

# Falls Prevention Interventions in Hospitals: Methods for a Systematic Review

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# Study Investigators

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# Hospital Falls

- Falls are the most common adverse events that are reported in hospitalised older adults
- In Australian hospital settings:
  - 6-8 falls per 1000 bed days in Australian medical and surgical wards
  - 6-11 falls per 1000 bed days in Australian geriatric & rehabilitation hospitals

# Interventions

Exercise &  
rehabilitation

Environmental  
Modifications

Medication

Systems &  
Policies

Knowledge  
change

Multifactorial

Which works best?

# Objectives

- To evaluate the effectiveness of falls prevention interventions on reducing falls in hospitalised adults
- To summarise components of effective falls prevention interventions.
- Our study is still in progress
- Last review on this topic was conducted in 2018 by Cameron et al.

# Methods

**PRISMA guidelines** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

**Protocol development:** Slade et al. 2017

**Search of databases:** MEDLINE, EMBASE, CINAHL, The Cochrane Central Register of Controlled Trials, AMED, PEDro, PsychInfo and Sport Discus

**Article screening:** One reviewer, groups of two reviewers

Open Access

Protocol

**BMJ Open** Effects of falls prevention interventions on falls outcomes for hospitalised adults: protocol for a systematic review with meta-analysis

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Susan C Slade,<sup>1</sup> David L Carey,<sup>1</sup> Anne-Marie Hill,<sup>2</sup> Meg E Morris<sup>1,3</sup>

# Eligibility

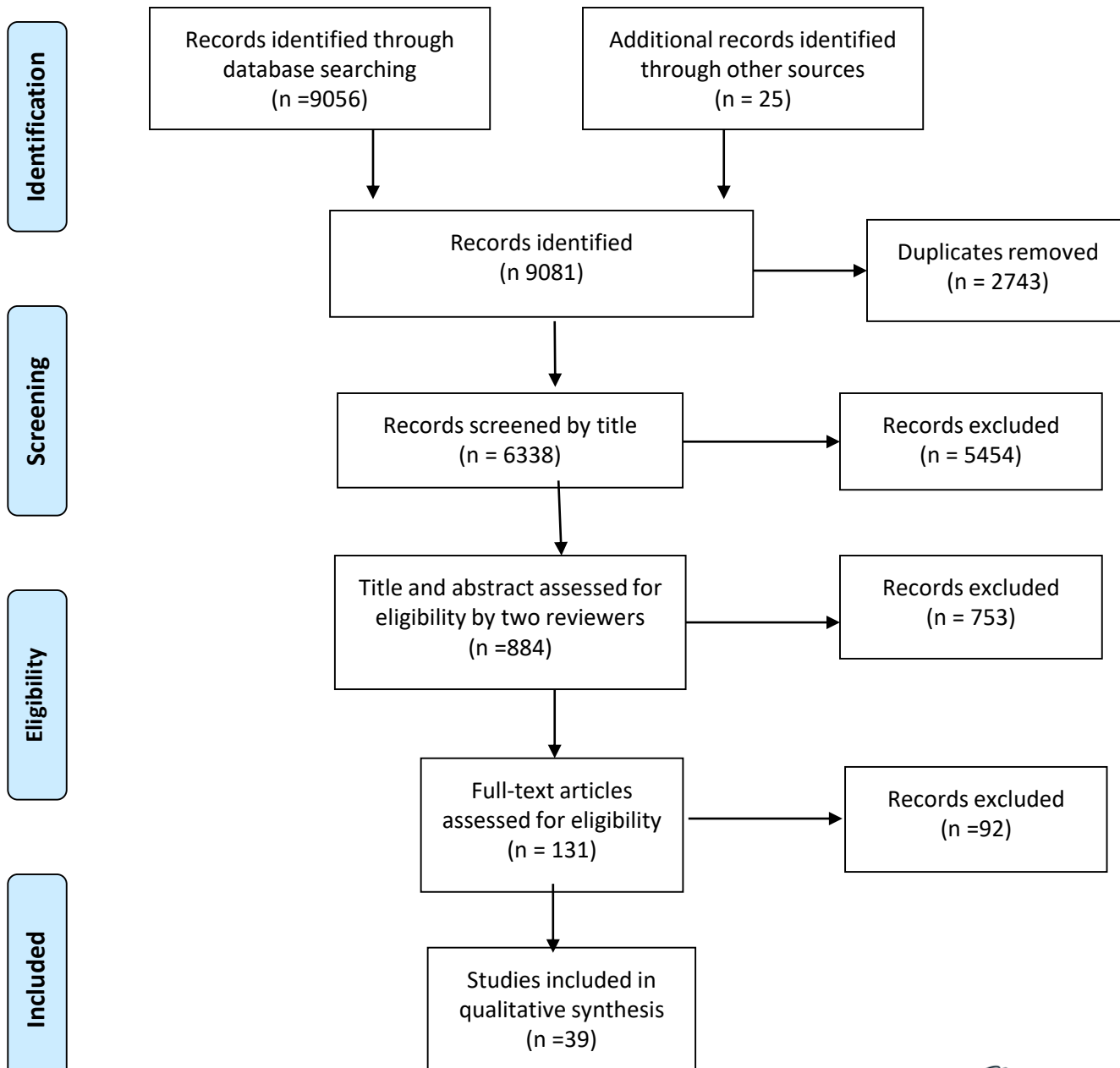
**Study design:** Randomised controlled trials, quasi-randomised trials or controlled clinical trials, published in peer-reviewed journals

