

# Reablement in the home for people aged 65 years and over: components, effectiveness, and influencing factors

An evidence review



Authors:

Martin Keane

Olivia Cagney

Andy Cochrane

Caitriona Lee

Ailish Farragher

Jean Long

Date June 2021

# Disclaimer

Any views expressed in this report are those of the authors and not necessarily those of the Minister for Health, the Department of Health, or the Health Research Board.

#### Suggested citation:

Keane M, Cagney O, Cochrane A, Lee C, Farragher A, Long J. Reablement in the home for people aged 65 years and over: components, effectiveness, and influencing factors. An evidence review. Dublin, Ireland: Health Research Board; 2021. Available from: <a href="https://www.hrb.ie/publications/">https://www.hrb.ie/publications/</a>

#### Published by:

Health Research Board, Dublin © Health Research Board 2021

t 353 1 234 5000 f 353 1 661 2335 e hrb@hrb.ie www.hrb.ie

# **Table of Contents**

T/	ABLE OF CO	NTENTS	3
LI	ST OF TABLE	ES	6
LI	ST OF FIGUE	RES	6
^	RRDE\/IATIO	NS	7
	_		
EX	KECUTIVE SU	JMMARY	8
	-	JESTIONS	
		l findings	
		1: core components and definition of reablement-type interventions	
		2: effectiveness of reablement-type interventions	
		3: factors required for successful reablement-type interventions	
1	INTRODU	JCTION	14
	1.1 Poli	CY BACKGROUND	14
		POSE	
	1.3 RESE	ARCH QUESTIONS	15
2	METHOR	DS	16
_			
	2.1 REVI	EW TOPIC, DESIGN AND REVIEW METHODS	
	2.1.1	Choice of an umbrella review design for Questions 2 and 3	
	2.1.2	Umbrella reviews as evidence-based products for policy-makers	
	2.1.3	Types of outputs derived from an umbrella review	
		USION AND EXCLUSION CRITERIA	
		RCH STRATEGY	
		ENING	
		ENING REVIEWS: INCLUSIONS AND EXCLUSIONS	
		A EXTRACTION	
		A ANALYSIS	
	_	RLAP OF PRIMARY STUDIES IN THE INCLUDED REVIEWS	
3	FINDING	S	25
		INICAL FINDINGS	
	IDENTIFICATIO	NNC	26
			_
			_
			_
	•	STION 1: HOW IS REABLEMENT DEFINED IN SELECTED INTERNATIONAL JURISDICTIONS AND V	
		NENTS?	
	3.2.1 3.2.2	Introduction	
	3.2.2 3.2.3	Definition of reablement  Components of reablement reported in five jurisdictions	
	3.2.3 3.2.3.1		
	3.2.3.2		
	3.2.3.3	Norway	_
	3.2.3.4	· · ·	
	3.2.3.5	USA	37

3.2.4	Summary	38
3.3 Qui	ESTION 2: WHAT IS THE EFFECT OF REABLEMENT ON: (A) PATIENT OUTCOMES; (B) HEALTH AND SOCIAL (	CARE
	COMES; AND (C) VALUE-FOR-MONEY OUTCOMES?	
3.3.1	Introduction	
3.3.2	Post-intervention home care requirements	_
3.3.2.1	•	
	care requirements?	
3.3.3	Quality of life	
3.3.3.1		
3.3.3.1	48	٠.
3.3.4	Effect on functional status: physical function and activities of daily living	50
3.3.4.1		
	of older people?	
3.3.5	Transfer to residential care and use of acute hospital services	
3.3.5.1		50
	ntial care and use of acute hospital services?	5.0
3.3.6	Cost-effectiveness	
3.3.6.1		
	ESTION 3: WHAT FACTORS ARE REQUIRED FOR SUCCESSFUL REABLEMENT INTERVENTIONS, CONSIDERING	
	·	
	; (B) HEALTH AND SOCIAL CARE REABLEMENT TEAMS; AND (C) THE HEALTHCARE SYSTEM?	
3.4.1	Introduction	
3.4.2	Relevant factors pertaining to the planning and delivery of reablement-type services	
the cont	ext of intermediate care	
3.4.2.1	8	
	2.1.1 Agreeing objectives of care	
_	2.1.2 Complexities of decision-making at a time of vulnerability	
	2.1.3 Continuity of care in the health and social care system	
	2.1.4 Role of informal carers	
_	2.1.5 Reablement environment	
	2.1.6 Impact of the local health and social care system context	
3.4.2.2		
	2.2.1 Change management within and between health and social care organisations	
	2.2.2 Engagement with staff	
	2.2.3 Professional development	
_	2.2.4       Leadership         2.2.5       Supporting organisational structures and processes	
	Supporting organisational structures and processes      Active engagement of carers and voluntary services as part of the team	
3.4.3		
3.4.3.1		
	The use of holistic practice by occupational therapists to support service user engagement	
3.4.3.3		65
home	65	
3.4.3.4		65
3.4.4	Factors relevant to the use of physical activity strategies in reablement services	
3.4.4.1	,,,,	
3.4.4.2	, , , ,	00
_	ment	67
3.4.5	Summary	
5.4.5	Summary	
DISCUSS	SION	69
	IN FINDINGS	
4.1.1	Reablement-type services in other jurisdictions	
4.1.2	Effectiveness of reablement-type services and limitations of primary trials	
4.1.2.1		
4.1.2.2	. , ,	
4.1.3	Factors associated with the delivery and acceptance of reablement-type services	70
4.2 STR	ENGTHS AND WEAKNESSES	72
4.3 Fut	LIRE RESEARCH	73

	4.3.1	What is the optimal skill mix in a reablement team?	73
	4.3.2	Who benefits the most from reablement?	
	4.3.3	Is the single geriatric assessment tool currently employed by HSE staff sufficient f	
	reablem	nent?	
	4.3.4	What are the best outcome measures?	
	4.3.5	What types of evaluations are required?	
RE	FERENCES		75
ΑP	PENDICES		81
	APPENDIX 1	LIST OF LITERATURE SEARCH STRATEGIES AND RESULTS FOR THE SEARCHES	81
	A. Ov	erview of literature search results	81
	B. Ful	ll search strategies	82
	C Refere	ence and citation chasing	101
	Appendix 2	EXCLUDED STUDIES	104
	A. Resul	ts excluded at each stage of the screening process	104
	B. Studi	es excluded from Questions 2 and 3 at analysis stage	104
	C Studie	es excluded at full-text screening stage (n=167)	107
	APPENDIX 3	QUALITY ASSESSMENT: TOOL AND RESULTS	117
	Health E	Evidence	119
		Assessment Tool Dictionary	
		assessment results for Question 2 and Question 3	
		JOANNA BRIGGS INSTITUTE DATA EXTRACTION FORM FOR SYSTEMATIC REVIEWS AND RESEARCH SYN	
			126
	APPENDIX 5	CHARACTERISTICS OF THE INCLUDED REVIEWS FOR QUESTION 2	129
	APPENDIX 6	CHARACTERISTICS OF THE INCLUDED REVIEWS FOR QUESTION 3	131
		OVERLAP OF PRIMARY PAPERS ACROSS SYSTEMATIC REVIEWS FOR QUESTION 2	

# **List of tables**

Table 1 Eligibility criteria for reviews and syntheses to be included in this umbrella review17
Table 2 Search concepts for literature searches covering Questions 2 and 319
Table 3 Databases and other resources searched
Table 4 Systematic reviews, primary studies, and grey literature sources included in the analysis, by research question
Table 5 TIDieR checklist
Table 6 TIDieR checklist applied to Australia31
Table 7 TIDieR checklist applied to New Zealand
Table 8 TIDieR checklist applied to Norway34
Table 9 TIDieR checklist applied to the UK (England)
Table 10 TIDieR checklist applied to the USA
Table 11 Whitehead <i>et al.</i> 's summary of effect of reablement on post-intervention home care requirements
Table 12 Tessier <i>et al.</i> 's summary of effect of reablement on post-intervention home care requirements
Table 13 Pettersson and Iwarsson's summary of effect of reablement on post-intervention home care requirements
Table 14 Whitehead et al.'s summary of effect of reablement on quality of life46
Table 15 Tessier et al.'s summary of effect of reablement on quality of life47
Table 16 Pettersson and Iwarsson's summary of effect of reablement on quality of life48
Table 17 Whitehead et al.'s summary of effect of reablement on activities of daily living51
Table 18 Whitehead et al.'s summary of effect of reablement on physical functioning52
Table 19 Tessier et al.'s summary of effect of reablement on functional capacity53
Table 20 Whitehead <i>et al.</i> 's summary of effect of reablement on transfer to residential care and use of acute hospital services56
Table 21 Key factors to facilitate the planning and delivery of reablement-type services60
List of figures
Figure 1 PRISMA flow diagram for review search26

# **Abbreviations**

Abbreviation	Explanation
ADL	activities of daily living
CI	confidence interval
HBR	home-based reablement
HRQoL	health-related quality of life
HIP	Home Independence Program
HSE	Health Service Executive
IADL	instrumental activities of daily living
MeSH	Medical Subject Headings
OR	odds ratio
QoL	quality of life
RR	relative risk
SCIE	Social Care Institute for Excellence
SD	standard deviation
SF-36	36-Item Short Form Health Survey
SMD	standardised mean difference
TIDieR	Template for Intervention Description and Replication
UK	United Kingdom
USA	United States of America

# **Executive summary**

## **Purpose**

The objective of this evidence review is to bring together international evidence and feed into the Department of Health's consideration of a national policy framework for intermediate care and reablement. The evidence review will contribute to the design of pilot models of reablement in Ireland that are set to commence in 2021. The pilot models will consider identified definitions, components, and outcome measures, and will be taking consideration of identified success factors.

# **Research questions**

This evidence review answered the following questions:

- 1. How is reablement defined in selected international jurisdictions and what are its core components?
- 2. What is the effect of reablement on: (a) patient outcomes; (b) health and social care system outcomes; and (c) value-for-money outcomes?
- 3. What factors are required for successful reablement interventions, considering: (a) patients; (b) health and social care reablement teams; and (c) the healthcare system?

#### **Methods**

We used an umbrella review design to examine the evidence base for reablement-type services delivered in the home and in the community to people aged 65 years and over. An umbrella review summarises and synthesises evidence from multiple systematic reviews to answer relevant questions. The reason we chose to undertake an umbrella review is that, in our scoping exercise of the literature, we identified the existence of several relevant reviews on the topic of reablement-type services. We therefore decided to use the systematic reviews as the basis for examining the evidence on reablement-type services, rather than undertaking yet another systematic review of primary studies. Individuals for whom a reablement referral may be helpful include those returning home from hospital or another inpatient care setting, or those who are referred to reablement-type services in the community when there is evidence of declining independence or declining functional ability to manage activities of daily living (ADL).

Our information specialists undertook a comprehensive systematic search of five clinical and social databases, nine systematic review databases, and four unpublished or grey literature sources to identify relevant reviews. We first developed inclusion and exclusion criteria for our three research questions; we then developed a search strategy using relevant terms ('reablement', 'restoration', 'intermediate care', etc.), and we searched for systematic reviews only. Two reviewers independently screened on title and abstract and then on full text. Two reviewers independently completed a quality assessment of the systematic reviews included in the analysis for Questions 2 and 3 using an adapted version of the Health Evidence Quality Assessment Tool – Review Articles. One researcher extracted the data from each paper, while another researcher validated them. For Question 1, we expanded the definition of 'reablement' from the United Kingdom (UK)-based definition to an internationally agreed definition, and we employed the Template for Intervention Description and Replication (TIDieR) to identify the components of reablement in the five case jurisdiction(s) selected. We used three systematic reviews from the main search, six primary research papers, and two technical reports from scoping searches to answer Question 1. The Question 1 findings provide examples of the components of reablement based on information from the five included jurisdictions; therefore, this is not a comprehensive overview of the situation and just provides a flavour of international practice for Irish policy-makers. To answer Question 2, we completed a narrative summarisation and, where feasible, synthesis of eight systematic reviews, and report on the effectiveness of reablement compared with standard home care. We summarised the data on five outcomes: post-intervention home care requirements, quality of life, functional status, use of the health and social care system, and costeffectiveness. We calculated the overlap in primary papers between the reviews used to answer

Question 2 using the corrected covered area method to identify overlap of primary studies across the systematic reviews used to assess effectiveness. For Question 3 we used three reviews, and have summarised each review's design characteristics and the relevant factors as reported in each review separately. This approach was necessary, as each review differs in scope and content.

# **Findings**

#### **Technical findings**

Our searches returned 2,876 candidate studies, and following screening of these studies, we included 13 systematic reviews that satisfied our inclusion criteria. We used data from three of these reviews to answer Question 1 (one of these three reviews was also used to contribute data to answer Question 2). In addition, we supplemented the data used from the three reviews with data from six primary studies and two technical reports to provide a more comprehensive response to Question 1. We used data from eight of the reviews to answer Question 2, and we used data from three of the reviews to answer Question 3. The quality of the reviews we used to answer Questions 2 and 3 was assessed as being moderate to high.

### Question 1: core components and definition of reablement-type interventions

Based on the data we present from Australia, New Zealand, Norway, the UK, and the United States of America (USA), it is apparent that reablement services vary widely in their structure, delivery, and staff skill mix, although they share general features such as a focus on supporting people to do things for themselves rather than doing things for them. Additionally, reablement services mutually appear to be goal oriented and intensive, to have a predefined duration, and to be delivered in older people's homes. For four out of the five jurisdictions included (Australia, Norway, the UK, and the USA), the reported primary aim of reablement services is to improve the functional outcomes of older people and/or help them regain daily living skills.

The content of reablement services varies widely, and most primary studies did not provide specific details of exercises or activities that are sometimes used in these services. However, the reablement services mentioned in the primary studies cover a multitude of skills/aspects that fall into the following categories: ADL (four countries); physical mobility (five countries); health (one country); social connection (two countries); task support (three countries); and training and education (one country).

There is a huge variety in who delivers the intervention across the five jurisdictions, ranging from home care support workers to occupational therapists, social workers, and nurses. Some jurisdictions use a multidisciplinary team to integrate the intervention, while others use specific staff for either assessment or intervention support. All five jurisdictions define the duration of reablement interventions as lasting 6–12 weeks. In three jurisdictions (Australia, New Zealand, and the UK), the intensity of interventions is individually tailored and can vary according to need. All five jurisdictions deliver reablement services in the individual's home.

Overall, the literature we examined suggests that there is great variation in how reablement-type services are defined and operationalised in the five jurisdictions. However, recent efforts by international researchers have produced a consensus statement on the defining features of reablement-type services that emphasise person-centredness, independence, and autonomy. These principles are achieved through regular assessments, goal-oriented support plans, training, and supports that aim to enhance an individual's physical and/or other functioning.

#### Question 2: effectiveness of reablement-type interventions

We included eight systematic reviews that assessed the impact of reablement services on five outcomes:

- 1. Post-intervention home care requirements
- 2. Quality of life
- 3. Functional status: physical function and ADL
- 4. Transfer to residential care and use of acute hospital services, and
- 5. Cost-effectiveness.

We examined six reviews that report on trials comparing reablement-type services with usual care to assess **post-intervention home care requirements**. Three of the reviews (Whitehead *et al.*, 2015; Tessier *et al.*, 2016; and Pettersson and Iwarsson, 2017) reported numeric and statistical data from the trials they examined to demonstrate the difference in effect between the intervention and usual care on post-intervention home care requirements. All three of these reviews suggest a large effect favouring the intervention over usual care on this outcome, although there are reported differences across these three reviews in how the outcome was defined, measured, and assessed in the included trials.

In the other three reviews (Ryburn *et al.*; Sims-Gould *et al.*; and Bersvendsen *et al.*), the authors provide a short summary of the trials they examined comparing reablement-type services with usual care on the extent of the requirement for home care services post-intervention. None of these three reviews provide adequate numbers, proportions, or statistical tests to support the difference in effect reported in their summaries comparing the intervention and usual care on this outcome.

Therefore, based on three reviews that report statistical findings, we conclude that the current evidence indicates that reablement-type services may be better than usual care in reducing post-intervention home care requirements. However, the outcomes measured differ across trials, and therefore standardisation is required before stronger recommendations can be made. The incomplete reporting of data in the other three reviews means that the current evidence from these three reviews is inconclusive.

We examined six reviews that report on trials comparing reablement-type services with usual care to measure their effect on **quality of life** (QoL) among older people. There are reported differences in how QoL is defined and measured, and different end points used in the trials reported in the six reviews we examined for this outcome. For example, dimensions of both health-related quality of life (HRQoL) and generic QoL constructs are measured in the included trials.

Ryburn *et al.* mentioned only one trial assessing QoL, and they reported in favour of the intervention, but provided no statistical data to support their conclusion. Whitehead *et al.* reported that four of the eight trials they examined favoured the intervention over usual care on QoL measures. Tessier *et al.* (2016) reported on four trials that all favoured the intervention, but they provided no statistical data to support their claims. Cochrane *et al.* undertook a meta-analysis of two trials and reported that there was very low-quality evidence to suggest that reablement may make little or no difference to QoL at the 3-month or at the 9–12-month follow-up periods. Pettersson and Iwarsson reported on two trials which demonstrated that the group who received restorative home care achieved a statistically significant increase in HRQoL compared with the control group. Bersvendsen *et al.* reported that in only one of the three included trials, the intervention group demonstrated a statistically significant difference when compared with the usual care group when QoL was assessed.

Only the three reviews by Ryburn *et al.* (one trial), Tessier *et al.* (four trials), and Pettersson and Iwarsson (two trials) include trials that all report in favour of the intervention compared with usual care, but one of the trials included in Tessier *et al.* did not reach the threshold for statistical significance. The remaining reviews included a total of 13 trials, and only 5 of these trials reported a statistically significant finding in favour of reablement.

Overall, based on the incomplete reporting of statistical data in some of the included reviews and on the inconsistent direction of effect in the other included reviews, we concluded that there is currently insufficient evidence to determine whether reablement-type services are better than usual care in improving the QoL of people aged 65 years and over who receive such services in their own home.

We examined seven reviews that reported on trials that assessed **functional status** (**physical function and ADL**) of older people in evaluations comparing reablement-type services with usual care. The definition and measurement of functional and physical status dimensions differed in the trials reported on in the seven reviews. Three reviews (Ryburn *et al.*, Sims-Gould *et al.*, and Bersvendsen *et al.*) provided a short text-based summary of findings from the included trials. None of these three reviews provide any statistical data to support their claims regarding an overall comparison between reablement-type services and usual care for this outcome.

Four reviews (Whitehead *et al.*; Cochrane *et al.*; Tessier *et al.*; and Pettersson and Iwarsson) reported data from primary studies, and 50% report a statistically significant improvement in ADL or physical functioning while another 33% report a non-statistically significant improvement in the same measures, indicating a somewhat positive result.

Despite some positive reporting backed by statistical test results in three reviews that reablement-type services may be better than usual care in improving functional and/or physical activity among older people, our conclusion is that there is insufficient evidence to support this finding without reservation. However, there are positive signals with respect to home-based reablement-type services' effect on functional and physical status when compared with usual home care services.

We examined five reviews that reported on trials that assessed **use of the health and social care system**, including admissions to residential or nursing homes, visits to emergency departments, and hospital admissions. There is variation in how admissions were defined and measured across the trials reported in the five reviews. This lack of consistency regarding what is being measured, and how, reduces the confidence in the conclusions we can draw. In addition, in the five reviews we examined, the authors treated the relevant data from the trials differently, with some providing statistics to support their claims and others reporting short text-based summaries of trial findings with little or no accompanying statistics.

Both Whitehead *et al.* and Cochrane *et al.* reported no difference between the intervention and usual care, while Sims-Gould *et al.* made a broad claim in favour of the intervention but provided no statistics to support their claim. Pettersson and Iwarsson, reporting on two trials, suggest that recipients of the intervention were more likely to remain living at home, but they only provided statistics from one of the included trials to support this claim. Bersvendsen *et al.* claimed that the evidence is promising for the intervention to delay transfer to residential care, and that there is some evidence that participants in the intervention group were less likely to visit emergency departments or be readmitted to hospital. However, the reporting of the trials cited by Bersvendsen *et al.* did not provide adequate information to assess these claims.

Overall, we conclude that the current evidence is inconclusive regarding whether home-based reablement-type services are better than usual care in reducing use of the health and social care system by people aged 65 years and over.

There was variation around how **cost-effectiveness** was defined and measured in the primary studies on home-based reablement included in the single review we identified, and there was uncertainty regarding the direction of effect in the studies the review authors summarised. Based on this assessment, we conclude that the current evidence on the cost-effectiveness of home-based reablement for people aged 65 years and over is inconclusive as to whether reablement-type services are more cost-effective than usual care.

# Question 3: factors required for successful reablement-type interventions

We included three reviews that provide data on key factors that can affect the success of reablement-type services. The three reviews provided rich data that both described these factors and explained why they are important to reablement's success, reflecting the views and experiences of service users and service providers, specifically occupational therapists. There were no data available that reflect the views of informal carers.

The views and experiences expressed cover the following key components:

- Planning and delivery of reablement-type services in the home
- Occupational therapy to support reablement in the home, and
- Older people's perceptions of the benefits of physical activity..

The first review outlined the relevant factors that facilitate collaborative decision-making between service users and service providers, and the factors that facilitate the integrated working between health and social care professionals and carers.

The third review identified six factors that can facilitate collaborative decision-making between service users and reablement team members:

- 1. Reaching an agreement on the objectives of care
- 2. Appreciating the complexities of decision-making at a time of vulnerability for older adults
- 3. Considering the relevance of continuity of care in the health and social care system
- 4. Promoting the role of informal carers
- 5. Considering the appropriate environment for providing reablement-type services, and
- 6. Considering the potential impact that the local health and social care system may have on the development of service plans.

In addition, the third review identified six factors that can facilitate integrated working between health and social care professionals and informal carers, and that can enhance the planning and delivery of reablement-type services in the context of intermediate care. These factors are:

- 1. Change management within and between health and social care organisations
- 2. Engagement with staff
- 3. Professional development
- 4. Leadership
- 5. Supporting organisational structures and processes, and
- 6. The active engagement of carers and voluntary services as part of the team.

A recurring factor that permeates the third review is for services to place service users at the centre of service design and delivery by establishing meaningful negotiation around shared goals and outcomes.

In the second review, which examined the role of occupational therapists in reablement-type services, the provision of important skills and expertise by occupational therapists is a relevant factor that can benefit the content and delivery of reablement-type services. In addition, occupational therapists' contribution to the development of meaningful care plans and the timely provision of supportive technology and equipment can be an important factor to enable older adults to live independently in their own homes. Furthermore, integrated service provision is more effective when reablement team members recognise the unique skills and expertise of occupational therapists and how these skills, when deployed as part of the team, can contribute to service users' engagement and motivation.

In the third review, which examined the role of physical activity strategies in reablement-type services, it was reported that older adults' motivation and confidence with respect to doing physical activity increased along with their incremental experiences of undertaking physical exercise and their improvement of functional and physical status. In addition, it was suggested that the value and enjoyment of being physically active are important factors for participating in physical activity interventions among older adults and that positive physical activity experiences increase their motivation to engage with physical activity.

#### **Conclusion**

It must be recognised that reablement-type services are a relatively new addition to the suite of services delivered in the home for older adults. Efforts to define and standardise reablement services are in progress, and this is reflected in the reported variation of reablement-type service models operating in the five international jurisdictions examined in this evidence review.

The evidence base on the effectiveness of reablement-type services is also emerging, and thus far, there are positive signals in the evidence to suggest that reablement reduces the need for ongoing home care visits post-intervention. In addition, there are some positive signals that reablement-type services improve functional status among older adults, but this evidence is not yet sufficient to make definitive conclusions, and further evaluation is required in order to strengthen the evidence base. There is inconclusive evidence with respect to reablement-type services' effect on QoL, use of health and social care services, and costs.

The factors that appear to facilitate the acceptance of reablement-type services and improve their planning and delivery are positioned around putting the values of the service users at the centre of service provision. Collaborative decision-making that allows older adults to exercise their agency and autonomy in their home is a key mechanism that enables services to have a positive effect. Older adults welcome and enjoy physical activity measures. Services that are delivered by competent, trained, and integrated teams that are sensitive to the personal wishes and values of older adults show promise for achieving the overall objectives inherent in the philosophy of reablement.

## 1 Introduction

# 1.1 Policy background

The 2018 *Home Support Service for Older People* document commits to undertaking a review of all aspects of intermediate care in Ireland with a view to making recommendations on future models of intermediate care,<sup>1</sup> which will cover:

- Transitional care interventions delivered at home (for approximately 30 days) after discharge from acute hospital
- Intermediate care comprising short-stay beds in a community hospital or post-acute facility, some
  of which will provide rehabilitation, and
- Reablement activities delivered in the home.<sup>1</sup>

## 1.2 Purpose

The objective of this evidence review is to bring together international evidence and feed into the Department of Health's consideration of a national policy framework for intermediate care and reablement. The evidence review will feed into an early stage of the process and will help inform the design of pilot models of reablement which are due to be evaluated in Ireland and are set to commence in 2021. The pilot models will consider identified definitions, components, and outcome measures, and will be taking consideration of identified success factors.

Reablement belongs to the broad family of intermediate care interventions. The Social Care Institute for Excellence (SCIE) describes the position of reablement on the spectrum of intermediate care. According to SCIE, "Reablement is one service on a continuum of intermediate care. This continuum spans acute and long-term care and responds to a range of health and social care needs. Other 'intermediate' services can include rehabilitation, rapid response, and supported discharge teams. Although there is no single delivery model for reablement, it is generally designed to help people accommodate illness or disability by learning or re-learning the skills necessary for daily living. These skills may have been lost through deterioration in health and/or increased support needs. Reablement services are generally provided for a period of up to 6 weeks although people often meet their goals in a far shorter period. The focus is on promoting and optimising independent functioning rather than resolving health issues. It is about helping people do as much for themselves as possible rather than doing things for people that they cannot do".<sup>2</sup> (p2)

As elaborated by SCIE in the extract above, reablement is not an intervention designed to treat a specific disease or disability; instead, it is described as an intervention aimed at improving and maintaining the mental and physical independence of older adults.<sup>2</sup> The following description by Aspinal *et al.* provides a useful definition of the key characteristics of reablement: "Reablement is an intensive, time-limited intervention provided in people's homes or in community settings, often multi-disciplinary in nature, focusing on supporting people to regain skills around daily activities. It is goal oriented, holistic and person-centred irrespective of diagnosis, age and individual capacities. Reablement requires skilled professionals who are willing to adapt their practice, as well as receptive older people, families and care staff".<sup>3</sup> (p1)

However, it must be noted that although most authors try to outline the key differences between reablement and other intermediate care interventions, there remain some disputes regarding the precise dimensions of difference. According to Cochrane *et al.*, "There is a lack of clarity regarding the boundaries between reablement and other related interventions in health and social care (including intermediate care, occupational therapy and traditional domiciliary care). While reablement shares features with other interventions, it is distinguished by a re-orientation of home care away from treating disease and creating dependency to maximising independence; it achieves this by offering intensive (i.e. multiple visits), time-limited (typically 6–12 weeks' duration), multidisciplinary, personcentred and goal-directed home-care services".<sup>4</sup> (p5)

# 1.3 Research questions

This evidence review will answer the following questions:

- 1. How is reablement defined in selected international jurisdictions and what are its core components?
- 2. What is the effect of reablement on: (a) patient outcomes; (b) health and social care system outcomes; and (c) value-for-money outcomes?
- 3. What factors are required for successful reablement interventions, considering: (a) patients; (b) health and social care reablement teams; and (c) the healthcare system?

The population of interest was people aged 65 years and over and living in the community.

# 2 Methods

# 2.1 Review topic, design and review methods

The type of individual for whom a reablement referral may be helpful includes those older people returning home from hospital or another inpatient care setting, or those who are referred in the community when there is evidence of declining independence or ability to manage activities of daily living.

We used the umbrella review design to examine the evidence base for reablement-type services delivered in the home and in the community to people aged 65 years and over. An umbrella review summarises and synthesises findings from multiple systematic reviews. The umbrella review method allowed the reviewers to examine the reported evidence of the effectiveness of reablement-type services and to identify whether the evidence base is consistent or contradictory. Umbrella reviews also allow for reviewers to bring together data from reviews that have captured the views and experiences of stakeholders regarding the strengths and weaknesses of an intervention. Umbrella reviews are useful for decision-makers in the policy area who require an overview of the most relevant and reliable evidence.

## 2.1.1 Choice of an umbrella review design for Questions 2 and 3

The main reason we chose to undertake an umbrella review is that, in our scoping exercise, we identified the existence of several completed reviews. 4-9 According to Aromataris and Munn (2017), "if current, multiple, good-quality systematic reviews exist about a given topic or question, any reviewer should reconsider the need to conduct yet another review addressing the same issue. Rather, these [existing reviews] may be the basis to conduct an Umbrella Review and summarize or synthesize the findings of systematic reviews already available". 10 (p365)

In addition, a brief scan of the existing systematic reviews that we identified showed us that the reported results of these reviews were inconsistent and contradictory in their assessment of the evidence on reablement-type services in terms of whether reablement leads to improved independence in older people. Therefore, a key driver behind our decision to use an umbrella review approach was to see if we could resolve the inconsistencies and contradictions reported in the reviews scanned.

#### 2.1.2 Umbrella reviews as evidence-based products for policy-makers

Umbrella reviews have become feasible mainly due to the increasing volume of systematic reviews that are published on a regular basis. According to Aromataris *et al.* (2015), "The number of systematic reviews published to accommodate the demands of evidence-informed decision-making has increased markedly over the past two decades. One recent [2015] estimate suggests that 11 systematic reviews are published every day".<sup>11</sup> (p133)

Systematic reviews are a recognised evidence-based product that are often used by policy-makers in their deliberations and decision-making. As systematic reviews are the exclusive unit of analysis in umbrella reviews, this means that umbrella reviews can contribute to evidence-based policy-making. According to Aromataris *et al.*, "With the ever-increasing number of systematic reviews published daily, umbrella reviews have a clear role in evidence-based healthcare and evidence-informed decision-making". <sup>11</sup> (p139)

#### 2.1.3 Types of outputs derived from an umbrella review

The main output derived from an umbrella review is an overall summary of the existing evidence as reported in systematic reviews. This does not mean that such output is an uncritical regurgitation of what is reported in the review-based literature; rather, the strength of the umbrella review's design is that it provides for scrutiny of the review-based evidence to identify and resolve inconsistencies and contradictions. In addition, reviewers can assess the nature and extent of heterogeneity across the review-based literature and discuss the implications for how such heterogeneity might impact on our understanding of what is being studied and how it is studied.

According to Aromataris *et al.* (2015), "The principal reason for the conduct of an umbrella review is to summarize the evidence from multiple research syntheses.... Umbrella reviews are conducted to provide an overall examination of the body of information that is available for a given topic, and to compare and contrast the results of published systematic reviews. The wide picture obtainable from the conduct of an umbrella review is ideal to highlight whether the evidence base around a topic is consistent or contradictory, and to explore the reasons for the findings. Furthermore, an umbrella review allows ready assessment of whether review authors addressing similar review questions independently observe similar results and arrive at generally similar conclusions." <sup>111</sup> (p133)

#### 2.2 Inclusion and exclusion criteria

We developed inclusion and exclusion criteria based on our three research questions, and these criteria are presented in Table 1.

Table 1 Eligibility criteria for reviews and syntheses to be included in this umbrella review

Criterion	Include	Exclude
Population	People aged 65 years and over and living in the community. These people will include those returning home from hospital or other inpatient care setting, or those referred in the community when there is evidence of declining independence or ability to cope with everyday living.  For mixed populations, the proportion of older people must be >80%, as per the Cochrane et al. review. <sup>4</sup>	People aged under 65 years.  Reviews where no age is given, but that extrapolate to younger age groups.
Intervention	Reviews of interventions that promote active engagement by community-dwelling elderly people in a range of daily activities. Such interventions may use components such as strength, balance, and endurance programmes for improving or maintaining mobility; home visits to promote active self-care and chronic disease self-management; fall-prevention strategies; medication adherence; and nutrition management.  Interventions can be delivered in the home and in community settings over a specific duration by multidisciplinary teams and/or specially trained personnel. The delivery of the intervention will consist of multiple home visits and be reported as person-centred and goal oriented.	Acute care in the home, e.g. 'hospital at home'. Interventions exclusively delivered in hospitals or nursing homes.
Context	Home-based interventions  Community setting	
Primary outcomes	<ul> <li>Quality of life, e.g. health-related and social-care-related quality of life</li> <li>Functional status, including measures of the skills and abilities required to complete activities of daily living</li> <li>Psychological/cognitive status</li> </ul>	Disease-specific outcomes

Criterion	Include	Exclude
	Social inclusion/isolation	
	<ul> <li>Living arrangements, and</li> </ul>	
	Patient satisfaction.	
	System outcomes:	
	<ul> <li>Hospital readmission</li> </ul>	
	<ul> <li>Ongoing home care service (e.g. care hours)</li> </ul>	
	<ul> <li>Use of external health services (e.g. visits to emergency department)</li> </ul>	
	<ul> <li>Transfer of care to a nursing home, and</li> </ul>	
	• Cost-effectiveness.	
Study design	Reviews and syntheses that report a search of at least two databases and include evaluations that assess at least one of our primary outcomes.	All primary studies
	Reviews and syntheses that contain qualitative data on factors around planning and implementation.	
Language	English only	Any language other than English – the short time frame for review does not allow for translation.
Dates	Reviews and syntheses published from January 2000 to May 2020.	Reviews and syntheses published before 2000.

# 2.3 Search strategy

Deciding on the correct concepts to use in our search strategy was a challenging exercise. Reablement is generally accepted as a core service located on the spectrum of the intermediate care suite of services. However, specific components of reablement services are also investigated as standalone concepts, i.e., physical activity interventions. There is much overlap between reablement services and various types of rehabilitation, home care, 'hospital at home', etc. While reablement as an intervention may be used with subjects across a wide range of ages, our reviews were exclusively focused on older adults aged 65 years and over, and the setting of interest was the home or the community.

In order to obtain a general idea of the nature and extent of the available literature, the information specialist (CL) undertook a scoping exercise, searching Ovid MEDLINE, Ovid PsycINFO, and Google Scholar. From this exercise, we identified a small number of systematic reviews and randomised controlled trials that seemed relevant to the focus of our inquiry. In addition, key words and Medical Subject Headings (MeSH) terms were identified from the database searches and from the reviews, and the information specialist (CL) used PubReMiner to search for further MeSH and key terms. <sup>12</sup> Testing of search terms was carried out as standard. The use of general therapy terms (for example, occupation therapy) did not appear to capture any works that were not also captured using the reablement and typical measured outcomes of reablement-type interventions, but did substantially increase the number of irrelevant papers captured. Therefore, after testing, this approach was not used in the search strategy.

The scope of the literature indicated that the most appropriate approach to the review questions would be to limit the searches to systematic reviews for Questions 2 and 3. The date limit set for this review was for reviews published between January 2000 and May 2020, where it would be expected that the reviews from the earlier part of the date range would incorporate primary research from before 2000. Aromataris et al. (2015) note that using a date limit of 5–10 years for research syntheses would include primary or original research from the previous 30 years and that these searches rarely need to go further back than 1990, given the low numbers of syntheses prior to that date. 11 We chose a limit of 20 years for our review searches. We expected from our scoping searches that this would capture reviews which covered primary research for several decades prior to 2000. The term 'reablement' in general has been used since the 1940s, but in the sense used for this review it has been used primarily only since the 2000s. An English language limit was placed on the search; as the review would be carried out in a short time frame, it would not be possible to arrange for comprehensive translation services, and the concepts involved would be too complex and poorly defined to be able to rely on a simplistic translation using Google Translate or another online programme. It was agreed that the final searches were to be based around the concepts and search limits included in Table 2.

Table 2 Search concepts for literature searches covering Questions 2 and 3

Search concepts for Questions 2 and 3		
Intervention	Reablement	
Population	Older people (aged 65 years and over)	
Location	Home-based interventions or community locations	
Study types	Reviews – systematic reviews and other reviews using more than two databases	
Publication date	2000–2020	
Language	English language only	

The searches were designed to be as comprehensive as possible. Sensitivity was prioritised over specificity (which would be too limiting in a poorly defined topic with widely varying terminology). The full list of literature search strategies and results for the searches can be found in Appendix 1. While a full PRESS peer review of the searches was not possible at the time, the searches were designed around the key search elements described in the PRESS Guideline Statement and checklist. The search strategy did not include all PICO elements - The Cochrane Handbook for Systematic Reviews of Interventions guidance notes that including all aspects of a research question in a search strategy may not be the most helpful strategy, as it may exclude useful research if the relevant terms are not included in indexed, searchable fields in databases or search resources. This source recommends basing the search on population (or condition), intervention, and study design. The search strategy for this review combined intervention (reablement terminology), population (older people terminology), context (home or community locations) and study design (reviews).

The range of databases chosen for our search was intended to cover as wide a range of potential subject areas as possible, including clinical, social, and psychology-focused databases; systematic review databases; and open access/grey literature online resources. These are listed in Table 3. Searches were initially designed for Ovid MEDLINE by the information specialist and were then translated for use in the other databases. The search options for several of the resources listed below do not allow for such comprehensive searching as in Ovid or EBSCO databases, and searches were tailored appropriately, or were abbreviated where the level of confounding results was very high (for example, using the search engine Google). Final literature searches were carried out between 20 and 22 May 2020.

Table 3 Databases and other resources searched

Type of	Databases and other resources used	Date of search
Type of	Databases and other resources used	Date of search

data source		
Clinical	Ovid MEDLINE	20 May 2020
and social databases	Ovid PsycINFO	20 May 2020
	Ovid Social Policy and Practice	20 May 2020
	EBSCO CINAHL Complete	20 May 2020
	EBSCO SocINDEX with Full Text	21 May 2020
Systematic	Cochrane Library (John Wiley & Sons, Inc)	21 May 2020
review databases	Campbell Library (John Wiley & Sons, Inc)	21 May 2020
	DoPHER EPPI-Centre	22 May 2020
	Epistemonikos (Epistemonikos Foundation)	22 May 2020
	PROSPERO (University of York)	22 May 2020
	University of York CRD Database (including DARE, NHS EED, and HTA)	22 May 2020
	Health Evidence (McMaster University)	22 May 2020
	Social Systems Evidence (McMaster University and Monash University)	22 May 2020
	Health Systems Evidence (McMaster University)	22 May 2020
Grey	CORE.ac.uk (Open University and Jisc)	22 May 2020
literature sources	Social Care Online (SCIE)	21 May 2020
	Google.com	22 May 2020
	Google Scholar	22 May 2020

The results of the literature searches (n=3,931) were exported to EndNote version X9.3, where deduplication was carried out, resulting in a total of 2,876 citations to be examined. The citations were uploaded to EPPI-Reviewer 4 for screening by two researchers and an information specialist (MK, OC, and CL).<sup>15</sup>

# 2.4 Screening

Screening was carried out in two stages – initially by title and abstract, and subsequently by article full text. The screening process was carried out in accordance with the inclusion and exclusion criteria outlined in the review protocol and reproduced in Table 1.

The screening categories used in EPPI Reviewer for screening the results were:

- Include
- Exclude on intervention
- Exclude on study type
- Exclude on review protocol/synthesis (for follow-up)
- Exclude on target group
- Exclude on 'background'
- Exclude on duplicate
- Exclude on language
- Exclude on date

The numbers excluded per screening category have been described in Appendix B. Papers excluded on intervention were those which did not deal with reablement-type processes. Papers excluded on target group dealt with subjects other than an older population or with subjects residing in nursing homes. A screening category called 'exclude on background' was used to retain papers which were not reviews but which, it was felt, could be useful in understanding or explaining the concepts of the review. The language category was used to exclude papers in languages other than English. The date exclusion category was used for papers published before 2000. Non-review papers were screened out using the study type screening category, however, review protocols and syntheses were excluded separately during screening but retained to follow up the reviews described therein, to maximise the opportunity to capture any relevant review not already captured by the searches.

Arising from this screening strategy, two reviewers and one information specialist nominated 57 studies as candidate papers for in-depth examination regarding their potential contribution to reablement. We will discuss this process in more detail in Section 2.5.

Finally, in order to bring our search strategy up to date and to ensure that we had not missed any recently published work that may be of relevance, we undertook a follow-up search comprising reference chasing and citation chasing (or backward and forward citation chasing); this search was carried out at the end of July 2020. The references and citations from the 57 candidate papers we had initially identified were compiled by two information specialists (CL and AF). The initial number of results from citation chasing was 6,655, which was reduced to 4,947 after deduplication. After prescreening for out-of-scope (by the protocol criteria) and previously screened items, the number of potential papers to be examined was seven. However, none of these seven papers was suitable for inclusion in the final analysis.

# 2.5 Screening reviews: inclusions and exclusions

We brought 57 reviews into our final stage of screening. Our decisions from here on were again based on our inclusion and exclusion criteria as outlined in Table 1. We subjected each of the 57 reviews to full-text examination before deciding on their relevance to our work. We found that these reviews had some features in common: they targeted older adults, often defining them as frail adults or adults with chronic conditions, such as dementia; and some covered interventions delivered in the home, in the community (i.e., in general practice), and in other institutional settings. We also found that these reviews had many different features. For example, outcomes evaluated in these reviews included a hybrid mix of health and social care outcomes and health system outcomes. We also found great diversity in the types of interventions evaluated in these reviews, which included fall prevention in the home, home visits, medication management, integrated care interventions, occupational therapy, assistive technologies, and many other interventions. Fall prevention and medication management were evaluated as standalone interventions. We also found that the research objectives of these reviews differed greatly, from scoping broad areas to comparing interventions, to exploring the meaning of qualitative literature. During our in-depth discussion, we accepted that the types of interventions we were observing in these reviews could be used as part of providing reablement-type services to older adults in the home. However, 44 of the 57 reviews focused on interventions that were not explicitly delivered or evaluated as part of reablement-type services or approaches, and these were excluded. These are listed in Appendix B.

