022) Moving into New Housing Designed for People with Disability: Preliminary Evaluation of Outcomes. *Disability and Rehabilitation*, <https://doi.org/10.1080/09638288.2022.2060343>

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