

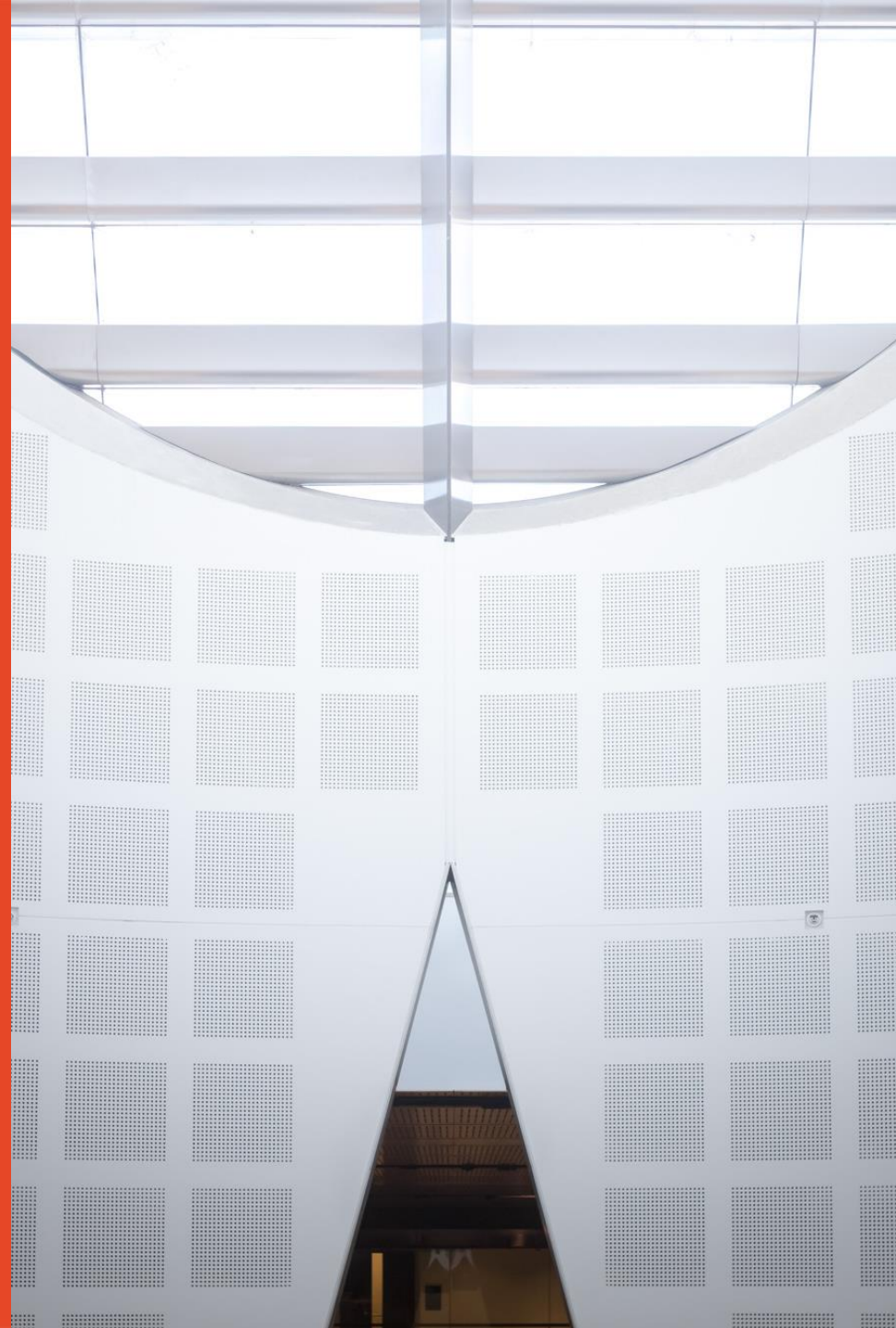
**Does a fall prevention  
educational program  
improve knowledge and  
change exercise  
prescribing behaviour in  
health and exercise  
professionals?  
A randomised controlled  
trial.**

**Presented by**

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THE UNIVERSITY OF  
**SYDNEY**



## Background

Exercise is an effective fall prevention intervention but low numbers of older people engage in suitable programs.