We observed during our in-depth examination of the 57 reviews that 13 reviews were explicitly focused on reablement-type services that were delivered in the home to older adults aged 65 years and over. Three of the 13 reviews were used to answer Question 1. In addition to the three reviews used for Question 1, we included six primary papers and two reports from the scoping search to supplement the data obtained from the three reviews. We found that eight reviews provided data that covered the effectiveness of reablement (Question 2). These reviews reported on outcomes or success factors that were of interest to us, including quality of life, the use of health and social care services, and an assessment of functional physical status. Three reviews spoke directly to the experiences of service users and service providers about factors that facilitate successful reablement (Question 3). Table 4 presents the 13 reviews, six primary research studies, and two grey literature reports that we included for data extraction and analysis, together with our three review questions.

Appendix 2 contains the list of reviews excluded at the full-text screening stage and the data analysis stage, with their reason for exclusion.

# Table 4 Systematic reviews, primary studies, and grey literature sources included in the analysis, by research question

Primary studies, studies, systematic reviews, and grey literature sources included in the analysis by question

#### Question 1 (n=11)

- Australian Association of Gerontology. 16 Fact Sheet 2: Australian Approaches to Reablement in the Home Support and Care Program. Australia: Australian Association of Gerontology (AAG); 2019. Available from: <a href="https://www.aag.asn.au/documents/item/2903">https://www.aag.asn.au/documents/item/2903</a>
- Baker DI, Gottschalk M, Eng C, Weber S, Tinetti ME.<sup>17</sup> The design and implementation of a restorative care model for home care. Gerontologist. 2001;41(2):257-63. Available from: <a href="https://doi.org/10.1093/geront/41.2.257">https://doi.org/10.1093/geront/41.2.257</a>
- Beresford B, Mann R, Parker G, Kanaan M, Faria R, Rabiee P, et al.<sup>18</sup> Reablement services for people at risk of needing social care: the MoRe mixed-methods evaluation. Health Services and Delivery Research. 2019;7(16):1-254. Available from: http://dx.crossref.org/10.3310/hsdr07160
- 4. Clotworthy A, Kusumastuti S, Westendorp RGJ.<sup>19</sup> Reablement through time and space: A scoping review of how the concept of 'reablement' for older people has been defined and operationalised. BMC Geriatr. 2020;[Preprint]. Available from: <a href="https://doi.org/10.21203/rs.2.21256/v1">https://doi.org/10.21203/rs.2.21256/v1</a>
- Cochrane A, Furlong M, McGilloway S, Molloy DW, Stevenson M, Donnelly M.<sup>4</sup> Time-limited homecare reablement services for maintaining and improving the functional independence of older adults. Cochrane Database Syst Rev. 2016;(10):CD010825. Available from: <a href="https://dx.doi.org/10.1002%2F14651858.CD010825.pub2">https://dx.doi.org/10.1002%2F14651858.CD010825.pub2</a>
- 6. Doh D, Smith R, Gevers P.<sup>20</sup> Reviewing the reablement approach to caring for older people. Ageing Soc. 2020;40(6):1371-83. Available from: https://doi.org/10.1017/S0144686X18001770
- Langeland E, Tuntland H, Folkestad B, Førland O, Jacobsen FF, Kjeken I.<sup>21</sup> A multicenter investigation of reablement in Norway: a clinical controlled trial. BMC Geriatr. 2019;19:29. Available from: <a href="https://dx.doi.org/10.1186%2Fs12877-019-1038-x">https://dx.doi.org/10.1186%2Fs12877-019-1038-x</a>
- Metzelthin SF, Rostgaard T, Parsons M, Burton E.<sup>22</sup> Development of an internationally accepted definition of reablement: a Delphi study. Ageing Soc. 2020:1-16. Available from: <a href="https://doi.org/10.1017/S0144686X20000999">https://doi.org/10.1017/S0144686X20000999</a>
- 9. Parsons M, Senior H, Kerse N, Chen M-H, Jacobs S, Anderson C.<sup>23</sup> Randomised trial of restorative home care for frail older people in New Zealand. Nurs Older People. 2017;29(7):27-33. Available from: <a href="https://doi.org/10.7748/nop.2017.e897">https://doi.org/10.7748/nop.2017.e897</a>
- 10. Productivity Commission.<sup>24</sup> Caring for older Australians. Canberra, Australia: Productivity Commission; 2011. Productivity Commission Inquiry Report Volume 2, No. 53. Available from: <a href="https://www.pc.gov.au/inquiries/completed/aged-care/report/aged-care-volume2.pdf">https://www.pc.gov.au/inquiries/completed/aged-care/report/aged-care-volume2.pdf</a>
- 11. Tuntland H, Aaslund MK, Espehaug B, Førland O, Kjeken I.<sup>25</sup> Reablement in community-dwelling older adults: a randomised controlled trial. BMC Geriatr. 2015;15(1):145. Available from: https://dx.doi.org/10.1186%2Fs12877-015-0142-9

#### Question 2 (n=8 systematic reviews)

- Bersvendsen T, Jungeilges J, Abildsnes E.<sup>26</sup> Evaluation of home-based reablement: A systematic review. 2018. Available from: <a href="https://www.uia.no/en/content/download/104410/1609629/file/Evaluation%20of%20home-based%20reablement%20-%20A%20systematic%20review.pdf">https://www.uia.no/en/content/download/104410/1609629/file/Evaluation%20of%20home-based%20reablement%20-%20A%20systematic%20review.pdf</a>.
- Cochrane A, Furlong M, McGilloway S, Molloy DW, Stevenson M, Donnelly M.<sup>4</sup> Time-limited homecare reablement services for maintaining and improving the functional independence of older adults. Cochrane Database Syst Rev. 2016;(10):CD010825. Available from: https://dx.doi.org/10.1002%2F14651858.CD010825.pub2
- 3. Faria R, Kiss N, Aspinal F, Harden M, Weatherly H.<sup>27</sup> Economic evaluation of social care interventions: lessons drawn from a systematic review of the methods used to evaluate reablement.

Primary studies, studies, systematic reviews, and grey literature sources included in the analysis by question

Health Econ Outcome Res Open Access. 2016;2(1):107.

- 4. Pettersson C, Iwarsson S.<sup>5</sup> Evidence-based interventions involving occupational therapists are needed in re-ablement for older community-living people: A systematic review. Br J Occup Ther. 2017;80(5):273-85. Available from: <a href="https://doi.org/10.1177%2F0308022617691537">https://doi.org/10.1177%2F0308022617691537</a>
- Ryburn B, Wells Y, Foreman P.<sup>28</sup> Enabling independence: restorative approaches to home care provision for frail older adults. Health Soc Care Community. 2009;17(3):225-34. Available from: https://doi.org/10.1111/j.1365-2524.2008.00809.x
- Sims-Gould J, Tong CE, Wallis-Mayer L, Ashe MC.<sup>6</sup> Reablement, reactivation, rehabilitation and restorative interventions with older adults in receipt of home care: A systematic review. J Am Med Dir Assoc. 2017;18(8):653-63. Available from: https://doi.org/10.1016/j.jamda.2016.12.070
- Tessier A, Beaulieu M-D, McGinn CA, Latulippe R.<sup>7</sup> Effectiveness of reablement: A systematic review. Healthc Policy. 2016;11(4):49-59. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/pmc4872552/
- Whitehead PJ, Worthington EJ, Parry RH, Walker MF, Drummond AER.<sup>9</sup> Interventions to reduce dependency in personal activities of daily living in community dwelling adults who use homecare services: a systematic review. Clin Rehabil. 2015;29(11):1064-76. Available from: <a href="https://dx.doi.org/10.1177%2F0269215514564894">https://dx.doi.org/10.1177%2F0269215514564894</a>

#### Question 3 (n=3 systematic reviews)

- 1. Dibsdall L.<sup>29</sup> A realist synthesis and evaluation of the role and impact of occupational therapists in reablement services [PhD thesis]. Bristol: University of the West of England; 2019.
- Mjøsund HL, Burton E, Moe CF, Uhrenfeldt L.<sup>30</sup> Integration of physical activity in reablement for community dwelling older adults: A systematic scoping review [preprint version 1]. Research Square. 2019. Available from: https://www.researchsquare.com/article/rs-8574/v1
- Pearson M, Hunt H, Cooper C, Shepperd S, Pawson R, Anderson R.<sup>31</sup> Providing effective and preferred care closer to home: a realist review of intermediate care. Health Soc Care Community. 2015;23(6):577-93. Available from: <a href="https://doi.org/10.1111/hsc.12183">https://doi.org/10.1111/hsc.12183</a>

## 2.6 Quality assessment

We used an adapted version of the Health Evidence Quality Assessment Tool – Review Articles to assess the quality of reviews (Appendix 3).<sup>32</sup> This instrument was chosen because it provides a broad rating score that classifies reviews as weak (1–4/10), moderate (5–7/10), or strong (8–10/10), which enables reviewers to build quality rating into a broader discussion within the overall body of work being undertaken. In addition, the instrument is suitable to assess the quality of both quantitative and qualitative reviews, which avoids the necessity for reviewers to switch between instruments when considering both types of review design. This quality assessment was undertaken independently by two reviewers (MK and OC) using the 10 quality criteria outlined in the Health Evidence Quality Assessment Tool – Review Articles, and a final quality rating was assigned for each review; there was little disagreement between the two assessors. We discuss the implications for our overall findings in Section 4.2.

#### 2.7 Data extraction

Data from the included reviews were extracted by two reviewers (MK and OC) using the Joanna Briggs Institute Data Extraction Form for Review for Systematic Reviews and Research Syntheses (Appendix 4).<sup>33</sup> We extracted data on the following items: review objectives, review design, description of the intervention, population, setting, search details, number and type of primary studies included in each review, countries where primary studies were completed in each review, outcomes assessed, and findings for both quantitative (Question 2) and thematic (Question 3) papers. One researcher extracted the data from each paper, while another researcher validated them. There was little error

and errors were agreed by both authors. A full description of the characteristics of the included reviews is provided in Appendices 5 and 6.

Where data were extracted from a preprint paper and the paper was subsequently published in a journal after the extraction and synthesis process, the reference used is the original preprint – the paper from which the data were extracted.

## 2.8 Data analysis

For Question 1, we expanded the definition of 'reablement' from the United Kingdom (UK)-based definition to an internationally agreed definition, and we employed the Template for Intervention Description and Replication (TIDieR) to identify the components of reablement in five case jurisdictions.<sup>34</sup> We used three systematic reviews from the main search, as well as six primary papers and two grey literature reports from scoping searches, to answer Question 1.

For Question 2, we completed a narrative synthesis of eight reviews in which we discuss the effectiveness of reablement compared with standard home or hospital care. We calculated the overlap in primary papers between reviews using the corrected covered area method, and we applied a systematic approach in order to write our evidence conclusions on effectiveness.

For Question 3, we completed a qualitative analysis of three reviews in order to identify the factors that influence successful reablement.

# 2.9 Overlap of primary studies in the included reviews

Pieper et~al. developed a methodology to assess overlap of primary studies between systematic reviews of the same interventions. They title this measure the 'corrected covered area'. We used this measure for each effectiveness outcome in Question 2 in order to assess the overlap of the same primary studies across more than one systematic review. Pieper et~al. grade the percentage overlap as low (0–5%), moderate (6–10%), high (11–15%), and very high (16% or over) so that reviewers can categorise the overlap.

# 3 Findings

# 3.1 Technical findings

Our searches returned 2,876 studies, and we included 13 systematic review studies (Figure 1). We used data from three systematic reviews in Question 1 (one of these reviews was also used in Question 2), data from eight systematic reviews for Question 2, and data from three systematic reviews for Question 3. In addition to the three reviews used for Question 1, we included six primary papers and two grey literature reports from the scoping search to supplement the lack of information in the systematic reviews. The Question 1 findings provide author-described examples of reablement from five case jurisdictions to provide a flavour for Irish policy-makers. The quality of the reviews we used to answer Questions 2 and 3 was assessed as being moderate to high (Appendix 3). As the quality assessments are all moderate or high, they do not change the overall conclusions on each outcome.

Appendix 5 presents the characteristics of the reviews included in Question 2, while Appendix 6 presents the characteristics of the reviews included in Question 3. The papers excluded during the screening process are listed in Appendix B and recorded on Figure 1 in the PRISMA flow chart.

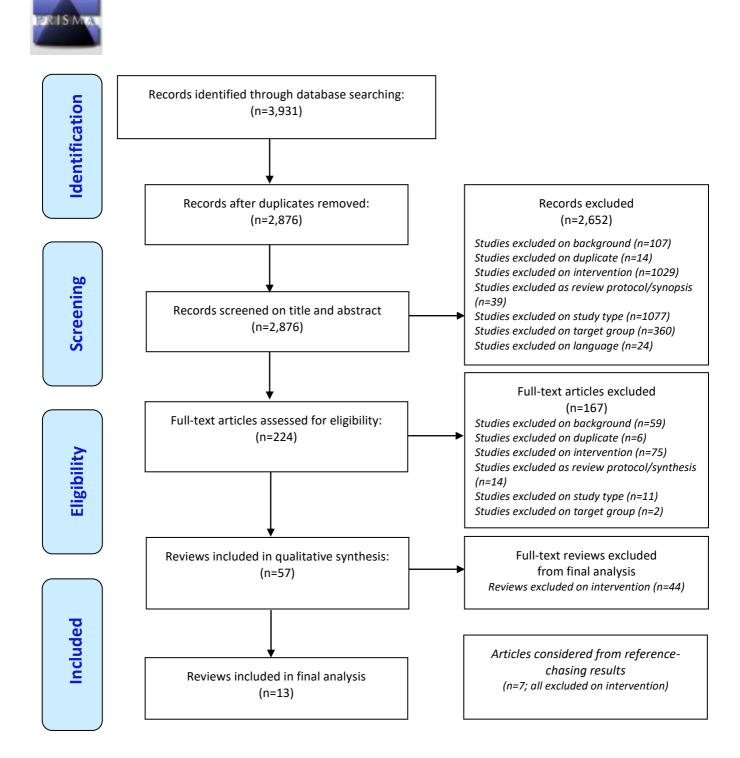


Figure 1 PRISMA flow diagram for review search

Source: Moher et al., 2009<sup>36</sup>

# 3.2 Question 1: How is reablement defined in selected international jurisdictions and what are its core components?

#### 3.2.1 Introduction

From the outset, we intended to rely exclusively on reviews that met our inclusion criteria to provide us with data to answer Question 1. However, when we undertook full-text screening of these reviews, we realised they did not contain consistent definitions of reablement-type services, the core components of these services, or how services are structured and operated in different countries. The diversity in reporting on these issues across the reviews we examined is neatly encapsulated in the following extract from one of the reviews we examined. According to Pettersson and Iwarsson, "Reablement is defined in different ways and with varying degrees of clarity.... With a geographical spread representing Australia and New Zealand as well as the USA and Scandinavia, it is not surprising that there are differences in the terminology and definitions used. Since the definitions and descriptions of the activities and interventions differ across the sample of studies included in our review it is difficult to compare the results". 5 (p282-283)

As an adequate response to Question 1 was important for our stakeholders, we decided to draw on data from a purposive sample of primary papers and fact sheets from our initial scoping review alongside three reviews from our formal search in order to answer Question 1. Purposive sampling is a technique in which researchers rely on their own judgement when selecting data sources to supplement either absent or partial data. The technique is suitable for use when the researcher is exclusively using the data for descriptive purposes and not for evaluation purposes. The purpose of drawing on this purposive sample of sources is to provide an adequate understanding of the defining features of reablement services and what components could potentially be considered for inclusion in reablement services in Ireland.

First, we outline some of the key defining features of reablement as reported in a small number of academic studies. The academic examples we draw upon illustrate some of the common defining features of reablement services while also capturing some of the differences in defining features that are reported in different jurisdictions. This account includes the most up-to-date attempts by international academics to reach a consensus on a set of defining features. Second, we draw upon primary studies and fact sheets to illustrate some of the key components of reablement services that are reported in the five included jurisdictions: Australia, New Zealand, Norway, the UK, and the United States of America (USA). We selected these countries because, based on our reading of the literature, they have reached some maturity regarding the implementation of and research on reablement.<sup>7</sup> For example, most of the randomised controlled trials evaluating reablement services have been undertaken in these five countries.

#### 3.2.2 Definition of reablement

There are some attempts in the literature to elaborate on some of the key features of reablement services. For example, a review performed by Doh *et al.* in 2020 examined 14 definitions from 13 data sources published between 2005 and 2017.<sup>20</sup> Doh *et al.* undertook a thematic analysis of these definitions, from which they identified nine themes which they claim represent the essential features of reablement.<sup>20</sup> According to Doh *et al.*, functionality was the most frequently cited feature of reablement. Functionality in this context referred to "improving the ability of individuals to perform their daily living activities and included therapies for increasing mobility (e.g. physiotherapy and occupational therapy) and cognition (e.g. stimulation exercises)".<sup>20</sup> (p1375)

Another recurring feature was independence, both in terms of carrying out activities of daily living and in terms of supporting cognitive functioning. The concept of an intervention as short term and time-limited was consistently mentioned, with the average time limit on interventions ranging from 6 to 12 weeks. The location of the intervention was most frequently in the home and/or a community setting, with some papers referring to the intervention as 'home-based reablement'. The other themes that emerged included goal-oriented and person-centred plans (that are specific to the needs/wants of the individual) and provision of interventions by a multidisciplinary team. Finally, the

aim of reablement was considered a strategy to reduce or delay the need for ongoing support (suggesting that this would subsequently avoid a further drain on government funds) and was regarded as conducive to social connectivity (such as re-establishing community and other social relationships).

According to Tuntland *et al.*, reablement services are broadly recognised as a timely approach to improving home care services for older people who are experiencing functional decline. Reablement services tend to be provided by healthcare providers who operate as a multidisciplinary team working with the older person towards shared goals. Reablement services are often described as a targeted, multicomponent, and intensive intervention delivered in the person's home. The aim is to support the completion of activities of daily living that the older person defines as important in enabling them to age in place, be active, and participate socially in their community.

For the purposes of undertaking an evaluation of reablement services according to the Cochrane Collaboration methods, Cochrane *et al.* identified five essential criteria that they argued were necessary in order to consider an intervention as 'reablement'. The five criteria are as follows:

- "Participants must have an identified need for formal care and support or be at risk of functional decline.
- 2. Intervention must be time-limited (typically 6–12 weeks) and intensive (e.g., multiple home visits).
- 3. Intervention must be delivered in the older person's own home.
- 4. Intervention must focus on promoting independence.
- 5. Intervention must be person-centered, and goal directed."4 (p6)

Although there is some commonality in the literature regarding the general features of reablement as elaborated in the work cited above, <sup>4,20,25</sup> it is also highlighted by Langeland *et al.* (2019) that there is considerable variation within and between countries with respect to intervention components, staff skill mix, and rehabilitation setting (home or institution). According to Langeland *et al.*, "Hence, studies have emphasized different aspects of the intervention, even if they comply with the criteria from the Cochrane review".<sup>21</sup> (p12)

A more elaborate illustration of the different terminology used to characterise the key features of reablement services in different jurisdictions is provided in the work by Clotworthy et al. 19 According to Clotworthy et al., "the lack of shared understanding and consensus about what reablement is or should be is reflected in the multitude of terms used to describe nearly identical programmes. [For example,] in English-speaking countries with similar service models, programmes with similar components have different names: e.g., reablement or re-ablement (United Kingdom), and the active service model or restorative home support (Australia, New Zealand, and the USA). In Scandinavia, the Swedish version is called hemrehabilitering (home rehabilitation), while the term hverdagsrehabilitering (everyday rehabilitation) is used in both Norway and Denmark, and the terms reactivation, geriatric rehabilitation, or restorative intervention are sometimes (inconsistently) used in other countries. Moreover, some countries have recently begun to merge the terms reablement, reactivation, rehabilitation, and restorative intervention into the overarching concept of '4R interventions' to define healthcare services for older adults who need support to continue to live at home. By bundling these programmes together under an umbrella term, the implication is that each of these interventions has common features and goals that are relevant to a specific target group; however, the lack of an agreed set of specific clinical and demographic characteristics makes the target population highly heterogeneous and difficult to define". 19p27-28)

With a view to achieving consensus on the defining features of reablement services, Metzelthin *et al.* undertook a Delphi study to pursue agreement on the characteristics, components, and aims of reablement.<sup>22</sup> The study consisted of four web-based survey rounds using a Delphi process. More than 80 reablement experts from 11 countries participated in at least one round. Most of the experts reached agreement on five key characteristics of reablement services (intensive, person-centred, holistic, multidisciplinary, and coordinated by a professional care manager). The majority also agreed

on seven key components of reablement services (assessment; goal-oriented treatment plan; regular reassessment of treatment plan; training in daily activities; use of home modifications and assistive devices; involvement of social network; and reablement training and support for staff). Five main aims of reablement services were also agreed (enhancing clients' physical functioning, increasing clients' independence in daily activities, enabling clients to participate in meaningful activities, enabling clients to be engaged in the community, and reducing need for long-term care and related costs). Furthermore, most experts agreed that reablement is an inclusive approach irrespective of the person's age, capacity, diagnosis, or setting; however, the experts failed to reach agreement on how reablement services might target older people with compromised mental health capacity. Based on these levels of agreement, Metzelthin *et al.* developed a definition of reablement which was accepted by 79% of participating experts.<sup>22</sup> The consensus definition reads:

"Reablement is a person-centred, holistic approach that aims to enhance an individual's physical and/or other functioning, to increase or maintain their independence in meaningful activities of daily living at their place of residence and to reduce their need for long-term services. Reablement consists of multiple visits and is delivered by a trained and coordinated interdisciplinary team. The approach includes an initial comprehensive assessment followed by regular reassessments and the development of goal-oriented support plans. Reablement supports an individual to achieve their goals, if applicable, through participation in daily activities, home modifications and assistive devices as well as involvement of their social network. Reablement is an inclusive approach irrespective of age, capacity, diagnosis or setting".<sup>22 (p11)</sup>

#### 3.2.3 Components of reablement reported in five jurisdictions

This section will outline descriptive data on reablement services in five different jurisdictions: Australia, New Zealand, Norway, the UK (England), and the USA. We collected these data from reviews, primary studies, and fact sheets for the purpose of documenting some of the components of reablement services in the five nominated jurisdictions. We acknowledge that there is likely to be considerable variation in these jurisdictions regarding the implementation of reablement services, and our elaborations are not meant to be a defined set of models for the five jurisdictions. Rather, the data we have drawn upon are meant to provide an adequate understanding for our stakeholders as to what components are operating in reablement services in these five jurisdictions.

We present the descriptive components from the five nominated jurisdictions using the TIDieR checklist. We chose the TIDieR checklist and guide because it has been developed to improve the completeness of the reporting – and, ultimately, the replicability – of interventions, and the 12 items are suitable to capture the core components of complex interventions such as reablement. The 12-item TIDieR checklist is detailed in Table 5.

# **Table 5 TIDieR checklist**

Question no.	Short name	Full question
1	Brief name or description	Provide the name or a phrase that describes the intervention.
2	Why or rationale	Describe any rationale, theory, or goal of the elements essential to the intervention.
3	What or material content	Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers.
4	What or procedural content	Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.
5	Who or person delivering it	Describe the composition of the multidisciplinary team.
6	How or mode of delivery	Describe the modes of delivery of the intervention (such as face to face or by some other mechanism, such as Internet or telephone) and whether it was provided individually or in a group.
7	Where or place of delivery	Describe the type(s) of location(s) where the intervention was delivered, including any necessary infrastructure or other relevant features.
8	When and how much	Describe the number of times the intervention was delivered, and over what time period, frequency of sessions, schedule of sessions, duration of sessions, and intensity of sessions.
9	Modifications	If the intervention was modified during the study, describe the changes (what, why, when, and how).
10	Adapting or tailoring	If the intervention was planned to be personalised, titrated, or adapted, then describe what, why, when, and how.
11	Fidelity or adherence	If intervention adherence or fidelity was assessed, describe how and by whom, and describe strategies that were used to maintain or improve fidelity.
12	Actual fidelity	If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as defined.

#### 3.2.3.1 Australia

In Australia, state governments have been inspired by the success of reablement programmes in the UK. Numerous pilot studies of reablement interventions, known as restorative home care programmes, have been tested. These include the development and evaluation of the Home Independence Program (HIP) by the private home care provider Silver Chain in Western Australia, the Supported Independent Living Collaborative in Queensland, and Victoria Home and Community Care's Active Service Model, which is part of a group of four government-funded pilot programmes across the state of Victoria. A summary of two approaches (the HIP in Western Australia and Victoria Home and Community Care's Active Service Model) is described using the TIDieR checklist in Table 6.

According to the example programmes described in Table 6, restorative care programmes are designed to help people increase their capacity to do things for themselves and to reduce the need for home care and other aged care services. Programmes are time-limited and targeted towards specific goals or desired outcomes that are agreed with the individual. Regional assessment services and aged care assessment teams coordinate and provide intervention programmes which are facilitated by allied health professionals. The intervention is delivered face to face in the client's home and appears to last 6–8 weeks.

Table 6 TIDieR checklist applied to Australia

Question no.	Short name	Australia
1	Brief name or description	Fact Sheet 2: Australian Approaches to Reablement in the Home Support and Care Program provides a detailed summary of the current reablement approaches used as part of the Government's Home Support and Care Program. <sup>16</sup>
2	Why or rationale	The introduction of intensive, time-limited reablement services was based on Australian and international research, which noted emerging evidence that reablement or restorative home support programs – programs designed to help people 'do things for themselves' rather than 'having things done for them' – can delay or reduce the need for home care and other aged care services. In addition to being intensive and time-limited, reablement is targeted towards a person's specific goals in order to adapt to functional loss or regain confidence and ability to resume activities. <sup>24</sup>
3	What or material content	Western Australia HIP: The first Australian reablement programme was developed in 1999 in Western Australia. The HIP is based on evidence-based strategies to assist people to optimise functioning, reduce further decline, and encourage self-management of chronic disease. The intervention is goal oriented and promotes engagement in activities of daily living. Examples include strength and balance exercises, fall prevention, medication management, continence and nutrition management, and social well-being. The intervention aims at task simplification and the use of assistive technology. The intervention is done in the individual's home, face to face. The intervention period is described as intensive and time-limited (12 weeks maximum).
		Victoria Home and Community Care's Active Service Model: Victoria Home and Community Care's Active Service Model is described as an initiative that aims to help people live in the community as independently and autonomously as possible. Resources were developed to assist service providers in implementing reablement interventions. According to the Australian Association of Gerontology factsheet, examples of two of the resources developed are the Goal Directed Care Planning Toolkit and Supporting older people living well at homeUnderstanding the role of OT, both authored by Pascale¹6 which both highlight the effectiveness of occupational therapists and local service providers working collaboratively to deliver coordinated reablement care. The model is a goal-directed planning toolkit. Reviews

Question no.	Short name	Australia
		of the Active Service Model's first 3 years emphasised the need for support from management/industry leaders; staff training and guidance materials; and regional networks and partnerships. The Active Service Model team worked with a university to determine outcome measures.
4	What or procedural content	Regional assessment services and aged care assessment teams work together and with the client to establish a support plan that reflects strengths and abilities, areas of difficulty, and the support that will best meet their needs and goals. Assessments help identify potential clients who may benefit from reablement. The assessment is active and provides the opportunity to offer suggestions on areas of difficulty (such as ways to safely get into and out of the shower) and/or strategies (such as using frozen chopped vegetables to improve the ease of cooking), as well as the provision of follow-up coaching.
5	Who or person delivering it	Regional assessment services assessor may need to take on a coordinating or short-term case management role during reablement.
6	How or mode of delivery	The intervention is delivered face to face in the client's home.
7	Where or place of delivery	Some services seem to be specific to the state/location in which they occur, while others are nationally mandated.
8	When and how much	In general, it appears that reablement programmes last 6–8 weeks, during which clients will be assessed and coached to reach their capability goals. The Western Australia HIP was described as intensive and ran for 12 weeks maximum.
9	Modifications	Not reported
10	Adapting or tailoring	Personal goals are agreed with patient and staff.
11	Fidelity or adherence	Not reported
12	Actual fidelity	Not reported

Source: Based on information obtained from the Australian Association of Gerontology, 2019,  $^{16}$  Productivity Commission, 2011.  $^{24}$ 

#### 3.2.3.2 New Zealand

Within New Zealand, reablement interventions or restorative home support seeks to improve the quality of home care and maximise the ability of frail older people to continue living in their own homes for as long as possible. A summary of the current approach towards restorative home support is described in Table 7 based on information obtained from the primary study undertaken by Parsons *et al.*<sup>23</sup> According to Parsons *et al.*, registered nurse case managers undertake assessments of older people in the community who are deemed to be at high risk of permanent institutional care. Goal facilitation is central to each client's care plan, and each goal is organised into sub-goals. Interventions are mainly based around repetitive activities of daily living exercises. Training of staff and supervision is mentioned, with non-regulated support workers having daily contact with health professional coordinators. The intervention is carried out in the individual's home. The intensity of the intervention is individually tailored and varies according to need.<sup>23</sup>

Table 7 TIDieR checklist applied to New Zealand

Question	Short name	New Zealand
no.		
1	Brief name or description	Community Flexible Integrated Responsive Support Team (Community FIRST) is part of a new service delivery model known in New Zealand as restorative home support. <sup>23</sup>
2	Why or rationale	The restorative home support approach seeks to improve the quality of home care and maximise the ability of frail older people to continue living in their own homes for as long as possible. <sup>23</sup> Community-based participants assessed as being at high risk of permanent institutional care by a regional assessment agency are deemed eligible for participation.
3	What or material content	Non-regulated support workers undertake a national training programme (which seems to be in rehabilitation, but this is not clearly reported) and receive regular appraisal by coordinators.
4	What or procedural content	A registered nurse case manager undertakes the comprehensive geriatric assessment (includes functional, social, and psychological domains). The assessment is combined with a care plan with mutually agreed short- and long-term goals. It is developed by a nurse, the older person, and family carer(s). Goals are frequently socially oriented. Physical activity is also integrated into the intervention and the activity is facilitated by non-regulated support workers. The physical activity comprises repetitive activities of daily living exercises, such as sitting and standing exercises. The authors mention the importance of carer support, but do not describe how this is facilitated beyond involvement in goal setting.
5	Who or person delivering it	Health professional coordinators are responsible for clinical assessment, goal facilitation, care planning, and reviews, and non-clinical personnel are responsible for rostering, supervision, and delegation of tasks to non-regulated support workers. Professionals are in daily contact with non-regulated support workers around care of clients. There is no mention of the level of experience/expertise required or which other specialities are involved.
6	How or mode of delivery	Face to face in client's own home.
7	Where or place of delivery	In the client's home.
8	When and how much	Intensity is individually tailored and varies according to need. Physical activity component visits up to four times daily, 7 days per week, including in the evening if required. It is not clear how long the intervention lasts. Three monthly reviews are completed by a nurse case manager.
9	Modifications	Not reported
10	Adapting or tailoring	The intervention is individually tailored according to client goals and has inbuilt flexibility so that if the client deteriorates over a few days, visit frequency and time spent on each visit can be increased, or if the client improves and becomes more independent, the inputs are reduced accordingly.
11	Fidelity or adherence	Not reported
12	Actual fidelity	Not reported

Source: Parsons et al., 2017<sup>23</sup>

# 3.2.3.3 Norway

In the Norwegian healthcare context, the aim of reablement is to apply a person-centred, resource-oriented, and interdisciplinary approach. Langeland *et al.* and Tuntland *et al.* describe two examples of the current reablement approach used in Norway (Table 8). <sup>21,25</sup> According to the examples, assessments cover three occupational performance areas: self-care, productivity, and leisure. The primary focus is to identify activities that the individual perceives as meaningful. As a result, the intervention can include physical, cognitive, psychological, and social components. Interventions are performed by multidisciplinary teams (disciplines mentioned include home help, auxiliary nurse, occupational therapist, physiotherapist, and nurse). Interventions are carried out in the individual's own home, and emphasis is placed on the individual doing daily training and performing tasks for themselves. Duration in both Norwegian studies varied, but was typically 4–10 weeks.

Table 8 TIDieR checklist applied to Norway

Question no.	Short name	Norway
		Reablement A by Langeland et al. <sup>21</sup>
1	Brief name or description	Reablement in Norway is the brief name.
2	Why or rationale	The rationale for reablement is to introduce a holistic, health-promoting approach. Reablement views components such as daily activities, physical function, health-related quality of life, and coping as all-inclusive.
3	What or material content	A 2-day training course in performing data collection procedures and in designing and delivering the intervention was provided. Additionally, a lecture was given from an expert on the Canadian Occupational Performance Measure system. The system was used for baseline assessments and provided direction for the subsequent intervention. Local study coordinators were provided with training manuals detailing all procedures and data collection instruments (for example, the use of videos to demonstrate Canadian Occupational Performance Measure interview and physical function tests).
4	What or procedural content	For the formal study, initial assessment was provided using the Canadian Occupational Performance Measure by a member of a multidisciplinary team (examples mentioned include occupational therapists, physiotherapists, or nurses). With the team member, the individual receiving the intervention defined up to five goals that were essential to her/him. Once goals were established, a rehabilitation plan was developed which was a collaboration between individual goals and professional initiatives. Collaboration was consistent throughout the reablement period. Daily encouragement for the individual completing training and performing tasks for themselves is provided.
5	Who or person delivering it	The multidisciplinary team consists most often of home help, an auxiliary nurse, an occupational therapist, a physiotherapist, and a nurse.
6	How or mode of delivery	Face to face in client's own home.
7	Where or place of delivery	Interventions are community based. Participants are deemed eligible if they have recently experienced functional decline.
8	When and how much	In the study, the duration of interventions varied between individuals. Typically, this was 4–10 weeks, with a mean duration of 5.7 weeks. The most frequently reported intensity was five times per week (48% of sites), followed by three to four times per week (33% of sites).
9	Modifications	Not reported
10	Adapting or tailoring	Individual tailoring is a major principle of reablement. Therefore, the content of interventions varies considerably, although basic features are the same.

Question no.	Short name	Norway
11	Fidelity or adherence	Not reported
12	Actual fidelity	Not reported
		Reablement B by Tuntland et al. <sup>25</sup>
1	Brief name or description	The name of the primary study is "Reablement in community-dwelling older adults".
2	Why or rationale	The intervention described is based on a theoretical framework known as the Canadian Model of Occupational Performance and Engagement. The framework takes account of the interaction between individuals, their environment, and their occupation. The intervention is described as targeted, multicomponent, and intensive, and focuses on enhancing performance of daily activities. Daily activities must be defined as important by the individual receiving the intervention. The overall aim is to increase independence in daily activities in order to enable people to age in place, be active, and participate socially in their society.
3	What or material content	All healthcare personnel received training before intervention, particularly in ideology of self-management. Training also included how to conduct assessments. Simpler exercises and other skills were illustrated and described in a booklet left for participants to use in their home, and were demonstrated in informal meetings so that home care staff could carry them out.
4	What or procedural content	Occupational and physical therapists conduct baseline assessments using the Canadian Occupational Performance Measure system to identify activity limitations perceived as important to participants; this information was used to develop the rehabilitation plan. The focus was on stimulating the participant to perform the daily activities themselves rather than letting others do them. Among individual features were: (1) training in individual activities; (2) adaptations to the environment or the activity; and (3) exercise programmes.
5	Who or person delivering it	Intervention was provided by both occupational and physical therapists. Both were involved in conducting assessments as well as supervision of home care personnel (some of whom had no formal education) in how to encourage and assist the person in daily training. The following percentages represent the distribution of home visits among healthcare professionals: nurse (15.0%), auxiliary nurse (35.0%), assistant (22.7%), physical therapist (9.9%), occupational therapist (13.3%), social educator (1.1%), and student (3.0%). There was no mention of level of experience/expertise.
6	How or mode of delivery	Face to face in the client's own home.
7	Where or place of delivery	Interventions were community based. Participants applied for or were referred to home-based services.
8	When and how much	The rehabilitation period lasted an average of 10 weeks. The mean number of home visits per person per week was 7 (standard deviation [SD]: ±5), with a mean of 78 total visits over the 3 months of the rehabilitation period. The mean number of hours per person per week was 2.1 hours (SD: ±1.8).
9	Modifications	Not reported
10	Adapting or tailoring	Not reported
11	Fidelity or adherence	New staff members were given extra attention in order to ensure adherence to the intervention.
12	Actual fidelity	Not reported

Source: Langeland et al., 2019;<sup>21</sup> Tuntland et al., 2015<sup>25</sup>

# 3.2.3.4 UK (England)

A primary study undertaken by Beresford *et al.* provides an example of how reablement is operated in England, as seen in Table 9.<sup>18</sup> In England, reablement is initiated with an assessment by a specialist practitioner in which person-centred goals are mutually created with the individual. This is followed by a time-limited intervention period with trained staff (such as occupational therapists, physical therapists, social workers, and home care agency staff). The home care agency staff provide home visits with the aim of helping the individual regain their ability to perform activities of daily living or identify new ways in which to carry out these activities. Both the frequency and duration of home visits are expected to decrease over the intervention period. In England, 6 weeks is, formally, the maximum duration for which service users do not have to pay for the service. Within the study by Beresford *et al.* (2019), the duration of reablement was typically 6 weeks, which included an average of 12 sessions per week.<sup>18</sup>

Table 9 TIDieR checklist applied to the UK (England)

Question no.	Short name	UK (England)
1	Brief name or description	The Models of Reablement Evaluation (MoRE) study is a reablement service for people at risk of needing social care.
2	Why or rationale	Reablement is a goal-oriented intervention comprising intensive, time-limited (up to 6 weeks) assessment and therapeutic work delivered in the individual's usual place of residence. Its purpose is to restore/regain self-care and daily living skills in order for individuals at risk of needing social care support, or of needing an increase in its intensity, to continue living in their own homes. The key objectives are: (1) avoidance of acute admissions; (2) early supported discharge after acute admission; (3) longer-term avoidance of unplanned hospital admission; (4) reduction in use of home care services; and (5) avoidance of admission to long-term care. The key characteristics are: (1) time-limited (up to a maximum of 6 weeks); and (2) restorative self-care. The authors discuss concern over the lack of specific training, particularly in dementia care. Additionally, there is concern over some sites not using a standardised measure for assessments.
3	What or material content	Not reported
4	What or procedural content	As previously mentioned, lack of use of standardised measures for assessment was an issue; however, almost all cases assessed mobility, quality of life, physical health, and activities of daily living. The procedure often involved goal setting – 92% of providers said they set goals in partnership with the user. The goal-setting process was usually done with an occupational therapist (56%) or reablement worker (42%). Four distinct patterns of staffing and skill mix were revealed in the study: (1) with occupational therapist and social work involvement, but in these cases, it was unusual to have a nurse or health support worker; (2) with home care workers, home care organisers, and reablement workers, but no occupational therapist; (3) multidisciplinary – including occupational therapists, physiotherapists, and nurses, and likely to include health support workers; and (4) with reablement support workers.
5	Who or person delivering it	
6	How or mode of delivery	Face to face in the client's usual place of residence.
7	Where or place of delivery	In the client's usual place of residence.
8	When and how much	Maximum of 6 weeks, but extended under certain circumstances, e.g. difficulties with onward referrals.
9	Modifications	Not reported
10	Adapting or tailoring	It was not clear how well a goal-oriented approach was achieved across sites.

Question no.	Short name	UK (England)
11	Fidelity or adherence	Not reported
12	Actual fidelity	Varied between sites.

Source: Beresford et al., 2019<sup>18</sup>

#### 3.2.3.5 USA

Baker *et al.* describe a USA-based restorative care model for home care that was developed and implemented to improve older adults' functional outcomes (Table 10).<sup>17</sup>

The American restorative care model integrates medical treatments for acute conditions with personal care and rehabilitation in order to improve older adults' functional outcomes. The intervention is integrated and coordinated by an interdisciplinary team with shared goals that are established with the individual. Treatment plans included combinations of exercise and training; behavioural changes; environmental adjustments; adaptive equipment; counselling and support; training and education of the patient, family, and friends; and medication adjustment. Intervention support is provided by home health aides (trained in basic rehabilitation services) who provide support on activities of daily living, mobility activities, and use of assistive devices. The patient is given every opportunity to safely practise self-care activities, with the home health aides assisting only as needed.

