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Exercise in Residential Aged Care

**Practical tips on success
factors from the
Sunbeam Program and
beyond**



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SUNBEAM - How did we get here?



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AUSTRALIAN
PHYSIOTHERAPY
ASSOCIATION

Disillusioned
with AH
service
funding in
RACF

Search for
evidence

Conducted
a Cluster
RCT

Lobby for
change



Exercise in residential aged care

Results relating to the effectiveness of exercise in reducing the rate of falls and risk of falling are inconsistent

(Cochrane Review - Cameron et al 2010,2012)



... Programs were reported to be subsequently abandoned by multiple aged care institutions worldwide.

(Silva R et al , 2013)

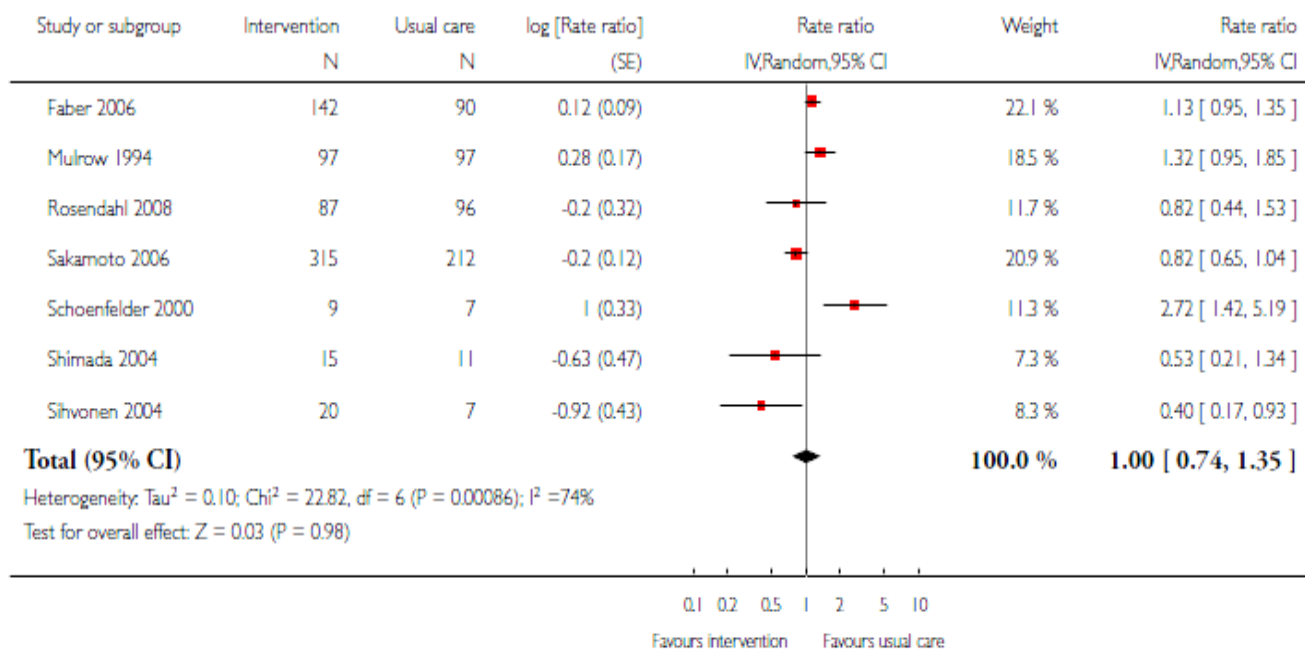
Supervised exercise versus usual care

Analysis 1.1. Comparison 1 Supervised exercises vs usual care (nursing care facilities), Outcome 1 Rate of falls.

Review: Interventions for preventing falls in older people in nursing care facilities and hospitals

Comparison: 1 Supervised exercises vs usual care (nursing care facilities)

Outcome: 1 Rate of falls



Exercise.....



Type

Dosage

Frequency

all matter...

