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PrAISED

Promoting Activity, Independence  
and Stability in Early Dementia

# Intervention Development

Dr Vicky Booth

Assistant Professor/Clinical-academic Physiotherapist

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# Outline

- Share insights into developing a dementia-specific intervention to promote activity and independence while reducing falls risk in older adults with mild dementia.
- Review the practical components of our intervention development
- Reflect on the process to derive recommendations for future health intervention advances



*“develop the intervention to a point where it can reasonably be expected to have a worthwhile effect”*

## Evaluating the Public Health Impact of Health Promotion Interventions: The RE-AIM Framework

Russell E. Glasgow, PhD, Thomas M. Vogt, MD, MPH, and Shawn M. Boles,



## Developing and evaluating complex interventions:

METHODOLOGY

Open Access

Developing theory-informed behaviour change interventions to implement evidence into practice: a systematic approach using the Theoretical Domains Framework

Simon D French<sup>1,2\*</sup>, Sally E Green<sup>1</sup>, Denise A O'Connor<sup>1</sup>, Joanne E McKenzie<sup>1</sup>, Jill J Francis<sup>3</sup>, Susan Michie<sup>4</sup>, Rachelle Buchbinder<sup>1,5,6</sup>, Peter Schattner<sup>6</sup>, Neil Spike<sup>6</sup> and Jeremy M Grimshaw<sup>7,8</sup>

## BMC Health Services Research



Research article

Open Access

### The development of a theory-based intervention to promote appropriate disclosure of a diagnosis of dementia

Robbie Foy<sup>\*1</sup>, Jillian J Francis<sup>2</sup>, Marie Johnston<sup>3</sup>, Martin Eccles<sup>1</sup>, Jan Lecouturier<sup>1</sup>, Claire Bamford<sup>1</sup> and Jeremy Grimshaw<sup>4</sup>

## Six steps in quality intervention development (6SQuID)

Daniel Wight,<sup>1</sup> Erica Wimbush,<sup>2</sup> Ruth Jepson,<sup>3</sup> Lawrence Doi<sup>3</sup>

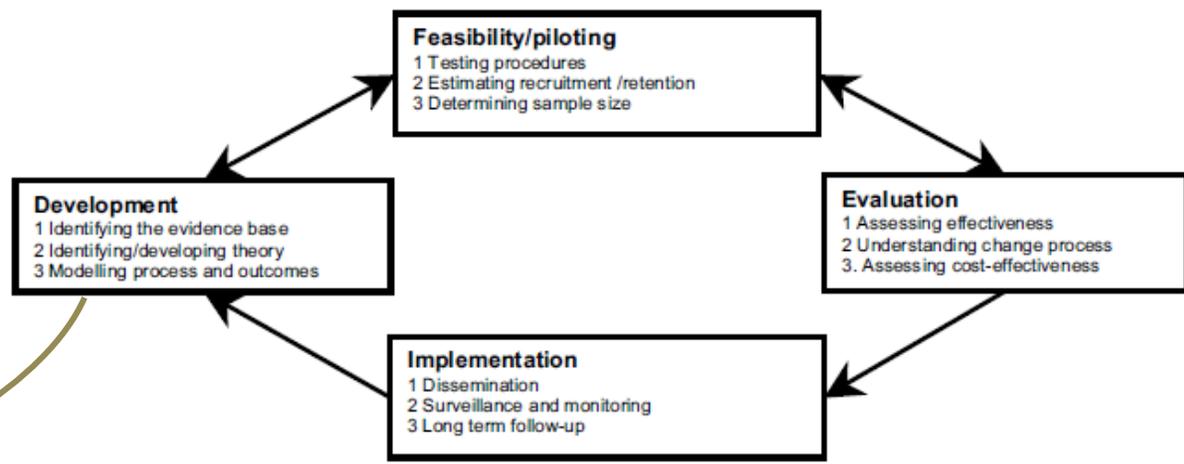
## BMJ Open Guidance on how to develop complex interventions to improve health and healthcare

Alicia O'Cathain,<sup>1</sup> Liz Croot,<sup>1</sup> Edward Duncan,<sup>2</sup> Nikki Rousseau,<sup>2</sup> Katie Sworn,<sup>1</sup> Katrina M Turner,<sup>3</sup> Lucy Yardley,<sup>3,4</sup> Pat Hoddinott<sup>2</sup>

*“develop the intervention to a point where it can reasonably be expected to have a worthwhile effect”*



## Developing and evaluating complex interventions:



...should ask themselves as they work...