Table 10 TIDieR checklist applied to the USA

Question no.	Short name	USA
1	Brief name or description	Restorative care model for home care.
2	Why or rationale	The restorative model was designed to integrate medical treatments for acute conditions with personal care and rehabilitation in order to improve older adults' functional outcomes.
3	What or material content	Therapists and nurses were trained in conducting screening assessments of impairments that could impede function (such as mental status, depression, gait, and balance). Home health aides attended a multidisciplinary conference specifically designed for the project and were trained in basic rehabilitation services and in coaching patients on activities of daily living, mobility activities, and the use of assistive devices. The authors note that it is important that "those implementing change must have a hand in developing the process". 17 (p261)
4	What or procedural content	The intervention focused on identifying goals that are specific to the individual. Assessments were done on recent functional abilities, identifying existing systems for meeting goals, and sharing the definition of when a goal is met. A Self-Care Progress Report was created with the individual and left in their home to communicate one consistent plan of care, which was updated as necessary. The patient was given every opportunity to safely practise self-care activities with home health aides, who assisted only as needed.
5	Who or person delivering it	A multidisciplinary work group experienced in providing home care. These included a principal investigator (PhD, registered nurse), a research physical therapist, home care agency staff (two nurses and two physical therapists), and two experienced home health aides.
6	How or mode of delivery	Face to face in the client's own home.
7	Where or place of delivery	The intervention is delivered in the client's own home. The working group identified barriers to functional independence and developed possible solutions to address these. Work was disseminated to all clinicians, educational sessions, small group discussions, and individual case reviews.

8	When and how much	Not clear
9	Modifications	The intervention was described as a 'cycle' of implementation in which the goals and interventions are incrementally and continuously designed and refined.
10	Adapting or tailoring	Personal goals were agreed between the patient and staff.
11	Fidelity or adherence	Nurses explained the Self-Care Progress Report simultaneously to home health aides, the patient, and other carers in order to ensure continuity.
12	Actual fidelity	Home health aides' supervisors, chart review, and supervisory conversations noted that demonstration site staff were unique in their emphasis on "getting patients moving". $^{17~(p261)}$

Source: Baker et al., 200117

### **3.2.4 Summary**

Based on the data we presented from Australia, New Zealand, Norway, the UK, and the USA, it is apparent that reablement services vary widely in their structure, delivery, and staff skill mix, although they share general features such as a focus on supporting people to do things for themselves rather than having others do things for them. Additionally, reablement services mutually appear to be goal oriented and intensive, to have a predefined duration, and to be delivered in older people's homes.

For four out of the five jurisdictions included (Australia, Norway, the UK, and the USA), the aim of reablement services is to improve the functional outcomes of older people and/or help them regain daily living skills. This echoes one of Cochrane *et al.*'s five essential criteria for reablement: that an intervention must focus on promoting independence in order to be considered reablement.<sup>4</sup> For example, *Fact Sheet 2: Australian Approaches to Reablement in the Home Support and Care Program* describes reablement as an intervention to help older people adapt to changed circumstances such as functional loss, and to help them regain their confidence and capacity to resume their daily activities.<sup>16</sup> Of the jurisdictions we included, both New Zealand (Parsons *et al.*, 2017) and the UK (Beresford *et al.*, 2019) highlight that the underlying rationale of reablement is to help older people live in their homes for as long as possible.<sup>18,23</sup> The UK provides an additional rationale for reablement, which is to reduce unplanned and acute hospital admissions and to generally avoid admissions to long-term care.

The content of reablement services varies widely, and most primary studies did not provide specific details of the exercises or activities that are used in these services. However, the reablement services mentioned in the primary studies cover a multitude of skills/aspects that fall into the following categories: activities of daily living (Australia, Norway, the UK, and the USA); physical mobility (Australia, Norway, New Zealand, the UK, and the USA); health (e.g. nutrition, medication management) (Australia); social connection (Australia and New Zealand); task support (assistive technology/task simplification) (Australia, Norway, and the USA); and training and education (the USA).

All five jurisdictions highlight the importance of establishing a support plan with specific goals in the initial assessment phase. Goals are mutually agreed by both the individual and the staff member. Again, this echoes Cochrane *et al.*'s (2016) criterion that reablement interventions must be personcentred and goal directed.<sup>4</sup> There is a huge variety in who delivers the intervention, ranging from home care support workers to occupational therapists, social workers, and nurses. Some jurisdictions use a multidisciplinary team to integrate the intervention, while others use specific staff for either assessment or intervention support. In Australia, regional assessment services and aged care assessment teams coordinate and manage assessments. From the Australian Association of Gerontology fact sheet, <sup>16</sup> it is not clear who provides the intervention during the intensive intervention period. In the example from the USA, therapists and nurses are trained in screening assessments, and home health aides appear to provide the intervention. The UK example, Beresford *et al.* (2019), mentions various staffing and skill mixes for both the assessment and the intervention.<sup>18</sup>

Some reablement services include both occupational therapist and social worker involvement, but in these cases it is unusual to have a nurse or health support worker on the team. Others have a home care worker, home care organisers, and reablement workers, but no occupational therapists. Still others are provided by a multidisciplinary team including occupational therapists, physiotherapists, and nurses. In the Norwegian examples, the initial assessment and intervention are integrated by a multidisciplinary team (including occupational therapists, physiotherapists, and nurses) which collaborates with the participant throughout the reablement period. In New Zealand, Parsons *et al.* (2017) explain that a registered nurse case manager undertakes the assessment while a healthcare assistant specially trained in rehabilitation delivers the intervention.<sup>23</sup> It is clear that great variety exists in how reablement services are delivered.

All five jurisdictions define the duration of reablement interventions as lasting 6–12 weeks. In three jurisdictions (Australia, New Zealand, and the UK), the intensity of interventions is individually tailored and can vary according to need. All five jurisdictions deliver reablement services in the individual's home.

# 3.3 Question 2: What is the effect of reablement on: (a) patient outcomes; (b) health and social care system outcomes; and (c) value-for-money outcomes?

#### 3.3.1 Introduction

In this section, we summarise data from eight reviews that report on trials comparing reablement-type services with usual care. The eight reviews were published between 2009 and 2018: Ryburn *et al.* (2009),<sup>28</sup> Whitehead *et al.* (2015),<sup>9</sup> Cochrane *et al.* (2016),<sup>4</sup> Faria *et al.* (2016),<sup>27</sup> Tessier *et al.* (2016),<sup>7</sup> Pettersson and Iwarsson (2017),<sup>5</sup> Sims-Gould *et al.* (2017),<sup>6</sup> and Bersvendsen *et al.* (2018).<sup>26</sup> We summarised the data on five outcomes: post-intervention home care requirements; quality of life and health-related quality of life; functional status (physical function and activities of daily living); use of the health and social care system; and the cost-effectiveness of reablement.

### 3.3.2 Post-intervention home care requirements

Six reviews reported on trials that compared reablement-type services with usual care to assess post-intervention home care requirements – Ryburn *et al.* (2009), Whitehead *et al.* (2015), Tessier *et al.* (2016), Pettersson and Iwarsson (2017), Sims-Gould *et al.* (2017) and Bersvendsen *et al.* (2018). The assumption underpinning this outcome is that reablement-type services may restore functional independence in older adults living at home so that they will be able to do tasks themselves and will not need to rely on health and/or social services staff to visit their homes to do tasks for them. We structured our summary sequentially by the year of publication of each review, beginning with the work of Ryburn *et al.* in 2009 and finishing with the work of Bersvendsen *et al.* in 2018.

Ryburn et al. (2009) reported on three trials that compared reablement-type services with usual care.<sup>28</sup> The patients' need for ongoing home care services post-intervention was one of the outcomes reported on. According to Ryburn et al., both the Australian and UK trials "demonstrated significant reductions in home care usage [in favour of the restorative intervention compared with 'usual' home and community care services]. Similarly, the USA-based restorative agency programme that investigated the efficacy of short-term post-discharge home care provision demonstrated shorter and less intensive home care episodes for the intervention group (34.4 days compared with 35.7 days in the usual care group)". 28 (p231) It must be noted that Ryburn et al. do not define what they mean by significant reductions in home care usage for the intervention group when compared with usual care in the trials undertaken in Australia and the UK; so, although the direction of effect seems to favour the intervention, there is no estimate of effect reported. In the USA-based trial, the reported difference favouring the intervention is very small (1.3 days). In addition, Ryburn et al. explain some of the actual services that reablement teams can provide which may enable older people to exercise independence in their own homes. According to Ryburn et al., "providing timely interventions, education and assistive technologies to encourage frail older adults to resume independence and activity in many cases appears to be effective in reducing demand for ongoing services in a costeffective manner".28 (p232)

Whitehead *et al.* (2015) reported on seven trials that compared reablement-type services with usual care on the extent of the input from paid care workers post-intervention. According to Whitehead *et al.*, "All [seven trials] found a significant difference between the intervention and control groups in terms of those requiring care, those requiring a reduction or discontinuation of care, or the costs of ongoing care. That is, service users were being provided with less care or less costly care at the final follow-up point. This is an important finding and suggests that these interventions can reduce the amount of ongoing homecare required". (p1072) Table 11 presents Whitehead *et al.* reported effect of reablement on post-intervention home care requirements.

Table 11 Whitehead *et al.*'s summary of effect of reablement on post-intervention home care requirements

Primary study authors	Direction of effect	How the difference of effect on post-intervention home care requirements is reported in Whitehead <i>et al.</i> (2015) <sup>9</sup>
Feldman <i>et al.</i>	Favours intervention	Intervention: Cluster care
(1996)		Average of 6 or fewer hours per week in the intervention group compared with the usual care group (statistically significant reduction in home care hours).
Glendinning et	Favours intervention	Intervention: Reablement/restorative home care
al. (2010)		Intervention participants used fewer social care services during the follow-up period (statistically significant reduction in home care services).
Gottleib and	Favours intervention	Intervention: Assistive technology
Caro (2000)		A statistically significant increase in use of formal home care services in control group (change scores only – no data provided).
King et al.	Favours intervention	Intervention: Reablement/restorative home care
(2012)		Reduced support required (intervention group: 29% [22/76]; control group: 0% [0/81]), indicating a statistically significant reduction in home care support.
Lewin and	Favours intervention	Intervention: Reablement/restorative home care
Vandermeulen (2010)		Reduced/discontinued home care support:
		3 months follow-up – intervention group: $66\%$ ( $66/100$ ); control group: $11\%$ ( $11/100$ )
		12 months follow-up – intervention group: 65% (65/100); control group: 26% (26/100)
		Statistically significant reduction in home care support.
Lewin <i>et al.</i>	Favours intervention	Intervention: Reablement/restorative home care
(2013)		Needing ongoing 'personal care':
		3 months follow-up – intervention group: 28% (103/375); control group: 64% (238/375)
		6 months follow-up – intervention group: 18% (67/375); control group: 40% (151/375)
		Statistically significant reduction in personal care support.
Zingmark and Bernspang	Favours intervention	Intervention: Occupational therapy bathing intervention with follow-up at 4 months
(2011)		Intervention group: 30% (14/46); control group: 75% (21/28)
		Statistically significant reduction in help required for bathing.

Source: Whitehead et al., 20159

**Tessier** *et al.* **(2016)** reported on seven trials comparing reablement-type services with usual care on the extent of service utilisation, which included assessing the requirement for ongoing home care services post-intervention. However, it must be noted that there are variations in the nature of the outcomes assessed across the seven studies. Nonetheless, Tessier *et al.* reported that overall, the direction of effect in the seven studies favoured the intervention over usual care, and in five of the seven studies, the effect was reported to be statistically significant. As elaborated by Tessier *et al.*, "According to seven studies, reablement had a positive effect on service utilization in the first year.

Fewer people required home care services after receiving reablement compared to those receiving usual home care services.... The absolute risk reduction ranged across the studies was between 55% at 3 months and 22% at 12 months. However, only one study indicated that the effects were maintained in the long term [5 years]."<sup>7 (p54)</sup> Table 12 presents Tessier *et al.*'s reported effect of reablement on post-intervention home care requirements.

Table 12 Tessier *et al.*'s summary of effect of reablement on post-intervention home care requirements

Primary study authors	Direction of effect	How the difference of effect on post-intervention home care requirements is reported in Tessier <i>et al.</i> (2016) <sup>7</sup>
Glendinning et	Favours intervention	Intervention: Reablement
al. (2011)		60% reduction in ongoing home care needs in the intervention group (statistically significant difference).
King et al.	Favours intervention	Intervention: Reablement
(2012b)		Greater proportion of users needing fewer home care services in the intervention group in the short term (statistically significant difference).
Lewin and	Favours intervention	Intervention: Reablement
Vandermeulen (2010)		Lower probability of continuing to require services in the intervention group in the short term (statistically significant difference).
Lewin <i>et al.</i>	Favours intervention	Intervention: Reablement
(2013b)		Lower probability of continuing to require services in the intervention group in the long term (statistically significant difference).
Lewin <i>et al</i> .	Favours intervention,	Intervention: Reablement
(2013a) Lewin <i>et al.</i> (2014)	but not statistically significantly different	Non-statistically significant difference between groups for hours of home care services, hospital admissions, and emergency department visits in the short and medium term in the intention-to-treat analysis.
Senior et al.	Favours intervention,	Intervention: Reablement
(2014)	but not statistically significantly different	Non-statistically significant reduction in the risk of death and/or residential care placement in the intervention group in the medium term.
Tinetti <i>et al.</i>	Favours intervention	Intervention: Reablement
(2002)		Statistically significant reduction in the risk of residential care placement, emergency department visits, and length of home care episode in the intervention group in the short term.

Source: Tessier et al., 2016<sup>7</sup>

Note: short term=less than 1 year; medium term=1-3 years; long term=more than 3 years

**Pettersson and Iwarsson (2017)** reported on two trials that compared reablement with usual care on post-intervention home care requirements.<sup>5</sup> According to Pettersson and Iwarsson, "significantly fewer among those who completed the [intervention] program were in need of home care compared with the group that received usual home care [in two studies]".<sup>5</sup> (p280) Table 13 presents Pettersson and Iwarsson's reported effect of reablement on post-intervention home care requirements.

Table 13 Pettersson and Iwarsson's summary of effect of reablement on post-intervention home care requirements

Primary study authors	Direction of effect	How the difference of effect on post-intervention home care requirements is reported in Pettersson and Iwarsson (2017) <sup>5</sup>
Lewin <i>et al.</i> (2013a)	Favours intervention	Intervention: Restorative home care service (Home Independence Program [HIP])
		The HIP group was significantly less likely to need ongoing personal care services at 3 months (odds ratio [OR]: 0.18; 95% confidence interval [CI]: 0.13–0.26; $p$ <0.001) and at 12 months (OR: 0.22; 95% CI: 0.15–0.32; $p$ <0.001). The findings indicate a statistically significant reduction in personal care service requirements.
Lewin <i>et al.</i>	Favours intervention	Intervention: Reablement home care service (HIP)
(2013b)		The HIP group was less likely to need ongoing personal care over the first 3 years, leading to a median cost savings of AU\$12,500 over nearly 5 years. The findings indicate a statistically significant reduction in personal care costs.

Source: Pettersson and Iwarsson, 2017<sup>5</sup>

Sims-Gould *et al.* (2017) reported on an unclear number of trials comparing reablement-type services with usual care on the extent of service usage, including the requirement for home care services post-intervention. In this review, the category of service usage includes variation in the nature and extent of the outcome measured, which means that it is not reported clearly how many of the trials reported on the requirement for home care services post-intervention. According to Sims-Gould *et al.*, "Across the studies, service usage was calculated according to home care use/hours, place of residence, and transfers to residential care, or acute care (e.g., unplanned hospital stays, total hospital days, and emergency room visits)." (p660)

There is some evidence from this review that favours the intervention group over usual care in reducing the requirement for home care services post-intervention, but there are no measures of effect or statistical tests reported to support the textual statements. What is reported by Sims-Gould *et al.* is that "The interventions resulted in reduced home care use at various follow-up points: the number of participants requiring ongoing home care was reduced at three and 12 months in two studies...length of time receiving home care was shorter overall in one study and participants required fewer home care hours and had a lower total home care cost over a 9-month period in one study and required fewer home care hours and had a lower total home care cost over a 2-year period in another study". <sup>6</sup> (p660)

**Bersvendsen** *et al.* **(2018)** reported on four trials that compared reablement-type services with usual care on the extent of requiring home care services post-intervention.<sup>26</sup> Bersvendsen *et al.* suggest that a summary of the data from the four trials favours reablement-type services over usual care on reducing home care service usage post-intervention. However, Bersvendsen *et al.* do not provide any statistics to estimate the difference in effect; they merely report that "There is evidence for the fact that relative to usual care, HBR [home-based reablement] significantly reduces the number of home care hours and visits as well as the general duration of home care episodes in the long term".<sup>26</sup> (p18)

# 3.3.2.1 Conclusion: Are reablement-type services better than usual care in reducing post-intervention home care requirements?

In the six reviews that report on trials comparing reablement-type services with usual care on the extent of the requirement for home care services post-intervention, there is some variation in the features of the reporting across the reviews. This variation limits the confidence in the conclusions we

can draw to answer the question of whether reablement-type services are better than usual care in reducing post-intervention home care requirements.

For example, only three of the six reviews (Whitehead *et al.*, 2015,<sup>9</sup> Tessier *et al.*, 2016,<sup>7</sup> and Pettersson and Iwarsson, 2017)<sup>5</sup> reported numerical data for each of their included trials to demonstrate the difference in effect between the intervention and usual care on post-intervention home care requirements. All three reviews suggest the direction of effect favours the intervention over usual care on this outcome, although there is large variation across these three reviews in how the outcome was defined, measured, and assessed. The three reviews demonstrate a large effect in favour of the intervention at three months that reduces slightly over a 12-month period.

For one (Ryburn *et al.*, 2009<sup>28</sup>) of the other three reviews, the authors provide some numerical data, while for the other two reviews (Sims-Gould *et al.*, 2017; and Bersvendsen *et al.*, 2018),<sup>6,26</sup> the authors provide a text-based summary of a relatively small number of trials comparing reablement-type services with usual care on the extent of the requirement for home care services post-intervention. Neither of these two reviews provide any numbers, proportions, or statistical tests to support the difference in effect reported between the intervention and usual care on this outcome. In the reviews by Sims-Gould *et al.* and Ryburn *et al.*, each of the primary studies (trials) is summarised, whereas Bersvendsen *et al.* collapse the findings from four trials into a very short textual summary.

It must be noted that there is high overlap (12.7%) among the primary studies included across the six reviews that reported on this outcome. For example, one-third of the 17 primary studies were used in more than one review (see Appendix 7, Table 1). Four primary studies were reported across two reviews, and two primary studies were reported across four reviews.

Based on three reviews with statistical data (Whitehead *et al.*, 2015;<sup>9</sup>; Tessier *et al.*, 2016;<sup>7</sup> and Pettersson and Iwarsson, 2017),<sup>5</sup> the current evidence indicates that home-based reablement-type services for people aged 65 years and over may be better than usual care in reducing post-intervention home care requirements. However, the outcomes measured differ across trials, and therefore standardisation is required before stronger recommendations can be made. The other three reviews do not add to the outcomes for reasons already stated. <sup>6,26,28</sup>

### Summary statement

The current evidence indicates that home-based reablement-type services may be better than usual care in reducing the post-intervention home care requirements of people aged 65 years and over. However, the outcomes measured differ across trials and standardisation is required before stronger recommendations can be made.

### 3.3.3 Quality of life

We included six reviews that reported on the assessment of quality of life (including health-related quality of life) from evaluations comparing reablement-type services with usual care: Ryburn *et al.* (2009),<sup>28</sup> Whitehead *et al.* (2015),<sup>9</sup> Cochrane *et al.* (2016),<sup>4</sup> Tessier *et al.* (2016)<sup>7</sup>, Pettersson and Iwarsson<sup>5</sup> and Bersvendsen *et al.* (2018)<sup>26</sup>

**Ryburn** *et al.* **(2009)** noted the lack of focus on assessing quality of life in evaluations of reablement-type services during the early years of the service. <sup>28</sup> As elaborated by Ryburn *et al.* at the time, "there has yet to be much work on how restorative programmes impact on the quality of life of clients and carers". <sup>28</sup> (p232) Ryburn *et al.* included only one trial (undertaken in Australia) that included a measure of quality of life. As described by Ryburn *et al.*, "only the Western Australian Silver Chain programme specifically measured a factor that can be directly related to quality of life – geriatric morale (i.e., clients' morale). Clients who received the Silver Chain programme demonstrated significantly higher scores on the Philadelphia Geriatric Center Morale Scale than non-participants". <sup>28</sup> (p229) However, the *p*-values are not provided in the review to support this difference.

Whitehead *et al.* (2015) included eight trials that reported an assessment of quality-of-life measures in evaluations comparing reablement-type services with usual care, and four of the eight trials reported a positive effect on quality of life. It must be noted that the primary outcome of interest in the review by Whitehead *et al.* was activities of daily living, with other outcomes – including quality of life – being reported as secondary outcomes. According to Whitehead *et al.*, "Five studies reported a significant effect in favor of the intervention group, in health-related quality of life. One showed no effect, and two did not provide overall scores. Thus, overall, there is some evidence that these interventions can improve health-related quality of life, but there are discrepancies between studies in the way the data has been analysed and reported". However, the data included in the review by Whitehead *et al.* suggest that only four of the eight studies favoured the intervention group over usual care. Table 14 presents the direction of effect of reablement on quality of life in the Whitehead *et al.* review.

Table 14 Whitehead et al.'s summary of effect of reablement on quality of life

Primary study authors	Direction of effect	How the difference of effect on quality of life is reported in Whitehead <i>et al.</i> (2015) <sup>9</sup>
Glendinning et	Favours intervention	Intervention: Reablement/restorative home care
al. (2010)		Significant improvement in EQ5D score in reablement group ( $p$ <0.001). No change in control group. The EQ5D instrument describes and values health with respect to mobility, self-care, usual activities, pain/discomfort, and anxiety/depression.
		No significant differences in the Adult Social Care Outcomes Toolkit (ASCOT) scores.
King et al.	Favours intervention	Intervention: Reablement/restorative home care
(2012)		36-Item Short Form Health Survey (SF-36): between-arm difference in change in mean score) 3.8 (0.0, 7.7) $p$ =0.05 in favour of the intervention group.
Markle-Reid	Favours intervention	Intervention: Nurse-led health promotion/care coordination
(2002)		SF-36 split into component scales: significant improvement in summary scales in intervention group.
Markle-Reid <i>et</i>	No difference in	Intervention: Nurse-led health promotion/care coordination
al. (2006)	effect	SF-36 split into component scales: no difference in effect
Markle-Reid et	No difference in	Intervention: Specialist interprofessional stroke care
al. (2011)	effect	SF-36 split into component scales: no difference in effect
Parsons et al.	Favours intervention	Intervention: Goal-setting
(2012)		SF-36 (overall): intergroup difference in change from baseline was $p$ <0.0001 in favour of intervention.
Zingmark and	Did not provide	Intervention: Occupational therapy bathing intervention
Bernspand (2011)	overall scores	EQ5D graphically displayed, so the data cannot be extracted.
Lewin <i>et al.</i>	Did not provide	Intervention: Reablement/restorative home care
(2013)	overall scores	Collected, but not presented in paper. No differences reported.

Source: Whitehead et al., 2015<sup>9</sup>

Cochrane *et al.* (2016) included two trials in their meta-analysis and reported that reablement may make little or no difference to quality of life.<sup>4</sup> According to Cochrane *et al.*, "We combined QoL [quality of life] scores from one trial (Assessment of Quality-of-Life Scale; 3 and 12 months) and the overall health rating score from the COOP/Wonka trial (;) and lower scores indicated an improvement in QoL at 3 and 9 months. The very low-quality findings indicated that reablement may make little or no difference to QoL at 3 months (SMD [standardised mean difference] -0.18; 95% CI: -0.43 to 0.07; 2 trials; 252 participants) or at the 9–12-month follow-up period (SMD -0.23; 95% CI: -0.48 to 0.02; 2 trials; 249 participants)".<sup>4</sup> (p15)

Tessier *et al.* (2016) included four trials that reported the effect of reablement on health-related quality-of-life (HRQoL) measures and found that this difference was statistically significant in three studies, and not significant in one.<sup>7</sup> According to Tessier *et al.*, "reablement was associated with greater improvement in HRQoL compared to usual homecare services in four studies (total sample of 1,706 participants). This difference was statistically significant in three studies, and not significant in one".<sup>7</sup> (p53) Table 15 presents Tessier *et al.*'s summary of effect of reablement on quality of life. In seeking to explain how reablement may have improved HRQoL, Tessier *et al.* point to the potential importance of involving patients in making decisions, particularly around setting goals that are meaningful to them. According to Tessier *et al.*, "There is good evidence supporting the effectiveness of reablement, particularly regarding HRQoL.... The added value of recognizing the importance of

patient participation in decision-making is well documented and is likely related to the observed improvement in HRQoL. Similarly, involving the patient in goal setting has been shown to lead to significant improvement in HRQoL, possibly via individualized activities". <sup>7</sup> (p56)

Table 15 Tessier et al.'s summary of effect of reablement on quality of life

Primary study authors	Direction of effect	How the difference of effect on quality of life is reported in Tessier <i>et al.</i> (2016) <sup>7</sup>
Glendinning et al.	Favours	Intervention: Reablement
(2011)	intervention	Greater improvement in the intervention group in the short term; clinically significant and statistically significant.
King <i>et al.</i> (2012b)	Favours	Intervention: Reablement
	intervention	Greater improvement in the intervention group in the short term; statistically significant but not clinically significant.
Lewin <i>et al.</i> (2013a)	Favours	Intervention: Reablement
Lewin <i>et al.</i> (2014)	intervention, but not statistically significantly different	Non-statistically significant difference between the groups.
Parsons et al. (2012)	Favours	Intervention: Reablement
Parsons et al. (2013)	intervention	Only the intervention group showed improvement in the short term, and this improvement was statistically significant.

Source: Tessier et al., 2016<sup>7</sup>

Note: short term=less than 1 year; medium term=1-3 years; long term=more than 3 years

**Pettersson and Iwarsson (2017)** included two studies that included an assessment of HRQoL in their evaluation and reported that both studies demonstrated that reablement improved quality of life. <sup>5</sup> According to Pettersson and Iwarsson, "In two studies the group that received 'restorative home care' achieved a statistically significant increase in health-related quality of life compared with the control group". <sup>5</sup> (p280) Table 16 presents Pettersson and Iwarsson's summary of effect of reablement on quality of life.

Table 16 Pettersson and Iwarsson's summary of effect of reablement on quality of life

Primary study authors	Direction of effect	How the difference of effect on quality of life is reported in Pettersson and Iwarsson (2017) <sup>5</sup>
King et al.	Favours intervention	Intervention: Restorative home care service
(2012)		Participants' report on HRQoL as measured with the SF-36
		Differences between participants who received restorative home care and those who received usual care (SF-36 total score: $p$ =0.05, mean difference 3.8 with 95% CI: $-1.1$ –7.7; SF-36 mental component: $p$ =0.05, mean difference 4.2 with 95% CI: 0.0–8.4).
		Statistically significant positive effect
Parsons et al.	Favours intervention	Intervention: Restorative home care
(2012)		Participants' report on HRQoL
		Greater mean increase in HRQoL over time in intervention group than in control group, as measured with the overall SF-36 score ( $p$ =0.0006).
		Statistically significant positive effect

Source: Pettersson and Iwarsson, 2017<sup>5</sup>

Bersvendsen *et al.* (2018) cited three trials that included an assessment of quality of life, and state that one of the three trials demonstrated that reablement improved quality of life.<sup>5</sup> One trial, conducted in New Zealand, had measured change in HRQoL as the primary outcome. According to Bersvendsen *et al.*, "HRQoL in the New Zealand trial was measured by the 36-Item Short Form Health Survey (SF-36), an instrument that generates an overall score between 0 and 100, with larger numbers indicating better HRQoL. The instrument also provides separate mental and physical health sub-scores. After adjusting for baseline demographics, the SF-36 overall score differences were statistically significant at the 10% or 0.1 level in favour of the home-based reablement (HBR) group. The mean difference in SF-36 score from baseline to 7 months was 3.8. Splitting the SF-36 into the two different components indicated significant results for the mental health sub-score only. This suggests that HBR may improve HRQoL".<sup>26 (p8)</sup>

Commenting on the remaining two trials that assessed quality-of-life measures as secondary outcomes in evaluations comparing reablement-type services with usual care, Bersvendsen *et al.* state, "The two remaining studies looking into HRQoL or QoL [quality of life] [as secondary outcomes] reported no significant differences between HBR and usual care. The follow-up periods in these studies were 9–12 months. While most of the HRQoL components [in one study] are in favour of HBR, [home-based reablement], all these effects are associated with p-values larger than 0.05 [not statistically significant]". $^{26}$  ( $^{p17-18}$ )

Based on their assessment of the three trials, Bersvendsen *et al.* note that in only one of the three trials, the intervention group demonstrated a statistically significant difference from the usual care group when quality of life was assessed. According to Bersvendsen *et al.*, "only one study had change in HRQoL as the primary outcome. This study showed a promising result [at a 0.1 level], with the HBR group scoring significantly better at the 7-month follow-up. The mental health component of the SF-36 was the main driver for the increased score for the HBR group.... The two remaining studies reported no significant differences [at the 0.05 level]...[meaning] there is no convincing evidence that HBR increases HRQoL or QoL".<sup>26</sup> (p17-18)

# 3.3.3.1 Conclusion: Are reablement-type services better than usual care in improving quality of life?

In the six reviews that report on trials comparing reablement-type services with usual care in terms of their effects on quality of life, there is variation in the nature of the reports which limits our confidence in drawing firm conclusions. First, it must be noted that since the review by Ryburn *et al.* 

in 2009,<sup>28</sup> which reported only one trial that assessed quality of life, the number of trials that include quality of life as an outcome in their evaluation has remained relatively small. Regarding variation in the reporting in the six reviews, there are differences in how quality of life is defined and how it is measured, as well as differences in measurement end points. In addition, quality of life is reported as a primary outcome and a secondary outcome, as HRQoL, and as generic quality of life.

Ryburn *et al.* mentioned only one trial assessing quality of life, and they reported in favour of the intervention, but provided no statistical data to support their conclusion.<sup>28</sup> Whitehead *et al.* reported that four of eight trials they examined favoured the intervention over usual care on quality of life measures.<sup>9</sup> Tessier *et al.* (2016) reported on four trials that all favoured the intervention.<sup>7</sup> Cochrane *et al.* undertook a meta-analysis of two trials and reported that there was very low-quality evidence to suggest that reablement may make little or no difference to quality of life at the 3-month or at the 9–12-month follow-up periods.<sup>4</sup> Pettersson and Iwarsson reported on two trials which demonstrated that the group that received restorative home care achieved a statistically significant increase in HRQoL compared with the control group.<sup>5</sup> Bersvendsen *et al.* report that in only one of the three included trials, the intervention group demonstrated a statistically significant difference from the usual care group when quality of life was assessed.<sup>26</sup>

Only the reviews by Ryburn *et al.* (one trial), <sup>28</sup> Tessier *et al.*<sup>7</sup> (four trials), and Pettersson and Iwarsson<sup>5</sup> (two trials) include trials that all report in favour of the intervention compared with usual care, but one of the trials included in Tessier *et al.* did not reach the threshold for statistical significance. The remaining reviews included a total of 13 trials, and only five of these trials reported a statistically significant finding in favour of reablement.

It must be noted that there is moderate overlap (7.1%) among the primary studies used across the six reviews, with three studies cited in more than one review (see Appendix 7, Table 2). Specifically, one primary study was included in four reviews. Another primary study was included in three reviews, and a third primary study was included in two reviews.

Overall, we conclude that there is currently insufficient evidence to determine if reablement-type services in individuals' own homes are better than usual care in improving the quality of life of people aged 65 years and over.

### Summary statement

The current evidence is inconclusive regarding whether home-based reablement-type services are better than usual care in improving quality of life among people aged 65 years and over.

# 3.3.4 Effect on functional status: physical function and activities of daily living

Seven reviews reported on trials that included an assessment of reablement-type services compared with usual care on functional status, physical functioning, and activities of daily living (ADL) among older adults living in their own homes.

**Ryburn** *et al.* **(2009)** included a total of three studies; the authors report that "Each of the three multicomponent programmes [evaluated in the three studies] produced some evidence that implementation of their programme resulted in functional improvements". <sup>28</sup> (p<sup>230–231)</sup> Ryburn *et al.* do not explain the nature of these improvements, nor do they provide any statistics to support these claims. However, they do suggest that the focus on restoring levels of independence and activity in older adults appears to be associated with the positive outcomes observed. According to Ryburn *et al.*, "a restorative approach to home care has significant advantages over the traditional approach aimed at maintenance and support only. Providing timely interventions, education, and assistive technologies to encourage frail older adults to resume independence and activity appears to be effective". <sup>28</sup> (p<sup>232</sup>)

Whitehead et al. (2015) reported on eight trials that included an assessment of ADL in evaluations comparing reablement-type services with usual care. 9 Whitehead et al. reported substantial variation in how ADL was defined and measured in the trials they examined. It was therefore impossible to extract similar data for meta-analysis. According to Whitehead et al., "Only eight studies reported using an ADL measure; seven different measurement methods were used. Some of these were not standardized: some studies used actual reports of ability or completion of tasks, others were based on users' perceived difficulty in completing tasks. Of these eight trials, two showed statistically significant improvement in overall ADL ability in favor of the intervention group, one a non-significant improvement in the intervention group compared to the control group, and one showed no difference between the groups, although the authors noted possible contamination of the control group. A further two reported the non-significant change scores only.... The remaining two reported ADL measurement for individual activities (such as 'dressing') separately. This made it impossible to determine an overall effect for these studies, although more activities improved in the intervention group compared to the control group. Overall, findings on ADL favored the intervention group in five of the eight studies".9 (p1069-1070) Table 17 presents Whitehead et al.'s summary of the effect of reablement on ADL.

Table 17 Whitehead et al.'s summary of effect of reablement on activities of daily living

Primary study authors	Direction of effect	How the difference of effect on ADL is reported in Whitehead et al. (2015) <sup>9</sup>
Lewin and	Favours intervention	Intervention: Reablement/restorative home care
Vandermeulen (2010)		Significant difference in ADL abilities with a mean change score favouring the intervention group at 3 months ( $z$ = $-3.71$ , $p$ < $0.001$ ) and at 12 months ( $z$ = $-2.90$ , $p$ = $0.004$ ), adjusted for baseline differences.
Marek <i>et al.</i> (2006)	Favours intervention	Intervention: Nurse-led health promotion/care and coordination
		Significant difference in ADL abilities (favouring the intervention group) between the intervention group (mean: 2.1; standard deviation [SD]: 4.7) and the control group (mean: 3.3; SD: 4.7); p= 0.01, at 12 months.
Tinetti <i>et al.</i>	Favours intervention,	Intervention: Reablement/restorative home care
(2002)	but not statistically significantly different	Mean self-care score was better (not significant) in the intervention group (adjusted for baseline difference) ( $t$ =-1.81; $p$ =0.07).
Lewin <i>et al</i> .	No difference in effect	Intervention: Reablement/restorative home care
(2013)		No significant difference in ADL abilities between the intervention group (mean: 11.87) and control group (mean: 12.65) at 3 months.
Feldman et al.	No difference in effect	Intervention: Cluster care
(1996)		No difference in ADL abilities between groups.
Gottleib and	No difference in effect	Intervention: Assistive technology
Caro (2000)		No difference in ADL abilities between groups.
Glendinning et	Favours intervention,	Intervention: Reablement/restorative home care
al. (2010)	but no statistical test	No overall scale scores. Higher percentage success in the intervention group for the ability to walk outside, bathe or shower, dress, and undress.
Zingmark and	Favours intervention	Intervention: Occupational therapy bathing intervention
Bernspang (2011)		Of 19 ADL, 7 showed significant improvement in both groups (the 7 activities are not reported) and 6 showed significant improvement in the intervention group only (walking inside, walking in the neighbourhood, getting clothes from wardrobe, washing hair, combing hair, and manicuring).

Source: Whitehead et al., 20159

Whitehead *et al.* also reported on five trials that evaluated the physical functioning of older people in comparing reablement-type services with usual care. The five trials that assessed physical functioning were different trials than the ones that measured ability to perform ADL among older adults, but Whitehead *et al.* decided to include them in their review because, according to Whitehead *et al.*, The remaining five studies did not report a specific ADL measure, instead reporting the Short Form-36 which includes a physical functioning component. Physical functioning ability may be an important outcome for this population group and may provide a broad indication as to their ability to perform ADL, although this should not be regarded as a substitute for an ADL outcome. All of these five trials showed an effect in favor of the intervention group, which was statistically significant in two studies [and non-significant in three studies]. It was considered important to include these studies as the population were in receipt of home care for assistance with personal activities of daily living. If we

had excluded them, we would have omitted important studies from our analysis". 9 (p1071–1072) Table 18 presents Whitehead *et al.*'s summary of the effect of reablement on physical functioning.

Table 18 Whitehead et al.'s summary of effect of reablement on physical functioning

Primary study authors	Direction of effect	How the difference of effect on physical functioning is reported in Whitehead et al. (2015) <sup>9</sup>
King et al.	Favours intervention,	Intervention: Reablement/restorative home care
(2012)	but not statistically significantly different	Change in SF-36 physical component from baseline to 7 months in favour of the intervention group (mean change: 2.6; 95% CI: $-1.5$ , 6.6; $p=0.22$ ) (not significant).
Markle-Reid	Favours intervention	Intervention: Nurse-led health promotion/care coordination
(2002)		Significant difference between the intervention group (mean: 39.20; SD: 27.40) and the control group (mean= 26.30; SD= 22.80); t=2.480, p= 0.015
Parsons et al.	Favours intervention	Intervention: Goal-setting
(2012)		Linear mixed methods model used. Significant difference in intergroup change from baseline (intervention mean: 44.45 (3.52) 54.04 (3.52) C: 52.08 (3.42) to 51.31 (3.42) P=0.0002).
Markle-Reid et	Favours intervention,	Intervention: Specialist interprofessional stroke care
al. (2011)	but not statistically significantly different	Difference in mean change score favoured the intervention group (not statistically significant, but authors argued that it was clinically significant) (mean change: 5.87; 95% CI: $-3.98$ , 17.73; $p=0.24$ ).
Markle-Reid et	Favours intervention	Intervention: Nurse-led health promotion/care coordination
al. (2006)		Difference in mean change score in favour of the intervention group (mean change: $-5.39$ ; 95% CI: $-11.13$ to 0.35; $p$ =0.065) (not significant).

Source: Whitehead et al., 20159

In the only meta-analysis undertaken to compare reablement with usual care, **Cochrane** *et al.* **(2016)** assessed functional status as the primary outcome in their review, which was undertaken according to the prescribed standards of the Cochrane Collaboration. Cochrane *et al.* included two randomised controlled trials, and the pooled meta-analysis used a random effects model to address the statistical variability reported in both trials. According to Cochrane *et al.*, "We pooled the self-report function measures from one trial undertaken in Australia (ADLs and IADLs [instrumental activities of daily living]) and one trial undertaken in Norway (COPM [Canadian Occupational Performance Measure]) using the generic inverse variance method. There was very low-quality evidence to suggest that time-limited reablement may slightly improve functional status at 3 months (SMD -0.40; 95% CI -0.81 to 0.00; 2 studies; 252 participants), and at the 9–12-month follow-up period (SMD -0.30; 95% CI -0.53 to -0.06; 2 studies; 249 participants)". Cochrane *et al.* used Grading of Recommendations, Assessment, Development and Evaluations (GRADE) to assess the quality of the evidence and classified the evidence presented here as very low quality, indicating that the true effect could be markedly different from the estimated effect.

**Tessier** *et al.* **(2016)** reported on seven trials that evaluated functional capacity as an outcome when comparing reablement-type services with usual care. As reported by Tessier *et al.*, Seven studies examined the effect of reablement on various aspects of functional capacity. Four studies reported no effects of reablement. Two studies looking exclusively at ADLs demonstrated an improvement in both groups of participants [reablement and usual home care]. In three studies, either ADL, IADL or mobility showed greater improvement with reablement than with usual services. Table 19 presents Tessier *et al.* summary of the effect of reablement on functional capacity.

Table 19 Tessier et al.'s summary of effect of reablement on functional capacity

Primary study authors	Direction of effect	How the difference of effect on functional capacity is reported in Tessier <i>et al.</i> (2016) <sup>7</sup>
Burton et al.	No difference in effect	Intervention: Reablement
(2013a and 2013b)		Non-statistically significant effect on physical activity level (medium and long term) in intervention group.
King et al.	No difference in effect	Intervention: Reablement
(2016b)		Non-statistically significant improvement in both groups (short term).
Lewin and	Favours intervention	Intervention: Reablement
Vandermeulen (2010)		Only the intervention group showed short-term significant improvement in ADL, instrumental activities of daily living (IADL), and mobility.
Lewin <i>et al.</i>	No difference in effect	Intervention: Reablement
(2013a) and		No statistical difference between the groups, and outcomes improved in both groups in the short term.
Lewin <i>et al.</i> (2014)		
Parsons et al.	Favours intervention	Intervention: Reablement
(2012) and		Statistically significantly greater improvement for the intervention group in the short term.
Parsons <i>et al.</i> (2013)		
Senior et al.	Favours intervention,	Intervention: Reablement
(2014)	but not statistically significantly different	Non-statistically significant difference between the groups for ADL and IADL in the medium term.
Tinetti et al.	No difference in effect	Intervention: Reablement
(2002)		Statistically significantly greater improvement in IADL and mobility in the intervention group over short-term time period. No difference between intervention and control groups for ADL, and both improved over time.