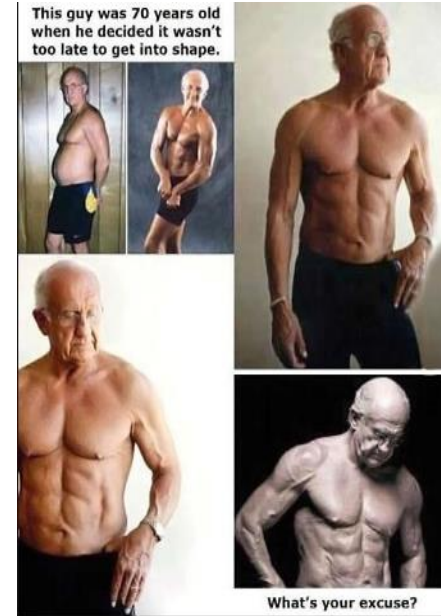


What if all those studies were doing the wrong type and dose of exercise?

Components of effective exercise

programs (Tiedeman et al 2011 – at the time this was the most recent)

- ✓ Total dose of exercise – 50 hours minimum
- ✓ High level balance work
- ✓ Strength work for those who are deconditioned
- ✓ All exercises individually upgraded – progressed
- ✓ Close supervision – to allow for safe inclusion of high level balance work
- ✓ Maintenance program continued after initial conditioning phase
- ✓ Walking program (while beneficial for other health conditions) should not be considered a falls prevention program