...the development-evaluation-implementation process...

...ing, piloting, evaluating, reporting and implementing a complex intervention can be a lengthy process. The stages are important, and too strong a focus on the main evaluation, to the neglect of adequate development work, or proper consideration of the practical issues of implementation, will result in weaker interventions that are harder to evaluate, less likely to be implemented and less likely to be worth implementing.

**Developing an intervention**

Questions to ask yourself include: Are you clear about what you are trying to do: what outcome you are aiming for, and how you will bring about change? Does your intervention have a coherent theoretical basis? Have you used this theory systematically to develop the intervention? Can you describe the intervention fully, so that it can be implemented properly for the purposes of your evaluation, and replicated by others? Does the existing evidence – ideally collated in a systematic review – suggest that it is likely to be effective or cost effective? Can it be implemented in a research setting, and is it likely to be widely implementable if the results are favourable?

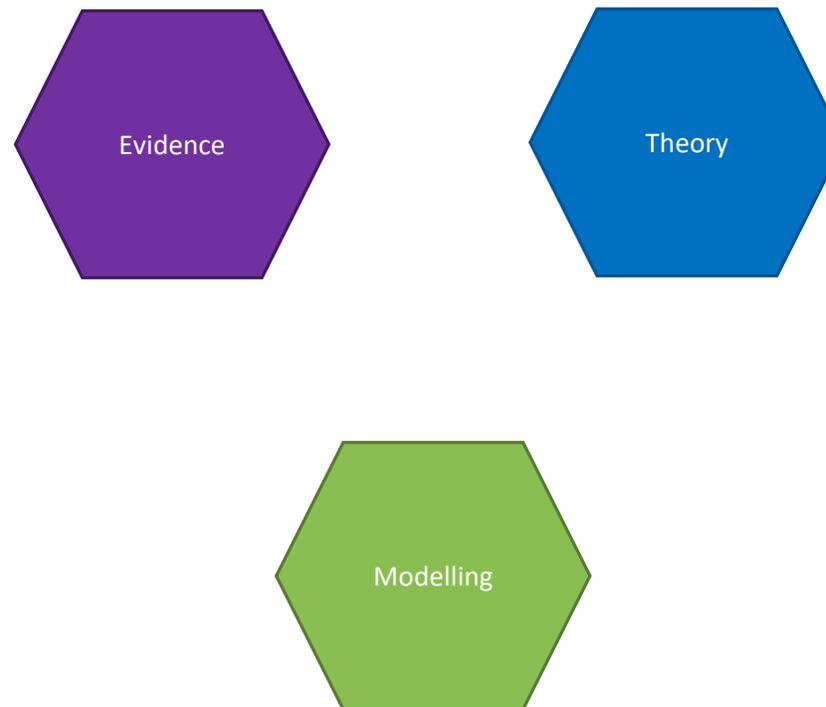
If you are unclear about the answers to these questions, further development work is needed before you begin your evaluation. If you are evaluating a policy or a service change as it is being implemented, rather than carrying out an experimental intervention study, you still need to be clear about the rationale for the change and the likely size and type of effects, in order to design the evaluation appropriately.

**Piloting and feasibility**

Questions to ask yourself include: Have you done enough piloting and feasibility work to be confident that the intervention can be delivered as intended? Can you make safe assumptions about effect size, recruitment and retention in the main evaluation study?