Source: Tessier et al., 20167

Note: short term=less than 1 year; medium term=1-3 years; long term=more than 3 years

**Pettersson and Iwarsson (2017)** reported on three trials that assessed functional status as an outcome in evaluations comparing reablement-type services with usual care, and all reported improvements in the intervention group.<sup>5</sup> According to Pettersson and Iwarsson, "In one study the findings showed that those who completed [the intervention] had a significantly greater average increase in self-reported ADL ability at the 1-year follow-up compared to those who received usual home care".<sup>5</sup> (p280) Pettersson and Iwarsson do not report any statistics from this trial to support their cited findings.

Commenting on the second trial, Pettersson and Iwarsson reported that "the findings showed that those who had not needed home care before as well as those who needed such [care] had improved their ADL ability at the 1-year follow-up of the new intervention, and their ADL capacity remained stable during the follow-up period" [ADL ability improved significantly over time, F(2,185)=3.244, p=0.041], where F is the statistic used to ascertain whether the means between two populations are statistically significantly different.

In the third trial cited by Pettersson and Iwarsson, the authors reported on the outcome of physical activity and physical health. According to Pettersson and Iwarsson, the third trial "found that clients who had completed the [intervention] were significantly more physically active than those who received usual home care, although the two types of interventions did not explain the level of physical activity. Whether they got [the intervention] or usual home care, the majority of clients lived up to the recommended levels of physical activity. Moreover, those who had completed the [intervention] rated their physical health significantly better than those who received usual home care <sup>5 (p282)</sup> Participants in the Home Independence Program (HIP) scored significantly higher on version 2 of the 12-Item Short Form Survey physical component summary (M=31.25; SD=11.04) than participants who received usual home care (Mean=29.27; Standard Deviation (SD)=10.12; p<0.05)].

**Sims-Gould** *et al.* **(2017)** reported on nine trials that assessed functional status in older people when comparing reablement-type services with usual care. The trials reported on by Sims-Gould *et al.* assessed different dimensions of functional status and used different instruments to measure functional status. As reported by Sims-Gould *et al.*, "Participants' functional abilities were assessed using a wide range of tools, including the Barthel Index of Activities of Daily Living, assorted questionnaires pertaining to Instrumental activities of daily living (IADL), interRAI Home Care Assessment System score, and the Canadian Occupational Performance Measure (COPM)". 6 (p660)

Sims-Gould *et al.* report that the majority of the nine trials that assessed functional status in older people favoured the intervention over usual care, but the authors do not provide any statistical data to support this claim.<sup>6</sup> Instead, Sims-Gould *et al.* provide a summary of the findings from their included trials. According to Sims-Gould *et al.*, "Although two studies reported no changes in functional abilities over the intervention period, seven of the studies found improvements that lasted several months to a year. These functional improvements included fewer activity restrictions at 3 months post-intervention; improved ADL scores and self-assessed ability in the kitchen at 3 months, and in the execution of domestic tasks at 12 months; better home management and self-care; improvements in ADL and IADL at 6 months and 12 months; better self-perceived performance and satisfaction in the execution of daily tasks at 3 and 9 months; and less likely to require assistance with bathing – one of the most common reasons for referral to home care – at 3 and 12 months". 6 (p660–661)

In addition to reporting on functional status, Sims-Gould *et al.* report on what they call clinical outcomes. According to Sims-Gould *et al.*, "Clinical outcomes are those pertaining to survival, falls, mobility, and physical performance. Six studies reported statistically significant clinical outcomes: improvement in self-reported walking impairments; improved mobility scores, including walking and transfers from bed to chair; improved physical function, as measured by the Short Physical Performance Battery overall score and gait speed; improved Timed Up and Go test scores; and better rates of survival compared to a control group or a comparator group". 6 (p661)

Sims-Gould *et al.* do not provide any numbers or statistical tests to support these claims, so we know little about the six trials that they claimed reported statistically significant results in favour of reablement-type services over usual care.

Bersvendsen et al. (2018) reported on six trials that assessed physical status in older people in evaluations comparing reablement-type services with usual care. However, Bersvendsen et al. provide a short summary of the relevant findings from the six trials, with no statistical data to explain or support the claims made by the authors. According to Bersvendsen et al., "Physical functioning or independence were the potential benefit categories where we found the most studies, and often these focused on ADL...one study produced some promising results. The home-based reablement (HBR) group scored significantly better on all physical measures after 3- and 12-month follow-ups.... A more recent study also indicated improvements in physical functioning for the HBR group. Less clear are the results of an Australian study, in which statistical significance in instrumental ADL could only be established in the context of the AT analysis [actual treatment or per-protocol analysis and not the recommended intention-to-treat analysis that takes account of loss to follow-up]. The latter study used a 12-month follow-up period. In contrast, three studies showed no statistical significance in either functional mobility or ADL. The follow-up periods in these three studies lasted between 7 and

18 months. This is longer than the respective period in the studies reporting positive statistical significance in favour of HBR. A common pattern for all the results is that there were no significant or clear effects on physical functioning. These studies all included physical gain as a secondary outcome. They were not originally designed for detecting any effect on physical functioning. This may influence the results. However, this argument partially also holds for the studies reporting a positive significant effect.... There is no clear evidence supporting the notion that HBR significantly increases physical functioning. Encouragingly, in the studies that produced no significant difference, HBR tended to lead to superior results on the selected instruments". <sup>26</sup> (p17)

# 3.3.4.1 Conclusion: Are reablement-type services better than usual care in improving the functional status of older people?

We examined seven reviews that reported on trials that assessed functional status (physical function and ADL) in older people in evaluations comparing reablement-type services with usual care. There is variation in how functional and physical status were defined and measured across the trials reported in the seven reviews. This lack of consistency regarding what is being measured, and how, reduces the confidence in the conclusions we can draw.

Three reviews (Ryburn *et al.*, <sup>28</sup> Sims-Gould *et al.*, <sup>6</sup> and Bersvendsen *et al.* <sup>26</sup>) provided a short text-based summary of findings from the included trials. None of these three reviews provide any statistical data to support their claims regarding an overall comparison between reablement-type services and usual care. For example, in the review by Sims-Gould *et al.*, six of nine trials were claimed to report statistically significant results in favour of the intervention. <sup>6</sup> Yet, Sims-Gould *et al.* do not provide any statistics from the trials they cite to support their claims. This is a difficult issue for authors of umbrella reviews, as such inadequate reporting from systematic reviews will impact on the confidence of conclusions that umbrella review authors can draw.

Four reviews (Whitehead *et al.*, 2015,<sup>9</sup> Cochrane *et al.*, 2016,<sup>4</sup> Tessier *et al.*, 2016,<sup>7</sup> and Pettersson and Iwarsson, 2017<sup>5</sup>) reported data from primary studies, and 50% report a statistically significant improvement in ADL or physical functioning while another 33% report a non-statistically significant improvement in ADL or physical functioning, indicating a somewhat positive result.

It is important to note the moderate overlap (6%) among a number of primary studies across the seven reviews we examined (see Appendix 7, Table 3). For example, six primary studies are cited in more than one review.

Despite some positive reporting backed by statistical test results in three reviews that reablement-type services may be better than usual care in improving the functional and/or physical status of older people, our conclusion is that there is insufficient evidence to support this finding without reservation. However, the overall signals are positive with respect to the effect of home-based reablement-type services when compared with usual home care services on functional and/or physical status.

### Summary statement

The current evidence is inconclusive regarding whether home-based reablement-type services are better than usual home care in improving ADL and physical functioning among people aged 65 years and over. However, the overall signals are positive in favour of home-based reablement-type services over usual home care services.

### 3.3.5 Transfer to residential care and use of acute hospital services

Five reviews reported on trials that examined admissions to the health and social care system among older adults living in their own homes when reablement-type services were compared with usual care (Whitehead *et al.*,<sup>9</sup> Cochrane *et al.*,<sup>4</sup> Pettersson and Iwarsson, <sup>5</sup>; Sims-Gould *et al.*,<sup>6</sup> and Bersvendsen *et al.*<sup>26</sup> The trials reported in the five reviews examined admissions to nursing and residential homes, admissions to acute hospitals, and visits to emergency departments.

Whitehead *et al.* (2015) reported on seven trials that assessed admissions to the health system – that is, admissions to nursing and residential homes and admissions to hospital. Whitehead *et al.* do not discuss the assessments from these seven trials in their paper, as these outcomes were secondary to the primary outcomes of their review. However, Whitehead *et al.* do include the relevant data in a supplementary table, and we have extracted these data and placed them in Table 20. From the data provided by Whitehead *et al.*, there is little difference between the intervention and usual care in terms of the effect on admissions to health system care. Statistical tests of difference were not reported.

Table 20 Whitehead *et al.*'s summary of effect of reablement on transfer to residential care and use of acute hospital services

Primary study authors	Direction of effect	How the difference of effect on transfer to residential care and use of acute hospital services is reported in Whitehead et al. (2015) <sup>9</sup>
King <i>et al.</i> (2012)		Intervention: Reablement/restorative home care
		Residential home
	Favours usual care	4-month follow-up – intervention group: 3% (3/93); control group: 2% (2/93)
	Favours usual care	7-month follow-up – intervention group: 4% (4/93); control group: 2% (2/93)
Lewin and		Intervention: Reablement/restorative home care
Vandermeulen (2010)		Residential home
	Favours intervention	3-month follow-up – intervention group: 1% (1/100); control group: 2% (2/100)
	Favours intervention	12-month follow-up – intervention group: $2\%$ (2/100); control group: $4\%$ (4/100)
Lewin <i>et al.</i> (2013)		Intervention: Reablement/restorative home care
		Hospital/residential/hospice
	Favours usual care	3-month follow-up – intervention group: 13% (49/375); control group: 7% (27/375)
	Favours intervention	6-month follow-up – intervention group: 13% (49/375); control group: 14% (52/375)
Marek <i>et al.</i> (2006)		Intervention: Nurse-led health promotion/care coordination
		Nursing home
	Favours intervention	Intervention group: 4% (2/55); control group: 23% (7/30)
Markle-Reid (2002)		Intervention: Nurse-led health promotion/care coordination
		Hospital admission
	Favours intervention	Intervention group: 16% (10 of 62); control group: 24% (15 of 64) $$
Tinetti <i>et al.</i> (2002)		Intervention: Reablement/restorative home care
		No longer at home

	Favours intervention	Intervention group: 18% (122/691); control group: 29% (201/691)
Zingmark and Bernspang (2011)		Intervention: Occupational therapy bathing intervention
		Nursing home
	Favours usual care	Intervention group: 2% (1/55); control group: 0% (0/32)

Source: Whitehead et al., 20159

**Cochrane** *et al.* **(2016)** examined admissions to residential care as a primary outcome in their review.<sup>4</sup> According to Cochrane *et al.*, "one trial reported the number of people who were in residential care at 3 and 12 months. There was very low-quality evidence that reablement may make little or no difference to the rates of transfer to a residential setting (RR [relative risk] 0.76; 95% CI 0.40–1.44; 3-month data; RR 0.92; 95% CI 0.62–1.34; 12-month data; 750 participants)".<sup>4</sup> (p16)

Cochrane *et al.* report on one trial that examined visits to emergency departments. <sup>4</sup> According to Cochrane *et al.*, "Only one trial reported on presentations to emergency departments. The very low-quality evidence suggests that the intervention may make little or no difference to the rates of emergency department visits at 12 months follow-up (RR 0.90; 95% CI 0.79–1.04; 750 participants) or at 24 months (RR 0.93; 95% CI 0.84–1.03; 750 participants)". <sup>4</sup> ( $^{p16}$ )

Cochrane *et al.* also examined unplanned hospital admissions among older people using one trial. According to Cochrane *et al.*, "Very low-quality evidence from a single study with 750 participants suggested that the intervention may make little or no difference to unplanned hospital admissions at 12 months follow-up (RR 0.94; 95% CI 0.83–1.07) or 24 months (RR 0.94; 95% CI 0.85–1.03)". 4(p15)

**Pettersson and Iwarsson (2017)** do not explicitly report on admissions to the health and social care system; however, they do report findings from two trials on the measure of 'remaining living at home'. We interpret 'remaining living at home' to mean that participants have a reduced need to transfer to a health or social care setting. According to Pettersson and Iwarsson, "[in one trial] the probability of remaining living at home was greater among clients who received restorative care compared to the group which received usual home care [no statistics provided]...[in the second trial] participants who received the intervention were more likely to remain at home at the completion of the home care episode than those who received usual care (OR [odds ratio]=1.99 95% CI=1.47–2.69)". <sup>5</sup> (p<sup>280)</sup>

**Sims-Gould** *et al.* **(2017)** report that in four trials, "several interventions appeared to facilitate participants continuing to live at home, rather than transferring to residential care". <sup>6</sup> (p661) However, Sims-Gould *et al.* do not provide any statistics or additional data to support this claim. Sims-Gould *et al.* also report from trials that assessed visits to the emergency department in hospital and admissions to hospital. According to Sims-Gould *et al.*, "Interventions also reduced the total number of emergency room visits [two trials], unplanned hospital stays [one trial] and total hospital days [two trials]". <sup>6</sup> (p661) Sims-Gould *et al.* do not provide any statistics to support these claims.

Bersvendsen *et al.* (2018) report on two trials that assessed the need for residential care.<sup>26</sup> Citing one trial from Australia, Bersvendsen *et al.* report that "A significantly lower proportion of HBR [homebased reablement] participants compared to conventional care patients were assessed and approved for residential or equivalent home care at the end of the study".<sup>26</sup> (p7) Bersvendsen *et al.* do not provide any statistics to support this claim. In the second primary study reported on by Bersvendsen *et al.* that assessed need for residential care, Bersvendsen *et al.* report that "For the combined primary outcome of death or residential care, there were no statistically significant results. The insignificant result was a 24% reduction in favor of HBR regarding the probability of residential care or death".<sup>26</sup> (p12) Based on their examination of these two trials, Bersvendsen *et al.* offer the following encouraging remarks: "Some promising results have been reported with respect to HBR reducing the need for specialist or residential care".<sup>26</sup> (p18)

Bersvendsen *et al.* also reported on trials that examined emergency department visits and hospital admissions. According to Bersvendsen *et al.*, "HBR users were less than half as likely to have an ED [emergency department] visit during the home care episode. Over a 2-year period, HBR recipients had

significantly fewer ED presentations compared to individuals receiving the baseline treatment [or standard home care], though these results only hold for the AT analysis [actual treatment analysis rather than the intention-to-treat analysis] and were unadjusted [that is, not adjusted for sociodemographic variables]. The latter findings also hold for the number of hospital admissions. Moreover, another study concluded that HBR participants were less likely to be readmitted to the hospital compared to subjects under usual care, a result that was only significant at the 10% [rather than the conventional 5%] probability level".<sup>26 (p18)</sup>

# 3.3.5.1 Conclusion: Are reablement-type services better than usual care in reducing transfers to residential care and use of acute hospital services?

We examined five reviews that reported on trials that assessed use of the health and social care system, including admissions to residential or nursing homes, visits to emergency departments, and hospital admissions (Whitehead *et al.* (2015),<sup>9</sup> Cochrane *et al.* (2016),<sup>4</sup>Pettersson and Iwarsson (2017),<sup>5</sup> Bersvendsen *et al.* (2018)<sup>26</sup>There is variation in how admissions were defined and measured across the trials reported in the five reviews. This lack of consistency regarding what is being measured, and how, reduces the confidence in the conclusions we can draw. In addition, in the five reviews we examined, the authors treated the relevant data from the trials differently, with some providing statistics to support their claims and others reporting short text-based summaries of trial findings with little or no accompanying statistics. There is a very high degree of overlap between the primary trials reported across the five reviews.

To recap on the five reviews we examined, both Whitehead *et al.*<sup>9</sup> and Cochrane *et al.*<sup>4</sup> reported no difference between the intervention and usual care, while Sims-Gould *et al.*<sup>6</sup> made a broad claim in favour of the intervention but provided no statistics to support their claim. Pettersson and Iwarsson,<sup>5</sup> reporting on two trials, suggest that recipients of the intervention were more likely to remain living at home, but they only provided statistics from one of the included trials to support this claim. Bersvendsen *et al.*<sup>26</sup> claimed that the evidence is promising for the intervention to delay transfer to residential care, and that there is some evidence that participants in the intervention group were less likely to visit emergency departments or be readmitted to hospital. However, the reporting of the trials cited by Bersvendsen *et al.* did not provide adequate statistical data to assess these claims.

Overall, we conclude that the current evidence is inconclusive regarding whether home-based reablement-type services are better than usual care in reducing use of the health and social care system by people aged 65 years and over.

### Summary statement

The current evidence is inconclusive regarding whether home-based reablement-type services are better than usual care in reducing use of the health and social care system by people aged 65 years and over.

#### 3.3.6 Cost-effectiveness

We identified one review, undertaken by Faria *et al.* (2016), that investigated how the cost-effectiveness of reablement had been evaluated in the relevant literature.<sup>27</sup> Overall, Faria *et al.* reported that there was some evidence to suggest that reablement can reduce the cost of acute care and home care post-intervention. According to Faria *et al.*, "Ten studies found reablement cost-effective. [Of these, four] studies observed no significant differences in its effectiveness but reported cost savings for reablement. Two studies found reablement more effective and reported cost savings. Four studies found reablement more effective and more costly; of these four, two studies considered the additional costs to be reasonable due to potential longer-term savings that could not be captured within the time horizon of the analysis. Two studies were unable to conclude on the cost-effectiveness of the intervention because there were no significant differences in the costs and outcomes".<sup>27</sup> (p4) Faria *et al.* went on to describe the variations in reporting on cost-effectiveness in the studies examined. According to Faria *et al.*, "The costs included varied by study, and mostly reflected the perspective of the analysis. There was some variation in the costing of informal care, which reflects the lack of consensus in the literature on this topic. Clearer guidance is needed on how to cost informal care".<sup>27</sup> (p5)

Faria *et al.* also summarise several research gaps that were reported in the studies examined. According to Faria *et al.*, "The studies [covering costs] reported some common areas of methodological uncertainty and future research requirements. Six studies discussed the uncertainty around the impact on carers. Six studies discussed the potential benefits of subgroup analysis to determine how the individual's characteristics affect the costs and outcomes, and tailor reablement to the individual's needs. Four studies discussed that more research is required on appropriate outcome measures. The uncertainty in the cost savings from reduced hospital stays was discussed in two studies. Two studies discussed that more research is required on the cost-effectiveness of different service models".<sup>27</sup> (p4)

### 3.3.6.1 Conclusion: Are reablement-type services cost-effective?

Based on the Faria *et al.* review, there was variation around how cost-effectiveness was defined and measured in the primary studies on home-based reablement that they reviewed; there was also uncertainty regarding the direction of effect in the studies they summarised and in the outcomes where cost savings may be achieved.<sup>27</sup>

Based on this assessment, we conclude that the current evidence on the cost-effectiveness of home-based reablement for people aged 65 years and over is inconclusive as to whether reablement-type services are more cost-effective than usual care.

### Summary statement

The current evidence is inconclusive regarding whether home-based reablement-type services for people aged 65 years and over are more cost-effective than usual care.

# 3.4 Question 3: What factors are required for successful reablement interventions, considering: (a) patients; (b) health and social care reablement teams; and (c) the healthcare system?

#### 3.4.1 Introduction

We identified three reviews that explicitly report on relevant factors related to the planning, delivery, and acceptance of reablement-type services from the perspective of service providers and service users. The review by Pearson *et al.* sets out relevant factors pertaining to the planning and delivery of reablement-type services in the context of intermediate care. The relevant factors identified by Pearson *et al.* are set out under two categories: (1) collaborative decision-making with service users to facilitate reablement; and (2) integrated working between health and social care professionals and informal carers. The review by Dibsdall contains relevant factors pertaining to the role of occupational therapists in reablement-type services, and the review by Mjøsund *et al.* reports on relevant factors pertaining to the use of physical activity strategies in reablement services. In Sections 3.4.2 to 3.4.4, we summarise separately the design characteristics of each review and the relevant factors as reported in each review. This approach is necessary as each review differs in scope and content.

# 3.4.2 Relevant factors pertaining to the planning and delivery of reablement-type services in the context of intermediate care

**Pearson et al. (2015)** undertook a realist review "to provide an evidence-informed 'road map' of key factors for decision-makers to critically consider when planning the delivery of intermediate care services within their local context". <sup>31</sup> (p578) Pearson *et al.* assembled a broad range of evidence contained in 193 data sources, which included 38 primary studies comprising qualitative studies, quantitative surveys, and mixed-method process evaluations. Based on their analysis and synthesis of the literature, Pearson *et al.* developed a conceptual framework for intermediate care, including reablement-type services. According to Pearson *et al.*, "This framework forms the basis for exploring factors at service user, professional, and organisational levels that should be considered when designing and delivering intermediate care services within a particular local context". <sup>31</sup> (p577)

The conceptual framework developed by Pearson *et al.* comprises two main categories of factors which they found to be relevant for consideration when planning and delivering reablement-type services. Table 21 outlines these factors under each of the two categories. The first category includes the factors relevant to establishing collaborative decision-making between reablement teams and service users. The second category includes the factors relevant to integrated working partnerships between reablement team members – including health and social care professionals – and informal carers.

Table 21 Key factors to facilitate the planning and delivery of reablement-type services

Factor	Collaborative decision-making with service users to facilitate reablement	Factor	Integrated working between health and social care professionals and informal carers
1	Agreeing objectives of care	1	Change management within and between health and social care organisations
2	Complexities of decision-making at a time of vulnerability	2	Engagement with staff
3	Continuity of care in the health and social care system	3	Professional development
4	Role of informal carers	4	Leadership
5	Reablement environment	5	Supporting organisational structures and processes
6	Impact of the local health and social care system context	6	Active engagement of carers and voluntary services as part of the team

Source: Pearson et al., 2015<sup>31</sup>

### 3.4.2.1 Collaborative decision-making with service users to facilitate reablement

**Pearson** *et al.* identified six factors that can facilitate collaborative decision-making between service users and reablement team members (Table 21):<sup>31</sup>

In the subsequent text, we have outlined each factor in detail and included relevant text-based extracts from the review by Pearson *et al.* to illustrate why they found these factors relevant to the planning and delivery of reablement-type services within the context of intermediate care.<sup>31</sup>

#### 3.4.2.1.1 Agreeing objectives of care

**Pearson et al.** highlighted the relevance of establishing shared objectives of care between reablement team members and service users, and they suggested that the professional development of reablement team members may facilitate such a process. According to Pearson *et al.*, "Agreeing the objectives of care with service users is not necessarily straightforward. Goals considered appropriate by professionals, within the structure of the existing local health and social care system, may not correspond with the goals of patients...the professional development of care staff, including professional carers and support staff, appears to be important for enabling collaborative decision-making with service users". 31 (p579–580)

#### 3.4.2.1.2 Complexities of decision-making at a time of vulnerability

Pearson *et al.* contended that at certain stages in the medical encounter between reablement teams and patients, the latter may experience vulnerability that may reduce their capacity to engage collaboratively in decision-making about their care.<sup>31</sup> Pearson *et al.* suggested that in these instances, reablement teams can enhance the scope for collaboration by considering the long-term goals that are relevant to patients but that may not be achievable in the short term. According to Pearson *et al.*, "decision-making about ESD [early supported discharge] for service users at a time of vulnerability is difficult. This difficulty can limit the extent to which collaborative decision-making takes place when endeavoring to balance a service user's well-being with their preferences and fears, within current service configurations. While service users may be able to balance their long-term well-being with their own fears about the difficulties of rehabilitation in retrospect, doing so at the time at which care is negotiated can be problematic and daunting...service users may simply have a longer-term perspective than health and social care professionals.... Decision-making with service users therefore needs to recognize this long-term perspective, engage with the aspects of service users' lives that are of significance to them, and reach agreement on objectives of care that link with these goals that extend beyond the period of intermediate care". <sup>31</sup> (p582-584)

### 3.4.2.1.3 Continuity of care in the health and social care system

**Pearson et al.** viewed it as essential that patients' prior experiences with health and social care services be considered by reablement teams. Otherwise, negative past experiences by patients may interfere with their future engagement in decision-making about their care, particularly when the care is provided in their own home. According to Pearson *et al.*, When discussing care objectives and the place of care, health and social care professionals may need to maintain an awareness of service users' prior experiences of community services. Service users who feel they have been 'let down' by promises of health and social care provision in the past are likely to be reluctant to take up what they perceive to be similarly weak services. It seems to be essential to address this perceived risk about home services, where service users have previously had negative experiences, as it constitutes a substantial risk to the feeling of safety in one's home that is valued so highly. Collaborative decisions about care and place of care can therefore only be made where service users feel confident in service standards". (31 (p584)

#### 3.4.2.1.4 Role of informal carers

**Pearson et al.** asserted that the role of informal carers is relevant to consider when promoting collaborative decision-making between reablement teams and service users. <sup>31</sup> However, the role of informal carers received scant attention in the studies that Pearson *et al.* reviewed. According to Pearson *et al.*, "The role played by service users' informal carers in discussing and agreeing care was rarely mentioned in service users' or health and social care professionals' accounts. One possibility is

that informal carers are already highly integrated into decision-making processes within the health and social care system and subsequently do not 'need' to be mentioned. However, another possibility is that service users and professionals often assumed that a significant other would take on the role of informal carer.... While the extent to which service users' family and friends are pivotal to continuity of care will vary by condition and life circumstances, it is clear that consultation with service users in isolation from these primary social and care networks is inadequate for organising continuity of care".<sup>31</sup> (p584-585)

#### 3.4.2.1.5 Reablement environment

Pearson et al. contended that collaboration between service providers and service users can facilitate dialogue and consensus regarding the preferred setting in which the goals of service users can be achieved.31 According to Pearson et al., "Perspectives on the location that provided the 'best' environment for the 're-enablement' of service users often reflected differences in the priorities of health and social care professionals and service users. Professionals tended to focus on the suitability of environments to promote the recovery of functional abilities, while service users usually adopted 'a wider focus' that considered the suitability of environments for promoting their well-being as a whole.... Professionals valued the home for the way that it enabled them 'to observe' service users engaging in rehabilitation activities in their usual environment, thereby allowing problems to be addressed that would have otherwise been missed. There is a danger here that professionals prioritise a desire for service users to attain certain functional goals within a specified time-period over service users' self-knowledge and desire to reach a wider set of goals over a longer, less clearly defined time-period. However, health and social care professionals were generally able to promote the recovery of functional abilities within an understanding of day-to-day activities that were meaningful for service users.... Collaborative decision-making therefore remains central to organising successful services. Forming an awareness and understanding of what motivates service users, and jointly considering the environment that is most likely to help them reach their goals can be central to engagement in reenabling activities".31 (p585)

#### 3.4.2.1.6 Impact of the local health and social care system context

**Pearson** *et al.* pointed out that services can be restricted by the level of awareness of options among service providers. This means that the options available to service users could be contingent on experience of the service providers they work with. According to Pearson *et al.,* "Inevitably, the characteristics of the local health and social care system could significantly bound [or limit] care options for service users. Decisions about these options were largely mediated by health and social care professionals using their knowledge of available resources in the local system to guide decision-making about the best place of care and negotiate the bureaucracy to access those services, funds or care". S1 (p586)

### 3.4.2.2 Integrated working between health and social care professionals and

Pearson *et al.* identified six factors that can facilitate integrated working between health and social care professionals and informal carers, and that can enhance the planning and delivery of reablement-type services in the context of intermediate care (Table 21).<sup>31</sup>

In the subsequent text, we have outlined each factor in detail and included relevant extracts from the review by Pearson *et al.* to illustrate why the authors find these factors relevant to the planning and delivery of reablement-type services within the context of intermediate care.

#### 3.4.2.2.1 Change management within and between health and social care organisations

Pearson *et al.* pointed out that bringing services with differing ideologies together in an integrated way requires attention, as integration means change, which can be resisted.<sup>31</sup> According to Pearson *et al.*, "The integration of services, across both acute and community care in the health sector, and health and social sectors in the community, was frequently identified as requiring changes in both service organisation and professional practice...the evidence suggests that development of services to deliver intermediate care in an integrated way requires effective management of change processes

within and between health and social care organisations. Managing this change process effectively entails a multi-component approach that operates at both local and strategic levels. The need to create each component in such an approach will depend on the extent to which current practice already encompasses it. The five components we identified in the literature on intermediate care are: engagement with staff; professional development; leadership; supporting organisational structures and processes; and active engagement of carers and voluntary services as part of the team". <sup>31</sup> (p586–587)

### 3.4.2.2.2 Engagement with staff

Pearson *et al.* highlighted the importance of enabling team members to play an active role in care planning for older people receiving services. According to Pearson *et al.*, An integrated approach at the level of organisations is difficult without collaborative care planning processes for individual patients. Encouraging and enabling both professional and support worker staff to contribute to planning care for individual service users was identified as important for realising an integrated approach. It is possible that such an approach communicates a recognition and valuing of practitioners' and support workers' experiential skills and knowledge and thereby contributes to supporting front-line staff's autonomy in practice". (p587)

#### 3.4.2.2.3 Professional development

Pearson *et al.* reported on the relevance of knowledge sharing and the development of working relations in order to integrate team working. <sup>31</sup> According to Pearson *et al.*, "We identified the importance of the working environment in helping professionals and support workers to develop professionally. Regular face-to-face meetings of teams that included all grades of staff were reported to provide an important forum for communicating about service changes and providing support for the development of working roles, as was an approach that maintained a distinct contribution for each professional group while allowing for a blurring of boundaries in other aspects of professional roles.... The apparent success of these meetings was attributed by the researchers to the time and space they provided for professionals to learn new ways of working and adjust to the increased responsibilities that these entailed.... The evidence suggests that a range of approaches may be appropriate to promote integrated working, but that whichever is adopted, they must increase knowledge of others' practice and promote the development of working relationships".<sup>31</sup> (p587)

#### 3.4.2.2.4 Leadership

Pearson *et al.* suggested that effective leadership can challenge resistance to integrated working and diminish the emphasis on service user outcomes which may arise within traditional professional hierarchies.<sup>31</sup> According to Pearson *et al.*, "We identified the importance of organisational leadership both for providing a consistent sense of direction in the development and delivery of intermediate care services, and for managing working relationships between professionals, and between professionals and support staff. Leadership could play a particularly strong role where traditional professional hierarchies or professional practices countered the ethos of integrated working or weakened a focus on service user outcomes.... Leadership also had a strong role to play in establishing co-ordinated communication channels between community and hospital settings that enabled practitioners to link intermediate care services into the wider health and social care system of which they were a part. The evidence suggests that proactive leadership has an important role to play in developing services, constructively addressing taken-for-granted working practices and power relations, and providing the strategic vision that drives the development of structures that support service delivery".<sup>31</sup> (p587–588)

#### 3.4.2.2.5 Supporting organisational structures and processes

Pearson *et al.* outlined a large number of change processes that warrant consideration when health and social care agencies move closer to developing integrated working partnerships.<sup>31</sup> According to Pearson *et al.*, "A number of key processes are important, but not sufficient, to achieve integrated working. For example, formal joint working arrangements, pooled budgets and shared communication and assessment systems were all identified as highly important, although there were sensitivities about shared assessment tools if these were introduced in a way that was seen as replacing, rather than complementing, professional expertise. The drivers of practitioners' actions

may need to be considered.... While the timeframe for meaningful change towards integrated working to take place depended on the extent to which the above enabling factors were already present in a local system, a change process measured in years rather than months was considered realistic.... Depending on local conditions, a delicate balance may need to be struck between driving change forward and excluding front-line professionals, who may feel either that planned changes undermine their expertise or introduce additional responsibilities that they do not consider to be part of their role. The evidence suggests that formalised agreements about, and processes to support, integrated working are insufficient on their own. Co-ordinated engagement with health and social care professionals at multiple strategic and practice levels is required to challenge assumptions about how care delivery should be organised in a locality. Changes in the way that services were commissioned could help or hinder the development of integrated working in intermediate care services with a collaborative decision-making approach. The extent to which professionals engage in integrated working can...be enabled or constrained not only by their employing organisation but also by other organisations and power relations in the system of which they are a part".<sup>31</sup> (p588)

### 3.4.2.2.6 Active engagement of carers and voluntary services as part of the team

Pearson *et al.* suggested that integrated working partnerships can benefit from the role of carers and the extended social networks of older people receiving care.<sup>31</sup> According to Pearson *et al.*, "Carers and voluntary services are equally part of the 'integrated' team yet are conspicuous by their absence from many (but not all) practitioner and service manager perceptions of health and social care teams. As carers may not share the goals of service users or the goals expressed in care plans, this can be a significant issue for integrated working, in particular for early supported discharge (ESD) services. In particular, as carers are often one of the most significant people in a service user's life, they may play a significant role in setting expectations for re-enablement. A carer's identity, for example as a spouse or sibling, may lead to a perceived need to care by 'doing for' rather than 'enabling' their significant other, countering the 're-enabling' ethos of intermediate care. The nature of existing relationships within a person's home is such that a professional cannot simply 'over-rule' a carer's input. Professionals may find this mismatch in expectations highly frustrating and hard to deal with, resulting in some carers being labelled as difficult, resistant or obstructive. Providing ways for professionals to address these frustrations and subsequently engage with carers and collaboratively develop care plans is therefore vital for the delivery of integrated working".<sup>31</sup> (p588–589)</sup>

# 3.4.3 Factors relevant to the role of occupational therapists in reablement-type services

Occupational therapists play an important role in the planning and delivery of reablement-type services. This can include providing training to reablement team members to enable the provision of services to people living in their own home. In addition, occupational therapists undertake assessments of service users' needs and design service plans with appropriate follow-up support when required. However, not all reablement services use the skills and expertise of occupational therapists.

Dibsdall (2019) undertook a realist synthesis of the literature to establish the contexts and mechanisms that lead to positive, or negative, outcomes for service users, for carers, and for members of the reablement team when occupational therapists were involved in reablement services. <sup>29</sup> A key objective of the review by Dibsdall was to identify the factors that influence the practice of occupational therapists in reablement-type services. Drawing on data synthesised from 26 articles reflecting the views and experiences of occupational therapists and other reablement team members, Dibsdall developed four programme theories to explain why and how occupational therapists can work best and under what conditions to achieve positive outcomes in reablement-type services. <sup>29</sup> Programme theories are middle-range ideas based on working assumptions of how and why programmes may achieve certain outcomes. These working assumptions are relevant factors that influence the practice of occupational therapists in reablement-type services. The four programme theories identified from the realist synthesis review of the literature by Dibsdall focused on occupational therapists as members of the reablement team undertaking assessments, goal

setting and reablement plans, providing equipment and working with support workers. We summarise the four working theories developed by Dibsdall in Sections 3.4.2.1 to 3.4.2.4.<sup>29</sup>

### 3.4.3.1 Recognising the skills and knowledge of occupational therapists

The first programme theory developed by Dibsdall suggests that recognition of the skills and knowledge of occupational therapists by other staff in reablement teams determines the degree to which occupational therapists support service users and carers. According to Dibsdall, "The recognition of the skills and knowledge of occupational therapists by other team members appears to be a key mechanism underlying the role of occupational therapists in reablement services". <sup>29(p74)</sup>

In addition, there are certain contextual conditions that can promote the involvement of occupational therapists in the provision of reablement-type services. According to Dibsdall, "their input into the screening and allocation of work and receiving referrals from support workers in the reablement service were identified as contexts that support the involvement of occupational therapists with different service users".<sup>29</sup> (p202)

# 3.4.3.2 The use of holistic practice by occupational therapists to support service user engagement

The second programme theory developed by Dibsdall suggests that occupational therapists support service users to engage with reablement services by using their expertise to apply a holistic ethos to their practice. According to Dibsdall, "the skills and knowledge of occupational therapists can be utilised in assessment, goal setting, and the development of plans in a holistic way for reablement to support the occupational engagement of service users in areas of daily life".<sup>29</sup> (p147)

# 3.4.3.3 Providing timely access to equipment can enable service users to be independent in their home

The third programme theory developed by Dibsdall suggests that the timely provision by occupational therapists of relevant supporting equipment increases the independence of service users and can support carers in their caring role. According to Dibsdall, there is evidence from reablement staff and service users that providing equipment is a role of occupational therapists that increases the occupational performance of service users and can lead to reduced care costs in the longer term. An important context is the timeliness of the provision of equipment to prevent delay in a service user becoming more independent. Page (p91)

### 3.4.3.4 Occupational therapists working collaboratively with multidisciplinary reablement teams

The fourth programme theory developed by Dibsdall suggests that when occupational therapists engage with support workers on the reablement team, including involvement in training support workers, this can increase the skills of support workers and assist support workers to work in a reabling way. <sup>29</sup> This work was identified as relevant in facilitating support workers to provide a service that enables participants to complete daily activities for themselves in contrast to traditional approaches that may have emphasised doing things for service users. According to Dibsdall, "Studies of reablement services have recognised a need for support workers to make a shift from 'doing for' a person". <sup>29</sup> (p86)

In addition, certain factors are identified by Dibsdall which facilitate working relationships between occupational therapists and support workers on reablement teams. According to Dibsdall, "The data emphasise the importance of trust between occupational therapists and support workers.... Communication and trust were identified as mechanisms supporting good practice in reablement. Colocation and building face-to-face relationships with other reablement team members were contexts that supported working together as a team. Regular feedback about service users being supported by the reablement team was key to effective working".<sup>29</sup> (p202–203)

In addition to providing training and support to other reablement team members, occupational therapists also play a role in establishing a shared purpose among all members of the reablement

team and the service users.<sup>29</sup> In some cases, establishing such a shared purpose requires almost an ideological shift in thinking away from the traditional model of service provision (i.e. doing things for service users) to the reablement model, where the service user is supported and enabled to do things for themselves. According to Dibsdall, "The final programme theory emphasises the importance of shared purpose for reablement at all levels of the service. Occupational therapists could see clear links between the ethos of reablement and the philosophy of occupational therapy. Occupational therapists worked with support workers, and for those with experience in traditional care settings, supported them to move from 'doing to' a person to supporting the service user to do more for themselves". <sup>29</sup> (p203)

### 3.4.4 Factors relevant to the use of physical activity strategies in reablement services

**Mjøsund** *et al.* **(2019)** undertook a review to identify and map evidence of how physical activity strategies are integrated and explored in studies of reablement for community-dwelling older adults and to identify knowledge gaps that are important for further research. Mjøsund *et al.* included 23 qualitative studies reflecting the perspectives of healthcare professionals (15 studies), older adults (6 studies), and family members (2 studies).<sup>30</sup>

### 3.4.4.1 Factors that older adults consider relevant for physical activity strategies in reablement

Mjøsund *et al.* outlined several factors that motivated older adults to engage with physical activity interventions delivered as part of reablement-type services.<sup>30</sup> For example, older adults overcame initial fears of injury incrementally, and their motivation to engage with physical activities evolved over time. According to Mjøsund *et al.*, "Some older adults reported that they felt insecure when participating in activities, due to fear of injury or overload of body structures. However, their confidence to manage exercises and activities was built during the reablement period and was strengthened by doing activities repeatedly. Similarly, it was found that the older adults' willpower [motivation] to engage in exercises and everyday activities evolved during their recovery. The older adults' determination and willpower was considered important for their engagement in exercise and performing everyday activities".<sup>30</sup> (p7)

The opportunity to perform physical activities in their own home was also a motivating factor for some older adults, contributing to their independence. In addition, ensuring that the layout of the home was safe and that their external environment was accessible were also important factors for older people. According to Mjøsund *et al.*, "Older adults reported that they preferred to plan their own day themselves, including deciding when to perform training and activities, and that being in their home environment stimulated them to be independent and take part in everyday activities. Organizing the home to make it safer and easier to manoeuvre inside, as well as reducing barriers for outside activities were also reported as important for activity performance". <sup>30</sup> (p7)

Active engagement by reablement team staff to encourage older people to engage with physical activities was also a motivating factor for some older people, demonstrating the importance of how services are delivered. According to Mjøsund *et al.*, "Encouragement, support, supervision, and a push by reablement staff was considered a motivational factor for increasing physical activity among participants. The support from the reablement staff stimulated some older adults to do exercises/activities on their own and to continue physical activity after the reablement period, while others were only motivated when the staff were encouraging them.<sup>30</sup> (p7)

The benefits accrued from developing physical strength was reported by older people as a factor motivating engagement in physical activities, as becoming stronger increased their participation in other activities of daily living. According to Mjøsund *et al.*, "older adults experienced physical strengthening to be essential for their progress and that physical strengthening also led to increased participation in other activities in their daily life".<sup>30</sup> (p7)

# 3.4.4.2 Factors that healthcare professionals consider relevant for physical activity strategies in reablement

Healthcare professionals identified several factors that could impact on the delivery of physical activity interventions to older people receiving reablement-type services. For example, the content of the intervention, the competencies of allied health workers, and the degree of team collaboration were highlighted as relevant factors that could impact on the delivery of physical activity interventions. According to Mjøsund *et al.*, "HCPs [healthcare professionals] considered the organization of tasks between health professionals and allied health personnel to be beneficial for reaching out to a larger population and for giving more intensive training. However, it was also reported that the competencies of the allied health personnel and the team collaboration could have impacted on the content of the training or exercises. HCPs in several of the studies noted that it was advantageous to implement simple and recognizable exercises that could easily be explained to both the allied health personnel and the older adults. It was considered beneficial to use written instructions for the exercises/training".<sup>30 (p8)</sup>

When physical activity strategies were targeted to the identified needs of the older people, collaboration between healthcare professionals and allied team workers was prominent, suggesting that the opportunity to target bespoke training options to the identified needs of older persons, over adherence to standardised intervention, facilitated collaboration between reablement team members. According to Mjøsund *et al.*, "In some reablement settings, the ability to target the exercises/training to the older adults' individual needs, including a focus on movement quality, was more emphasized than standardized exercise programs. In these teams, a more intense collaboration between health professionals (physiotherapists in this case) and allied health personnel was reported, including both formal and informal meeting points, as well as ongoing supervision and common reflection in the team". <sup>30 (p8)</sup>

In addition, it was also reported that delivering targeted interventions was sometimes a factor in building the competencies of allied health workers, as this approach allowed workers to learn incrementally. According to Mjøsund *et al.*, "It was emphasized that allied health personnel had the required competencies to follow up individually targeted interventions, that they were capable of independent evaluations of the older adults' function and independence during the period, and also that they had sufficient competence to evaluate the need for additional therapeutic assistance. The allied health personnel in these teams expressed that it was difficult to point out what to look for, but that they learned along the way. Thus, this approach relied more on building the competencies of allied health personnel, which was reported as a limitation in other settings. The roles of the allied health personnel were found to be transformed from being carers to becoming trainers and implied a change of mindset of what it means to be a good carer". <sup>30</sup> (p8)

### 3.4.5 Summary

Our elaboration of relevant factors that may influence the delivery and the acceptance of reablement-type services is limited to our examination of three reviews.