- A NSW survey of >5600 older people showed participation in balance exercise is around 6% (Merom D, et al. 2012)

Health and exercise professionals play a crucial role in preventing falls as part of their daily practice.

Need necessary knowledge and skills to implement effective exercise programs.

## Aim

To evaluate the effect of participation in a fall prevention educational program on health and exercise professionals' knowledge, behaviour and confidence to prescribe evidence-based exercise.

Downloaded from <http://bmjopen.bmj.com/> on January 20, 2015 - Published by [group.bmj.com](http://group.bmj.com)

Open Access Protocol

**BMJ Open** Does a fall prevention educational programme improve knowledge and change exercise prescribing behaviour in health and exercise professionals? A study protocol for a randomised controlled trial

2014;4:e007032

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# Methods

Recruitment from Sydney and surrounds, Central Coast, Orange and surrounds

Recruitment and consent

Baseline survey to assess fall prevention knowledge and exercise prescription behaviour and confidence

Concealed randomisation

Intervention group  
Educational program and access to internet-based resources

Control group  
Three month wait list (delayed intervention)

Three month follow-up survey (same as baseline)

## Intervention:

- Full day face-to-face workshop for up to 35 attendees/session
- Didactic and interactive teaching strategies
- Information about internet-based support resources
- Workshop notes provided in printed format
- Delivered by 2 fall prevention researchers with over 20 years of combined experience

# Workshop outline

## Module 1

- ▶ Epidemiology of falls
- ▶ The physiology of balance and falls
- ▶ The biomechanics of balance and falls

## Module 2

- ▶ Fall risk assessment
- ▶ Fall risk assessment, *practical activity*

## Module 3

- ▶ Fall prevention strategies: how to interpret the evidence
- ▶ Exercise prescription for older people and fall prevention
- ▶ Prescribing exercise to prevent falls, *practical activity*

## Module 4

- ▶ Medical conditions impacting exercise tolerance
- ▶ Fall prevention programme implementation and management
- ▶ Tailoring exercise programmes for clinical groups, *practical activity*

## Primary outcomes

Measured via self-report questionnaire at 3 months post-randomisation

### 1. Knowledge about fall prevention

6 multiple choice questions

### 2. Change in fall prevention exercise prescription behaviour

“Do you think you have changed the way you prescribe fall prevention exercise in the past three months?” (5-point Likert scale “strongly agree- strongly disagree”);

and “If strongly agree/agree, give one example of how you have changed the way you prescribed fall prevention exercise”.

## Secondary outcomes

### 1. Confidence to prescribe fall prevention exercises (score/10)

Q4. How confident are you at prescribing exercises to people aged 60+ years for fall prevention?

(0=least confident & 10=most confident)

### 2. Proportion of older people seen by participants in the past month that were prescribed fall prevention exercises (%)

0 1 2 3 4 5 6 7 8 9 10

least confident

most confident

Q7. How many older clients/patients (60+ years) have you seen in the past month? \_\_\_\_\_

Q8. In the past month, have you prescribed exercise to an older client/patient (60+ years) for the specific purpose of reducing their risk of falling?

### 3. Proportion of fall prevention exercises prescribed to older people in the past month that comply with evidence-based guidelines

Yes  No If yes, how many older people did you prescribe these exercises to? \_\_\_\_\_

- Considered types of exercises and dose prescribed

# Results

## PARTICIPANTS

- n=200, 82% females
- 58% aged 20-39 years
- Physios (65%), Exercise Physiologists (12%), OTs (10%)