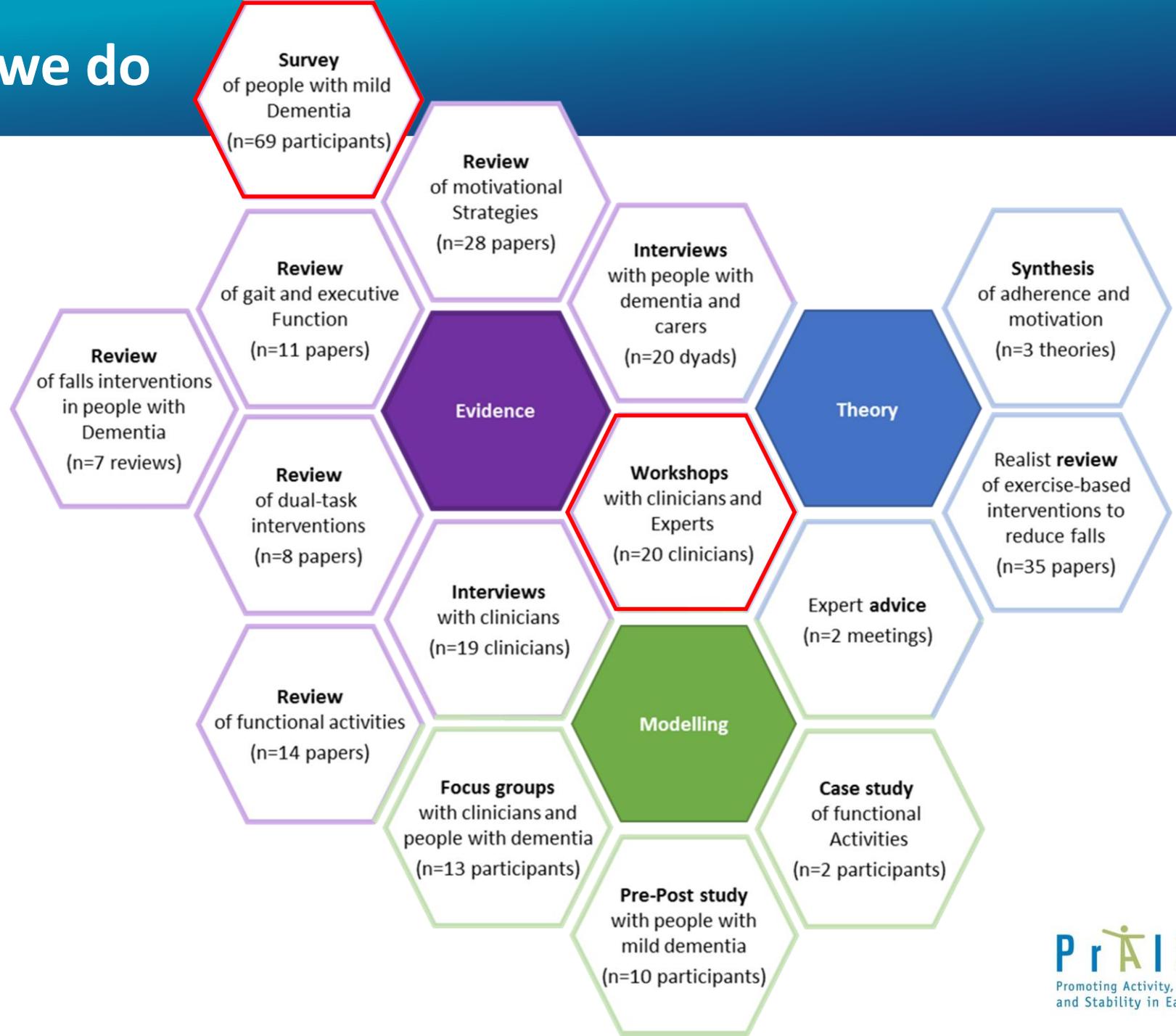
- Using the key aspects of the MRC guidance