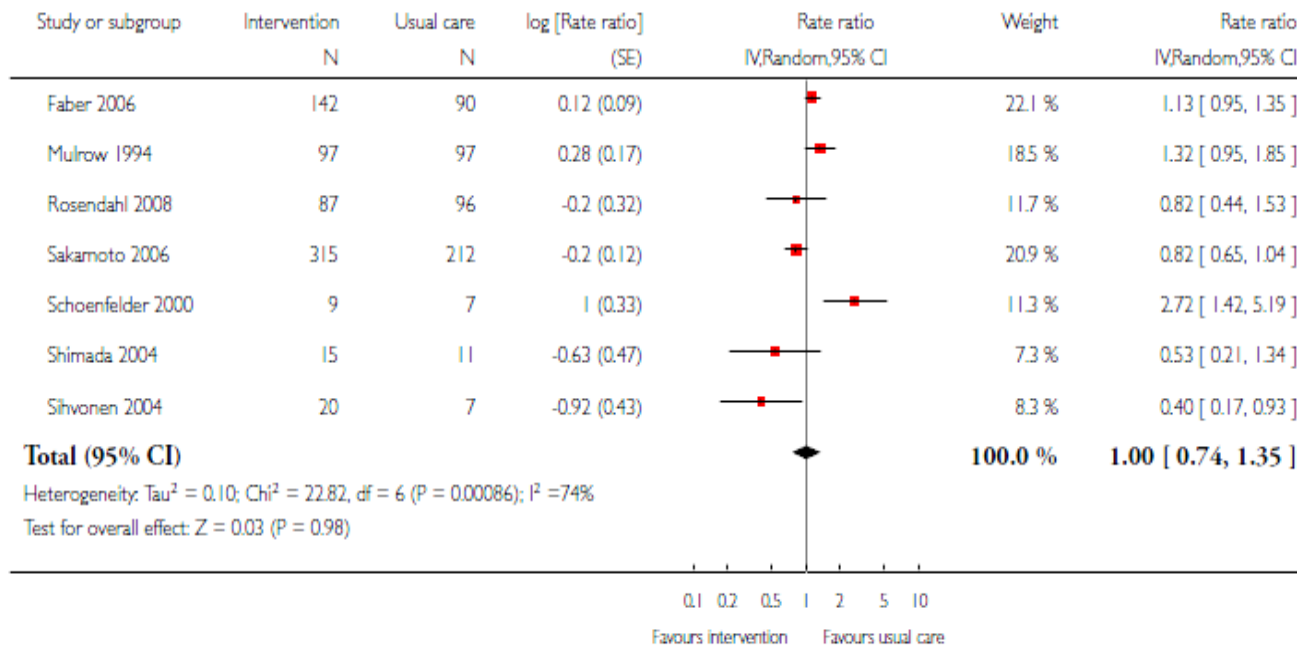
NONE implemented these components

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Outcome: 1 Rate of falls



Sunbeam Trial – 16 RACF, 221 participants



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Characteristic	Intervention Group (n= 113)	%	Usual Care Group (n= 108)	%
Age	86.04 (SD = 6.77)		86.65 (SD = 7.17)	
Female	71	62.8	73	68.22
Months in RACF	22.88 (SD = 27.57) Range 1-192		26.07 (SD = 24.6) Range 1-120	
High Care ACFI	61	54	55	50
Falls in prior 12 months	189		114	
Fallers	69	61.01	54	50.00
Diagnosed co-morbid conditions:				
Anxiety/ Depression	86	76.12	41	37.96
Arthritis	74	65.49	64	59.26
Cardiac Disease	54	47.79	47	43.52
Cognitive Impairment	63	58.33	54	50.00
Diagnosed Gait/balance Disorder	86	76.12	87	80.56
Hypertension	69	61.06	60	55.56
Osteoporosis	40	35.40	31	28.97
MS Pain	60	53.10	48	44.44
Visual Impairment	38	33.63	29	27.10
Prescribed Vitamin D	30	26.55	32	29.91

The Intervention



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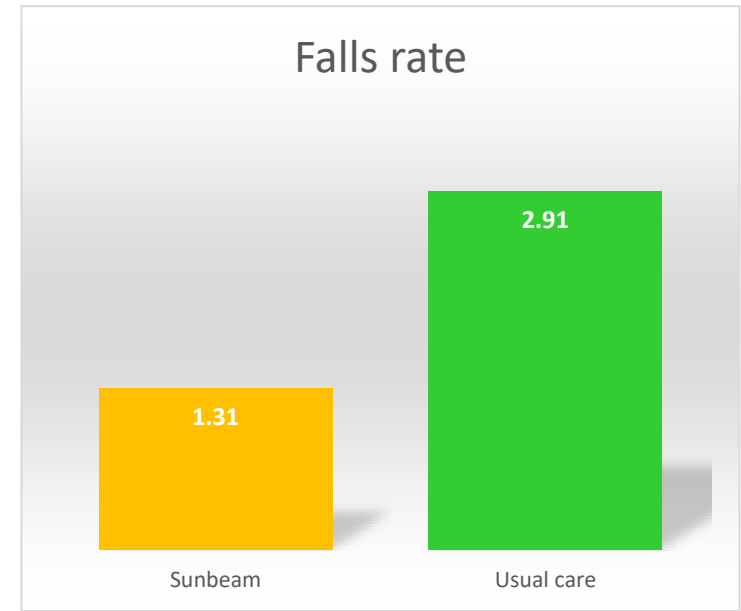






Outcomes at 12 months

- 55% Reduction in falls rate
IRR = 0.45 (95% CI 0.17-0.74)



- Improvement in physical performance (*SPPB*)
($p = 0.2$)
- NO adverse events

Calculating cost effectiveness



- Cost to deliver the program - \$463 per person (including gym set up costs and personnel)
- Incremental cost effectiveness ratio (ICER) = \$22 per fall avoided (*cost effective*)
- Modelled saving to Australian Health Economy
= \$AUD 120 Million

Beyond the RCT - Disseminating the results

- ✓ RCT Publication
- ✓ CE Publication
- ✓ Share findings with those responsible for reform
- ✓ Lobby for change



CHANGE - R - ACFI - Key Recommendation

7.2. Are Physical Therapy Programs Effective?

There is a growing body of evidence of the range of positive outcomes from physical therapy interventions with older frail persons. It not only improves or maintains functional ability, but can also impact on the management of chronic diseases and their associated risks, reducing falls, and improving social and quality of life outcomes.