## WORKPLACE/ EXPERIENCE

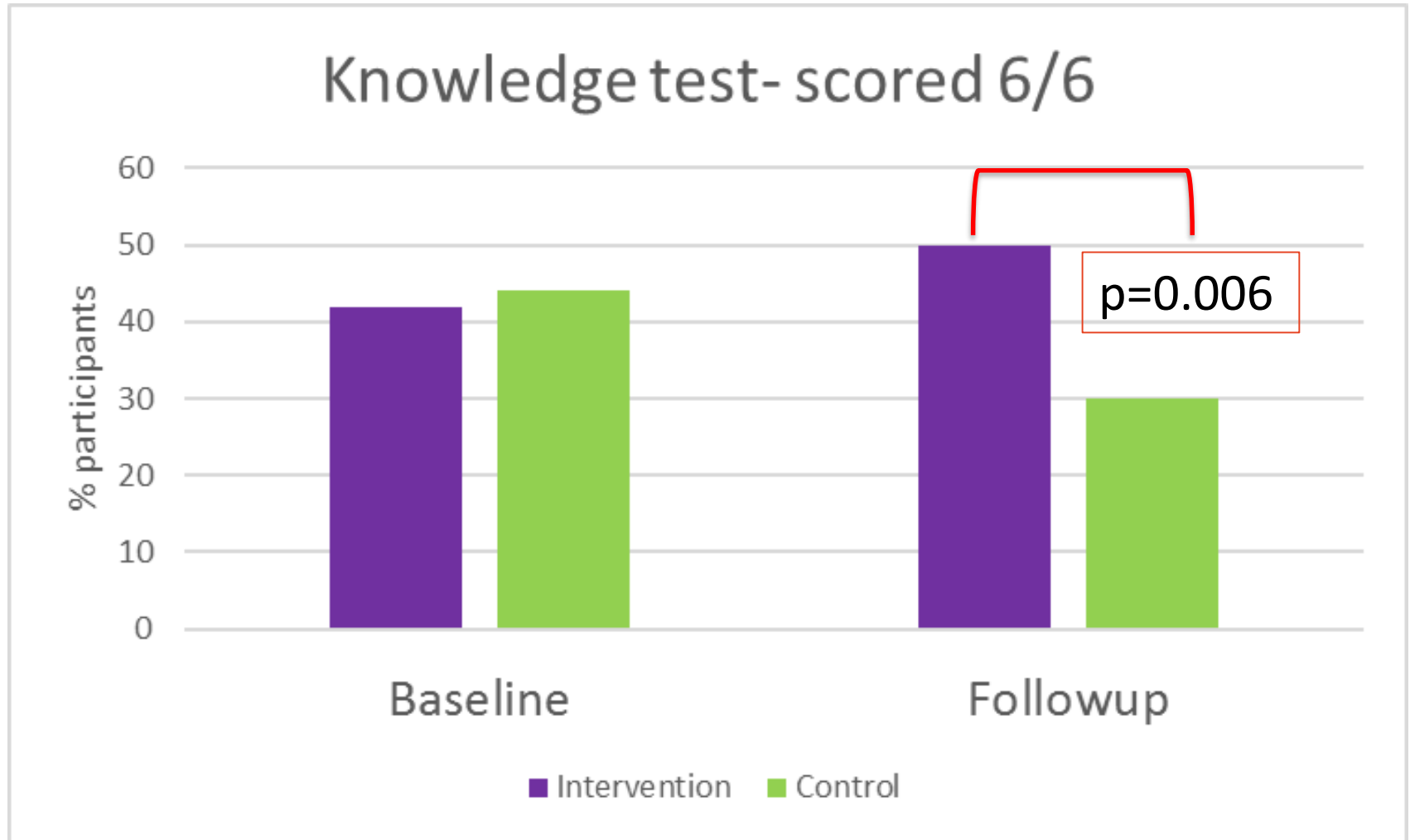
- 79% previous experience prescribing fall prevention exercise
- Workplace setting:
  - Hospital (53%)
  - Community (18%)
  - RACF (12%)
  - Other (17%)

## ATTITUDES

- 97% believed it's possible to improve balance in older age
- 90% believed it's possible to prevent falls in older age