# What did we do

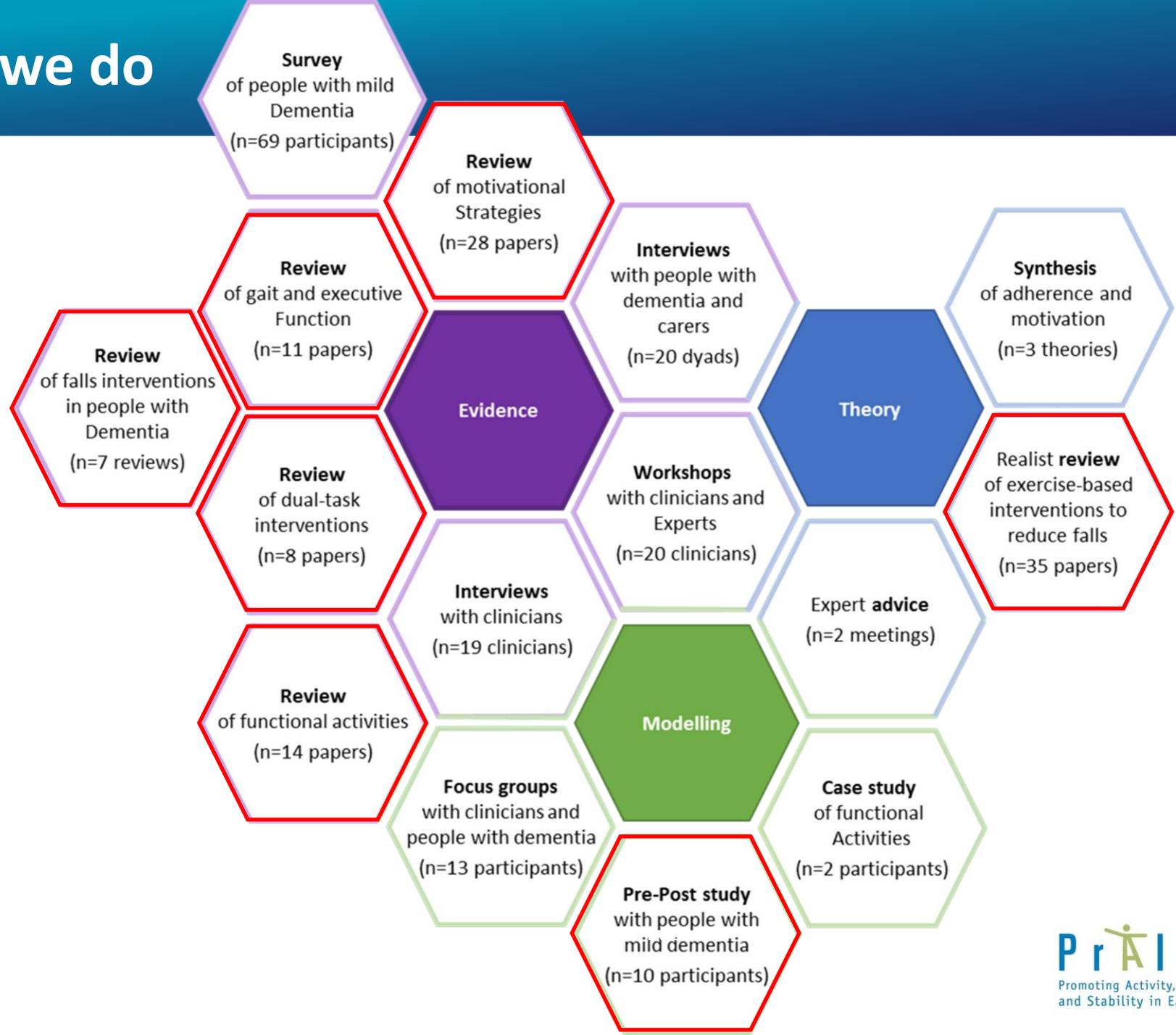
- Using the key aspects of the MRC guidance
- Categorised each of the research methods
- Survey of cognitive and physical measures to confirm the problem
- Workshops with clinicians to explore what we wanted to do and how