The review by Pearson *et al.* outlined the relevant factors that facilitate collaborative decision-making between service users and service providers and the factors that facilitate the integrated working between health and social care professionals and informal carers.<sup>31</sup> The factors reported in the review by Pearson *et al.* were identified from a large body of relevant literature which examined the experiences of service users and service providers regarding factors relevant to the design and delivery of intermediate care services, including reablement-type services. A recurring theme that runs throughout the review by Pearson *et al.* is the need for services to place service users at the centre of service delivery by establishing meaningful negotiation around shared goals and outcomes. The following extract from the review by Pearson *et al.* neatly encapsulates this theme and suggests that placing service users at the centre of service development and delivery may be an important factor in getting reablement-type services to work effectively. According to Pearson *et al.* (2015), "Our review has shown that intermediate care is both defined by and is believed to achieve its intended goals through a central focus on the service users. Intermediate care is thought to 'work' by involving patients in collaborative decision-making about the objectives of their care and the place of

care. Realising the potential of this focus on the service user requires action at both organizational and professional levels, so that service users develop confidence in the standard of intermediate care services available to them and believe that their input will be listened to and acted upon.... Our review shows that placing patients at the centre of service development and delivery is a core explanatory element for how programmes work".<sup>31</sup> (p590)

In the review by Dibsdall, which examined the role of occupational therapists in reablement-type services, it is reported that occupational therapists can provide important skills and expertise to benefit the content and delivery of reablement-type services. <sup>29</sup> In addition, occupational therapists can support the development of meaningful care plans and the timely provision of supportive technology and equipment to enable older adults to live independently in their own homes. An important factor is reablement team members recognising the unique skills and expertise of occupational therapists and how these skills, when deployed as part of the team, can contribute to the engagement and motivation of service users.

In the review by Mjøsund *et al.*, which examined the role of physical activity strategies in reablement-type services, it was reported that older adults' motivation and confidence related to physical activity increased along with their incremental experiences of doing physical exercise and their improvement of functional and physical status.<sup>30</sup> In addition, the review by Mjøsund *et al.* suggested that the value and enjoyment of being physically active are important factors for participating in physical activity interventions among older adults and that positive physical activity experiences increase their motivation to engage with physical activity.

### 4 Discussion

### 4.1 Main findings

### 4.1.1 Reablement-type services in other jurisdictions

Based on the five case jurisdictions we reported on in Question 1, there are differences in how reablement-type services are described in the literature from Australia, New Zealand, Norway, the UK, and the USA. These reported differences concern overall structure, the mode of delivery, and staff skill mix. However, the reports from the five jurisdictions suggest that there are some common features, such as a focus on supporting people to do things for themselves rather than doing things for them. Additionally, reablement-type services as reported in the five jurisdictions appear to be goal and outcome oriented; intensive with a short, predefined duration; and delivered in older people's homes. However, challenges remain at national level to agree on the fundamental elements of reablement-type services. According to Clotworthy *et al.* (2020), "many countries have encountered, and are still encountering, significant challenges with regard to how to define, standardize, and operationalize reablement services at a national level".<sup>19 (p28)</sup>

### 4.1.2 Effectiveness of reablement-type services and limitations of primary trials

### 4.1.2.1 Effectiveness of reablement-type services

Overall, we found that the current evidence reported in reviews is inconclusive, so we were unable to judge whether reablement-type services are better than usual care in their effect on post-intervention home care requirements, quality of life, physical functional status, and admissions to the health and social care system. However, the signals are positive for post-intervention home care requirements and increasing physical functional status. Additionally, there is minimal but inconclusive evidence comparing reablement-type services with usual care in terms of cost-effectiveness. We acknowledge that some trials reported in the reviews comparing reablement-type services with usual care have reported in favour of the intervention on some outcomes; however, there is a lack of consistency in how trials report the intervention and how they define and measure the outcomes. By lack of consistency, we mean that there is either variation in what is described or there is inadequate description, or, in some cases, elements of both. This means it is difficult for review authors to combine the data from trials in a meaningful way and to statistically aggregate an overall effect size for a specified outcome.

### 4.1.2.2 Primary study or trial limitations

In the reviews we examined, the authors elaborated several examples of inconsistent reporting in the trials they used.

Sims-Gould *et al.* – who reviewed the evidence from trials that evaluated what the authors call '4R interventions' (referring to reablement, reactivation, rehabilitation, and restorative programmes) – expressed concern at the inadequate reporting of the interventions in the trials they examined.<sup>6</sup> According to Sims-Gould *et al.*, "a major concern with the 4R interventions as described is the lack of information provided on the interventions themselves.... Overall, descriptions of the inventions were brief, in some instances limited to only a few sentences. Some examples/snapshots of what the tailored, personalized care looked like would have been helpful".<sup>6</sup> (p662) In addition, Whitehead *et al.*, who set out to compare the effect of reablement-type services with usual care on activities of daily living as the primary outcome, reported variation in how the intervention was described in the trials they examined, along with variation in evaluation methods. According to Whitehead *et al.*, "there was widespread variation in the type and content of the intervention and the method of evaluation used, within the majority of the included studies". <sup>9</sup> (p1073)

Sims-Gould *et al.* also draw attention to the inadequate reporting in the trials they examined of process information relating to the implementation of the intervention and how the intervention

differs from usual care.<sup>6</sup> According to Sims-Gould *et al.*, "there is very limited information on staff training. Most studies failed to describe what training, if any, that the interdisciplinary teams received to deliver these interventions. How these interventions differed from usual care or how clients and providers work together were not discussed. In sum, although 4R interventions posit some positive results, we are left with more questions about the nature of the interventions".<sup>6</sup> (p662)

Bersvendsen *et al.* report the lack of statistical data provided in the trials they examined. <sup>26</sup> Likewise, in most of the reviews we examined, there was a lack of statistical data reported from the trials reviewed. According to Bersvendsen *et al.*, "The most striking outcome of the assessment is that the majority of the home-based reablement papers under review failed to be informative about key aspects of the statistical modelling. This is surprising, since due to the nature of our selection process, all papers under review appear to rely on statistical methodology...none of the papers scrutinized provided sufficient information about the data or the statistics employed.... None of the studies provided information regarding the estimation technique used or possible adjustments of the standard errors".<sup>26</sup> (p<sup>14–16</sup>)

Cochrane et al. undertook a systematic review according to the methods of the Cochrane Collaboration to compare reablement-type services with usual care on relevant outcomes.<sup>4</sup> Cochrane et al. discuss the complexities that can arise when evaluating reablement-type services using the rigorous randomised controlled trial design. The issues raised by Cochrane et al. are not meant to say that the randomised controlled trial design is not appropriate; rather, the issues they raise are relevant for consideration when designing future trials. According to Cochrane et al., "Overall, the complexity associated with reablement makes it difficult to assess in a rigorous trial design, and there is little agreement about the most appropriate tools to measure relevant outcomes...it is important to note that the marked lack of randomised controlled trials in this area appears to reflect some of the challenges inherent in conducting rigorous research on social care in real-world community settings. For example, the recruitment of frail older people in the community can be problematic as many may be lost to follow-up for reasons including deteriorating health, hospital admissions, and transfers to residential settings. It can also be difficult to identify and recruit usual care groups when a service has already been established in a particular setting or when service providers believe the service to be effective (or both) and, therefore it should be available to all who might need it. Last, randomised controlled trials are expensive (and time-consuming) and the funding for such studies may be limited".4 (p18)

Finally, the review by Pettersson and Iwarsson illustrates the nature of the dilemma we have highlighted in this section so far, which is that some trials reported in the reviews we examined suggest that reablement-type services have the potential to effect positive change on some outcomes when compared with usual care. However, due to the differences in how trials are designed and reported, it is difficult for reviews to combine and aggregate relevant findings to estimate an overall size of effect. According to Pettersson and Iwarsson, "Overall, as the study designs differ considerably it is not possible to make any valid comparisons. Still, while the state of the knowledge produced during the period 2000–2014 is weak and scattered, the few scientific studies published indicate that reablement services represent a type of intervention that has the potential to support older people in need of help and support in everyday life effectively". (1284)

### 4.1.3 Factors associated with the delivery and acceptance of reablementtype services

We identified only three reviews that report data on factors associated with the delivery and acceptance of reablement-type services. Pearson *et al.* provide a conceptual framework of relevant factors that, if implemented, could improve the delivery and the acceptance of reablement-type services for older people.<sup>31</sup> The factors outlined by Pearson *et al.* are related to collaborative decision-making with service users in order to facilitate their acceptance of reablement, and features of integrated working between health and social care professionals and informal carers. Pearson *et al.* contend that reaching agreement on the objectives of care between reablement teams and older people is an important mechanism to achieve collaborative decision-making; services that are personcentred and goal oriented are well placed to deliver on the goals of shared decision-making.<sup>31</sup>

Pearson *et al.* went on to outline the factors that can facilitate integrated working between health and social care professionals and informal carers in order to facilitate the delivery of reablement-type services. The cooperation to these factors is teams having adequate professional training and working in cooperation to deliver services. However, Clotworthy *et al.* report that in many jurisdictions, the implementation of reablement-type services appears deficient in supporting these practices. According to Clotworthy *et al.* (2020), "Many of the articles we reviewed also suggested that, despite already being implemented by national governments, there is a lack of capacity, training and coordination/cohesion between professional groups to properly implement reablement programmes; in particular, professional training, coordination, and compliance remain problematic". 19 (p27)

Older people grew in motivation and confidence when they could incrementally experiment with physical activity interventions as part of their reablement-type service. This was an important factor in helping to engage with physical activity strategies and is something supported by a wider evidence base. According to Mjøsund *et al.*, "It was reported that the older adults' motivation and confidence related to physical activity increased along with their experiences of physical and improvement of functional status. This is in line with findings in other settings, where older adults perceive that the value and enjoyment of being physically active are important factors for participating in physical activity interventions, and that positive physical activity experiences increase their motivation to engage with physical activity. Thus, the health care professionals may need to adapt their motivational strategies continually during the reablement period to facilitate physical activity as part of the reablement intervention".<sup>30</sup> (p10)

However, Mjøsund *et al.* also highlighted the deficits that remain in the literature regarding the reporting of the use of physical activity strategies as part of reablement-type services. Such deficits limit the type of information available that may be useful in identifying additional factors that explain why older people may value physical activity interventions as part of their reablement services. According to Mjøsund *et al.*, "Although exercises often were reported as a component of reablement, the characteristics of these interventions were in general poorly reported.... There is limited evidence of how physical activity is integrated in reablement, including how physical strategies are targeted to older adults' individual needs and preferences in a reablement setting". <sup>30</sup> (p10-11)

We have outlined and summarised relevant factors pertaining to the delivery and acceptance of reablement-type services from a small number of reviews. Hence, there is substantial room for improvement in this area of information gathering, and the findings from process evaluations, both individually and through future synthesis, can make a useful contribution to this information gap. As elaborated by Cochrane *et al.* during their review of the evidence base on reablement-type services, "Reablement is not a passive process and it is important to identify the reasons why some people do not wish to, or cannot, engage with these programmes. There is, therefore, a need for more process evaluations to assess participants' experiences, views, and attitudes, and to identify, for example, the contexts and mechanisms associated with effective reablement services, including the role of the interdisciplinary team". <sup>4</sup> (p17)

In conclusion, we have assembled a body of literature that reports some common features of reablement-type services, but our review also illustrates a great deal of uncertainty about the implementation of reablement-type services in some jurisdictions, about the effectiveness of reablement-type services compared with usual care, and about the factors that facilitate delivery and acceptance of reablement-type services. From the literature we reviewed, it appears that reablement-type services are complex interventions, implemented in complex settings. However, the literature we have assembled in this review can provide a research basis upon which to build. The following elaboration by Bersvendsen *et al.* illustrates our concluding position. According to Bersvendsen *et al.*, "Home-based reablement (HBR), known as restorative care in Australia, the USA, and New Zealand, is one fairly new way of providing home care services. The main goal of HBR is to restore or increase a patient's level of functioning, thereby increasing the patient's self-reliance and consequently decreasing their dependence on healthcare services. Even though HBR is not a standardised treatment and the content of HBR varies, all such interventions intend to restore or increase the level of functioning.... The main features of being time-limited, multidisciplinary, home-based, goal oriented, and person-centred are homogenous across HBR programmes. Patients are

mainly senior citizens with or at risk of functional decline. Typically, a multidisciplinary team works towards a patient-defined goal that focuses on everyday activities important to the patient...HBR is a complex intervention implemented in an equally complex setting.... The research reviewed [thus far] provides a basis to build on".<sup>26</sup> (p2)

### 4.2 Strengths and weaknesses

As far as we can tell, this is the first umbrella review to use rigorous, systematic methods to comprehensively summarise evidence from existing systematic and realist reviews to answer relevant questions on reablement-type services. Our work on this overview is underpinned by a comprehensive search of numerous databases and supplementary avenues of enquiry to identify and retrieve published reviews on reablement-type services. As a result, we are confident that we have identified, retrieved, and examined all relevant existing reviews published in the English language that have examined reablement-type services for older adults living at home. We acknowledge that we may have missed relevant reviews published in languages other than English. Our search and inclusion strategies enabled us to include reviews published between January 2000 and May 2020, so we are confident that our work reflects an up-to-date coverage of the relevant literature. The earliest review found was published in 2009.

At each stage of our work on this review, from searching to screening, data extraction, and quality appraisal, at least two people have independently performed these tasks and then worked together to resolve any differences and reach consensus on important decisions. This means that from the outset, our approach has been robust and transparent, and we have endeavoured to report the full content of this work in our review.

We acknowledge that our approach to address Question 1 may be considered unorthodox in terms of the usual conduct of an umbrella review; however, our reasoning was that this approach was necessary due to the lack of adequate data in the reviews we examined. For example, we intended to rely exclusively on reviews to answer all three questions in our umbrella review. However, when we undertook full-text screening of the reviews that met our inclusion criteria for Questions 2 and 3, we realised that they did not contain consistent reports on defining reablement-type services, the core components of these services, or how services are structured and operated in different jurisdictions.

Therefore, we adopted a purposive approach to identifying relevant data sources to answer Question 1 on the definition of reablement, its components, and its implementation in five jurisdictions. We identified and extracted relevant data from six primary evaluations on reablement services located during our scoping search, as we reasoned that these evaluations would adequately describe interventions that operated in different jurisdictions. In addition, we drew on two unpublished documents located through Google and three reviews from our main search to build an adequate response to Question 1. We did not quality assess the literature used for Question 1, as we exclusively used data in order to describe examples of services in some jurisdictions rather than to evaluate these services.

We acknowledge that, due to the differences in reporting in the reviews examined on the effectiveness of reablement-type services compared with usual care, our analysis and comparison of these data was limited and heterogeneous, and hence, we summarised the data instead of producing a synthesis of the data. We concluded that it was not feasible to combine the data reported in the reviews beyond summary level, and we have outlined some of the reasons for this decision in our response to Question 2. In addition, we used only three reviews to report on factors that facilitate the delivery and acceptance of reablement-type services to address Question 3. Therefore, our work on this question may be considered exploratory instead of being comprehensive. However, we were limited by the data available to address the review question on relevant factors for successful reablement interventions, and we contend that further research is needed on this in order to elaborate a more comprehensive response.

#### 4.3 Future research

This umbrella review has revealed, albeit tentatively, a few positive outcomes associated with primary evaluations of reablement-type services across several countries which have different health and social care configurations. However, based on our overview of the systematic review literature, there remains uncertainty in several areas pertaining to the implementation of reablement-type services. This uncertainty has implications for implementing this service in Ireland. Therefore, we identify five questions for further research in the Irish context to address elements of this uncertainty:

- 1. What is the optimal skill mix in a reablement team?
- 2. Who benefits the most from reablement?
- 3. Is the single geriatric assessment tool currently employed by Health Service Executive (HSE) staff sufficient for reablement?
- 4. What are the best outcome measures?
- 5. What types of evaluations are required?

#### 4.3.1 What is the optimal skill mix in a reablement team?

The findings in this review indicate that, while there is no clear consensus as to the ideal make-up of the reablement team, there is evidence to suggest that access to multidisciplinary specialists is important.<sup>37</sup> For example, in some studies, occupational therapists have had a critical role in both the assessment of the older person and in the training and support of home care workers delivering the intervention, while in other studies, nurses have been allocated this role.

Home support services in Ireland are currently delivered by a range of providers, some of whom may already provide some elements of reablement. For example, a promising pilot scheme with 85 participants, conducted in Dublin North Central, indicated that it is possible for a multidisciplinary reablement team employed by the HSE to work with appropriately trained home care staff employed by a private provider. Further work may be needed in order to indicate whether this is the most appropriate model for the roll-out of the service, including who delivers the training to all the staff involved. While it is beyond the scope of this review to determine the best model of reablement service, the service could be:

- Delivered 'in-house' that is, the multidisciplinary and trained home care staff could be employed by the HSE directly
- Outsourced to suitably qualified home care staff, or
- Fully outsourced.

Whichever model is employed, it is important that practitioners promote a shared understanding of the ethos associated with reablement in order to ensure that expectations are compatible among clients, informal carers, and service providers. This will be particularly vital when changing the established home care provision paradigm.

# 4.3.2 Who benefits the most from reablement?

Further research is still needed in order to fully understand which groups or subgroups of older adults may benefit most from this type of intervention, as well as the optimal timing of the intervention. Some studies have found that a significant proportion of users do not benefit from reablement, or that they have increased support needs after reablement; this may reflect the differing inclusion criteria used in studies, or other factors. As mentioned by Bersvendsen *et al.*, some models of reablement specifically target older people with low to medium levels of need, whereas other services may target frailer older patients on the verge of entering residential care. Additionally, some services may only recruit older people with sufficient cognitive capacity to fully engage in the intervention, while other interventions have been developed specifically for people with dementia. An Irish study revealed a high prevalence of dementia among recipients of home care packages,

suggesting that specific dementia-appropriate approaches may be needed to support this population at home. 40 One question that arises is: Are results better when reablement is offered to older people being discharged from an acute setting, or to those in the community needing additional support? In this regard, it would be beneficial to understand how reablement may be integrated (or not) into the home-first model (as adopted in the HSE's Winter Planning within the COVID-19 Pandemic: October 2020 – April 2021) 41 which supports older people being discharged from hospital.

# 4.3.3 Is the single geriatric assessment tool currently employed by HSE staff sufficient for reablement?

A holistic assessment of the current status, needs, and wishes of the older person before starting reablement is crucial. Is the single geriatric assessment tool currently employed by the HSE sufficient for this purpose? In addition, could this assessment tool be employed to measure outcomes following a period of reablement?

#### 4.3.4 What are the best outcome measures?

There is a need to identify the most appropriate outcomes and assessment tools with which to measure meaningful changes in a population undertaking reablement. For example, are there benefits to using the goals set by the individual as an outcome measure? The goals set by an individual when they are recruited into the service may be very simple, but necessary to the participant; for example, "I want to be able to get my coat on by myself", "I want to go up the stairs to bed", or "I want to go to the toilet by myself". The success of reablement services could be measured by the extent to which these user-defined outcomes are met. Patient involvement at the initial stages and throughout the programme would be very helpful in determining which outcomes are most important for older adults themselves. The participants' goal achievement can work alongside the five outcomes (post-intervention home care requirements; quality of life; functional status, including physical function and activities of daily living; transfer to residential care and use of acute hospital services; and cost-effectiveness)measured in formal evaluations to date.<sup>37</sup>

## 4.3.5 What types of evaluations are required?

Process evaluations are required to assess clients' and practitioners' experiences of, views of, and attitudes towards reablement, and to identify the contexts and mechanisms associated with effective reablement services. Additionally, because little work has been carried out on the views, involvement, and experiences of informal carers during the reablement process, this perspective should be a feature of any evaluation. Such process evaluations should be run alongside any effectiveness trials in Ireland. The factors influencing reablement require additional primary research to enable metasynthesis.

# References

- 1. Health Service Executive (HSE). Home support service for older people. Dublin, Ireland: Health Service Executive (HSE); 2018. Available from: <a href="https://www.hse.ie/eng/home-support-services/">https://www.hse.ie/eng/home-support-services/</a>
- 2. Social Care Institute for Excellence. Maximising the potential of reablement. SCIE Guide 49. 2013. Available from: https://www.scie.org.uk/publications/guides/guide49/
- Aspinal F, Glasby JON, Rostgaard T, et al. New horizons: Reablement supporting older people towards independence. *Age Ageing* 2016; 45(5). https://doi.org/10.1093/ageing/afw094.
- 4. Cochrane A, Furlong M, McGilloway S, et al. Time-limited home-care reablement services for maintaining and improving the functional independence of older adults. Cochrane Database Syst Rev 2016; 10(10). https://doi.org/10.1002/14651858.CD010825.pub2.
- 5. Pettersson C, Iwarsson S. Evidence-based interventions involving occupational therapists are needed in re-ablement for older community-living people: A systematic review. *Br J Occup Ther* 2017; 80(5). https://doi.org/10.1177/0308022617691537.
- Sims-Gould J, Tong CE, Wallis-Mayer L, et al. Reablement, reactivation, rehabilitation and restorative interventions with older adults in receipt of home care: A systematic review. J Am Med Dir Assoc 2017; 18(8). <a href="https://doi.org/10.1016/j.jamda.2016.12.070">https://doi.org/10.1016/j.jamda.2016.12.070</a>.
- 7. Tessier A, Beaulieu MD, McGinn CA, et al. Effectiveness of reablement: A systematic review. *Healthc Policy* 2016; 11(4). https://doi.org/10.12927/hcpol.2016.24594.
- 8. Legg L, Gladman J, Drummond A, et al. A systematic review of the evidence on home care reablement services. *Clin Rehabil* 2016; 30(8). https://doi.org/10.1177/0269215515603220.
- Whitehead PJ, Worthington EJ, Parry RH, et al. Interventions to reduce dependency in personal activities of daily living in community dwelling adults who use homecare services: a systematic review. Clin Rehabil 2015; 29(11). https://doi.org/10.1177/0269215514564894.
- 10. Aromataris Ee, Munn Ze. Joanna Briggs Institute reviewer's manual. Adelaide, Australia: Joanna Briggs Institute; 2017.
- 11. Aromataris E, Fernandez R, Godfrey CM, et al. Summarizing systematic reviews: methodological development, conduct and reporting of an umbrella review approach. *Int J Evid Based Healthc* 2015; 13(3). https://doi.org/10.1097/xeb.000000000000055.
- 12. Koster J. Pubmed PubReminer. 2019. Available from: <a href="https://hgserver2.amc.nl/cgibin/miner/miner2.cgi">https://hgserver2.amc.nl/cgibin/miner/miner2.cgi</a>
- 13. McGowan J, Sampson M, Salzwedel DM, et al. PRESS peer review of electronic search strategies: 2015 guideline statement. *J Clin Epidemiol* 2016; 75. <a href="https://doi.org/10.1016/j.jclinepi.2016.01.021">https://doi.org/10.1016/j.jclinepi.2016.01.021</a>.
- 14. Lefebvre C, Glanville J, Briscoe S, et al. Chapter 4: Searching for and selecting studies. In: Higgins JPT, Thomas J, Chandler J, et al., eds. Cochrane Handbook for Systematic Reviews of Interventions version 6.2 (updated February 2021): Cochrane, 2021.
- 15. EPPI-Reviewer 4.0: software for research synthesis. EPPI-Centre Software. [program]. London: Social Science Research Unit, Institute of Education, University of London., 2010.
- 16. Australian Association of Gerontology (AAG). AAG fact sheet 2: Australian approaches to reablement in the home support and care program 2019. Available from: https://www.aag.asn.au/documents/item/2903

- 17. Baker DI, Gottschalk M, Eng C, et al. The design and implementation of a restorative care model for home care. *Gerontologist* 2001; 41(2). https://doi.org/10.1093/geront/41.2.257.
- 18. Beresford B, Mann R, Parker G, et al. Reablement services for people at risk of needing social care: the MoRe mixed-methods evaluation. *Health Services and Delivery Research* 2019; 7(16). https://doi.org/10.3310/hsdr07160.
- 19. Clotworthy A, Kusumastuti S, Westendorp RGJ. Reablement through time and space: A scoping review of how the concept of 'reablement' for older people has been defined and operationalised. *BMC Geriatrics* 2020; [Preprint]. https://doi.org/10.21203/rs.2.21256/v2.
- 20. Doh D, Smith R, Gevers P. Reviewing the reablement approach to caring for older people. *Ageing Soc* 2020; 40(6). https://doi.org/10.1017/S0144686X18001770.
- 21. Langeland E, Tuntland H, Folkestad B, et al. A multicenter investigation of reablement in Norway: a clinical controlled trial. *BMC Geriatr* 2019; 19(1). https://doi.org/10.1186/s12877-019-1038-x.
- 22. Metzelthin SF, Rostgaard T, Parsons M, et al. Development of an internationally accepted definition of reablement: a Delphi study. *Ageing Soc* 2020. https://doi.org/10.1017/S0144686X20000999.
- 23. Parsons M, Senior H, Kerse N, et al. Randomised trial of restorative home care for frail older people in New Zealand. *Nurs Older People* 2017; 29(7). https://doi.org/10.7748/nop.2017.e897.
- 24. Productivity Commission. Caring for older Australians, report no. 53, final inquiry report, . 2011. Available from: <a href="https://www.pc.gov.au/inquiries/completed/aged-care/report/aged-care-volume2.pdf">https://www.pc.gov.au/inquiries/completed/aged-care/report/aged-care-volume2.pdf</a>
- 25. Tuntland H, Aaslund MK, Espehaug B, et al. Reablement in community-dwelling older adults: a randomised controlled trial. *BMC Geriatr* 2015; 15(1). https://doi.org/10.1186/s12877-015-0142-9.
- 26. Bersvendsen T, Jungeilges J, Abildsnes E. Evaluation of home-based reablement: A systematic review. Kristiansand, Norway: Universitetet i Agder; 2018. Available from: <a href="https://www.uia.no/en/content/download/104410/1609629/file/Evaluation%20of%20home-based%20reablement%20-%20A%20systematic%20review.pdf">https://www.uia.no/en/content/download/104410/1609629/file/Evaluation%20of%20home-based%20reablement%20-%20A%20systematic%20review.pdf</a>.
- 27. Faria R, Kiss N, Aspinal F, et al. Economic evaluation of social care interventions: lessons drawn from a systematic review of the methods used to evaluate reablement.

  Health Econ Outcome Res 2016; 2(1). https://doi.org/10.4172/2471-268x/1000107.
- 28. Ryburn B, Wells Y, Foreman P. Enabling independence: restorative approaches to home care provision for frail older adults. *Health Soc Care Community* 2009; 17(3). <a href="https://doi.org/10.1111/j.1365-2524.2008.00809.x">https://doi.org/10.1111/j.1365-2524.2008.00809.x</a>.
- 29. Dibsdall L. A realist synthesis and evaluation of the role and impact of occupational therapists in reablement services [PhD Thesis]. University of the West of England, Bristol, 2019.
- 30. Mjøsund HL, Burton E, Moe CF, et al. Integration of physical activity in reablement for community-dwelling older adults: a scoping review protocol. *JBI Database System Rev Implement Rep* 2019; 17(9). https://doi.org/10.11124/jbisrir-2017-003938.
- 31. Pearson M, Hunt H, Cooper C, et al. Providing effective and preferred care closer to home: a realist review of intermediate care. *Health Soc Care Community* 2015; 23(6). https://doi.org/10.1111/hsc.12183.
- 32. Health Evidence. Quality assessment instrument for review articles. Ontario, Canada: Health Evidence; 2016. Available from:

- https://www.healthevidence.org/documents/our-appraisal-tools/QA Tool&Dictionary 10Nov16.pdf.
- 33. Joanna Briggs Institute. Checklist for systematic reviews and research syntheses 2017. Available from: <a href="https://joannabriggs.org/sites/default/files/2019-06/JBI">https://joannabriggs.org/sites/default/files/2019-06/JBI</a> Critical Appraisal-Checklist for Systematic Reviews2017.docx.
- 34. Hoffmann TC, Glasziou PP, Boutron I, et al. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *BMJ* 2014; 348. <a href="https://doi.org/10.1136/bmj.g1687">https://doi.org/10.1136/bmj.g1687</a>.
- 35. Pieper D, Antoine SL, Mathes T, et al. Systematic review finds overlapping reviews were not mentioned in every other overview. *J Clin Epidemiol* 2014; 67(4). https://doi.org/10.1016/j.jclinepi.2013.11.007.
- 36. Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Med* 2009; 6(7). https://doi.org/10.1371/journal.pmed.1000097.
- 37. Bolton J. New developments in adult social care. 2019. Available from:

  <a href="https://ipc.brookes.ac.uk/publications/pdf/New\_Developments\_in\_Adult\_Social\_Care.pdf">https://ipc.brookes.ac.uk/publications/pdf/New\_Developments\_in\_Adult\_Social\_Care.pdf</a>
- 38. Timmins M, Rafferty R, O'Brien I, et al. 1094 Reabling Ireland's oldest old: an evaluation of a pilot re-ablement programme in Dublin north city. The International Association of Gerontology and Geriatrics European Region Congress (IAGG-ER) 8th Conference. Dublin, Ireland, 2015.
- 39. Jeon YH, Simpson JM, Low LF, et al. A pragmatic randomised controlled trial (RCT) and realist evaluation of the interdisciplinary home-bAsed Reablement program (I-HARP) for improving functional independence of community dwelling older people with dementia: an effectiveness-implementation hybrid design. *BMC Geriatr* 2019; 19(1). https://doi.org/10.1186/s12877-019-1216-x.
- 40. O'Brien I, Smuts K, Fan C, et al. High prevalence of dementia among community dwelling older adults in receipt of state funded home care packages: implication for healthcare planning. doi:. Ir J Psychol Med 2019; 36(2). https://doi.org/10.1017/ipm.2017.80
- 41. Health Service Executive (HSE). Winter planning within the COVID-19 pandemic. October 2020 April 2021 2020. Available from:

  www.hse.ie/eng/services/publications/winter-planning-within-the-covid19-pandemic-october-2020-april-2021.pdf
- 42. Apóstolo J, Cooke R, Bobrowicz-Campos E, et al. Effectiveness of interventions to prevent pre-frailty and frailty progression in older adults: a systematic review. *JBI Database System Rev Implement Rep* 2018; 16(1). <a href="https://doi.org/10.11124/jbisrir-2017-003382">https://doi.org/10.11124/jbisrir-2017-003382</a>.
- 43. Arbesman M, Mosley LJ. Systematic review of occupation- and activity-based health management and maintenance interventions for community-dwelling older adults. *Am J Occup Ther* 2012; 66(3). <a href="https://doi.org/10.5014/ajot.2012.003327">https://doi.org/10.5014/ajot.2012.003327</a>.
- 44. Gardner B, Jovicic A, Belk C, et al. Specifying the content of home-based health behaviour change interventions for older people with frailty or at risk of frailty: an exploratory systematic review. *BMJ Open* 2017; 7(2). https://doi.org/10.1136/bmjopen-2016-014127.
- 45. Berger S, Escher A, Mengle E, et al. Effectiveness of health promotion, management, and maintenance interventions within the scope of occupational therapy for community-dwelling older adults: A systematic review. *Am J Occup Ther* 2018; 72(4). https://doi.org/10.5014/ajot.2018.030346.

- 46. Berzins K, Reilly S, Abell J, et al. UK self-care support initiatives for older patients with long-term conditions: a review. *Chronic Illn* 2009; 5(1). https://doi.org/10.1177/1742395309102886.
- 47. Beswick AD, Rees K, Dieppe P, et al. Complex interventions to improve physical function and maintain independent living in elderly people: a systematic review and meta-analysis. *Lancet* 2008; 371(9614). https://doi.org/10.1016/s0140-6736(08)60342-6.
- Beswick AD, Gooberman-Hill R, Smith A, et al. Maintaining independence in older people. Rev Clin Gerontol 2010; 20(2). https://doi.org/10.1017/S0959259810000079.
- 49. van Het Bolscher-Niehuis MJ, den Ouden ME, de Vocht HM, et al. Effects of self-management support programmes on activities of daily living of older adults: A systematic review. *Int J Nurs Stud* 2016; 61. <a href="https://doi.org/10.1016/j.ijnurstu.2016.06.014">https://doi.org/10.1016/j.ijnurstu.2016.06.014</a>.
- 50. Boniface G, Mason M, MacIntyre J, et al. The effectiveness of local authority social services' occupational therapy for older people in Great Britain: A critical literature review. *Br J Occup Ther* 2013; 76(12). https://doi.org/10.4276/030802213x13861576675240.
- 51. Burton E, Farrier K, Galvin R, et al. Physical activity programs for older people in the community receiving home care services: systematic review and meta-analysis. *Clin Interv Aging* 2019; 14. https://doi.org/10.2147/CIA.S205019.
- 52. Clegg AP, Barber SE, Young JB, et al. Do home-based exercise interventions improve outcomes for frail older people? Findings from a systematic review. *Rev Clin Gerontol* 2012; 22(1). https://doi.org/10.1017/S0959259811000165.
- 53. Daniels R, van Rossum E, de Witte L, et al. Interventions to prevent disability in frail community-dwelling elderly: a systematic review. *BMC Health Serv Res* 2008; 8. https://doi.org/10.1186/1472-6963-8-278.
- 54. De Coninck L, Bekkering GE, Bouckaert L, et al. Home- and community-based occupational therapy improves functioning in frail older people: A systematic review. *J Am Geriatr Soc* 2017; 65(8). https://doi.org/10.1111/jgs.14889.
- 55. Devereux-Fitzgerald A, Powell R, Dewhurst A, et al. The acceptability of physical activity interventions to older adults: A systematic review and meta-synthesis. *Soc Sci Med* 2016; 158. https://doi.org/10.1016/j.socscimed.2016.04.006.
- 56. Mayo-Wilson E, Grant S, Burton J, et al. Preventive home visits for mortality, morbidity, and institutionalization in older adults: a systematic review and meta-analysis. *PLoS One* 2014; 9(3). https://doi.org/10.1371/journal.pone.0089257.
- 57. Fjordside S, Morville A. Factors influencing older people's experiences of participation in autonomous decisions concerning their daily care in their own homes: a review of the literature. *Int J Older People Nurs* 2016; 11(4). <a href="https://doi.org/10.1111/opn.12116">https://doi.org/10.1111/opn.12116</a>.
- 58. Frich LM. Nursing interventions for patients with chronic conditions. *J Adv Nurs* 2003; 44(2). https://doi.org/10.1046/j.1365-2648.2003.02779.x.
- 59. Fritz H, Seidarabi S, Barbour R, et al. Occupational therapy Intervention to improve outcomes among frail older adults: A scoping review. *Am J Occup Ther* 2019; 73(3). https://doi.org/10.5014/ajot.2019.030585.
- 60. Frost R, Belk C, Jovicic A, et al. Health promotion interventions for community-dwelling older people with mild or pre-frailty: a systematic review and meta-analysis. *BMC Geriatrics* 2017; 17(1). https://doi.org/10.1186/s12877-017-0547-8.
- 61. Hunter EG, Kearney PJ. Occupational therapy interventions to improve performance of instrumental activities of daily living for community-dwelling older adults: A

- systematic review. *Am J Occup Ther* 2018; 72(4). https://doi.org/10.5014/ajot.2018.031062.
- 62. Giosa JL, Holyoke P, Stolee P. Let's get real about person- and family-centred geriatric home care: A realist synthesis. *Can J Aging* 2019; 38(4). https://doi.org/10.1017/s0714980819000023.
- 63. Grant S, Parsons A, Burton J, et al. Home visits for prevention of impairment and death in older adults: A systematic review. *Campbell Systematic Reviews* 2014; 10(1). https://doi.org/10.4073/csr.2014.3.
- 64. Gregory A, Mackintosh S, Kumar S, et al. Experiences of health care for older people who need support to live at home: A systematic review of the qualitative literature. *Geriatr Nurs* 2017; 38(4). https://doi.org/10.1016/j.gerinurse.2016.12.001.
- 65. Rutt J. Reablement A review of evidence and example models of delivery. . Bradford: N. H. S. Doncaster Clinical Commissioning Group,; 2014:38. Available from:

  www.doncasterccg.nhs.uk/wp-content/uploads/2016/01/Reablement-review-FINAL.pdf.
- 66. Kirchhoff R, Berg H. Use of video communication technology in the light of everyday and/or tele rehabilitation. *Sykepleien Forskning* 2016. https://doi.org/10.4220/Sykepleienf.2016.57820.
- 67. Liu C-J, Brost MA, Horton VE, et al. Occupational therapy interventions to improve performance of daily activities at home for older adults with low vision: A systematic review. *Am J Occup Ther* 2013; 67(3). <a href="https://doi.org/10.5014/ajot.2013.005512">https://doi.org/10.5014/ajot.2013.005512</a>.
- 68. Liu CJ, Chang WP, Chang MC. Occupational therapy interventions to Improve activities of daily living for community-dwelling older adults: A systematic review. *Am J Occup Ther* 2018; 72(4). https://doi.org/10.5014/ajot.2018.031252.
- 69. Looman WM, Huijsman R, Fabbricotti IN. The (cost-)effectiveness of preventive, integrated care for community-dwelling frail older people: A systematic review. Health Soc Care Community 2019; 27(1). https://doi.org/10.1111/hsc.12571.
- 70. Luker JA, Worley A, Stanley M, et al. The evidence for services to avoid or delay residential aged care admission: a systematic review. *BMC Geriatrics* 2019; 19(1). https://doi.org/10.1186/s12877-019-1210-3.
- 71. Menichetti J, Graffigna G, Steinsbekk A. What are the contents of patient engagement interventions for older adults? A systematic review of randomized controlled trials. *Patient Educ Couns* 2018; 101(6). https://doi.org/10.1016/j.pec.2017.12.009.
- 72. Nielsen TL, Petersen KS, Nielsen CV, et al. What are the short-term and long-term effects of occupation-focused and occupation-based occupational therapy in the home on older adults' occupational performance? A systematic review. *Scand J Occup Ther* 2017; 24(4). <a href="https://doi.org/10.1080/11038128.2016.1245357">https://doi.org/10.1080/11038128.2016.1245357</a>.
- 73. Orellano E, Colón WI, Arbesman M. Effect of occupation- and activity-based interventions on instrumental activities of daily living performance among community-dwelling older adults: a systematic review. *Am J Occup Ther* 2012; 66(3). <a href="https://doi.org/10.5014/ajot.2012.003053">https://doi.org/10.5014/ajot.2012.003053</a>.
- 74. Papageorgiou N, Marquis R, Dare J, et al. Occupational therapy and occupational participation in community dwelling older adults: A review of the evidence. *Phys Occup Ther Geriatr* 2016; 34(1). <a href="https://doi.org/10.3109/02703181.2015.1109014">https://doi.org/10.3109/02703181.2015.1109014</a>.
- 75. Rahja M, Comans T, Clemson L, et al. Economic evaluations of occupational therapy approaches for people with cognitive and/or functional decline: A systematic review. *Health Soc Care Community* 2018. https://doi.org/10.1111/hsc.12553.
- 76. Ross LA, Schmidt EL, Ball K. Interventions to maintain mobility: What works? *Accid Anal Prev* 2013; 61. <a href="https://doi.org/10.1016/j.aap.2012.09.027">https://doi.org/10.1016/j.aap.2012.09.027</a>.