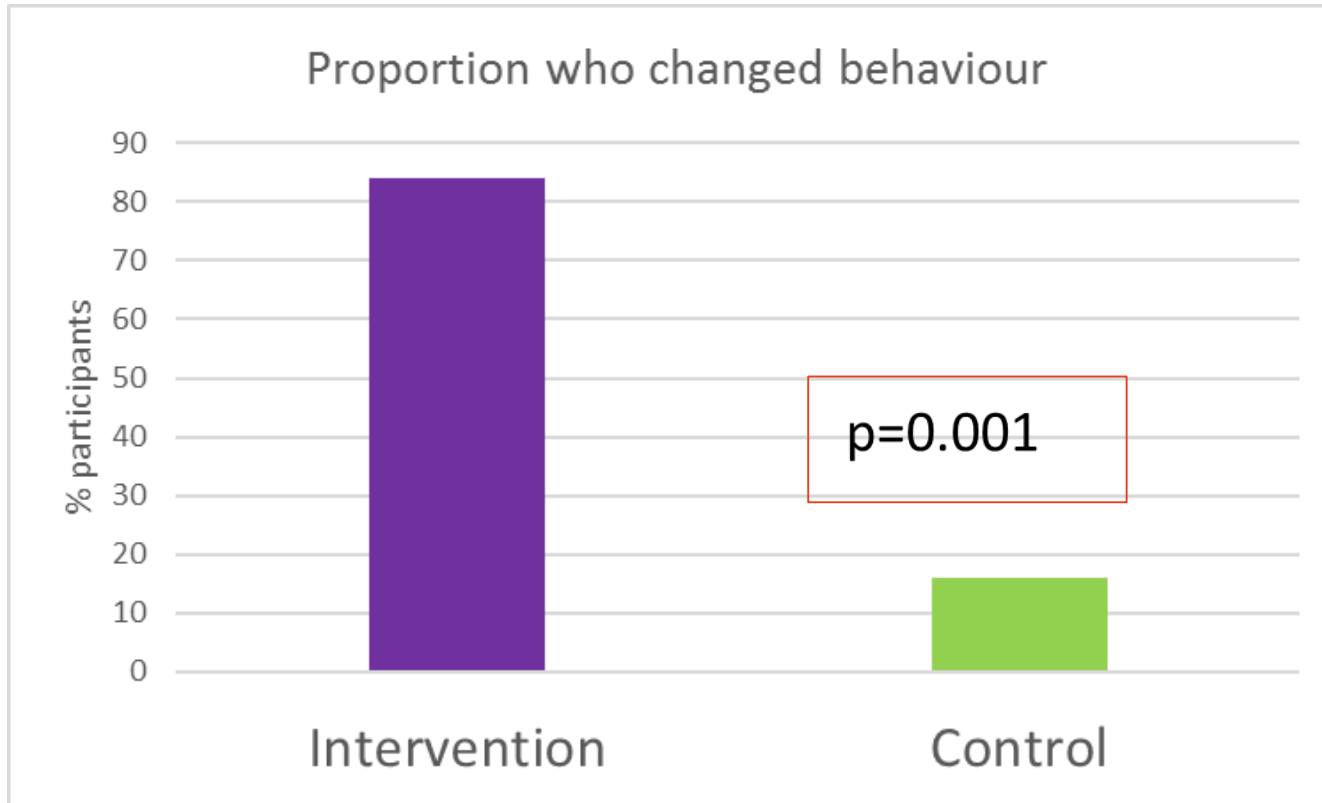


# Results- knowledge



## Results- behaviour

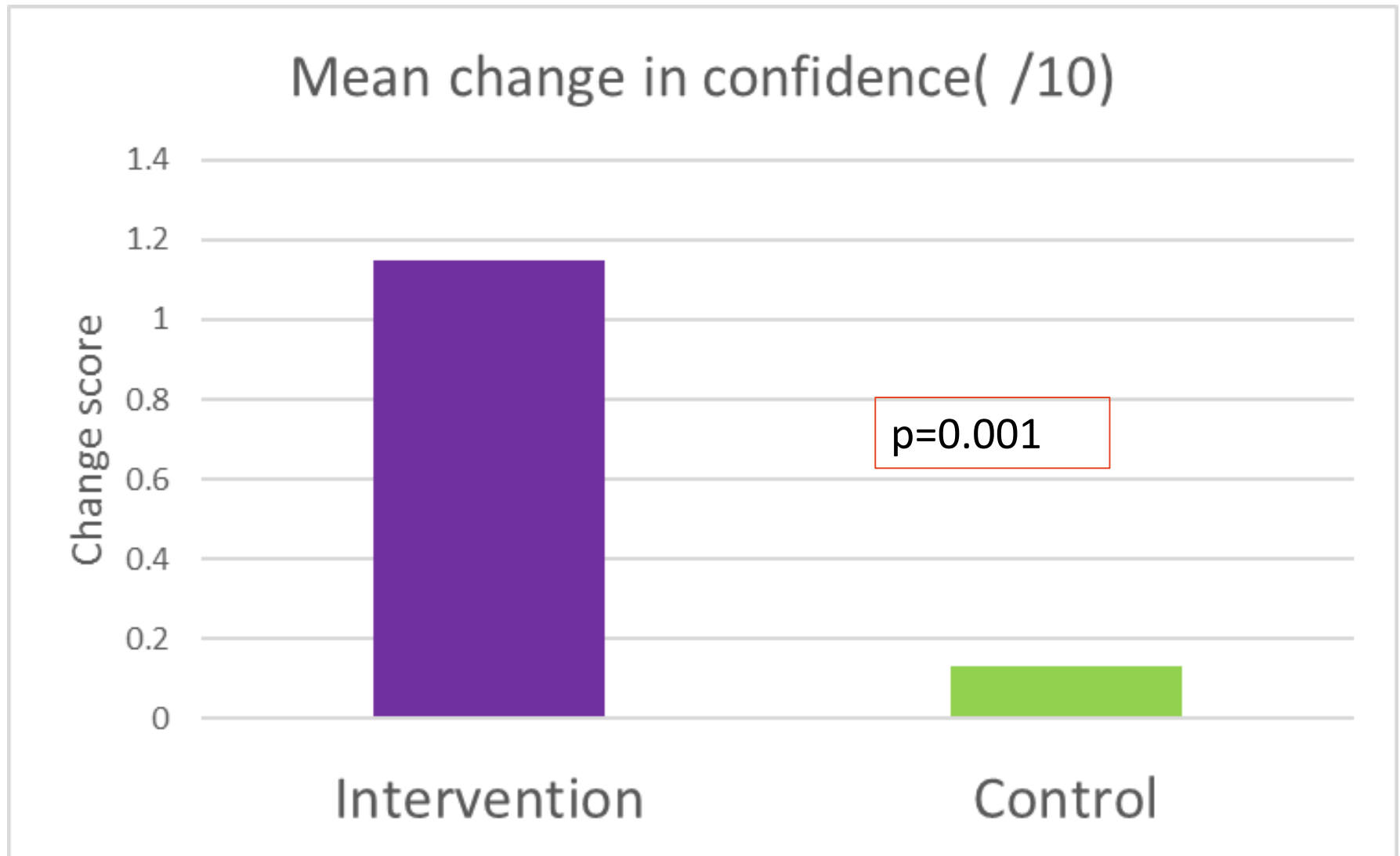
“Do you think you have changed the way you prescribe fall prevention exercise in the past three months?”