# What did we do

- Small sample pre-post study to compare group vs 1:1 delivery
- Multiple systematic literature reviews
- Mapped the 15 data sources onto the TIDieR framework (Hoffman et al, 2014)





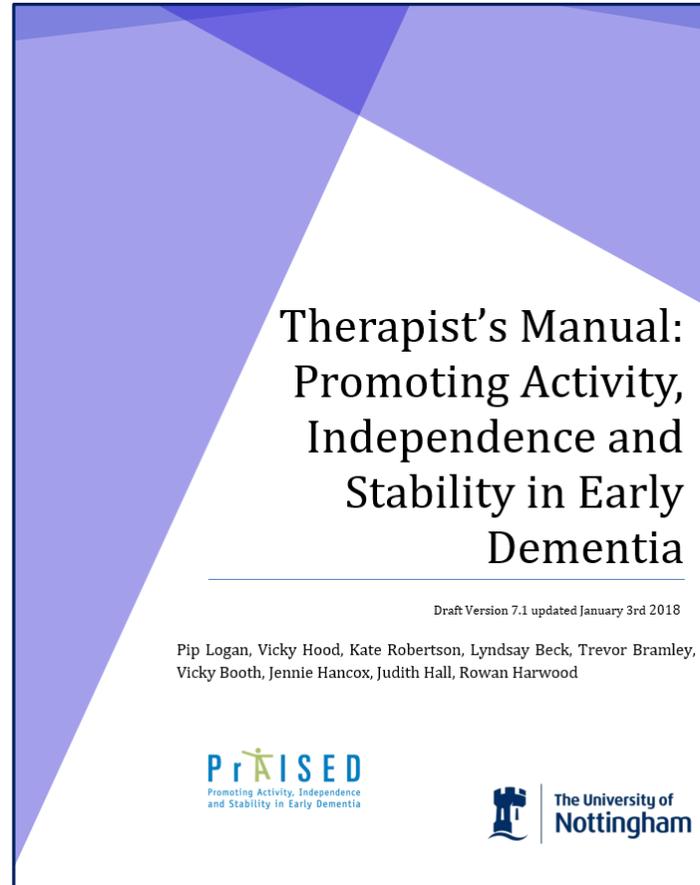
# What it produced

- Mapped the 15 data sources onto the TIDieR framework (Hoffman et al, 2014)