- 77. Seah B, Kowitlawakul Y, Jiang Y, et al. A review on healthy ageing interventions addressing physical, mental and social health of independent community-dwelling older adults. *Geriatr Nurs* 2019; 40(1). https://doi.org/10.1016/j.gerinurse.2018.06.002.
- 78. Dias Torres Silva CR, Mesquite de Carvalho K, do Livramento Fortes Figueiredo M, et al. Health promotion of frail elderly individuals and at risk of frailty. *Rev Bras Enferm* 2019; 72. https://doi.org/10.1590/0034-7167-2018-0575.
- 79. Steultjens EM, Dekker J, Bouter LM, et al. Occupational therapy for community dwelling elderly people: a systematic review. *Age Ageing* 2004; 33(5). https://doi.org/10.1093/ageing/afh174.
- 80. van Leeuwen KM, van Loon MS, van Nes FA, et al. What does quality of life mean to older adults? A thematic synthesis. *PLOS One* 2019; 14(3). https://doi.org/10.1371/journal.pone.0213263.
- 81. Verweij L, van de Korput E, Daams JG, et al. Effects of postacute multidisciplinary rehabilitation Including exercise in out-of-hospital settings in the aged: systematic review and meta-analysis. *Arch Phys Med Rehabil* 2019; 100(3). https://doi.org/10.1016/j.apmr.2018.05.010.
- 82. Wilberforce M, Challis D, Davies L, et al. Person-centredness in the community care of older people: A literature-based concept synthesis. *Int J Soc Welf*. 2017;26(1):86-98.
- 83. Wilkins S, Jung B, Wishart L, et al. The effectiveness of community-based occupational therapy education and functional training programs for older adults: A critical literature review. *Can J Occup Ther* 2003; 70(4). https://doi.org/10.1177/000841740307000405.
- 84. Wong KC, Wong FKY, Yeung WF, et al. The effect of complex interventions on supporting self-care among community-dwelling older adults: a systematic review and meta-analysis. *Age Ageing* 2018; 47(2). <a href="https://doi.org/10.1093/ageing/afx151">https://doi.org/10.1093/ageing/afx151</a>.

# **Appendices**

# Appendix 1 List of literature search strategies and results for the searches

- A. Overview of literature search results
- B. Full search strategies
- C. Reference and citation chasing

# A. Overview of literature search results

Databases	Date	Number of results
Ovid MEDLINE	20 May 2020	810
Ovid PsycINFO	20 May 2020	356
Ovid Social Policy and Practice	20 May 2020	305
EBSCO CINAHL Complete	20 May 2020	812
EBSCO SocINDEX with Full Text	21 May 2020	111
Cochrane Library (John Wiley & Sons Inc)	21 May 2020	380
Campbell Library (John Wiley & Sons Inc)	21 May 2020	10
Social Care Online (SCIE)	21 May 2020	246
Epistemonikos (Epistemonikos Foundation)	22 May 2020	218
PROSPERO (University of York)	22 May 2020	40
University of York CRD Database (including DARE, NHS EED and HTA)	22 May 2020	51
CORE.ac.uk (Open University and JISC)	22 May 2020	196
Health Evidence (McMaster University)	22 May 2020	28
Social Systems Evidence (McMaster University and Monash University)	22 May 2020	71
Health Systems Evidence (McMaster University)	22 May 2020	12
DoPHER EPPI-Centre	22 May 2020	1
Google.com	22 May 2020	200
Google Scholar	22 May 2020	80
Total before deduplication		3931
Total after deduplication		2876
Total retained for analysis after screening		57
Total added from reference chasing		0

#### B. Full search strategies

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) 1946 to May 19, 2020 Search date: 20 May 2020 Line Search terms Number number of results 1 Rehabilitation/ 18172 2 (reabl\* or re-abl\*).af. 346 3 re-enabl\*.af. 45 4 restorative care.af. 433 5 ((rehabilit\* or habilitat\* or reactivat\* or restor\* or empower\* or re-empower\* or re-learn\* or 100102 relearn\* or re-educat\* or reeducat\* or regain\*) adj3 (patient\* or function\* or abilit\* or activit\* or independen\*)).af. 6 "Activities of Daily Living"/ 63861 7 (("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" 41932 or "Karnofsky scale" or Karnofsky index or Karnofsky performance or domestic task\* or "selfcare skills" or "self care skills" or (activ\* adj2 daily)) and (rehabilit\* or habilitat\* or reactivat\* or empower\* or re-empower\* or re-learn\* or relearn\* or re-educat\* or reeducat\* or regain\* or restor\* or recover\* or maxim\* or improv\* or maintain\* or increas\* or optim\* or enabl\* or develop\*)).ti,ab,kw,kf. 8 Independent Living/ or Self-Care/ 38352 9 Recovery of function/ 51477 10 ((function\* or independen\* or dependen\* or "personal care" or self-manage\* or self-care) 477567 adj3 (restor\* or recover\* or maxim\* or improv\* or maintain\* or increas\* or optim\* or enabl\* or develop\* or living)).af. ((function\* or home\* or living) adj2 (dependen\* or independen\*)).mp. 45435 11 12 ((increas\* or decreas\* or reduc\* or change or improve\*) adj2 ("dependen\* on care" or 66 "relian\* on care" or "demand for home-care" or "demand on home-care" or "demand for home care" or "demand on home care" or "demand for home help" or "demand for homehelp" or "need for home care" or "need for home-care" or "need for home-help" or "need for home help" or "hours of care" or "home-care hours" or "home care hours" or home-care requirement\* or home care requirement\* or care hours or "levels of personal care")).mp. 13 or/1-12 685491 14 Home Care Services/ or Homemaker Services/ 33454 15 House Calls/ 3551 Community Health Nursing/ or Home Nursing/ or Home Health Nursing/ 28142 16 17 ((home or home-based or house or houses or house-based or domicil\* or residence) adj3 53238 (service\* or visit\* or call\* or support\*)).af. (homecare or "home-care" or (care adj (domicil\* or home))).af. 18 54866 19 33505 ((care or service or services or support or supports) adj3 (home-based or home setting or home settings or community setting or community settings or community-based or community dwelling or community dwellings or community-dwelling or "in the community" or "in the home" or "in the homes" or "at the place of residence" or "at the places of residence" or "at the home" or "at the homes")).af. 20 (home or domicile or house).ti. 81586 21 ("delivered in the home" or "delivered at home").mp. 491

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) 1946 to May 19, 2020		
Search da	nte: 20 May 2020	
22	or/14-21	163019
23	13 and 22	14922
24	(aging or ageing or elder* or older* or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) adj2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age))).mp. or aged.ti,kw,kf,hw.	5738997
25	aging/ or aged/ or "aged, 80 and over"/ or "frail elderly"/ or "health services for the aged"/ or "homes for the aged"/ or geriatrics/	3252976
26	24 or 25	5738997
27	23 and 26	10282
28	exp Review/ or Systematic review/ or Meta-Analysis/ or exp Review Literature as Topic/ or Meta-Analysis as Topic/	2748081
29	((systematic\$ or methodologic or comprehensive or integrative or collaborative or "state-of-the-art" or scoping or literature or umbrella or narrative or integrative or iterative or technolog\$ or quantitat\$ or qualitat\$ or traditional or critical or mapping or rapid or mixed studies or mixed methods or synthesis or research or thematic or pragmatic or realist or Cochrane or campbell) adj2 (review\$ or overview\$ or literature or bibliograph\$ or synthe\$ or report\$ or map or maps or summary or summaries)).mp.	1961479
30	(review\$ or systematic\$ or technology assessment).ti,kw,kf,hw.	2922698
31	(meta analy\$ or meta-analy\$ or metaanalys\$ or meta-synthe\$ or metasynth\$ or metaregression or meta-regression or health technology assessment\$ or "synthesis of evidence" or meta-summary).mp.	209388
32	(Medline or Pubmed or Cinahl or Cochrane or CDSR or Embase or PsycInfo or PsycLit or Scopus or "Web of Science" or EBSCO or OVID).tw,kf,hw.	236326
33	(Cochrane or systematic or technology assessment).jn,jw.	40340
34	(handsearch or data extraction or AMSTAR or AMSTAR2 or ROBIS).tw.	21929
35	(search\$ adj1 (literature or strateg\$ or electronic or hand or systematic or bibliographic or keyword\$ or key term\$)).tw,hw,kw,kf.	95330
36	or/28-35	4360336
37	27 and 36	955
38	limit 37 to yr="2000 - 2021"	810

Ovid PsycInfo (APA PsycInfo 1806 to May Week 2 2020)		
Search Da	te: <b>20 May 2020</b>	
Line number	Search terms	Numbe r of results
1	Rehabilitation/	19829
2	(reabl* or re-abl*).af.	105
3	re-enabl*.af.	16
4	restorative care.af.	182
5	((rehabilit* or habilitat* or reactivat* or restor* or empower* or re-empower* or re-learn* or relearn* or re-educat* or reeducat* or regain*) adj3 (patient* or function* or abilit* or activit* or independen*)).af.	37982
6	exp "Activities of Daily Living"/ or exp Self-Care Skills/	10212
7	(("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" or "Karnofsky scale" or Karnofsky index or Karnofsky performance or domestic task* or "self-care skills" or "self care skills" or (activ* adj2 daily)) and (rehabilit* or habilitat* or reactivat* or empower* or re-empower* or re-learn* or relearn* or reducat* or regain* or restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop*)).mp.	26298
8	((function* or independen* or dependen* or "personal care" or self-manage* or self-care) adj3 (restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop* or living)).mp.	76497
9	((function* or home* or living) adj2 (dependen* or independen*)).mp.	12165
10	((increas* or decreas* or reduc* or change or improve*) adj2 ("dependen* on care" or "relian* on care" or "demand for home-care" or "demand on home-care" or "demand for home care" or "demand for home help" or "demand for home-help" or "need for home care" or "need for home-care" or "need for home-help" or "need for home help" or "hours of care" or "home-care hours" or "home care hours" or home-care requirement* or home care requirement* or care hours or "levels of personal care")).mp.	30
11	or/1-10	148996
12	exp Home Care/ or exp Home Visiting Programs/ or Independent Living programs/	8533
13	exp Public Health Service Nurses/ or exp Home Care Personnel/	1032
14	((home or home-based or house or houses or house-based or domicil* or residence) adj3 (service* or visit* or call* or support*)).mp.	10465
15	(homecare or "home-care" or (care adj (domicil* or home))).af.	26485
16	((care or service or services or support or supports) adj3 (home-based or home setting or home settings or community settings or community-based or community dwelling or community dwellings or community-dwelling or "in the community" or "in the home" or "in the homes" or "at the place of residence" or "at the places of residence" or "at the homes" or "at the homes")).af.	37845
17	("delivered in the home" or "delivered at home").mp.	99
18	(home or domicile or house).ti.	25010
19	or/12-18	81064
20	11 and 19	8411
21	(aging or ageing or elder* or older* or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or	365493

# Ovid PsycInfo (APA PsycInfo 1806 to May Week 2 2020)

Search Date: 20 May 2020		
	centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) adj2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age))).mp. or aged.ti,hw,id,jw.	
22	exp aging/ or exp geriatrics/ or gerontology/ or geriatric patients/ or geriatric assessment/ or geropsychology/ or elder care/	102333
23	21 or 22	372884
24	20 and 23	3547
25	"literature review"/ or meta analysis/ or Systematic review/	27354
26	((systematic\$ or methodologic or integrative or collaborative or "state-of-the-art" or scoping or literature or umbrella or narrative or integrative or iterative or technolog\$ or quantitat\$ or qualitat\$ or traditional or critical or mapping or rapid or mixed studies or mixed methods or synthesis or evidence or research or thematic or pragmatic or realist or Cochrane or campbell) adj2 (review\$ or overview\$ or literature or bibliograph\$ or synthe\$ or report\$ or map or maps or summary or summaries)).mp.	419434
27	(review\$ or meta analysis or meta-analysis or systematic or overview\$ or literature or bibliograph\$ or synthe\$ or report\$ or map or maps or summary or summaries).dt,pt.	122589
28	(review\$ or synthes\$ or systematic\$).ti,ot,hw,id.	198466
29	(meta analy\$ or meta-analy\$ or metaanalys\$ or meta-synthe\$ or metasynth\$ or metaregression or meta-regression or health technology assessment\$ or "synthesis of evidence" or meta-summary).mp.	39440
30	(Medline or Pubmed or Cinahl or Cochrane or CDSR or Embase or PsycLit or Scopus or "Web of Science" or EBSCO or OVID).tw,sh,hw,id.	25425
31	(Cochrane or systematic or "technology assessment").jn,jw.	283
32	(handsearch or hand-search or data extraction or AMSTAR or AMSTAR2 or ROBIS).tw.	2290
33	(search\$ adj1 (literature or strateg\$ or electronic or hand or systematic or bibliographic or keyword\$ or key term\$)).tw,sh,hw,id.	15900
34	or/25-33	583847
35	24 and 34	379
36	limit 35 to yr="2000 - 2021"	356

Ovid Socia	l Policy and Practice (Social Policy and Practice 202004)	
Search dat	e: <b>20 May 2020</b>	
Line number	Search terms	Number of results
1	(reabl* or re-abl*).af.	640
2	re-enabl*.af.	22
3	restorative care.af.	30
4	((rehabilit* or habilitat* or reactivat* or restor* or empower* or re-empower* or re-learn* or relearn* or re-educat* or reeducat* or regain*) adj3 (patient* or function* or abilit* or activit* or independen*)).af.	1704
5	(("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" or "Karnofsky scale" or Karnofsky index or Karnofsky performance or domestic task* or "self-care skills" or "self care skills" or (activ* adj2 daily)) and (rehabilit* or habilitat* or reactivat* or empower* or re-empower* or re-learn* or relearn* or re-educat* or reeducat* or regain* or restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop*)).mp.	2884
6	((function* or independen* or dependen* or "personal care" or self-manage* or self-care) adj3 (restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop* or living)).af.	8868
7	((function* or home* or living) adj2 (dependen* or independen*)).mp.	5878
8	((increas* or decreas* or reduc* or change or improve*) adj2 ("dependen* on care" or "relian* on care" or "demand for home-care" or "demand on home-care" or "demand for home care" or "demand on home care" or "demand for home help" or "demand for home-help" or "need for home care" or "need for home-care" or "need for home-help" or "need for home help" or "hours of care" or "home-care hours" or "home care hours" or home-care requirement* or care hours or "levels of personal care")).mp.	46
9	or/1-8	14757
10	((home or home-based or house or houses or house-based or domicil* or residence) adj3 (service* or visit* or call* or support*)).af.	9321
11	(homecare or "home-care" or (care adj (domicil* or home))).af.	15643
12	((care or service or services or support or supports) adj3 (home-based or home setting or home settings or community settings or community-based or community dwelling or community dwellings or community-dwelling or "in the community" or "in the home" or "in the homes" or "at the place of residence" or "at the places of residence" or "at the homes")).af.	19175
13	(home or domicile or house).ti.	17728
14	("delivered in the home" or "delivered at home").mp.	37
15	or/10-14	45182
16	9 and 15	3108
17	(aging or ageing or elder* or older* or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) adj2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age))).mp. or aged.ti,de,ct,hw.	183747
18	16 and 17	2074
19	((systematic\$ or methodologic or comprehensive or integrative or collaborative or "state-of-the- art" or scoping or literature or umbrella or narrative or integrative or iterative or technolog\$ or	51074

#### Ovid Social Policy and Practice (Social Policy and Practice 202004)

Search date: 20 May 2020

quantitat\$ or qualitat\$ or traditional or critical or mapping or rapid or mixed studies or mixed methods or synthesis or research or thematic or pragmatic or realist or Cochrane or campbell) adj2 (review\$ or overview\$ or literature or bibliograph\$ or synthe\$ or report\$ or map or maps or summary or summaries)).mp.

(review\$ or systematic\$ or technology assessment).ti,de,ct,pt,hw,at.

(meta analy\$ or meta-analy\$ or metaanalys\$ or meta-synthe\$ or metasynth\$ or metaregression or meta-regression or health technology assessment\$ or "synthesis of evidence" or metasynmary).mp.

(Medline or Pubmed or Cinahl or Cochrane or CDSR or Embase or PsycInfo or PsycLit or Scopus or "Web of Science" or EBSCO or OVID).ti,ab,de,hw.

(Cochrane or systematic or technology assessment).jn,jx.

170

24	(handsearch or data extraction or AMSTAR or AMSTAR2 or ROBIS).ti,ab.	316
25	(search\$ adj1 (literature or strateg\$ or electronic or hand or systematic or bibliographic or keyword\$ or key term\$)).tw,hw,de.	2683
26	or/19-25	63306
27	18 and 26	322
28	limit 27 to yr="2000 -Current"	305

EBSCO CII	EBSCO CINAHL Complete		
Search date: 20 May 2020			
Line number	Search terms	Number of results	
S01	(MH "Rehabilitation") OR (MH "Home Rehabilitation") OR (MH "Rehabilitation, Community-Based")	22,275	
S02	TX (reabl* or re-abl*)	791	
S03	TX (re-enabl*)	135	
S04	TX ("restorative care")	972	
S05	TX ( ((rehabilit* OR habilitat* OR reactivat* OR restor* OR empower* OR re-empower OR re-learn OR relearn OR re-educat* OR reeducat* OR regain*) N2 (patient* OR function* OR abilit* OR activit* OR independen*)))	83,129	
S06	AB((function* or home* or living) N2 (dependen* or independen*))	13,317	
S07	TI (("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" or "Karnofsky scale" or Karnofsky index or Karnofsky performance or domestic task* or "self-care skills" or "self care skills" or (activ* N2 daily)) AND (rehabilit* or habilitat* or reactivat* or empower* or re-empower* or re-learn* or relearn* or re-educat* or regain* or restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop*)) OR AB (("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" or "Karnofsky scale" or Karnofsky index or Karnofsky performance or domestic task* or "self-care skills" or "self care skills" or (activ* N2 daily)) AND (rehabilit* or habilitat* or reactivat* or empower* or re-empower* or re-learn* or relearn* or re-educat* or reeducat* or regain* or restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop*))	21,034	
S08	TI ( ((function* OR independen* OR dependen* OR "personal care" OR self-manage* OR self-care) N2 (restor* OR recover* OR maxim* OR improv* OR maintain* OR increas* OR optim* OR enabl* OR develop* OR living)) ) OR AB ( ((function* OR independen* OR dependen* OR "personal care" OR self-manage* OR self-care) N2 (restor* OR recover* OR maxim* OR improv* OR maintain* OR increas* OR optim* OR enabl* OR develop* OR living)) ) OR SU ( ((function* OR independen* OR dependen* OR "personal care" OR self-manage* OR self-care) N2 (restor* OR recover* OR maxim*	87,099	

EBSCO (	CINAHL Complete	
Search o	late: 20 May 2020	
	OR improv* OR maintain* OR increas* OR optim* OR enabl* OR develop* OR living)) )	
S09	TI ((function* or home* or living) N2 (dependen* or independen*))	2,286
S10	TI ((increas* or decreas* or reduc* or change or improve*) N2 ("dependen* on care" or "relian* on care" or "demand for home-care" or "demand on home-care" or "demand for home care" or "demand for home help" or "demand for home-help" or "need for home care" or "need for home-care" or "need for home-care" or "need for home-care requirement* or home care requirement* or care hours" or "lowe care hours" or home-care requirement* or decreas* or reduc* or change or improve*) N2 ("dependen* on care" or "relian* on care" or "demand for home-care" or "demand for home care" or "demand on home-care" or "demand for home care" or "need for home care" or "need for home-care" or "need for home-help" or "need for home care" or "nome care hours" or "home care requirement* or home care requirement* or care hours or "levels of personal care")) OR SU ((increas* or decreas* or reduc* or change or improve*) N2 ("dependen* on care" or "relian* on care" or "demand for home-care" or "demand for home care" or "demand for home care" or "demand for home-care" or "need for home-help" or "need for home-care" or "demand for home care" or "need for home-care" or "demand for home care" or "need for home-care" or "need for home-care" or "need for home-help" or "need for home care" or "need for home-care" or "need for home-care requirement* or home care req	98
S11	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10	201,460
S12	(MH "Home Health Aides") OR (MH "Home Health Care")	25,662
S13	(MH "Home Visits")	6,767
S14	( TI((home* OR house OR domicil*) N2 (service* OR visit* OR call* OR support*)) OR ( AB((home* OR house OR domicil*) N2 (service* OR visit* OR call* OR support*))	18,024
S15	(TI (homecare OR "home-care" OR (care N1 (domicil* OR home))) AND TI (program* or scheme or intervention* or short-term)) OR (AB (homecare OR "home-care" OR (care N1 (domicil* OR home))) AND AB (program* or scheme or intervention* or short-term)) OR (SU (homecare OR "home-care" OR (care N1 (domicil* OR home))) AND SU (program* or scheme or intervention* or short-term))	8,902
S16	TI ( (("care program" OR "care programs" or "care programmes" or "care programme" OR service*) N2 ("home-based" OR "home setting" OR "community setting" OR "community-based" OR "community dwelling" OR "in the community" OR "in the home" OR "in the homes" OR "at the home" OR "at the place of residence" OR "at the places of residence")) ) OR AB ( (("care program" OR "care programs" or "care programmes" or "care programme" OR service*) N2 ("home-based" OR "home setting" OR "community setting" OR "community-based" OR "community dwelling" OR "in the community" OR "in the home" OR "in the homes" OR "at the home" OR "at the homes" OR "at the place of residence" OR "at the places of residence"))) OR SU (("care program" OR "care programs" or "care programmes" or "care programme" OR service*) N2 ("home-based" OR "home setting" OR "community setting" OR "community-based" OR "community dwelling" OR "in the community" OR "in the home" OR "at the home" OR "at the homes" OR "at the home" OR "at the homes" OR "at the home" OR "at the homes" OR "at the home	53,200
S17	( TI (home or house or domicile ) ) AND ( AB ("care program" or "care service" or "support service") )	639
S18	TX ("delivered in the home" or "delivered at home")	1,721
S19	S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18	93,183
S20	S11 AND S19	6,036
S21	TI ( (aged or aging or ageing or elder* or older* or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) N2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age))) ) OR AB ( (aging or ageing or elder* or "older adults" or "older adult" or "older patients" or "older subjects" or "older age" or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or	453,792

# **EBSCO CINAHL Complete**

Search date: 20 May 2020

Search da	te: <b>20 May 2020</b>	
	nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) N2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age)))) OR SU ((aging or ageing or elder* or "older adults" or "older adult" or "older patients" or "older subjects" or "older age" or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) N2 (people* or patient* or inpatient* or in-patient* or outpatient* or outpatient* or client* or person* or individual* or wom#n or man or men or age))))	
S22	(MH "Aged+") OR (MH "Aged, Hospitalized") OR (MH "Rehabilitation, Geriatric") OR (MH "Gerontologic Nursing") OR (MH "Gerontologic Care") OR (MH "Health Services for the Aged")	891,754
S23	S21 OR S22	1,079,888
S24	S20 AND S23	2,981
S25	(MH "Literature Review+") OR (MH "Meta Analysis")	130,824
S26	TX ((systematic* or methodologic or comprehensive or integrative or collaborative or "state-of-the-art" or scoping or literature or umbrella or narrative or integrative or iterative or technolog* or quantitat* or qualitat* or traditional or critical or mapping or rapid or mixed studies or mixed methods or synthesis or research or thematic or pragmatic or realist or Cochrane or campbell) N2 (review* or overview* or literature or bibliograph* or synthe* or report* or map or maps or summary or summaries))	643,157
S27	TI ( (review* OR systematic* OR technology assessment) ) OR SU ( (review* OR systematic* OR technology assessment) ) OR MW ( (review* OR systematic* OR technology assessment) )	367,689
\$28	TI (meta analy* OR meta-analy* OR metaanalys* OR meta-synthe* OR metasynth* OR metaregression OR meta-regression OR "health technology assessment" OR "health technology assessments" OR "synthesis of evidence" OR meta-summary) OR AB (meta analy* OR meta-analy* OR metaanalys* OR meta-synthe* OR metasynth* OR metaregression OR meta-regression OR "health technology assessment" OR "health technology assessments" OR "synthesis of evidence" OR meta-summary) OR SU (meta analy* OR meta-analy* OR metaanalys* OR meta-synthe* OR metasynth* OR metaregression OR meta-regression OR "health technology assessment" OR "health technology assessments" OR "synthesis of evidence" OR meta-summary)	90,939
S29	TI ( (Medline OR Pubmed OR Cinahl OR Cochrane OR CDSR OR Embase OR PsycInfo OR PsycLit OR Scopus OR "Web of Science" OR OVID) ) OR AB ( (Medline OR Pubmed OR Cinahl OR Cochrane OR CDSR OR Embase OR PsycInfo OR PsycLit OR Scopus OR "Web of Science" OR OVID) ) OR SU ( (Medline OR Pubmed OR Cinahl OR Cochrane OR CDSR OR Embase OR PsycInfo OR PsycLit OR Scopus OR "Web of Science" OR OVID) )	145,094
S30	TI ( (handsearch OR "data extraction" OR AMSTAR OR AMSTAR2 OR ROBIS) ) OR AB ( (handsearch OR "data extraction" OR AMSTAR OR AMSTAR2 OR ROBIS) )	8,639
\$31	TI ( (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keyword OR keywords OR "key term" OR "key terms")) ) OR AB ( (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keyword OR keywords OR "key term" OR "key terms")) ) OR SU ( (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keyword OR keywords OR "key term" OR "key terms")) ) OR MW (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keywords OR "key term" OR "key terms"))	50,569
S32	S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31	871,525
S33	S24 AND S32	856
	Limiters - Published Date: 20000101-20201231	816

EBSCO Soci	ndex with Full text	_
Search date: 21 May 2020		
Line number	Search terms	Number of results
S01	DE "REHABILITATION"	4773
S02	TX (reabl* or re-abl*)	106
S03	TX (re-enabl*)	27
S04	TX ("restorative care")	101
S05	TX ( ((rehabilit* OR habilitat* OR reactivat* OR restor* OR empower* OR re-empower OR re-learn OR relearn OR re-educat* OR reeducat* OR regain*) N2 (patient* OR function* OR abilit* OR activit* OR independen*)))	8749
S06	AB((function* or home* or living) N2 (dependen* or independen*))	2538
S07	TI (("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" or "Karnofsky scale" or Karnofsky index or Karnofsky performance or domestic task* or "self-care skills" or "self care skills" or (activ* N2 daily)) AND (rehabilit* or habilitat* or reactivat* or empower* or reempower* or re-learn* or relearn* or re-educat* or reeducat* or regain* or restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop*)) OR AB (("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" or "Karnofsky scale" or Karnofsky index or Karnofsky performance or domestic task* or "self-care skills" or "self care skills" or (activ* N2 daily)) AND (rehabilit* or habilitat* or reactivat* or empower* or re-empower* or relearn* or re-educat* or reeducat* or regain* or restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop*))	1797
S08	TI ( ((function* OR independen* OR dependen* OR "personal care" OR self-manage* OR self-care) N2 (restor* OR recover* OR maxim* OR improv* OR maintain* OR increas* OR optim* OR enabl* OR develop* OR living)) ) OR AB ( ((function* OR independen* OR dependen* OR "personal care" OR self-manage* OR self-care) N2 (restor* OR recover* OR maxim* OR improv* OR maintain* OR increas* OR optim* OR enabl* OR develop* OR living)) ) OR SU ( ((function* OR independen* OR dependen* OR "personal care" OR self-manage* OR self-care) N2 (restor* OR recover* OR maxim* OR improv* OR maintain* OR increas* OR optim* OR enabl* OR develop* OR living)) ) OR KW ( ((function* OR independen* OR dependen* OR "personal care" OR self-manage* OR self-care) N2 (restor* OR recover* OR maxim* OR improv* OR maintain* OR increas* OR optim* OR enabl* OR develop* OR living)) )	12213
S09	TI ((function* or home* or living) N2 (dependen* or independen*))	376
S10	TI ((increas* or decreas* or reduc* or change or improve*) N2 ("dependen* on care" or "relian* on care" or "demand for home-care" or "demand on home-care" or "demand for home care" or "demand for home care" or "need for home help" or "need for home-help" or "need for home care" or "need for home-care" or "need for home-care nours" or "home-care hours" or "home-care hours" or home-care requirement* or home care requirement* or care hours or "levels of personal care")) OR AB ((increas* or decreas* or reduc* or change or improve*) N2 ("dependen* on care" or "relian* on care" or "demand for home-care" or "demand on home-care" or "demand for home help" or "demand for home-help" or "need for home-care" or "need for home-help" or "need for home care" or "need for home-care" or "need for home-care requirement* or home care requirement* or home care requirement* or care hours or "levels of personal care"))	23
S11	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10	27316
S12	DE "HOME care of older people" OR DE "HOME care services"	2658
S13	DE "COMMUNITY-based programs" OR DE "COMMUNITY health services for older people"	238
S14	( TI((home* OR house OR domicil*) N2 (service* OR visit* OR call* OR support*)) OR ( AB((home* OR house OR domicil*) N2 (service* OR visit* OR call* OR support*)) OR KW((home* OR house OR domicil*) N2 (service* OR visit* OR call* OR support*))	6302
S15	(TI (homecare OR "home-care" OR (care N1 (domicil* OR home))) AND TI (program* or scheme or intervention* or short-term)) OR (AB (homecare OR "home-care" OR (care N1 (domicil* OR home)))	1759

	(homecare OR "home-care" OR (care N1 (domicil* OR home))) AND KW (program* or scheme or intervention* or short-term))	
S16	TI ( (("care program" OR "care programs" or "care programmes" or "care programme" OR service*) N2 ("home-based" OR "home setting" OR "community setting" OR "community-based" OR "community dwelling" OR "in the community" OR "in the home" OR "in the homes" OR "at the home" OR "at the homes" OR "at the place of residence" OR "at the places of residence")) OR AB ( (("care program" OR "care programs" or "care programmes" or "care programme" OR service*) N2 ("home-based" OR "home setting" OR "community setting" OR "community-based" OR "community dwelling" OR "in the community" OR "in the home" OR "in the homes" OR "at the home" OR "at the homes" OR "at the place of residence" OR "at the places of residence")) OR SU ( (("care program" OR "care programs" or "care programmes" or "care programme" OR service*) N2 ("home-based" OR "home setting" OR "community setting" OR "community-based" OR "at the homes" OR "at the homes" OR "at the place of residence" OR "at the places of residence")) OR KW ( (("care program" OR "care programs" or "care programmes" or "care programme" OR service*) N2 ("home-based" OR "home setting" OR "community setting" OR "community setting" OR "community dwelling" OR "in the community" OR "in the homes" OR "at the homes" OR "at the place of residence")) OR "community setting" OR "community setting" OR "community dwelling" OR "in the community" OR "in the homes" OR "at the homes" OR "at the place of residence" OR "at the place of residence" OR "at the homes" OR "at the place of residence" OR "at the place of residence" OR "at the homes" OR "at the place of residence" OR "at t	21484
S17	( TI (home or house or domicile ) ) AND ( AB ("care program" or "care service" or "support service") )	142
S18	TX ("delivered in the home" or "delivered at home")	445
S19	S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18	26825
S20	S11 AND S19	1365
S21	DE "AGING" OR DE "OLD age" OR DE "OLDER people" OR DE "OLDER patients" OR DE "GERIATRIC rehabilitation" OR DE "GERIATRICS" OR DE "ACTIVE aging" OR DE "AGING parents" OR DE "OLDER parents" OR DE "OLDER people's attitudes" OR DE "SOCIAL work with older people" OR DE "OLDER patients" OR DE "HEALTH of older people" OR DE "HEALTH of older women" OR DE "ELDERLY poor" OR DE "MINORITY older people" OR DE "OLDER Christians" OR DE "OLDER LGBTQ people" OR DE "OLDER Native Americans" OR DE "OLDER black people" OR DE "OLDER blind people" OR DE "OLDER couples" OR DE "OLDER homeless persons" OR DE "OLDER men" OR DE "OLDER women" OR DE "OLDER sexual minorities" OR DE "OLDER unemployed" OR DE "RURAL elderly" OR DE "URBAN elderly" OR DE "ELDERLY poor" OR DE "GERONTOLOGY"	29138
S22	TI ( (aged or aging or ageing or elder* or older* or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) N2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age))) ) OR AB ( (aging or ageing or elder* or "older adults" or "older adult" or "older patients" or "older subjects" or "older age" or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) N2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age))) ) OR SU ( (aging or ageing or elder* or "older adults" or "older adult" or "older patients" or "older subjects" or "older age" or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) N2 (people* or patient* or inpatient* or in-patient* or out-patient* or out-patient* or client* or person* or individual* or wom#n or man or men or age))) ) OR KW ( (aged or aging or ageing or elder* or older* or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or octagenarian* or octagenarian* or octagenarian* or onnagenarian* or centenarian* or sexagenarian* or veteran* or ((old* or elder* or retired) N2 (people* or patient* or inpatient* or in-patient* or out-patient* or out-patie	100569
S23	S21 OR S22	100583
S24	S20 AND S23	563
S25	TX ((systematic* or methodologic or comprehensive or integrative or collaborative or "state-of-the- art" or scoping or literature or umbrella or narrative or integrative or iterative or technolog* or	242,755

AND AB (program\* or scheme or intervention\* or short-term)) OR (SU (homecare OR "home-care" OR (care N1 (domicil\* OR home))) AND SU (program\* or scheme or intervention\* or short-term)) OR (KW

	quantitat* or qualitat* or traditional or critical or mapping or rapid or mixed studies or mixed methods or synthesis or research or thematic or pragmatic or realist or Cochrane or campbell) N2 (review* or overview* or literature or bibliograph* or synthe* or report* or map or maps or summary or summaries))	
S26	TI ( (review* OR systematic* OR technology assessment) ) OR SU ( (review* OR systematic* OR technology assessment) ) OR KW ( (review* OR systematic* OR technology assessment) )	255,014
S27	TI (meta analy* OR meta-analy* OR metaanalys* OR meta-synthe* OR metasynth* OR metaregression OR meta-regression OR "health technology assessment" OR "health technology assessments" OR "synthesis of evidence" OR meta-summary) OR AB (meta analy* OR meta-analy* OR metaanalys* OR meta-synthe* OR metasynth* OR metaregression OR meta-regression OR "health technology assessment" OR "health technology assessments" OR "synthesis of evidence" OR metasummary) OR SU (meta analy* OR meta-analy* OR metaanalys* OR meta-synthe* OR metasynth* OR metaregression OR meta-regression OR "health technology assessment" OR "synthesis of evidence" OR meta-summary) OR KW (meta analy* OR meta-analy* OR meta-analy* OR meta-analy* OR meta-synthe* OR meta-synthe* OR meta-synthe* OR meta-regression OR "health technology assessment" OR "health technology assessment" OR "synthesis of evidence" OR meta-synthe* OR meta-synthesis of evidence" OR meta-synthesis of evidence OR meta-synthesis of evid	5,608
S28	TI ( (Medline OR Pubmed OR Cinahl OR Cochrane OR CDSR OR Embase OR PsycInfo OR PsycLit OR Scopus OR "Web of Science" OR OVID) ) OR AB ( (Medline OR Pubmed OR Cinahl OR Cochrane OR CDSR OR Embase OR PsycInfo OR PsycLit OR Scopus OR "Web of Science" OR OVID) ) OR SU ( (Medline OR Pubmed OR Cinahl OR Cochrane OR CDSR OR Embase OR PsycInfo OR PsycLit OR Scopus OR "Web of Science" OR OVID) ) OR KW ( (Medline OR Pubmed OR Cinahl OR Cochrane OR CDSR OR Embase OR PsycInfo OR PsycLit OR Scopus OR "Web of Science" OR OVID) )	4,472
S29	TI ( (handsearch OR "data extraction" OR AMSTAR OR AMSTAR2 OR ROBIS) ) OR AB ( (handsearch OR "data extraction" OR AMSTAR OR AMSTAR2 OR ROBIS) )	256
S30	TI ( (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keyword OR keywords OR "key term" OR "key terms")) ) OR AB ( (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keyword OR keywords OR "key term" OR "key terms")) ) OR SU ( (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keyword OR keywords OR "key term" OR "key terms")) ) OR KW (search* N1 (literature or strategy OR strategies OR electronic OR hand OR systematic OR bibliographic OR keywords OR "key term" OR "key terms"))	2,360
S31	S25 OR S26 OR S27 OR S28 OR S29 OR S30	481,921
S32	S24 AND S31	121
S33	S24 AND S31	111

Cochrane Library (John Wiley & Sons Inc.)		
Search date: 21 May 2020		
Line number	Search terms	Number of Results
#1	MeSH descriptor: [Rehabilitation] this term only MeSH	308
#2	(reabl* OR re-abl*)	88
#3	(re-enabl*)	1
#4	("restorative care")	48
#5	(((rehabilit* or habilitat* or reactivat* or restor* or empower* or re-empower* or re-learn* or relearn* or re-educat* or reeducat* or regain*) NEAR/3 (patient* or function* or abilit* or activit* or independen*)))	13652
#6	MeSH descriptor: [Activities of Daily Living] this term only	4795
#7	((("activities of daily living" or IADL or ADL or "limitation of activity" or "limitation of activities" or "Karnofsky scale" or "Karnofsky index" or "Karnofsky performance" or "domestic tasks" or "self-care skills" or "self care skills" or (activ* NEAR/2 daily)) and (rehabilit* or habilitat* or reactivat* or empower* or re-empower* or re-learn* or relearn* or re-educat* or reeducat* or regain* or restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop*)))	17431
#8	MeSH descriptor: [Independent Living] explode all trees	401
#9	MeSH descriptor: [Self Care] this term only	4046
#10	MeSH descriptor: [Recovery of Function] this term only	5027
#11	(((function* or independen* or dependen* or "personal care" or self-manage* or self-care) NEAR/3 (restor* or recover* or maxim* or improv* or maintain* or increas* or optim* or enabl* or develop* or living)))	62256
#12	((function* or home* or living) NEAR/2 (dependen* or independen*))	4460
#13	((increas* or decreas* or reduc* or change or improve*) NEAR/2 ("dependent on care" or "dependence on care" or "reliant on care" or "reliance on care" or "demand for home-care" or "demand on home-care" or "demand for home care" or "demand on home care" or "demand for home help" or "demand for home-help" or "need for home-care" or "need for home-care" or "need for home-care or "need for home-care hours" or "home care hours" or "levels of personal care"))	12670
#14	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13	98926
#15	MeSH descriptor: [Home Care Services] explode all trees	0
#16	MeSH descriptor: [Homemaker Services] explode all trees	6
#17	MeSH descriptor: [House Calls] explode all trees	506
#18	MeSH descriptor: [Community Health Nursing] in all MeSH products	343
#19	MeSH descriptor: [Home Nursing] in all MeSH products	287
#20	MeSH descriptor: [Home Health Nursing] in all MeSH products	7

Cochrane Libra	ry (John Wiley & Sons Inc.)	_
Search date: 21	L May 2020	
#21	((home or home-based or house or houses or house-based or domicil* or residence) NEAR/3 (service* or visit* or call* or support*))	7471
#22	(homecare or "home-care" or (care NEXT (domicil* or home)))	1155
#23	((care or service or services or support or supports) NEAR/3 (home-based or "home setting" or "home settings" or "community setting" or "community settings" or community-based or "community dwelling" or "community dwellings" or community-dwelling or "in the community" or "in the home" or "in the homes" or "at the place of residence" or "at the places of residence" or "at the home" or "at the homes"))	2978
#24	((home* or domicile* or house*)):ti	14248
#25	("delivered in the home" or "delivered at home")	217
#26	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25	21513
#27	#14 AND #26	4876
#28	(aging or ageing or elder* or older* or geriatr* or gerontolog* or senior* or senescen* or retiree* or sexagenarian* or septuagenarian* or octagenarian* or nonagenarian* or centenarian* or supercentenarian* or veteran* or ((old* or elder* or retired) NEAR/2 (people* or patient* or inpatient* or in-patient* or outpatient* or out-patient* or client* or person* or individual* or wom#n or man or men or age)))	123797
#29	(Aged):ti	5562
#30	(Aged):kw	408238
#31	MeSH descriptor: [Aged] in all MeSH products	8819
#32	MeSH descriptor: [Frail Elderly] explode all trees	694
#33	MeSH descriptor: [Health Services for the Aged] explode all trees	439
#34	MeSH descriptor: [Homes for the Aged] explode all trees	609
#35	MeSH descriptor: [Geriatrics] explode all trees	203
#36	#28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35	482829
#37	#27 AND #36	3095
	with Cochrane Library publication date from Jan 2000 to Dec 2020	2868
	in Cochrane Reviews	380

Campbell Library	
Search date: 21 May 2020	
Search terms	Results
reabl* OR re-abl*	3
Re-enabl*	0
Restorative care	0
O results for "rehabilit* or habilitat* or reactivat* or restor* or empower* or re- empower* or re-learn* or relearn* or re-educat* or reeducat* or regain*" anywhere and "patient* or function* or abilit* or activit* or independen*"	0
4 results for "rehab*" anywhere and "older OR elder*" in Title published in "Campbell Systematic Reviews"	4
6 results for ""activities+of+daily+living"" anywhere and "older OR elder OR elderly OR senior OR seniors" in Title published in "Campbell Systematic Reviews"	6
8 results for "self-care" anywhere and "older OR elder OR elderly OR senior OR seniors"	8
10 unique titles, including 5 protocols	10
Campbell Title Registrations to Date - January 2020: 0	0

SCIE Social Care Institute for Excellence.	
Search date: 21 May 2020	
Searches	Number of results
Content Type: SR and all fields: reabl*	6
Content type: RR and all fields: reabl*	6
Content type: RR and SU reablement	8
Content type: SR and SU: reablement	12
Content type: SR and SU Older people and all fields: home care	88
Content type SR and SU older people and all fields "home care"	33
Content type: SR and SU older people and SU independent living	22
Content type: RR and SU older people and SU independent living	14
Content type SR and all fields rehab* and all fields home	20
Content type RR and all fields rehab* and all fields home	9
All fields "restorative care"	8
SU older people and SU activities of daily living and SU home care and title review	2
SU older people and SU social care provision and CT SR and all fields home	10
SU rehabilitation and all fields home and title review	12

SCIE Social Care Institute for Excellence.	
Search date: 21 May 2020	
Title review and AF home and AF re-enabl*	0
Title review and AF home and AF independen*	0
CT SR and AF home and AF independent*	0
	246

Epistemonikos	
Search date: 22 May 2020	
Only search fields available = title/abstract, title, abstract, authors. Publication type: systematic	tic review
Search terms	Number of results
(title:((title:(reablement OR reabling) OR abstract:(reablement OR reabling))) OR abstract:((title:(reablement OR reabling) OR abstract:(reablement OR reabling))))	7
AND publication type: SR	
(title:(rehabilit*) OR abstract:(rehabilit*)) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND (title:(home OR house OR domicile) OR abstract:(home OR house OR domicile))	72
(title:("independent living") OR abstract:("independent living")) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND (title:(home OR house OR domicile) OR abstract:(home OR house OR domicile))	11
(title:("activities of daily living") OR abstract:("activities of daily living")) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND (title:(home OR house OR domicile) OR abstract:(home OR house OR domicile))	62
(title:("home care") OR abstract:("home care")) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND (title:(dependen* OR independen*) OR abstract:(dependen* OR independen*))	29
(title:(improv* function* OR maint*) OR abstract:(improv* function* OR maint*)) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND title:(dependen* OR independen*)	16
(title:("house calls") OR abstract:("house calls")) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND title:(dependen* OR independen*)	0
(title:("house calls") OR abstract:("house calls")) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*))	2
(title:("home nurse" OR "home nurses" OR "home nursing") OR abstract:("home nurse" OR "home nurses" OR "home nursing")) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND (title:(independen* OR dependen*) OR abstract:(independen* OR dependen*))	1
(title:("care program" OR "care programs") OR abstract:("care program" OR "care programs")) AND (title:(older OR elder* OR senior OR aging OR geriatr* OR geront*) OR abstract:(older OR elder* OR senior OR aging OR geriatr* OR geront*)) AND (title:(home OR	10

house OR domicile) OR abstract:(home OR house OR domicile))

title:("intermediate care") AND (title:(older OR elder\* OR senior OR aging OR geriatr\* OR geront\*) OR abstract:(older OR elder\* OR senior OR aging OR geriatr\* OR geront\*)) AND (title:(home OR house OR domicile))

abstract:("intermediate care") AND (title:(older OR elder\* OR senior OR aging OR geriatr\* OR geront\*) OR abstract:(older OR elder\* OR senior OR aging OR geriatr\* OR geront\*)) AND (title:(home OR house OR domicile) OR abstract:(home OR house OR domicile))

218

1

PROSPERO (CRD York)	
Search date: 22 May 2020	
Search terms	Number of results
Reablement	8
Reabling	0
Reable	1
#1 (rehabilitat*):TI,KW1212	3
#2 (older or old or elder or elderly or senior or seniors or aged ageing or aging or geriatr* or geront*):TI,KW 2854	or
#3 (home* or house* or domicile*):TI,KW 780	
#4 #1 AND #2 AND #3 3	
#1 ("home care" or "house calls"):TI,KW 59	17
#2 (older or old or elder or elderly or senior or seniors or aged or ageing aging or geriatr* or geront*):TI,KW 2854	or
#3 (home* or house* or domicile*):TI,KW 780	
#4 #1 AND #2 AND #3 3	
4 records found for ("intermediate care"):TI,KW	4
#1 (old or older or elderly or elder or senior or seniors or aging ageing or geriatr* or geront*):TI,KW,RQ 3312	g or 7
#2 (home* or house* or domicile*):TI,KW,RQ 1083	
#3 #1 AND #2 207	
#4 ("activities of daily living"):TI,KW,RQ 171	
#5 #3 AND #4 7	
No hits for line : rehabilitation AND (Ccare_of_the_elderly):HA	0
Included	40

97

#### **CRD Database**

Including DARE (CRD assessed review (bibliographic), CRD assessed review (full abstract), Cochrane review, Cochrane related review record), NHS EED (CRD assessed economic evaluation (bibliographic), CRD assessed economic evaluation (full abstract)) and HTA (HTA in progress, HTA published).