Main factors that changed:

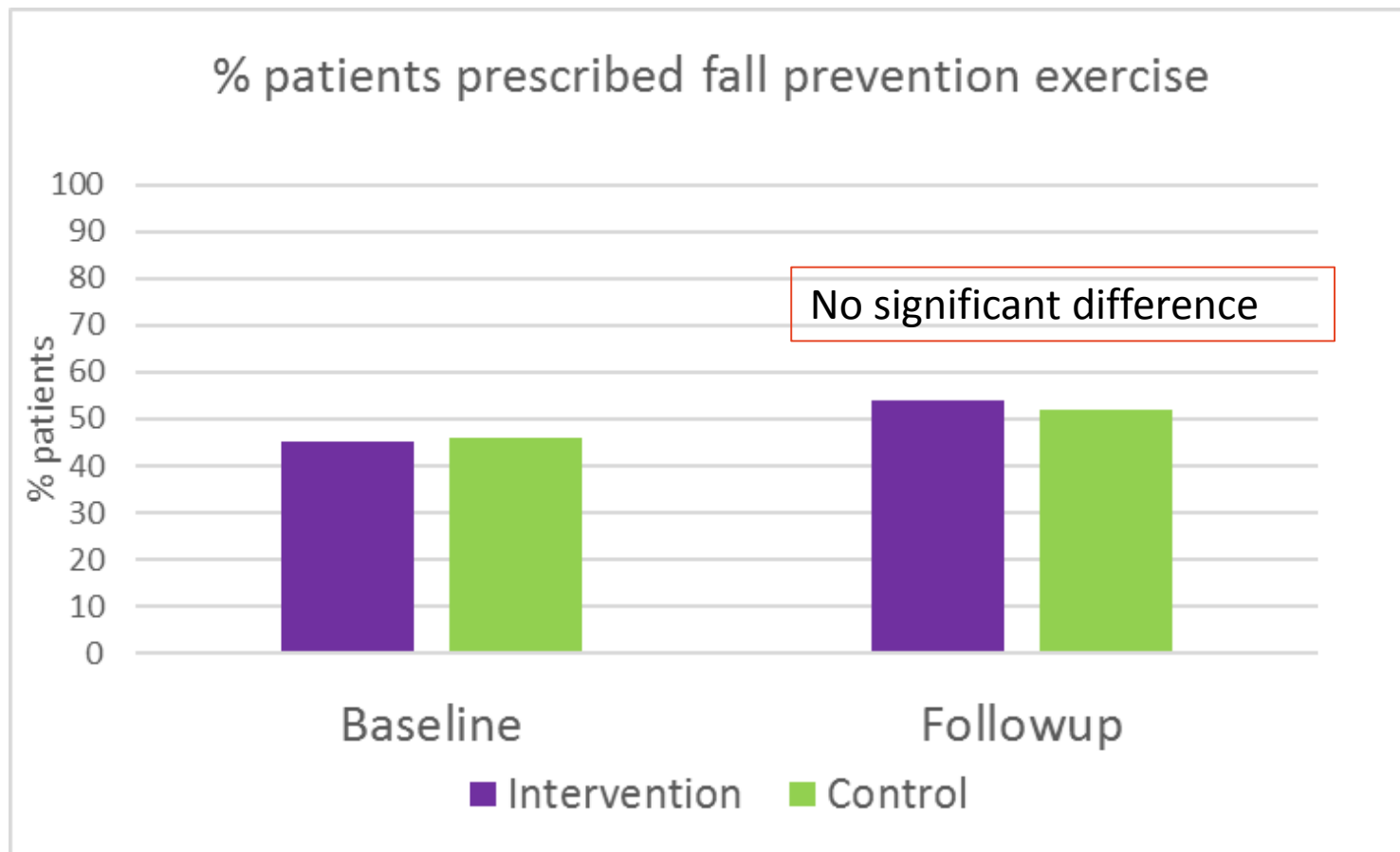
- Increased focus on balance challenging exercise (n=40/76)
- Increasing the dose of exercise prescribed (n=10/76)