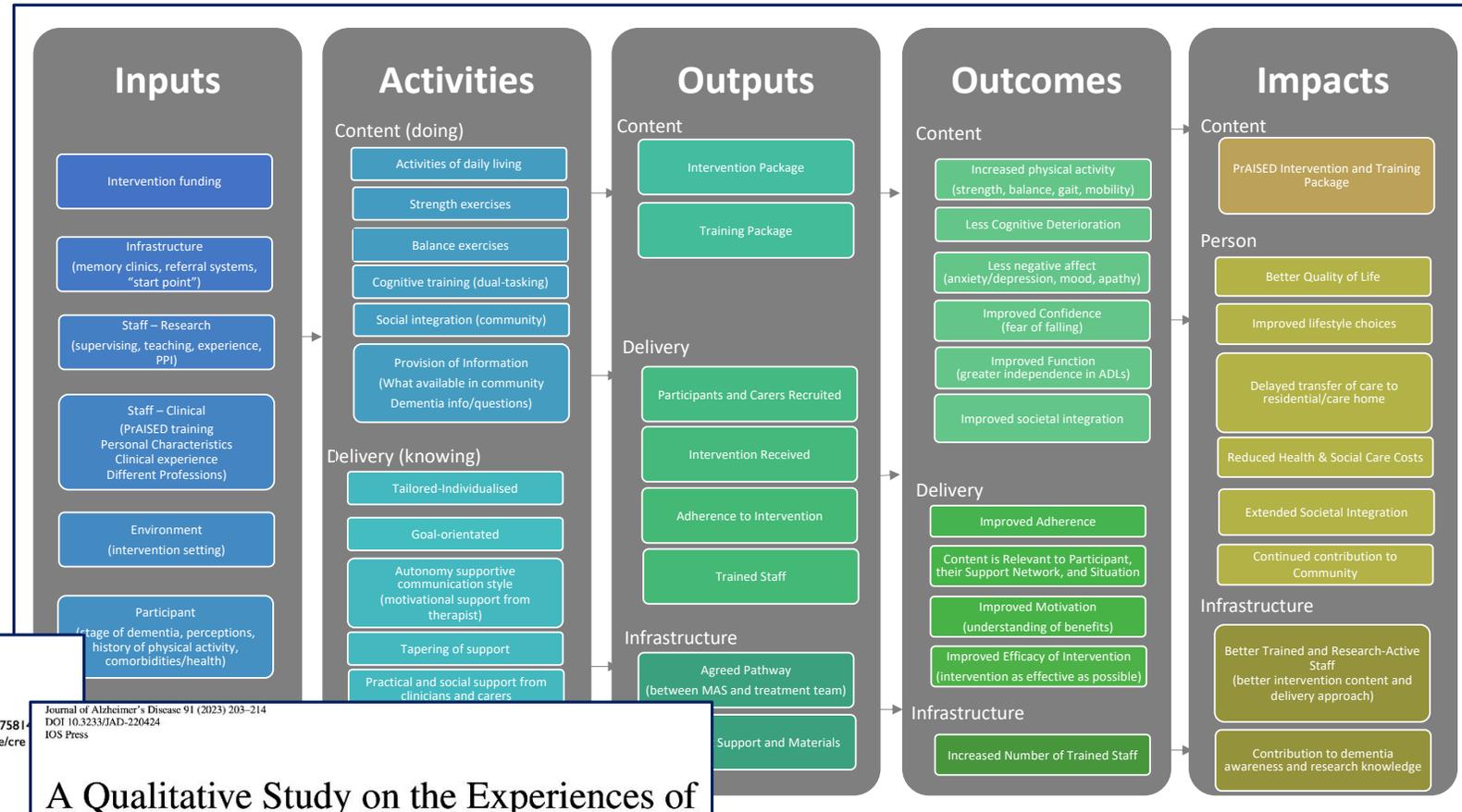
TIDieR checklist item		Intervention item and brief description
<b>1. Name</b>		An intervention to promote activity, independence, and stability in early dementia and mild cognitive impairment (PrAISED).
<b>2. Why</b>	Rationale	Older adults with mild cognitive impairment have high risk of falls. As well as standard falls risk factors associated with age and comorbidities, dementia-specific risk factors need addressing, which current interventions do not account for persons with dementia do not consider falls risks, but value maintenance of activity and independence.
	Theory	<ul style="list-style-type: none"> <li>• By intervening at an early-stage, activity and independence can be enhanced and maintained, and falls risk reduced.</li> <li>• Exercise at the correct intensity and duration can reduce falls risk.</li> <li>• Adding dual-task training (mitigating the effect of executive dysfunction) can enhance standard strength and balance exercises and incorporate cognitive risk factors for falls.</li> <li>• Functional activity assessment, adaptation and relearning can enhance independence and maintenance of activity, as well as identifying and addressing falls risk.</li> <li>• Promotion and engagement with community-outdoor environment can enhance duration of involvement in activity and encourage independence.</li> <li>• An intervention implemented according to motivational theory and supported by engagement strategies will improve uptake and adherence.</li> </ul>
	Goal	To promote activity and independence, and prevent falls, for older people with early dementia and mild cognitive impairment living in the community.
<b>What</b>	<b>3. Materials</b>	<p><i>Provider:</i> Specific training provided to therapists and support workers who undertake the intervention sessions with the participant. This involves training days, an intervention manual, a motivation manual, electronic access to intervention content, on-going online peer support, and face-to-face support from intervention developers, as required.</p> <p><i>Participants:</i> Intervention content printed on paper and collated into a 'home-file' folder. The content includes:</p> <ul style="list-style-type: none"> <li>• Clinician contact.</li> <li>• Strength and balance exercises (based on standard programmes i.e. Otago).</li> <li>• Dual-task exercises.</li> <li>• Functional activities.</li> <li>• Interest checklist</li> <li>• 'My week' planning form.</li> <li>• Goal-setting sheet.</li> <li>• Information on community-based activities.</li> <li>• Environmental adaption or risk enablement.</li> <li>• Visit record.</li> </ul> <p>Equipment for intervention sessions includes: therapeutic balls, variable cuff weights, household items such as a cup or glass, steps or stairs within the home, and functional activities items such as cooking materials, clothing or other household items.</p>
	<b>4. Procedures</b>	<p><i>Provider training:</i> Group training is provided to the therapists and support workers conducting intervention sessions. This includes intervention rationale, aims, assessments and content.</p> <p><i>Assessment procedure:</i> Falls risk assessment (Guide to Action, blood pressure), functional assessment (informed by Assessment of Motor and Process Skills), physical assessment (muscle strength, Berg Balance Scale, Timed Up and Go-Dual Task), and goal-setting.</p>