# Search date: 21 May 2020

Search terms	Number of results
Any field: reable* or reabling	2
Results for: (rehabil*):TI AND (Old OR Older OR elder OR elderly OR senior OR seniors OR aged OR ageing OR ageing OR geriatr* OR geront* ) AND (home* OR house* OR domicile*):TI FROM 2000 TO 2020	18
((Old OR Older OR elder OR elderly OR senior OR seniors OR aged OR aging OR ageing OR geriatr* OR geront* )) AND (care program or care programs or care programme OR care programmes):TI AND (home* or house* or domicile*):TI FROM 2000 TO 2020	3
Results for: ((Old OR Older OR elder OR elderly OR senior OR seniors OR aged OR aging OR ageing OR geriatr* OR geront* )) AND (activities of daily living):TI AND (home* or house* or domicile*):TI FROM 2000 TO 2020	1
Results for: ((Old OR Older OR elder OR elderly OR senior OR seniors OR aged OR aging OR ageing OR geriatr* OR geront* )) AND ("home care" or "house calls"):TI AND (home* or house* or domicile*):TI FROM 2000 TO 2020	26
Results for: ((Old OR Older OR elder OR elderly OR senior OR seniors OR aged OR aging OR ageing OR geriatr* OR geront* )) AND (intermediate care):TI AND (home* or house* or domicile*):TI FROM 2000 TO 2020	0
Results for: ((Old OR Older OR elder OR elderly OR senior OR seniors OR aged OR aging OR ageing OR geriatr* OR geront* )) AND (home nurse or home nurses or home nursing):TI AND (home* or house* or domicile*):TI FROM 2000 TO 2020	1
Total included	51

Core.ac.uk	
Search date: 22 May 2020	
Search terms	Number of results
title:("reablement" AND (review OR meta-analysis OR systematic) ) abstract:("reablement" AND (review OR meta-analysis OR systematic) ) AND year:[2000 TO 2020] (49 articles found)	48
title:("reabling" AND (review OR meta-analysis OR systematic) ) abstract:("reabling" AND (review OR meta-analysis OR systematic) ) AND year:[2000 TO 2020] (1 articles found)	1
Showing results for title:(("house AND calls" AND elder) AND (review OR meta-analysis OR systematic)) abstract:(("house AND calls" AND elder) AND (review OR meta-analysis OR systematic)) AND year:[2000 TO 2020] (0 articles found)	0
Showing results for title:(("intermediate AND care") AND (review OR meta-analysis OR systematic) ) abstract:(("intermediate AND care") AND (review OR meta-analysis OR systematic) ) AND year:[2000 TO 2020] (0 articles found)	0
Showing results for title:((rehabilitation AND older AND home AND review)) abstract:((rehabilitation AND older AND home AND review)) AND year:[2000 TO 2020] (157 articles found)	157
Total included (total unique results)	196

Health Evidence (McMaster University)	-
Search date: 22 May 2020	
Search terms	Number of results
Reabl*	1
Results for: ("restorative care") AND Limit:	0
Date = Published from 2000 to 2020	
Population = Seniors (60+ years)	
Returned 0 results	
Results for: [("home care") AND rehabil*] AND Limit:	1
Date = Published from 2000 to 2020	
Population = Seniors (60+ years)	
Results for: [(activities of daily living) AND (home care)] AND Limit:	1
Date = Published from 2000 to 2020	
Population = Seniors (60+ years)	
Results for: (independent living) AND Limit:	24
Date = Published from 2000 to 2020	
Population = Seniors (60+ years)	
Setting = Community	
Results for: [("care program") AND independ*] AND Limit:	1
Date = Published from 2000 to 2020	
Population = Seniors (60+ years)	
Setting = Community	
Total included	28

Social Systems Evidence	
Search date 22 May 2020	
Search terms	Number of results
Reablement	11
reabling	0
"activities of daily living" AND "home care" Older adults x	25
Date range : 2000-2020 x	
independence AND "home care" AND elder*	35
Older adults x	
Date range : 2000-2020 x	
Total included	71

Health Systems Evidence	
Search date 22 May 2020	
Search terms	Number of results
Reablement	4
Reabling	0
Home rehabilit* elder	2
"Home care" elder	6
Total included	12

EPPI Centre DOPHER Database of promoting health effectiveness reviews (DoPHER)	
Search date 22 May 2020	
Search terms	Number of results
Freetext (All but Authors): reablement	0
Freetext (All but Authors): reabl*	0
Freetext (All but Authors): "home care elderly independence"	0
Freetext (All but Authors): "rehabil* elderly"	0
Freetext (All but Authors): "older independence home"	0
Freetext (All but Authors): reabling	0
Freetext (All but Authors): restorative	1
Total included	1

Google (first 100 results)	
Search date 22 May 2020	
Reablement review	"about 147,000 results (0.23 seconds)"
Search date limits 1 Jan 2000 – 31 Dec 2020	
	146 actual results of which first 80 results extracted to Endnote (remainder consisted of reablement service websites of organisations and councils after this rather than research)

Google Scholar	
Search date: 22 May 2020	
Reablement "review" (wider search terms resulted in majority of confounding results)	about 2,070 results (0.03 sec)
	1st 200 results extracted to Endnote

# C Reference and citation chasing

Reference and citation chasing			
Process	Date	Results	
Reference chasing	8-21 July 2020.	3908	
Citation chasing	8-21 July 2020.	2747	
Reference and citation chasing combined	24 July 2020	6655	
Deduplicated	27 July 2020	4947	
Pre-screening for out-of-scope and previously screened results	27 July – 4 August 2020	7	
Included in final analysis		0	

#### List of reviews used for reference and citation chasing

- 1. Apóstolo J, Cooke R, Bobrowicz-Campos E, *et al.*<sup>42</sup> Effectiveness of interventions to prevent pre-frailty and frailty progression in older adults: a systematic review. *JBI Database System Rev Implement Rep* 2018;16(1):140-232. doi: 10.11124/jbisrir-2017-003382
- 2. Arbesman M, Mosley LJ.<sup>43</sup> Systematic review of occupation- and activity-based health management and maintenance interventions for community-dwelling older adults. *Am J Occup Ther* 2012;66(3):277-83. doi: 10.5014/ajot.2012.003327
- 3. Gardner B, Jovicic A, Belk C, *et al.*<sup>44</sup> Specifying the content of home-based health behaviour change interventions for older people with frailty or at risk of frailty: an exploratory systematic review. *BMJ Open* 2017;7(2):e014127. doi: 10.1136/bmjopen-2016-014127
- 4. Berger S, Escher A, Mengle E, *et al.*<sup>45</sup> Effectiveness of health promotion, management, and maintenance interventions within the scope of occupational therapy for community-dwelling older adults: A systematic review. *Am J Occup Ther* 2018;72(4):7204190010p1-10p10. doi: 10.5014/ajot.2018.030346
- 5. Bersvendsen T, Jungeilges J, Abildsnes E.<sup>26</sup> Evaluation of home-based reablement: A systematic review, 2018
- 6. Berzins K, Reilly S, Abell J, *et al.* <sup>46</sup> UK self-care support initiatives for older patients with long-term conditions: a review. *Chronic Illn* 2009;5(1):56-72. doi: 10.1177/1742395309102886
- 7. Beswick AD, Rees K, Dieppe P, *et al.*<sup>47</sup> Complex interventions to improve physical function and maintain independent living in elderly people: a systematic review and meta-analysis. *Lancet* 2008;371(9614):725-35. doi: 10.1016/s0140-6736(08)60342-6
- 8. Beswick AD, Gooberman-Hill R, Smith A, et al.<sup>48</sup> Maintaining independence in older people. Rev Clin Gerontol 2010;20(2):128-53. doi: 10.1017/S0959259810000079
- 9. van Het Bolscher-Niehuis MJ, den Ouden ME, de Vocht HM, et al.<sup>49</sup> Effects of self-management support programmes on activities of daily living of older adults: A systematic review. *Int J Nurs Stud* 2016;61:230-47. doi: 10.1016/j.ijnurstu.2016.06.014
- 10. Boniface G, Mason M, MacIntyre J, *et al.*<sup>50</sup> The effectiveness of local authority social services' occupational therapy for older people in Great Britain: A critical literature review. *Br J Occup Ther* 2013;76(12):538-47. doi: 10.4276/030802213x13861576675240
- 11. Burton E, Farrier K, Galvin R, *et al.*<sup>51</sup> Physical activity programs for older people in the community receiving home care services: systematic review and meta-analysis. *Clin Interv Aging* 2019;14:1045-64. doi: 10.2147/CIA.S205019
- 12. Clegg AP, Barber SE, Young JB, *et al*.<sup>52</sup> Do home-based exercise interventions improve outcomes for frail older people? Findings from a systematic review. *Rev Clin Gerontol* 2012;22(1):68-78. doi: 10.1017/S0959259811000165
- 13. Clotworthy A, Kusumastuti S, Westendorp RGJ. Peablement through time and space: A scoping review of how the concept of 'reablement' for older people has been defined and operationalised. *BMC Geriatrics* 2020; [Preprint] doi: 10.21203/rs.2.21256/v2
- 14. Cochrane A, Furlong M, McGilloway S, *et al.*<sup>4</sup> Time-limited home-care reablement services for maintaining and improving the functional independence of older adults. *Cochrane Database Syst Rev* 2016;10(10):Cd010825. doi: 10.1002/14651858.CD010825.pub2
- 15. Daniels R, van Rossum E, de Witte L, et al.<sup>53</sup> Interventions to prevent disability in frail community-dwelling elderly: a systematic review. *BMC Health Serv Res* 2008;8:278. doi: 10.1186/1472-6963-8-278

#### List of reviews used for reference and citation chasing

- 16. De Coninck L, Bekkering GE, Bouckaert L, *et al.*<sup>54</sup> Home- and community-based occupational therapy improves functioning in frail older people: A systematic review. *J Am Geriatr Soc* 2017;65(8):1863-69. doi: 10.1111/jgs.14889
- 17. Devereux-Fitzgerald A, Powell R, Dewhurst A, *et al.*<sup>55</sup> The acceptability of physical activity interventions to older adults: A systematic review and meta-synthesis. *Soc Sci Med* 2016;158:14-23. doi: 10.1016/j.socscimed.2016.04.006
- 18. Dibsdall L.<sup>29</sup> A realist synthesis and evaluation of the role and impact of occupational therapists in reablement services [PhD Thesis]. University of the West of England, Bristol, 2019.
- 19. Doh D, Smith R, Gevers P. Reviewing the reablement approach to caring for older people. *Ageing Soc* 2020;40(6):1371-83. doi: 10.1017/S0144686X18001770
- 20. Mayo-Wilson E, Grant S, Burton J, *et al.*<sup>56</sup> Preventive home visits for mortality, morbidity, and institutionalization in older adults: a systematic review and meta-analysis. *PLoS One* 2014;9(3):e89257. doi: 10.1371/journal.pone.0089257
- 21. Faria R, Kiss N, Aspinal F, *et al.*<sup>27</sup> Economic evaluation of social care interventions: lessons drawn from a systematic review of the methods used to evaluate reablement. *Health Econ Outcome Res* 2016;2(1):1000107. doi: 10.4172/2471-268x/1000107
- 22. Fjordside S, Morville A.<sup>57</sup> Factors influencing older people's experiences of participation in autonomous decisions concerning their daily care in their own homes: a review of the literature. *Int J Older People Nurs* 2016;11(4):284-97. doi: 10.1111/opn.12116
- 23. Frich LM.<sup>58</sup> Nursing interventions for patients with chronic conditions. *J Adv Nurs* 2003;44(2):137-53. doi: 10.1046/j.1365-2648.2003.02779.x
- 24. Fritz H, Seidarabi S, Barbour R, *et al.*<sup>59</sup> Occupational therapy Intervention to improve outcomes among frail older adults: A scoping review. *Am J Occup Ther* 2019;73(3):7303205130p1-30p12. doi: 10.5014/ajot.2019.030585
- 25. Frost R, Belk C, Jovicic A, *et al.*<sup>60</sup> Health promotion interventions for community-dwelling older people with mild or pre-frailty: a systematic review and meta-analysis. *BMC Geriatrics* 2017;17(1):157. doi: 10.1186/s12877-017-0547-8
- 26. Hunter EG, Kearney PJ.<sup>61</sup> Occupational therapy interventions to improve performance of instrumental activities of daily living for community-dwelling older adults: A systematic review. *Am J Occup Ther* 2018;72(4):7204190050p1-50p9. doi: 10.5014/ajot.2018.031062
- 27. Giosa JL, Holyoke P, Stolee P.<sup>62</sup> Let's get real about person- and family-centred geriatric home care: A realist synthesis. *Can J Aging* 2019;38(4):449-67. doi: 10.1017/s0714980819000023
- 28. Grant S, Parsons A, Burton J, et al.<sup>63</sup> Home visits for prevention of impairment and death in older adults: A systematic review. *Campbell Systematic Reviews* 2014;10(1):1-85. doi: 10.4073/csr.2014.3
- 29. Gregory A, Mackintosh S, Kumar S, *et al.*<sup>64</sup> Experiences of health care for older people who need support to live at home: A systematic review of the qualitative literature. *Geriatr Nurs* 2017;38(4):315-24. doi: 10.1016/j.gerinurse.2016.12.001
- 30. Rutt J.<sup>65</sup> Reablement A review of evidence and example models of delivery. . Bradford: N. H. S. Doncaster Clinical Commissioning Group,, 2014:38.
- 31. Kirchhoff R, Berg H. <sup>56</sup> Use of video communication technology in the light of everyday and/or tele rehabilitation. *Sykepleien Forskning* 2016:174-83. doi: 10.4220/Sykepleienf.2016.57820
- 32. Legg L, Gladman J, Drummond A, et al.<sup>8</sup> A systematic review of the evidence on home care reablement services. Clin Rehabil 2016;30(8):741-49. doi: 10.1177/0269215515603220
- 33. Liu C-J, Brost MA, Horton VE, *et al.*<sup>67</sup> Occupational therapy interventions to improve performance of daily activities at home for older adults with low vision: A systematic review. *Am J Occup Ther* 2013;67(3):279-87. doi: 10.5014/ajot.2013.005512
- 34. Liu CJ, Chang WP, Chang MC.<sup>68</sup> Occupational therapy interventions to Improve activities of daily living for community-dwelling older adults: A systematic review. *Am J Occup Ther* 2018;72(4):7204190060p1-60p11. doi: 10.5014/ajot.2018.031252
- 35. Looman WM, Huijsman R, Fabbricotti IN.<sup>69</sup> The (cost-)effectiveness of preventive, integrated care for community-dwelling frail older people: A systematic review. *Health Soc Care Community* 2019;27(1):1-30. doi: 10.1111/hsc.12571
- 36. Luker JA, Worley A, Stanley M, *et al.*<sup>70</sup> The evidence for services to avoid or delay residential aged care admission: a systematic review. *BMC Geriatrics* 2019;19(1):217. doi: 10.1186/s12877-019-1210-3
- 37. Pearson M, Hunt H, Cooper C, et al<sup>31</sup>. Providing effective and preferred care closer to home: a realist review of intermediate care. *Health Soc Care Community* 2015;23(6):577-93. doi: 10.1111/hsc.12183
- 38. Menichetti J, Graffigna G, Steinsbekk A.<sup>71</sup> What are the contents of patient engagement interventions for older adults? A systematic review of randomized controlled trials. *Patient Educ Couns* 2018;101(6):995-1005. doi: 10.1016/j.pec.2017.12.009

#### List of reviews used for reference and citation chasing

- 39. Mjøsund HL, Burton E, Moe CF, *et al.*<sup>30</sup> Integration of physical activity in reablement for community dwelling older adults: A systematic scoping review [preprint version 1]. Researchsquare: 02 Dec 2019:1-24. Available from: https://www.researchsquare.com/article/rs-8574/v1
- 40. Nielsen TL, Petersen KS, Nielsen CV, et al. 72 What are the short-term and long-term effects of occupation-focused and occupation-based occupational therapy in the home on older adults' occupational performance? A systematic review. Scand J Occup Ther 2017;24(4):235-48. doi: 10.1080/11038128.2016.1245357
- 41. Orellano E, Colón WI, Arbesman M.<sup>73</sup> Effect of occupation- and activity-based interventions on instrumental activities of daily living performance among community-dwelling older adults: a systematic review. *Am J Occup Ther* 2012;66(3):292-300. doi: 10.5014/ajot.2012.003053
- 42. Papageorgiou N, Marquis R, Dare J, *et al.*<sup>74</sup> Occupational therapy and occupational participation in community dwelling older adults: A review of the evidence. *Phys Occup Ther Geriatr* 2016;34(1):21-42. doi: 10.3109/02703181.2015.1109014
- 43. Pettersson C, Iwarsson S.<sup>5</sup> Evidence-based interventions involving occupational therapists are needed in re-ablement for older community-living people: A systematic review. *Br J Occup Ther* 2017;80(5):273-85. doi: 10.1177/0308022617691537
- 44. Rahja M, Comans T, Clemson L, *et al.*<sup>75</sup> Economic evaluations of occupational therapy approaches for people with cognitive and/or functional decline: A systematic review. *Health Soc Care Community* 2018 doi: 10.1111/hsc.12553
- 45. Ross LA, Schmidt EL, Ball K. $^{76}$  Interventions to maintain mobility: What works? *Accid Anal Prev* 2013;61:167-96. doi: 10.1016/j.aap.2012.09.027
- 46. Ryburn B, Wells Y, Foreman P.<sup>28</sup> Enabling independence: restorative approaches to home care provision for frail older adults. *Health Soc Care Community* 2009;17(3):225-34. doi: 10.1111/j.1365-2524.2008.00809.x
- 47. Seah B, Kowitlawakul Y, Jiang Y, *et al.*<sup>77</sup> A review on healthy ageing interventions addressing physical, mental and social health of independent community-dwelling older adults. *Geriatr Nurs* 2019;40(1):37-50. doi: 10.1016/j.gerinurse.2018.06.002
- 48. Dias Torres Silva CR, Mesquite de Carvalho K, do Livramento Fortes Figueiredo M, *et al.*<sup>78</sup> Health promotion of frail elderly individuals and at risk of frailty. *Rev Bras Enferm* 2019;72:319-27. doi: 10.1590/0034-7167-2018-0575.
- 49. Sims-Gould J, Tong CE, Wallis-Mayer L, *et al.*<sup>6</sup> Reablement, reactivation, rehabilitation and restorative interventions with older adults in receipt of home care: A systematic review. *J Am Med Dir Assoc* 2017;18(8):653-63. doi: 10.1016/j.jamda.2016.12.070
- 50. Steultjens EM, Dekker J, Bouter LM, et al.<sup>79</sup> Occupational therapy for community dwelling elderly people: a systematic review. *Age Ageing* 2004;33(5):453-60. doi: 10.1093/ageing/afh174
- 51. Tessier A, Beaulieu MD, McGinn CA, et al.<sup>7</sup> Effectiveness of reablement: A systematic review. *Healthc Policy* 2016;11(4):49-59. doi: 10.12927/hcpol.2016.24594
- 52. van Leeuwen KM, van Loon MS, van Nes FA, et al.<sup>80</sup> What does quality of life mean to older adults? A thematic synthesis. *PLOS One* 2019;14(3):e0213263. doi: 10.1371/journal.pone.0213263
- 53. Verweij L, van de Korput E, Daams JG, *et al.*<sup>81</sup> Effects of postacute multidisciplinary rehabilitation Including exercise in out-of-hospital settings in the aged: systematic review and meta-analysis. *Arch Phys Med Rehabil* 2019;100(3):530-50. doi: 10.1016/j.apmr.2018.05.010
- 54. Whitehead PJ, Worthington EJ, Parry RH, *et al.*<sup>9</sup> Interventions to reduce dependency in personal activities of daily living in community dwelling adults who usehome care services: a systematic review. *Clin Rehabil* 2015;29(11):1064-76. doi: 10.1177/0269215514564894
- 55. Wilberforce M, Challis D, Davies L, et al.<sup>82</sup> Person-centredness in the community care of older people: A literature-based concept synthesis. Int J Soc Welf 2017;26(1):86-98. doi: 10.1111/ijsw.12221
- 56. Wilkins S, Jung B, Wishart L, *et al.*<sup>83</sup> The effectiveness of community-based occupational therapy education and functional training programs for older adults: A critical literature review. *Can J Occup Ther* 2003;70(4):214-25. doi: 10.1177/000841740307000405
- 57. Wong KC, Wong FKY, Yeung WF, et al.<sup>84</sup> The effect of complex interventions on supporting self-care among community-dwelling older adults: a systematic review and meta-analysis. *Age Ageing* 2018;47(2):185-93. doi: 10.1093/ageing/afx151

# **Appendix 2 Excluded studies**

- A. Results excluded at each stage of the screening process
- B. Studies excluded from Questions 2 and 3 at analysis stage (n=44)
- C. Studies excluded at full-text screening stage (n=167)

## A. Results excluded at each stage of the screening process

Screening criteria	Title/abstract screening	Initial full-text screening	Subsequent full-text screening	Supplemental search results screening
Include	224	57	13 reviews	0
Exclude on intervention	1,029	75	44 reviews	380
Exclude on study type	1,077	11	-	3,013
Exclude on review protocol/synthesis (retain for follow-up)	39	14	-	22
Exclude on target group	360	2	-	555
Exclude on 'background'	107	59	-	49
Exclude on duplicate	14	6	-	27
Exclude on language	24	-	-	481
Exclude on date	2	-	-	411
Exclude: previously included				9
Total excluded	2,652	167	44	4,947

Total studies excluded at full text (n=211)

#### B. Studies excluded from Questions 2 and 3 at analysis stage

These reviews were excluded on the grounds that they related closely to the research questions but were not a close enough match for reablement as an intervention.

#### Excluded on intervention from Questions 2 and 3 at analysis stage (n=44)

- 1. Apóstolo J, Cooke R, Bobrowicz-Campos E, *et al.* Effectiveness of interventions to prevent pre-frailty and frailty progression in older adults: a systematic review. *JBI Database System Rev Implement Rep.* 2018;16(1):140-232.
- 2. Arbesman M, Mosley LJ. Systematic review of occupation- and activity-based health management and maintenance interventions for community-dwelling older adults. *Am J Occup Ther*. 2012;66(3):277-83.
- 3. Berger S, Escher A, Mengle E, *et al.* Effectiveness of health promotion, management, and maintenance interventions within the scope of occupational therapy for community-dwelling older adults: A systematic review. *Am J Occup Ther.* 2018;72(4):7204190010p1-10p10.
- 4. Berzins K, Reilly S, Abell J, et al. UK self-care support initiatives for older patients with long-term conditions: a review. Chronic Illn. 2009;5(1):56-72.
- 5. Beswick AD, Gooberman-Hill R, Smith A, et al. Maintaining independence in older people. Rev Clin Gerontol.

#### Excluded on intervention from Questions 2 and 3 at analysis stage (n=44)

2010;20(2):128-53.

- 6. Beswick AD, Rees K, Dieppe P, et al. Complex interventions to improve physical function and maintain independent living in elderly people: a systematic review and meta-analysis. *Lancet*. 2008;371(9614):725-35.
- 7. Boniface G, Mason M, MacIntyre J, *et al.* The effectiveness of local authority social services' occupational therapy for older people in Great Britain: A critical literature review. *Br J Occup Ther.* 2013;76(12):538-47.
- 8. Burton E, Farrier K, Galvin R, et al. Physical activity programs for older people in the community receiving home care services: systematic review and meta-analysis. *Clin Interv Aging*. 2019;14:1045-64.
- 9. Clegg AP, Barber SE, Young JB, et al. Do home-based exercise interventions improve outcomes for frail older people? Findings from a systematic review. Rev Clin Gerontol. 2012;22(1):68-78.
- 10. Daniels R, van Rossum E, de Witte L, et al. Interventions to prevent disability in frail community-dwelling elderly: a systematic review. *BMC Health Serv Res.* 2008;8:278.
- 11. De Coninck L, Bekkering GE, Bouckaert L, et al. Home- and community-based occupational therapy improves functioning in frail older people: A systematic review. J Am Geriatr Soc. 2017;65(8):1863-69.
- 12. Devereux-Fitzgerald A, Powell R, Dewhurst A, et al. The acceptability of physical activity interventions to older adults: A systematic review and meta-synthesis. Soc Sci Med. 2016;158:14-23.
- 13. Dias Torres Silva CR, Mesquite de Carvalho K, do Livramento Fortes Figueiredo M, et al. Health promotion of frail elderly individuals and at risk of frailty. Rev Bras Enferm. 2019;72:319-27.
- 14. Fjordside S, Morville A. Factors influencing older people's experiences of participation in autonomous decisions concerning their daily care in their own homes: a review of the literature. *Int J Older People Nurs*. 2016;11(4):284-97.
- 15. Frich LM. Nursing interventions for patients with chronic conditions. J Adv Nurs. 2003;44(2):137-53.
- 16. Fritz H, Seidarabi S, Barbour R, et al. Occupational therapy Intervention to improve outcomes among frail older adults: A scoping review. *Am J Occup Ther*. 2019;73(3):7303205130p1-30p12.
- 17. Frost R, Belk C, Jovicic A, et al. Health promotion interventions for community-dwelling older people with mild or pre-frailty: a systematic review and meta-analysis. *BMC Geriatrics*. 2017;17(1):157.
- 18. Gardner B, Jovicic A, Belk C, *et al.* Specifying the content of home-based health behaviour change interventions for older people with frailty or at risk of frailty: an exploratory systematic review. *BMJ Open*. 2017;7(2):e014127.
- 19. Giosa JL, Holyoke P, Stolee P. Let's get real about person- and family-centred geriatric home care: A realist synthesis. *Can J Aging*. 2019;38(4):449-67.
- 20. Grant S, Parsons A, Burton J, et al. Home visits for prevention of impairment and death in older adults: A systematic review. Campbell Systematic Reviews. 2014;10(1):1-85.
- 21. Gregory A, Mackintosh S, Kumar S, et al. Experiences of health care for older people who need support to live at home: A systematic review of the qualitative literature. *Geriatr Nurs*. 2017;38(4):315-24.
- 22. Hunter EG, Kearney PJ. Occupational therapy interventions to improve performance of instrumental activities of daily living for community-dwelling older adults: A systematic review. *Am J Occup Ther*. 2018;72(4):7204190050p1-50p9.
- 23. Kirchhoff R, Berg H. Use of video communication technology in the light of everyday and/or tele rehabilitation. *Sykepleien Forskning*. 2016:174-83.
- 24. Legg L, Gladman J, Drummond A, et al. A systematic review of the evidence on home care reablement services. Clin Rehabil. 2016;30(8):741-49.
- 25. Liu C-J, Brost MA, Horton VE, et al. Occupational therapy interventions to improve performance of daily activities at home for older adults with low vision: A systematic review. Am J Occup Ther. 2013;67(3):279-87.
- 26. Liu CJ, Chang WP, Chang MC. Occupational therapy interventions to Improve activities of daily living for community-dwelling older adults: A systematic review. *Am J Occup Ther*. 2018;72(4):7204190060p1-60p11.
- 27. Looman WM, Huijsman R, Fabbricotti IN. The (cost-)effectiveness of preventive, integrated care for community-dwelling frail older people: A systematic review. *Health Soc Care Community*. 2019;27(1):1-30.

#### Excluded on intervention from Questions 2 and 3 at analysis stage (n=44)

- 28. Luker JA, Worley A, Stanley M, et al. The evidence for services to avoid or delay residential aged care admission: a systematic review. *BMC Geriatrics*. 2019;19(1):217.
- 29. Mayo-Wilson E, Grant S, Burton J, et al. Preventive home visits for mortality, morbidity, and institutionalization in older adults: a systematic review and meta-analysis. *PLoS One*. 2014;9(3):e89257.
- 30. Menichetti J, Graffigna G, Steinsbekk A. What are the contents of patient engagement interventions for older adults? A systematic review of randomized controlled trials. *Patient Educ Couns*. 2018;101(6):995-1005.
- 31. Nielsen TL, Petersen KS, Nielsen CV, et al. What are the short-term and long-term effects of occupation-focused and occupation-based occupational therapy in the home on older adults' occupational performance? A systematic review. Scand J Occup Ther. 2017;24(4):235-48.
- 32. Orellano E, Colón WI, Arbesman M. Effect of occupation- and activity-based interventions on instrumental activities of daily living performance among community-dwelling older adults: a systematic review. *Am J Occup Ther*. 2012;66(3):292-300.
- 33. Papageorgiou N, Marquis R, Dare J, et al. Occupational therapy and occupational participation in community dwelling older adults: A review of the evidence. *Phys Occup Ther Geriatr*. 2016;34(1):21-42.
- 34. Rahja M, Comans T, Clemson L, *et al.* Economic evaluations of occupational therapy approaches for people with cognitive and/or functional decline: A systematic review. *Health Soc Care Community*. 2018.
- 35. Ross LA, Schmidt EL, Ball K. Interventions to maintain mobility: What works? *Accid Anal Prev.* 2013;61:167-96.
- 36. Rutt J. Reablement A review of evidence and example models of delivery. . Bradford: N. H. S. Doncaster Clinical Commissioning Group,; 2014:38. Available from: www.doncasterccg.nhs.uk/wp-content/uploads/2016/01/Reablement-review-FINAL.pdf.
- 37. Seah B, Kowitlawakul Y, Jiang Y, et al. A review on healthy ageing interventions addressing physical, mental and social health of independent community-dwelling older adults. *Geriatr Nurs*. 2019;40(1):37-50.
- 38. Steultjens EM, Dekker J, Bouter LM, et al. Occupational therapy for community dwelling elderly people: a systematic review. Age Ageing. 2004;33(5):453-60.
- 39. van Het Bolscher-Niehuis MJ, den Ouden ME, de Vocht HM, et al. Effects of self-management support programmes on activities of daily living of older adults: A systematic review. Int J Nurs Stud. 2016;61:230-47.
- 40. van Leeuwen KM, van Loon MS, van Nes FA, et al. What does quality of life mean to older adults? A thematic synthesis. *PLOS One*. 2019;14(3):e0213263.
- 41. Verweij L, van de Korput E, Daams JG, *et al.* Effects of postacute multidisciplinary rehabilitation Including exercise in out-of-hospital settings in the aged: systematic review and meta-analysis. *Arch Phys Med Rehabil.* 2019;100(3):530-50.
- 42. Wilberforce M, Challis D, Davies L, et al. Person-centredness in the community care of older people: A literature-based concept synthesis. Int J Soc Welf. 2017;26(1):86-98.
- 43. Wilkins S, Jung B, Wishart L, *et al.* The effectiveness of community-based occupational therapy education and functional training programs for older adults: A critical literature review. *Can J Occup Ther*. 2003;70(4):214-25.
- 44. Wong KC, Wong FKY, Yeung WF, et al. The effect of complex interventions on supporting self-care among community-dwelling older adults: a systematic review and meta-analysis. *Age Ageing*. 2018;47(2):185-93.

## C Studies excluded at full-text screening stage (n=167)

Explanation for exclusion criteria	Number excluded
Studies excluded on background	59
Studies which related to home/community care and could help to inform the researchers about these concepts etc but which were out of scope for this review)	
Studies exclude on duplicate	6
Studies excluded on intervention	75
Studies which did not examine reablement interventions	
Studies excluded as review or study protocol	14
Protocols for reviews and studies were retained for investigation – to follow up the related review or study – but the protocols were not included	
Studies excluded on study type	11
Non-review studies	
Studies excluded on target group	2
As per the inclusion criteria, interventions which may have been in scope but did not examine subjects at home or in the community	

#### Studies excluded on background (n=59)

- 1. Bibas L, Levi M, Bendayan M, et al. Therapeutic interventions for frail elderly patients: part I. Published randomized trials. Prog Cardiovasc Dis 2014;57(2):134-43. doi: https://dx.doi.org/10.1016/j.pcad.2014.07.004
- 2. Bødker MN. Potentiality made workable—exploring logics of care in reablement for older people. Ageing Soc 2019;39(9):2018-41. doi: https://doi.org/10.1017/S0144686X18000417
- 3. Bødker MN, Christensen U, Langstrup H. Home care as reablement or enabling arrangements? An exploration of the precarious dependencies in living with functional decline. Sociol Health Illn 2019;41(7):1358-72. doi: https://doi.org/10.1111/1467-9566.12946
- 4. Boland L, Légaré F, Becerra P, M. M., et al. Impact of home care versus alternative locations of care on elder health outcomes: an overview of systematic reviews. BMC Geriatr 2017;17(1):1-15. doi: https://doi.org/10.1186/s12877-016-0395-y
- 5. Bond RR, Mulvenna MD, Finlay DD, et al. Multi-faceted informatics system for digitising and streamlining the reablement care model. J Bbiomed Inform 2015;56:30-41. doi: https://doi.org/10.1016/j.jbi.2015.05.008
- 6. Briggs AM, Valentijn PP, Thiyagarajan JA, et al. Elements of integrated care approaches for older people: a review of reviews. BMJ Open 2018;8(4):e021194. doi: https://doi.org/10.1136/bmjopen-2017-021194
- 7. Cabrita M, Lamers SMA, Trompetter HR, *et al.* Exploring the relation between positive emotions and the functional status of older adults living independently: a systematic review. Aging Ment Health 2017;21(11):1121-28. doi: https://doi.org/10.1080/13607863.2016.1204982
- 8. Clohessy L. Prevention services in adult social care: reablement. London School of Economics Social Care Evidence in Practice: London School of Economics 2013.
- 9. Dahm KT, Landmark B, Reinar LM. The importance of personnel competence to achieve social participation and activity amongst users of municipal home care: Knowledge Centre for the Health Services at the Norwegian Institute of Public Health (NIPH), 2009:Executive Summaries.
- 10. Doughty K, Mulvihill P. Digital reablement—a personalised service to reduce admissions and readmissions to hospitals and nursing homes. J Assist Technol 2013;7(4):228-34. doi: https://doi.org/10.1108/JAT-07-2013-0018
- 11. Duan-Porter W, Ullman K, Rosebush C, et al. Interventions to prevent or delay long-term nursing home

#### Studies excluded on background (n=59)

placement for adults with Impairments—a systematic review of reviews. J Gen Intern Med 2020;35(7):2118-29. doi: https://doi.org/10.1007/s11606-019-05568-5

- 12. Duckworth JM, Repede E, Elliott L. Nurse practitioners aiding frail elderly through home visits. Home Health Care Management & Practice 2013;25(5):212-16. doi: https://doi.org/10.1177/1084822313484760
- 13. Eliassen M, Henriksen NO, Moe S. Physiotherapy supervision of home trainers in interprofessional reablement teams. J Interprof Care 2019;33(5):512-18. doi: https://doi.org/10.1080/13561820.2018.1541877
- 14. Eliassen M, Henriksen NO, Moe S. Variations in physiotherapy practices across reablement settings. Physiother Theory Pract 2020;36(1):108-21. doi: https://doi.org/10.1080/09593985.2018.1481162
- 15. Elkan R, Kendrick D, Dewey M, *et al.* Effectiveness of home based support for older people: systematic reviews and meta-analysis. BMJ 2001;323:719-24. doi: https://doi.org/10.1136/bmj.323.7315.719
- 16. Fagerstrom L, Wikblad A, Nilsson J. An integrative research review of preventive home visits among older people--is an individual health resource perspective a vision or a reality? Scand J Caring Sci 2009;23(3):558-68. doi: https://doi.org/10.1111/j.1471-6712.2008.00637.x
- 17. FitzGerald Murphy M, Kelly C. Questioning "choice": A multinational metasynthesis of research on directly funded home-care programs for older people. Health Soc Care Community 2019;27(3):e37-e56. doi: https://dx.doi.org/10.1111/hsc.12646
- 18. Francis J, Fisher M, Rutter D. Reablement: a cost-effective route to better outcomes: Social Care Institute for Excellence London; 2011 [Available from: https://www.scie.org.uk/publications/briefings/briefing36/]
- 19. Gerrish K, Laker S, Wright S, et al. Medicines reablement in intermediate health and social care services. Prim Health Care Res Dev 2017;18(4):305-15. doi: https://doi.org/10.1017/S1463423617000238
- 20. Gustafsson L-K, Anbäcken E-M, Elfström ML, *et al.* Working with short-term goal-directed reablement with older adults: Strengthened by a collaborative approach. Nordic J Nurs Res 2019;39(4):178-85. doi: https://doi.org/10.1177/2057158519850974
- 21. Gustafsson L-K, Östlund G, Zander V, *et al.* 'Best fit' caring skills of an interprofessional team in short-term goal-directed reablement: older adults' perceptions. Scand J Caring Sci 2019;33(2):498-506. doi: https://doi.org/10.1111/scs.12650
- 22. Haugen I, Slettebo T, Ytrehus S. Factors affecting user participation for elderly people with dementia living at home: a critical interpretive synthesis of the literature. Eur J Soc Work 2019;22(6):974-86. doi: https://doi.org/10.1080/13691457.2018.1441133
- 23. International Foundation for Integrated Care Scotland. Integrated care matters. Reablement care at home. Knowledge tree branch: International Foundation for Integrated Care Scotland,, 2017.
- 24. Iriss. Effectiveness of reablement services. Glasgow, Scotland: Iriss, 2011.
- 25. Iwarsson S, Lofqvist C, Oswald F. Synthesizing ENABLE-AGE research findings to suggest evidence-based home and health interventions. J Hous Elderly 2016;30(3):330-43. doi: https://doi.org/10.1080/02763893.2016.1198742
- 26. Jacobi C, Thiel D, Allum N. Enabling and constraining successful reablement: Individual and neighbourhood factors. PLoS ONE 2019;15(9):e0237432. doi: https://doi.org/10.1371/journal.pone.0237432
- 27. Jakobsen FA, Vik K. Health professionals' perspectives of next of kin in the context of reablement. Disabil Rehabil 2019;41(16):1882-89. doi: https://doi.org/10.1080/09638288.2018.1450452
- 28. Johansson G, Eklund K, Gosman-Hedstrom G. Multidisciplinary team, working with elderly persons living in the community: a systematic literature review. Scand J Occup Ther 2010;17(2):101-16. doi: https://dx.doi.org/10.1080/11038120902978096
- 29. Jokstad K, Skovdahl K, Landmark BT, *et al.* Ideal and reality; Community healthcare professionals' experiences of user-involvement in reablement. Health Soc Care Community 2019;27(4):907-16. doi: https://doi.org/10.1111/hsc.12708
- 31. Lenouvel E, Novak L, Nef T, et al. Advances in sensor monitoring effectiveness and applicability: a

#### Studies excluded on background (n=59)

- systematic review and update. Gerontologist 2020;60(4):e299-e308. doi: https://doi.org/10.1093/geront/gnz049
- 32. Lewin GF, Alfonso HS, Alan JJ. Evidence for the long term cost effectiveness of home care reablement programs. Clin Interv Aging 2013;8:1273-81. doi: https://doi.org/10.2147/CIA.S49164
- 33. Liaaen J, Vik K. Becoming an enabler of everyday activity: Health professionals in home care services experiences of working with reablement. Int J Older People Nurs 2019;14(4):e12270. doi: https://doi.org/10.1111/opn.12270
- 34. Low LF, Fletcher J. Models of home care services for persons with dementia: a narrative review. Int Psychogeriatr 2015;27(10):1593-600. doi: https://dx.doi.org/10.1017/S1041610215000137
- 35. Macintyre G, Stewart A. National performance indicator: increase the percentage of people aged 65 and over with high levels of care needs who are cared for at home. Glasgow: Institute for Research and Innovation in Social Services 2011.
- 36. McWilliam CL, Diehl-Jones WL, Jutai J, et al. Care delivery approaches and senior's independence. Can J Aging 2000;19(Suppl 1):101-24. doi: https://doi.org/10.1017/S0714980800014677
- 37. Nancarrow SA, Moran AM, Parker SG. Understanding service context: development of a service pro forma to describe and measure elderly peoples' community and intermediate care services. Health Soc Care Community 2009;17(5):434-46. doi: https://doi.org/10.1111/j.1365-2524.2009.00846.x
- 38. National Institute For Health and Care Excellence. NICE Guideline NG74 Intermediate care including reablement: National Institute For Health and Care Excellence, 2017.
- 39. Newton C. Personalising reablement: inserting the missing link. Work Older People 2012;16(3):117-21. doi: https://doi.org/10.1108/13663661211260934
- 40. NHS Midlands and Lancashire Commissioning Support Unit. Reducing unplanned admissions: using community based interventions: rapid evidence scan. West Midlands: NHS Midlands and Lancashire Commissioning Support Unit. The Strategy Unit 2016.
- 41. Olanrewaju O, Kelly S, Cowan A, et al. Physical activity in community dwelling older people: A systematic review of reviews of interventions and context. PLoS ONE 2016;11(12):e0168614. doi: https://doi.org/10.1371/journal.pone.0168614
- 42. Ottmann G, Allen J, Feldman P. A systematic narrative review of consumer-directed care for older people: implications for model development. Health Soc Care Community 2013;21(6):563-81. doi: https://doi.org/10.1111/hsc.12025
- 43. Parsons M, Senior HEJ, Kerse N, et al. The Assessment of Services Promoting Independence and Recovery in Elders Trial (ASPIRE): a pre-planned meta-analysis of three independent randomised controlled trial evaluations of ageing in place initiatives in New Zealand. Age Ageing 2012;41(6):722-28. doi: https://dx.doi.org/10.1093/ageing/afs113
- 44. Pearson M, Hunt H, Cooper C, *et al.* Intermediate care: a realist review and conceptual framework: National Institute for Health Research Service Delivery and Organisation Programme, 2013.
- 45. Peetoom KK, Lexis MA, Joore M, et al. Literature review on monitoring technologies and their outcomes in independently living elderly people. Disabil Rehabil Assist Technol 2015;10(4):1-24. doi: https://doi.org/10.3109/17483107.2014.961179
- 46. Piraino E, Heckman G, Glenny C, et al. Transitional care: who is left behind? A systematic review. Int J Integr Care 2012;12:e132. doi: https://doi.org/10.5334/ijic.805
- 47. Poulos RG, Gresham M, O'Connor CM, et al. Bridging the gap: from reablement policy to practice for people with dementia. Alzheimers Dement (N Y) 2018;4:508-09. doi: https://doi.org/10.1016/j.trci.2018.08.008
- 48. Provencher V, Demers L, Gélinas I. Home and clinical assessments of instrumental activities of daily living: what could explain the difference between settings in frail older adults, if any? Br J Occup Ther 2009;72(8):339-48. doi: https://doi.org/10.1177/030802260907200803
- 49. Research In Practice For Adults. Effectiveness of reablement services. RIPFA Evidence Clusters Dartington: Research In Practice For Adults,, 2008.