## Results- confidence



## Results- behaviour

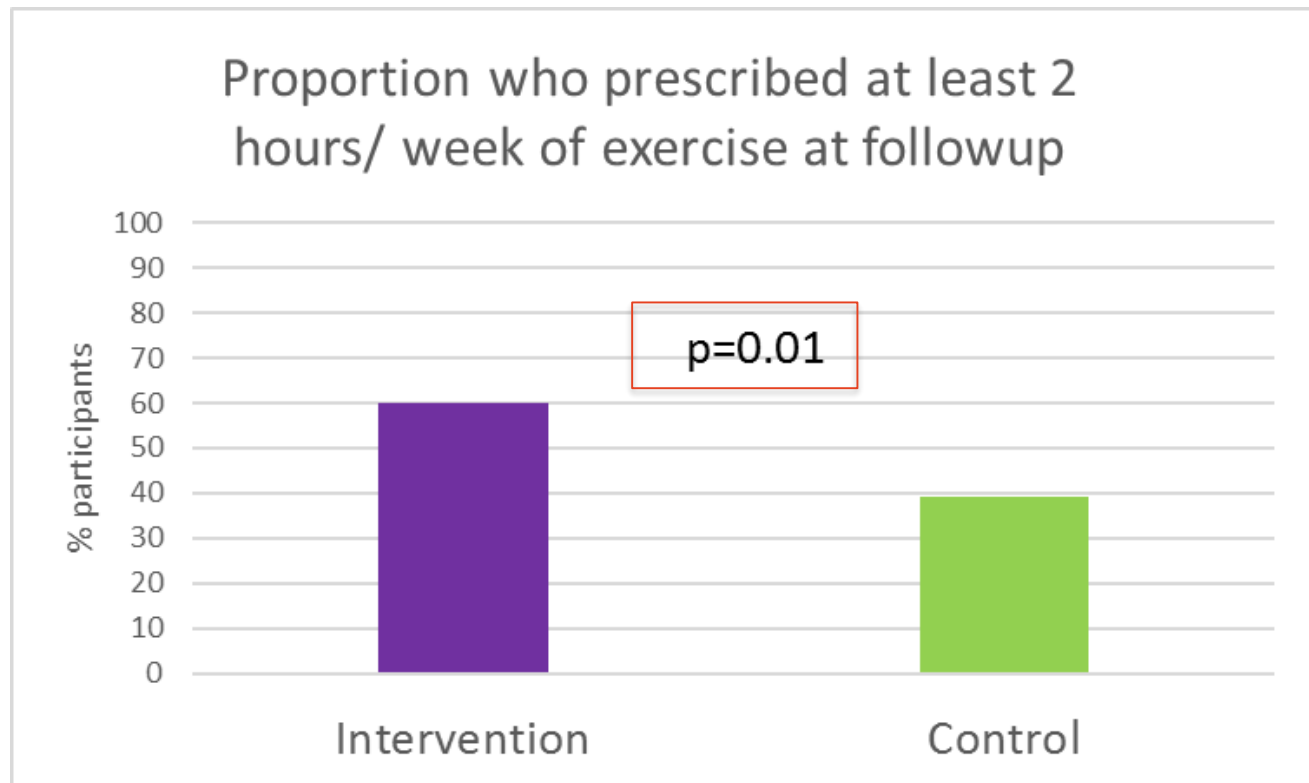
Proportion of older people seen by participants in the past month that were prescribed fall prevention exercises



## Results- behaviour

Proportion of fall prevention exercises prescribed to older people in the past month that comply with evidence-based guidelines

1. Type of exercise- no difference between groups in the number of evidence based exercises prescribed
2. Dose



# Discussion and summary

## Study limitations

- self report measures
- preaching to the converted?

Participation in a face-to-face workshop resulted in small improvements in:

- knowledge
- confidence
- behaviour

# Acknowledgements

- Study Funding: NHMRC Partnership Grant (APP1016876)
- Research Fellowship: NHMRC Career Development Fellowship
- Collaborators: Cathie Sherrington, Lindy Clemson, Stephen Lord, Lisa Harvey, Anne-Marie Hill, Daina Sturnieks, Lorraine Lovitt
- Study participants

# Active and Healthy website is expanding!



Active and Healthy is expanding to include a broader range of physical activity programs and information on the benefits of physical activity for people aged 50 years and older.

<http://www.activeandhealthy.nsw.gov.au/>