- Produced an intervention manual, delivery materials, and training programme



- Using a logic model format to refine and update the intervention
- Integrated activities and outputs
- Post trial...?



**Promoting activity, independence and stability in early dementia and mild cognitive impairment (PrAISED): development of an intervention for people with mild cognitive impairment and dementia**

Vicky Booth<sup>1,2</sup> , Rowan H Harwood<sup>2</sup> ,  
Victoria Hood-Moore<sup>1</sup>, Trevor Bramley<sup>1,3</sup>,  
Jennie E Hancox<sup>1</sup>, Kate Robertson<sup>1</sup>, Judith Hall<sup>2</sup>,  
Veronika Van Der Wardt<sup>1</sup> and Pip A Logan<sup>1</sup>

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Journal of Alzheimer's Disease 91 (2023) 203–214  
DOI: 10.3233/JAD-220424  
IOS Press

**A Qualitative Study on the Experiences of Therapists Delivering the Promoting Activity, Independence and Stability in Early Dementia (PrAISED) Intervention During the COVID-19 Pandemic**

Alison Cowley<sup>a,b,\*</sup>, Vicky Booth<sup>a,b</sup>, Claudio Di Lorito<sup>b</sup>, Pooja Chandria<sup>c</sup>, Olivia Chadwick<sup>d</sup>,  
Catherine Stanislas<sup>e</sup>, Marianne Dunlop<sup>f</sup>, Louise Howe<sup>b,f</sup>, Rowan H. Harwood<sup>f</sup> and Pip A. Logan<sup>b</sup>



# So what?

- Develop the intervention to a point where it can have a worthwhile effect
- It should be dynamic, iterative, creative, open to change and forward looking to future evaluation and implementation
- Ongoing cycles of development and refinement
- Stakeholder involvement is key
- Not all 'intervention development' is published (look for study protocols or process evaluations)



# Thank you

- PrAISED team past and present: Rowan Harwood, Veronika van der Wardt, Sarah Goldberg, Kristian Pollock, Kavita Vedhara, John Gladman, Tash Masud, Fiona Kearney, the late Rob Jones, Martin Orrell, Andrea Ward, Helen Smith, Lyndsay Beck, Jennie Hancox, Trevor Bramley, Vicky Hood, Pip Logan, Kate Robertson, Jude Hall, Claudio di Lorito, Louise Howe, Alison Cowley, Clare Burgon, Rupinder Bagwa, Juliette Lock, Martyn Harling, Kasia Kowalewska, Zoe Hoare, Rhiannon Tudor Edwards, Carys Jones, Andy Brand, Victory Ezeofor, Ned Hartfield,
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- NIHR