A new Therapy Program is a logical fit with the ACFI pain items, and the new program would be designed to fit with contemporary best pain practice and a broader range of physical interventions – for example, evidence-based pain treatments including therapeutic exercises

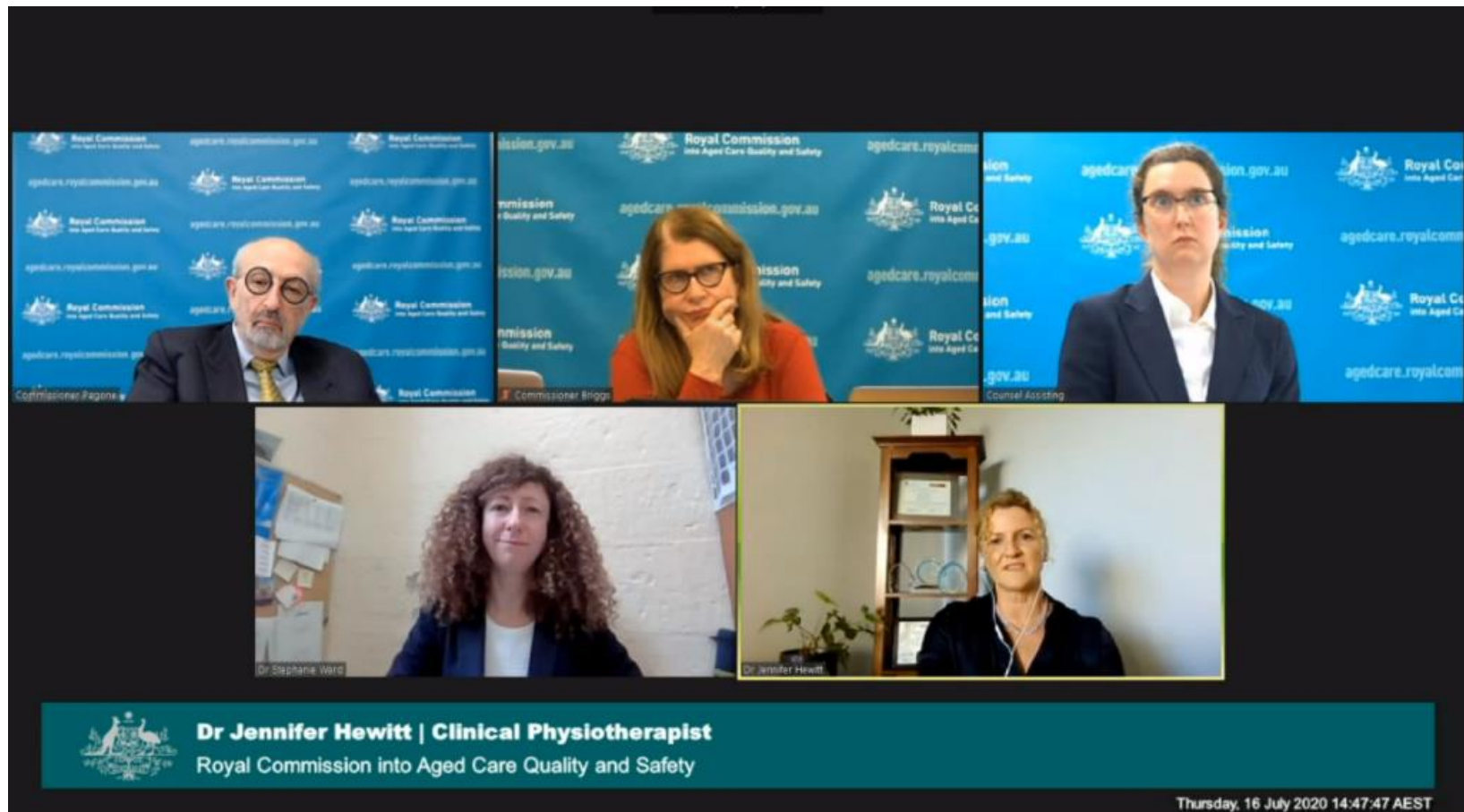


Persistence is key...

- Change of Federal Minister
- Revised ACFI no longer preferred
- Resource Use Classification Study (RUCS) – still underway but there is a separation between researchers and DOH
- Royal Commission in to Aged Care Quality and Safety is removed from politics and now directing its focus on the role of allied health in RAC.....