**Population:** Hospitalized adults

**Intervention:** Intervention to reduce falls in a hospital setting

**Comparison:** Contemporary comparison group

**Outcome:** Falls as a primary or secondary outcome measure





# Data Extraction & Analysis

- Data analysis using a **standard form**
  - setting, inclusion/exclusion criteria, random allocation , participants, demographics, diagnosis, intervention and falls

Primary falls outcomes:

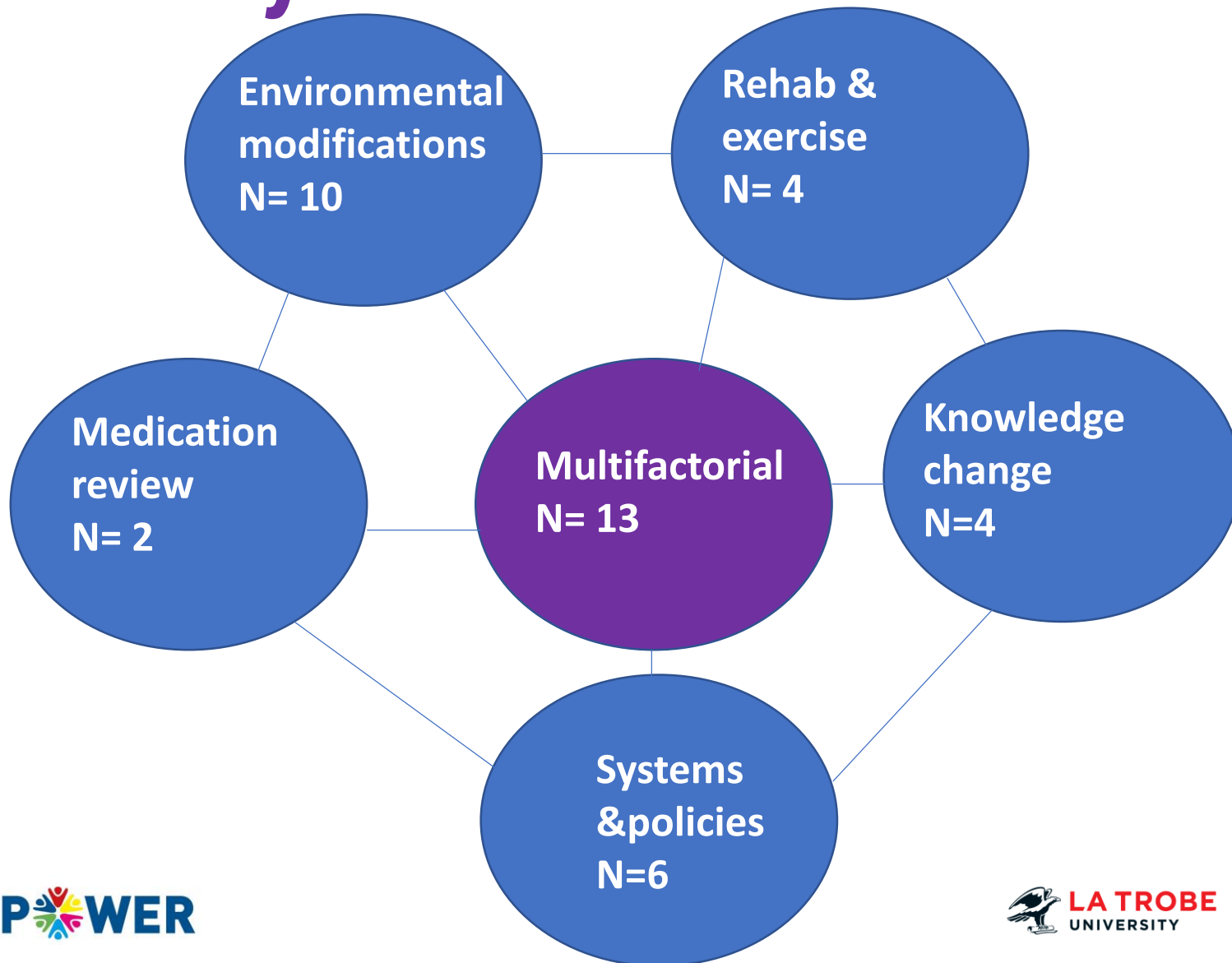
$$\text{Risk of Falls}(RR) = \frac{n \text{ fallers intervention} / \text{total population}}{n \text{ fallers control} / \text{total population}}$$

$$\text{Rate of Falls}(RaR) = \frac{n \text{ falls per 1000 bed days intervention}}{n \text{ falls per 1000 bed days control}}$$

# Key themes

- Very few high quality studies, literature is limited:
  - Total number of articles found: 39
  - Number of randomized controlled trials (RCTs): 26
    - cluster RCT's: 11
  - Number of multifactorial intervention studies: 13
    - Number of multifactorial intervention RCT's: 9
- It can be challenging to pool data from different studies when they present data differently: eg no RR, RaR, no raw data etc.

# Data Synthesis



# Summary

- Studies to date have not been able to identify which components of falls prevention should be combined for best practice
- Very few high quality studies in the literature
- Only 39 studies, 26 of which are RCT's
- There is a need for more research, to reach a better understanding of the most effective strategies

# Thank you