Persistence is key.....focus July 2022



Dr Hewitt's written submissions are now on the public record and can be found here <https://agedcare.royalcommission.gov.au/media/27689>

Progress with best practice guides 2020 - Professor Stephen Lord

Falls prevention – what works: residential care

- Multicomponent and multifactorial interventions [*Likely greater effects with more resources*]
- Vitamin D supplementation (excluding mega-doses)
- Medication review
- Physiotherapy exercises



Sunbeam trial

PRACTICAL TAKE HOME MESSAGES

Total dose of exercise 1.2 hours/week (min)



Progressive resistance training (2-3 sets, 10-15 reps, moderate intensity 12-14/20, Borg Scale)

Muscle groups included in Sunbeam Program:

- ✓ Knee flexors and extensors
- ✓ Hip extensors, abductors, adductors
- ✓ Elbow flexors and extensors
- ✓ Shoulder retractors
- ✓ Calves



Gym closed?



PRACTICAL TAKE HOME MESSAGES

High challenge balance exercise

Exercises included in Sunbeam Program:

- ✓ Standing bicep curls and shoulder retraction
- ✓ Heel raises
- ✓ Dynamic balance - recovery steps, grapevine
- ✓ Static balance – feet SBS, stride, semi tandem, tandem

Eyes open, eyes closed

- ✓ ROBOS

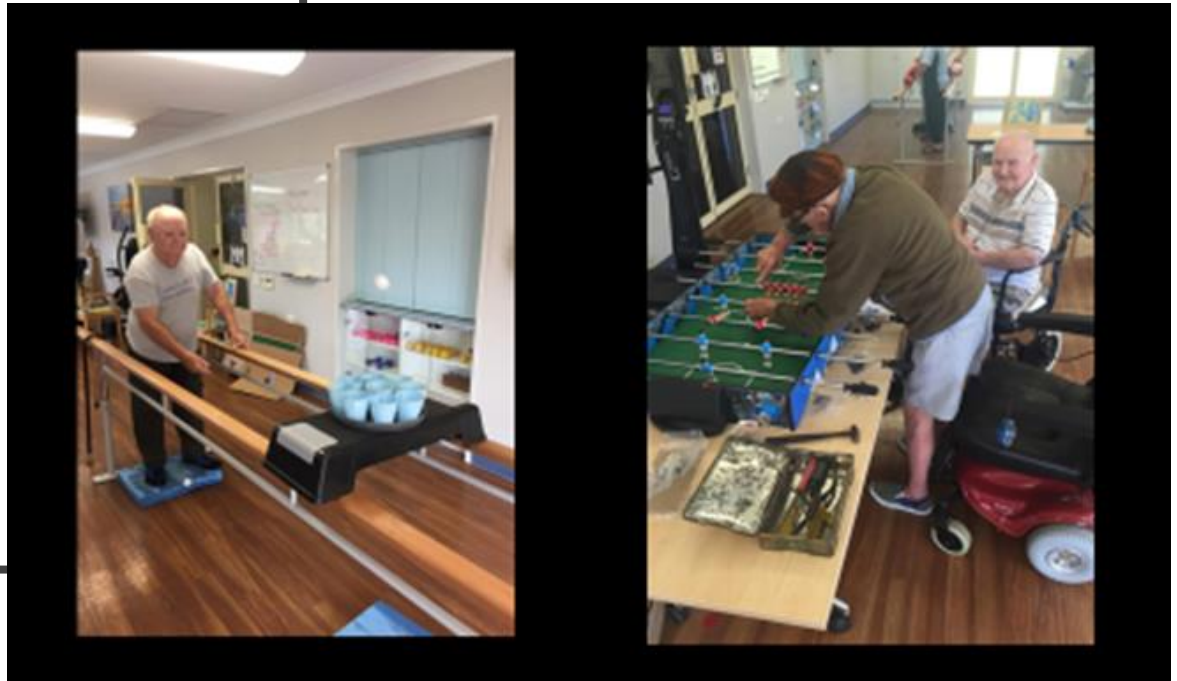




Balance with flair – beyond Sunbeam



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Thank you for listening



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