#### Studies excluded on background (n=59)

- 50. Rutt J. Reablement: a review of evidence and example models of delivery: Yorkshire and Humber Commissioning Support, 2014.
- 51. Ryan R, Santesso N, Lowe D, *et al.* Interventions to improve safe and effective medicines use by consumers: an overview of systematic reviews. Cochrane Database Syst Rev 2014;2014(4):CD007768. doi: https://doi.org/10.1002/14651858.CD007768.pub3
- 52. Schick-Makaroff K, Karimi-Dehkordi M, Cuthbertson L, *et al.* Using patient- and family-reported outcome and experience measures across transitions of care for frail older adults living at home: a meta-narrative synthesis. Gerontologist 2020;16:gnz162. doi: https://dx.doi.org/10.1093/geront/gnz162
- 53. Speirs T. Evidence review and principles for reablement in home care: Leading Age Services Australia, 2018.
- 54. Tew J, Nicholls V, Plumridge G, et al. Family-inclusive approaches to reablement in mental health: models, mechanisms and outcomes. Br J Soc Work 2017;47(3):864-84. doi: https://doi.org/10.1093/bjsw/bcw106
- 55. Wales K, Clemson L, Lannin N, et al. Functional assessments used by occupational therapists with older adults at risk of activity and participation limitations: A systematic review. PLoS ONE 2016;11(2):e0147980. doi: https://doi.org/10.1371/journal.pone.0147980
- 56. Wilson A, Richards S, Camosso-Stefinovic J. Older people's satisfaction with intermediate care: A systematic review. Rev Clin Gerontol 2007;17(3):199-218. doi: https://doi.org/10.1017/S0959259808002475
- 57. Yen IH, Flood JF, Thompson H, *et al.* How design of places promotes or inhibits mobility of older adults: realist synthesis of 20 years of research. J Aging Health 2014;26(8):1340-72. doi: https://doi.org/10.1177/0898264314527610
- 58. Zingmark M, Evertsson B, Haak M. The content of reablement: Exploring occupational and physiotherapy interventions. Br J Occup Ther 2019;82(2):122-26. doi: https://doi.org/10.1177/0308022618792188
- 59. Zwijsen S, Niemeijer A, Hertogh C. Ethics of using assistive technology in the care for community-dwelling elderly people: an overview of the literature. Aging Ment Health 2011;15(4):419-27. doi: https://doi.org/10.1080/13607863.2010.543662

# Studies excluded on duplicate (n=6)

- 1. Cochrane A, Furlong M, McGilloway S, et al. Time-limited home-care reablement services for maintaining and improving the functional independence of older adults. *Cochrane Database Syst Rev* 2016;2016:CD010825. doi: https://doi.org/10.1002/14651858.CD010825.pub2
- 2. Department of Health and Social Care GB. Quality Matters: a summary of year one outputs, Occupational therapy interventions to improve performance of instrumental activities of daily living for community-dwelling older adults: a systematic review. 2018
- 3. Gardner B, Jovicic A, Belk C, et al. Specifying the content of home-based health behaviour change interventions for older people with frailty or at risk of frailty: an exploratory systematic review. BMJ Open 2017;7(2):e014127. doi: https://doi.org/10.1136/bmjopen-2016-014127
- 4. Hunter EG, Kearney PJ. Occupational therapy interventions to improve performance of instrumental activities of daily living for community-dwelling older adults: A systematic review. *Am J Occup Ther* 2018;72(4):7204190050p1-50p9. doi: https://doi.org/10.5014/ajot.2018.031062
- 5. Leen De C, et al., De Coninck L, et al. Home and community-based occupational therapy improves functioning in frail older people: a systematic review. *J Am Geriatr Soc* 2017;65(8):1863-69. doi: https://doi.org/10.1111/jgs.14889
- 6. National Institute For Health and Care Excellence. Intermediate care including reablement. NICE guideline., 2017.

#### Studies excluded on intervention (n=75)

1. Abad-Corpa E, Gonzalez-Gil T, Martinez-Hernandez A, et al. Caring to achieve the maximum independence possible: A synthesis of qualitative evidence on older adults' adaptation to dependency. J Clin Nurs 2012;21(21-

- 22):3153-69. doi: https://doi.org/10.1111/j.1365-2702.2012.04207.x
- 2. Al-Shaqi R, Mourshed M, Rezgui Y. Progress in ambient assisted systems for independent living by the elderly. *Springerplus* 2016;5(5):624. doi: https://doi.org/10.1186/s40064-016-2272-8
- 3. Allen Christensen K, Lund K-M, Thuesen J. Evaluation of person-centredness in rehabilitation for people living with dementia is needed: A review of the literature. *J Aging Res* 2019;2019:8510792. doi: https://dx.doi.org/10.1155/2019/8510792
- 4. Anderson C, Ní Mhurchu C, Brown PM, *et al.* Stroke rehabilitation services to accelerate hospital discharge and provide home-based care: an overview and cost analysis. *Pharmacoeconomics* 2002;20(8):537-52. doi: https://dx.doi.org/10.2165/00019053-200220080-00004
- 5. Andrews J, Manthorpe J, Watson R. Involving older people in intermediate care. *J Adv Nurs* 2004;46(3):303-10. doi: https://doi.org/10.1111/j.1365-2648.2004.02990.x
- 6. Anuruang S, Hickman LD, Jackson D, et al. Community-based interventions to promote management for older people: an integrative review. *J Clin Nurs* 2014;23(15-16):2110-20. doi: https://doi.org/10.1111/jocn.12445
- 7. Apóstolo J, Bobrowicz-Campos E, Rodrigues M, *et al.* The effectiveness of non-pharmacological interventions in older adults with depressive disorders: A systematic review. *Int J Nurs Stud* 2016;58:59-70. doi: https://doi.org/10.1016/j.ijnurstu.2016.02.006
- 8. Arif MJ, El Emary IMM, Koutsouris DD. A review on the technologies and services used in the self-management of health and independent living of elderly. *Technol Health Care* 2014;22(5):677-87. doi: https://dx.doi.org/10.3233/THC-140851
- 9. Arnold CM, Sran MM, Harrison EL. Exercise for fall risk reduction in community-dwelling older adults: a systematic review. *Physiother Can* 2008;60(4):358-72. doi: https://doi.org/10.3138/physio.60.4.358
- 10. Ashworth NL, Chad KE, Harrison EL, et al. Home versus center based physical activity programs in older adults. Cochrane Database Syst Rev 2005(1) doi: https://dx.doi.org/10.1002/14651858.CD004017.pub2
- 11. Auais MA, Eilayyan O, Mayo NE. Extended exercise rehabilitation after hip fracture improves patients' physical function: a systematic review and meta-analysis. *Phys Ther* 2012;92(11):1437-51. doi: https://dx.doi.org/10.2522/ptj.20110274
- 12. Aziz NA, Leonardi-Bee J, Phillips MF, *et al.* Therapy-based rehabilitation services for patients living at home more than one year after stroke. *Cochrane Database Syst Rev* 2008;2008(2):CD005952. doi: https://dx.doi.org/10.1002/14651858.CD005952.pub2
- 13. Backonja U, Chi NC, Choi Y, et al. Visualization approaches to support healthy aging: A systematic review. *J Innov Health Inform* 2016;23(3):860. doi: https://dx.doi.org/10.14236/jhi.v23i3.860
- 14. Bahar-Fuchs A, Martyr A, Goh AMY, et al. Cognitive training for people with mild to moderate dementia. *Cochrane Database Syst Rev* 2019;2019(3):CD013069. doi: https://dx.doi.org/10.1002/14651858.CD013069.pub2
- 15. Bedaf S, Gelderblom GJ, De Witte L. Overview and categorization of robots supporting independent living of elderly people: What activities do they support and how far have they developed. *Assist Technol* 2015;27(2):88-100. doi: https://doi.org/10.1080/10400435.2014.978916
- 16. Bennett S, Laver K, Voigt-Radloff S, et al. Occupational therapy for people with dementia and their family carers provided at home: a systematic review and meta-analysis. *BMJ Open* 2019;9(11):e026308. doi: https://dx.doi.org/10.1136/bmjopen-2018-026308
- 17. Brusco NK, Taylor NF, Watts JJ, et al. Economic evaluation of adult rehabilitation: a systematic review and meta-analysis of randomized controlled trials in a variety of settings. *Arch Phys Med Rehabil* 2014;95(1):94-116.e4. doi: https://dx.doi.org/10.1016/j.apmr.2013.03.017
- 18. Burton E, Farrier K, Lewin G, *et al.* Are interventions effective in improving the ability of older adults to rise from the floor independently? A mixed method systematic review. *Disabil Rehabil* 2020;42(6):1-11. doi: https://doi.org/10.1080/09638288.2018.1508509
- 19. Burton E, Lewin G, Boldy D. A systematic review of physical activity programs for older people receiving home care services. *J Aging Phys Act* 2015;23(3):460-70. doi: https://doi.org/10.1123/japa.2014-0086
- 20. Chase CA, Mann K, Wasek S, et al. Systematic review of the effect of home modification and fall prevention programs on falls and the performance of community-dwelling older adults. Am J Occup Ther 2012;66(3):284-91.

doi: https://dx.doi.org/10.5014/ajot.2012.005017

- 21. Chase JA, Phillips LJ, Brown M. Physical activity intervention effects on physical function among community-dwelling older adults: A systematic review and meta-analysis. *J Aging Phys Act* 2017;25(1):149-70. doi: https://doi.org/10.1123/japa.2016-0040
- 22. Connolly B, Salisbury L, O'Neill B, et al. Exercise rehabilitation following intensive care unit discharge for recovery from critical illness. *Cochrane Database Syst Rev* 2015;2015(6):CD008632. doi: http://dx.doi.org/10.1002/14651858.CD008632.pub2
- 23. Corrieri S, Heider D, Riedel-Heller SG, *et al.* Cost-effectiveness of fall prevention programs based on home visits for seniors aged over 65 years: a systematic review. *Int Psychogeriatr* 2011;23(5):711-23. doi: https://dx.doi.org/10.1017/S1041610210002280
- 24. Crotty M, Unroe K, Cameron ID, et al. Rehabilitation interventions for improving physical and psychosocial functioning after hip fracture in older people. *Cochrane Database Syst Rev* 2010;2010(1):CD007624. doi: https://doi.org/10.1002/14651858.CD007624.pub3
- 25. D'Onofrio G, Sancarlo D, Ricciardi F, *et al.* Information and communication technologies for the activities of daily living in older patients with dementia: A systematic review. *J Alzheimers Dis* 2017;57(3):927-35. doi: https://dx.doi.org/10.3233/JAD-161145
- 26. Dawson A, Bowes A, Kelly F, *et al.* Evidence of what works to support and sustain care at home for people with dementia: a literature review with a systematic approach. *BMC Geriatr* 2015;15:59. doi: https://dx.doi.org/10.1186/s12877-015-0053-9
- 27. Desveaux L, Beauchamp M, Goldstein R, et al. Community-based exercise programs as a strategy to optimize function in chronic disease: a systematic review *Med Care* 2014;52(3):216-26. doi: https://doi.org/10.1097/MLR.000000000000005
- 28. Dolezel G. Adult day programs: heterogeneous in nature. Geriaction 2008;26(3):28-32.
- 29. Donnelly S, Cahill S, O'Neill D. Care planning meetings: Issues for policy, multi-disciplinary practice and patient participation. *Practice: Social Work in Action* 2018;30(1):53-71. doi: https://doi.org/10.1080/09503153.2017.1385758
- 30. Eklund K, Wilhelmson K. Outcomes of coordinated and integrated interventions targeting frail elderly people: a systematic review of randomised controlled trials. *Health Soc Care Community* 2009;17(5):447-58. doi: https://doi.org/10.1111/j.1365-2524.2009.00844.x
- 31. Eldar R. Rehabilitation in the community for patients with stroke: a review. *Top Stroke Rehabil* 2000;6(4):48-59. doi: https://doi.org/10.1310/2C0E-A1N6-0QBT-D1R3
- 32. Elliott S, E. LN. Occupational therapy fall prevention interventions for community-dwelling older adults: a systematic review. *Am J Occup Ther* 2018;72(4):7204190040p1-40p11. doi: https://doi.org/10.5014/ajot.2018.030494
- 33. Fairhall N, Sherrington C, Clemson L, et al. Do exercise interventions designed to prevent falls affect participation in life roles? A systematic review and meta-analysis. *Age Ageing* 2011;40(6):666-74. doi: https://dx.doi.org/10.1093/ageing/afr077
- 34. Ferrarello F, Baccini M, Rinaldi LA, et al. Efficacy of physiotherapy interventions late after stroke: a meta-analysis. *J Neurol Neurosurg Psychiatry* 2011;82(2):136-43. doi: https://dx.doi.org/10.1136/jnnp.2009.196428
- 35. Forbes D, Forbes SC, Blake CM, et al. Exercise programs for people with dementia. *Cochrane Database Syst Rev* 2015(4):CD006489. doi: https://dx.doi.org/10.1002/14651858.CD006489.pub4
- 36. Geraedts H, Zijlstra A, Bulstra SK, et al. Effects of remote feedback in home-based physical activity interventions for older adults: A systematic review. Patient Educ Couns 2013;91(1):14-24. doi: http://dx.doi.org/10.1016/j.pec.2012.10.018
- 37. Golding-Day M, Whitehead P, Radford K, et al. Interventions to reduce dependency in bathing in community dwelling older adults: a systematic review. Syst Rev 2017;6(1):198. doi: https://doi.org/10.1186/s13643-017-0586-4
- 38. Haider S, Grabovac I, Dorner TE. Effects of physical activity interventions in frail and prefrail community-dwelling people on frailty status, muscle strength, physical performance and muscle mass-a narrative review.

Wien Klin Wochenschr 2019;131(11-12):244-54. doi: https://dx.doi.org/10.1007/s00508-019-1484-7

- 39. Hendry A, Vanhecke E, Carriazo AM, et al. Integrated care models for managing and preventing frailty: a systematic review for the European Joint Action on Frailty Prevention (ADVANTAGE JA). Transl Med UniSa
- 2019;19:5-10.
- 40. Hill KD, Hunter SW, Batchelor FA, *et al.* Individualized home-based exercise programs for older people to reduce falls and improve physical performance: A systematic review and meta-analysis. *Maturitas* 2015;82(1):72-84. doi: https://dx.doi.org/10.1016/j.maturitas.2015.04.005
- 41. Howe TE, Rochester L, Neil F, et al. Exercise for improving balance in older people. Cochrane Database Syst Rev 2011;2011(11):CD004963. doi: https://doi.org/10.1002/14651858.CD004963.pub3
- 42. Johnson S, Bacsu J, Abeykoon H, et al. No place like home: a systematic review of home care for older adults in Canada. Can J Aging 2018;37(4):400-19. doi: https://doi.org/10.1017/S0714980818000375
- 43. Kendrick D, Kumar A, Carpenter H, et al. Exercise for reducing fear of falling in older people living in the community. *Cochrane Database Syst Rev* 2014;2014(11):CD009848. doi: https://doi.org/10.1002/14651858.CD009848.pub2
- 44. Kuijlaars IAR, Sweerts L, Nijhuis-van der Sanden MWG, *et al.* Effectiveness of supervised home-based exercise therapy compared to a control intervention on functions, activities, and participation in older patients after hip fracture: a systematic review and meta-analysis. *Arch Phys Med Rehabil* 2019;100(1):101-14.e6. doi: https://dx.doi.org/10.1016/j.apmr.2018.05.006
- 45. Kwan I, Rutter D, Anderson B, et al. Personal care and practical support at home: a systematic review of older people. Work Older People 2019;23(2):87-106. doi: https://doi.org/10.1108/WWOP-01-2019-0002
- 46. Lamont T, Evans T, Ford A, et al. Help at home: use of assistive technology for older people: NHS National Institute for Health Research, 2018.
- 47. Legg L, Langhorne P, Outpatient Service Trialists. Rehabilitation therapy services for stroke patients living at home: systematic review of randomised trials. *Lancet* 2004;363(9406):352-6. doi: https://doi.org/10.1016/S0140-6736(04)15434-2
- 48. Legg LA, Lewis SR, Schofield-Robinson OJ, et al. Occupational therapy for adults with problems in activities of daily living after stroke. *Cochrane Database of Systematic Reviews* 2017(7) doi: 10.1002/14651858.CD003585.pub3
- 49. Lewis M, Peiris CL, Shields N. Long-term home and community-based exercise programs improve function in community-dwelling older people with cognitive impairment: a systematic review. *J Physiother* 2017;63(1):23-29. doi: https://dx.doi.org/10.1016/j.jphys.2016.11.005
- 50. Liu L, Stroulia E, Nikolaidis I, *et al.* Smart homes and home health monitoring technologies for older adults: A systematic review. *Int J Med Inform* 2016;91:44-59. doi: https://dx.doi.org/10.1016/j.ijmedinf.2016.04.007
- 51. Mahler M, Sarvimaki A, Clancy A, et al. Home as a health promotion setting for older adults. *Scandinavian Journal of Public Health* 2014;42(15 Suppl):36-40. doi: https://dx.doi.org/10.1177/1403494814556648
- 52. Martinho D, Carneiro J, Corchado JM, et al. A systematic review of gamification techniques applied to elderly care. Artif Intell Rev 2020;53:4863–901. doi: https://doi.org/10.1007/s10462-020-09809-6
- 53. Marziali E, Serafini JM, McCleary L. A systematic review of practice standards and research ethics in technology-based home health care intervention programs for older adults. *J Aging Health* 2005;17(6):679-96. doi: https://doi.org/10.1177/0898264305281100
- 54. McClure RJ, Turner C, Peel N, et al. Population-based interventions for the prevention of fall-related injuries in older people. *Cochrane Database Syst Rev* 2005;25(1):CD004441. doi: https://doi.org/10.1002/14651858.CD004441.pub2
- 55. Nancarrow SA, Mountain GA. Staffing intermediate care services: a review of the literature to inform workforce development. Sheffield, UK: Sheffield Hallam University 2002.
- 56. Nordström P, Thorngren KG, Hommel A, et al. Effects of geriatric team rehabilitation after hip fracture: metaanalysis of randomized controlled trials. J Am Med Dir Assoc 2018;19(10):840-45. doi: https://doi.org/10.1016/j.jamda.2018.05.008
- 57. Ozdemir O, Tosun BU. Effects of home exercise programmes during home visits after hip replacement: a

- systematic review. J Coll Physicians Surg Pak 2017;27(1):34-37.
- 58. Peeters CM, Visser E, Van de Ree CL, *et al.* Quality of life after hip fracture in the elderly: A systematic literature review. *Injury* 2016;47(7):1369-82. doi: https://doi.org/10.1016/j.injury.2016.04.018
- 59. Pol MC, Poerbodipoero S, Robben S, *et al.* Sensor monitoring to measure and support daily functioning for independently living older people: a systematic review and road map for further development *J Am Geriatr Soc* 2013;61(12):2219-27. doi: https://doi.org/10.1111/jgs.12563
- 60. Reeder B, Jane C, Stevens-Lapsley J. Current telerehabilitation research with older adults at home. *J Gerontol Nurs* 2016;42(10):15-20. doi: https://doi.org/10.3928/00989134-20160201-02
- 61. Schoessow K. Shifting from compensation to participation: a model for occupational therapy in low vision. *Br J Occup Ther* 2010;73(4):160-69. doi: https://doi.org/10.4276/030802210X12706313443947
- 62. Scott I, Cooper C, Leverton M, et al. Effects of nonpharmacological interventions on functioning of people living with dementia at home: a systematic review of randomised controlled trials. Int J Geriatr Psychiatry 2019;34(10):1386-402. doi: https://doi.org/10.1002/gps.5127
- 63. Sempe L, Billings J, Lloyd-Sherlock P. Multidisciplinary interventions for reducing the avoidable displacement from home of frail older people: a systematic review. *BMJ Open* 2019;9(11):e030687. doi: https://doi.org/10.1136/bmjopen-2019-030687
- 64. Skelton DA, Howe TE, Ballinger C, et al. Environmental and behavioural interventions for reducing physical activity limitation in community-dwelling visually impaired older people. Cochrane Database Syst Rev 2013;6(6):CD009233. doi: https://doi.org/10.1002/14651858.CD009233.pub2
- 65. Song Y, van der Cammen TJM. Electronic assistive technology for community-dwelling solo-living older adults: a systematic review. *Maturitas* 2019;125:50-56. doi: https://doi.org/10.1016/j.maturitas.2019.04.211
- 66. Stuck AE, Egger M, Hammer A, *et al.* Home visits to prevent nursing home admission and functional decline in elderly people: systematic review and meta-regression analysis. *JAMA* 2002;287(8):1022-28. doi: https://doi.org/10.1001/jama.287.8.1022
- 67. Tappenden P, Campbell F, Rawdin A, et al. The clinical effectiveness and cost-effectiveness of home-based, nurse-led health promotion for older people: a systematic review. *Health Technol Assess* 2012;16(20):1-72. doi: https://dx.doi.org/10.3310/hta16200
- 68. Teng B, Gomersall SR, Hatton A, et al. Combined group and home exercise programmes in community-dwelling falls-risk older adults: Systematic review and meta-analysis. *Physiother Res Int* 2020;25(3):e1839. doi: https://dx.doi.org/10.1002/pri.1839
- 69. Thiebaud RS, Funk MD, Abe T. Home-based resistance training for older adults: a systematic review. *Geriatr Gerontol Int* 2014;14(4):750-57. doi: https://dx.doi.org/10.1111/ggi.12326
- 70. Thomé B, Dykes A, Hallberg IR. Home care with regard to definition, care recipients, content and outcome: systematic literature review. *J Clin Nurs* 2003;12(6):860-72. doi: https://doi.org/10.1046/j.1365-2702.2003.00803.x
- 71. Tourigny A, Bédard A, Laurin D, et al. Preventive home visits for older people: A systematic review. Can J Aging 2015;34(4):506-23. doi: https://doi.org/10.1017/S0714980815000446
- 72. Vandemeulebroucke T, Dierckx De Casterle B, Gastmans C. How do older adults experience and perceive socially assistive robots in aged care: a systematic review of qualitative evidence. *Aging Ment Health* 2018;22(2):149-67. doi: https://doi.org/10.1080/13607863.2017.1286455
- 73. Vassli LT, Farshchian BA. Acceptance of health-related ict among elderly people living in the community: A systematic review of qualitative evidence. *Int J Hum Comput Interact* 2018;34(2):99-116. doi: https://doi.org/10.1080/10447318.2017.1328024
- 74. Ward D, Drahota A, Gal D, et al. Care home versus hospital and own home environments for rehabilitation of older people. *Cochrane Database Syst Rev* 2008;2008(4):CD003164. doi: https://dx.doi.org/10.1002/14651858.CD003164.pub2
- 75. Warrick N, Prorok JC, Seitz D. Care of community-dwelling older adults with dementia and their caregivers. *CMAJ* 2018;190(26):E794-E99. doi: https://dx.doi.org/10.1503/cmaj.170920

#### Studies excluded as review or study protocol (n=14)

- 1. Audsley S, Orton E, Maula A, *et al*. What intervention components work best to maintain physical activity in older people? A systematic review. *Physiotherapy* 2019;105:e56-e57. doi: https://doi.org/10.1016/j.physio.2018.11.014
- 2. Bigger L, Taylor B. A literature review for the development of a supported living initiative for older people in rural North Antrim. Ballymoney: Causeway Health and Social Services Trust 2006.
- 3. Caesar D, Morley A. Perceptions of reablement for increasing independence by older adults and families. *Physiotherapy* 2019;105:e57. doi: https://doi.org/10.1016/j.physio.2018.11.015
- 4. Cochrane A, McGilloway S, Furlong M, et al. Home-care 're-ablement' services for maintaining and improving older adults' functional independence criteria for referral to home care: a rapid review: University of York Centre for Reviews and Dissemination, 2013.
- 5. Forbes D. Review: home visiting with multidimensional assessment and multiple visits reduces nursing home admissions in low risk elderly people. *Evid Based Nurs* 2002;5(4):118. doi: https://doi.org/10.1136/ebn.5.4.118.
- 6. Harris C, Hunter S. Smart-home technologies were found to support some domains of independent living when ageing at home: Perspectives of older adult consumers', families, health professionals and service providers. *Aust Occup Ther J* 2016;63(6):439-40. doi: https://dx.doi.org/10.1111/1440-1630.12323
- 7. Heemskerk MC, Kempenaar MC, van E, et al. Physiotherapy for falls prevention: exercises to improve muscle strength and balance [Fysiotherapie voor valpreventie: oefenen van spierkracht en balans]. Nederlands Tijdschrift Voor Fysiotherapie 2007;117(5):166-75.
- 8. Karlsen C, Ludvigsen MS, Moe CE, et al. Experiences of community-dwelling older adults with the use of telecare in home care services: a qualitative systematic review. *JBI Database System Rev Implement Rep* 2017;15(12):2913-80. doi: https://dx.doi.org/10.11124/JBISRIR-2017-003345
- 9. Mangione KK, Miller AH, Naughton IV. Cochrane review: improving physical function and performance with progressive resistance strength training in older adults. *Physical Therapy* 2010;90(12):1711-15. doi: 10.2522/ptj.20100270
- 10. Orellano-Colon E, Colón-Rodríguez M, Rodríguez-Quiles AL, *et al.* PROSPERO protocol. A literature review of the effectiveness of home- and community-based assistive technology (AT), environmental modification and training in activities of daily living interventions for older adults with chronic physical conditions 2018 [updated 2018. Available from: https://www.crd.york.ac.uk/prospero/display\_record.php?RecordID=94018.
- 11. Pettersson C, Iwarsson S. Re-ablement for older community-living older people: Evidence-based interventions involving occupational therapists are needed. COTEC-ENOTHE 2016. Galway, Ireland, 2016.
- 12. Social Systems Evidence. [review synopsis] Personal budgeting interventions to improve health and social care outcomes for people with a disability: A systematic review 2016 [updated 2016. Available from: https://www.socialsystemsevidence.org/articles/75926-personal-budgeting-interventions-to-improve-health-and-social-care-outcomes-for-people-with-a-disability-a-systematic-review?lang=en&t=Personalbu&source=search.
- 13. Trappes-Lomax T, Hawton A. The user voice: older people's experiences of reablement and rehabilitation. *J Integr Care (Brighton)* 2012;23(3):181-95. doi: https://doi.org/10.1108/14769011211237528
- 14. Whitehead P. Facilitating positive risk-taking by therapists in intermediate care and reablement services (RDF19/HLS/SWECW/WHITEHEAD) 2019 [updated 2019. Available from: https://www.findaphd.com/phds/project/facilitating-positive-risk-taking-by-therapists-in-intermediate-care-and-reablement-services-rdf19-hls-swecw-whitehead/?p103730.

### Studies excluded on study type (n=11)

- 1. Bendayan M, Bibas L, Levi M, *et al.* Therapeutic interventions for frail elderly patients: part II. Ongoing and unpublished randomized trials. *Prog Cardiovasc Dis* 2014;57(2):144-51. doi: https://dx.doi.org/10.1016/j.pcad.2014.07.005
- 2. Champion J. Telecare to support reablement in delaying a need for long-termhome care. *J Enabling Technol* 2010;4(3):60-63. doi: https://doi.org/10.5042/jat.2010.0494
- 3. Cochrane A, Furlong M, McGilloway S, *et al.* 070 The effects of time-limited home-care reablement services for older people: a Cochrane systematic review. *Age Ageing* 2016;45(Suppl 2):ii13—ii56. doi:

### Studies excluded on study type (n=11)

https://doi.org/10.1093/ageing/afw159.93

- 4. Hernandez MA, Wittenberg R. Prevention and alternatives to residential care: a review of the evidence. PSSRU Discussion Paper 2870. London, UK: Personal Social Services Research Unit,, 2014.
- 5. International Federation on Ageing (IFA) Global Think Tank on Ageing. Preparatory paper on frailty and reablement. IFA Copenhagen Summit 2015/2016 Copenhagen: International Federation on Ageing (IFA) 2015.
- 6. Liaaen J. Professional carers' experiences of working with reablement. Sør-Trøndelag University College, 2016.
- 7. Mudge AM, Adsett J. Factors predicting successful transition to community-based maintenance exercise programs following exercise rehabilitation. *Cardiopulm Phys Ther J* 2013;24(4):18-24.
- 8. Neno R. Intermediate care: policy rhetoric or an effective strategy? A review of the literature. *Nurs Older People* 2005;17(3):16-18. doi: https://doi.org/10.7748/nop.17.3.16.s7
- 9. Riley J, Boniface G, Cox J. The effectiveness of occupational therapy local authority social services' interventions for older people in Great Britain: A critical literature review. Cardiff University,: College of Occupational Therapists,, 2012.
- 10. Thom JM, Clare L. Rationale for combined exercise and cognition-focused interventions to improve functional independence in people with dementia. *Gerontology* 2011;57(3):265-75. doi: https://doi.org/10.1159/000322198
- 11. von Bonsdorff MB, Leinonen R, Kujala UM, et al. Effect of physical activity counseling on home care use in older people. J Am Geriatr Soc 2009;57(3):571-73. doi: https://dx.doi.org/10.1111/j.1532-5415.2009.02163.x

#### Studies excluded on target group (n=2)

- 1. Bennett JA. Maintaining and improving physical function in elders. *Annu Rev Nurs Res* 2002;20:3-33. doi: https://doi.org/10.1891/0739-6686.20.1.3
- 2. Weber M, Belala N, Clemson L, *et al.* Feasibility and effectiveness of intervention programmes integrating functional exercise into daily life of older adults: A systematic review. *Gerontology* 2018;64(2):172-87. doi: https://doi.org/10.1159/000479965

# **Appendix 3 Quality assessment: tool and results**

#### Adaptation of Health Evidence's Quality Assessment Tool for Review Articles

#### Instructions for completion:

Please refer to the attached dictionary for definitions of terms and instructions for completing each section. For each criterion, score by placing a check mark in the appropriate box.

First	Author <sup>4</sup>	's Su	rname:
11136	, latioi	<i>3 3 4</i>	i i iui i i c .

Year of Publication:

Journal:

Reviewer:

CRITERION	YES	NO				
Q1 Did the authors have a clearly focused question [population, intervention (strategy), and outcome(s)] for this review?						
Q2 Were appropriate inclusion and/or exclusion criteria used to select or exclude primary studies in this review?  Q3 Did the authors describe the review search strategy comprehensively?						
Q3 Did the authors describe the review search strategy comprehensively?						
Two or more appropriate data- bases were used	•	•				
Search terms based on question and inclusion criteria						
Limits to search stated						
Q4 Did the search strategy cover an adequate number of years, and if less than 10 years, was the number of years justified?						

For question 5, 6, and 8, please choose the column relating to the appropriate methodology. Strike a line through the column that does not apply.

#### Q5. Quantitative reviews:

Did the review describe the level of evidence in the primary studies included in the review? Circle one:

Level I RCTs only

Level II non-randomised, cohort, case-control

Level III uncontrolled studies (surveys, case series)

#### Q5. Qualitative reviews:

Did the review provide a clear description of the range of methods in each of the primary studies included in the review?

### Q6 Quantitative reviews:

Did two review authors independently assess the methodological quality of the primary studies (with a method of conflict resolution identified) using an appropriate tool? The tool may include the following criteria:

- Study sample (size, effect size)
- 2. Participation or response rates
- 3. Sources of bias (identify confounders, respondent bias)
- Data collection (justify measures of independent/dependent variables)
- 5. Follow-up/attrition rates (and effects)
- Data analysis (Estimates, risk measures, or ratios with confidence intervals)

#### Q6 Qualitative reviews:

Did two review authors independently assess the methodological quality of the primary studies (with a method of conflict resolution identified), including all of the following criteria:

- Suitability of methodology/paradigm to the research question
- 2. Clear description of sampling strategy
- Clear description of data collection and data analysis methods
- 4. Context sufficiently described so that relevance of findings to other contexts can be established
- 5. Rigour:
  - a. Audit trail (rationale for the research steps taken throughout the research process)
  - b. Coding agreed on by two or more authors
  - c. Deviant case analysis
- Reflexivity (authors reflected on their influence on the research process)

Q7 Are the results of the quality assessment in the review presented in a table or detailed in text?

#### Q8 Quantitative reviews:

Was a standardized data extraction tool used, and if it was appropriate to combine findings using meta-analysis was this used, if it was appropriate to combine findings using narrative analysis, was this used?

#### Q8 Qualitative reviews:

Was a standardized data extraction tool used, and did the reviewers describe the similarities and differences across studies in sufficient detail to make the results meaningful?

Q9 Were appropriate methods used for combining or comparing results across studies such as using weighting, fixed or random effects, sensitivity analysis, coding, or appropriate narrative or qualitative synthesis?

Q10 Do the data support the authors' interpretation of the findings (consider extraction sheet, other authors' findings, search limitations, and analysis limitations)?

#### **TOTAL SCORE:**

Quality Assessment Rating:	Strong	Moderate	Weak
(circle one)	(total score 8 – 10)	(total score 5 – 7)	(total score 4 or less)

#### **Health Evidence**

## **Quality Assessment Tool Dictionary**

A systematic review is a research approach to accessing, acquiring, quality assessing, and synthesising a body of research on a particular topic. All phases of systematic review development should be well described such that the process is transparent and replicable by others.

### Q1 Clearly focused research question

The review should have a clearly focused research question that contains the following components: Population, Intervention, and Outcomes. Any part of these that are not addressed in a review's main research question should be clearly stated in the inclusion criteria to receive a Yes for criterion #1. Outcomes can be general in the research question (e.g. to allow for a broader search strategy, especially if the topic at-hand has a limited body of literature available), and then be addressed more specifically in the evidence tables and/or highlighted through the process of data extraction. For example, a general question may read: "The aim of this study, therefore, was to systematically review evidence from controlled trials on the efficacy of motor development interventions in young children."

# Overall Coding for Q1:

If the answer to each of population, intervention and outcome is yes, then place a check mark in the Yes column. Otherwise, place a check mark in the No column.

Q2 Provision of inclusion and or exclusion criteria

The review should clearly describe the criteria that were used to select primary studies. This includes decisions related to the target population, intervention, outcome(s), as well as the research design (i.e., RCT, cohort, participatory, etc). Using the descriptions "peer-reviewed" and/or "measurement of a quantitative outcome" in the inclusion criteria are NOT sufficient descriptions to count for study design. Mark a No for this criterion.

If authors mention in their exclusion criteria that they rejected reviews, letters, editorials and case reports, but do not specifically address what they chose to include, mark a No for this criterion.

#### Overall Coding for Q2:

Place a check mark in the Yes column if selection criteria were clearly outlined.

#### Q3 Comprehensive search strategy

A well-described comprehensive search strategy will include multiple database searches (two or more) and may also include a variety of other search strategies. Relevant databases, chosen based on the key concepts in the research question, could include those from health databases (Medline, CINAHL, BIOSIS, EMBASE, etc.), psychological databases (PsycINFO), social science databases (sociological abstracts), and/or educational databases (ERIC).

The search terms need to have been based on the research question and the inclusion criteria.

Search limits are clearly stated.

#### Overall Coding for Q3:

To answer Yes, the author(s) should have used at least two appropriate databases, the search terms should be appropriate, and the limit should be clearly stated.

#### Q4 Search strategy covers an adequate number of years

In order to ensure that the entire body of relevant research is included in the review, the search strategy should cover a sufficient time period. The number of years that are adequate to search for primary studies will vary depending on the topic and the amount of literature being developed in that field. Generally, at least 10 years should be used as a minimum length of time, however, this may be increased if there has been little published in that time frame, or may be shortened if there has been a large amount of literature published in the recent past. The duration may also be shortened if the review is an update, however the original search must have covered a sufficient number of years, and if less than 10 years, the number of years must be justified.

### Overall Coding for Q4:

Answer Yes if the search strategy covered enough years that it is unlikely that important studies were missed and if the search period covers less than 10 years the number of years must be justified.

#### Q5 Level of evidence of studies included in review is described

Select the level of evidence based on the types of primary studies that appeared in the systematic reviews/metaanalyses under assessment. If more than one level of evidence was included, only circle the lowest level (Level III is the lowest of the three).

Should the author(s) describe the studies as 'observational', please consider these studies to be a Level III as they may include cross sectional studies.

#### Overall Coding for Q5:

Place a check mark in the Yes column if the level of evidence for the primary studies is clearly identified in the review and circle the appropriate level of evidence.

#### Q6 Quality assessment of primary studies

The methodological quality of primary studies is powerful in helping to explain variations in results from study to study. Therefore, the methodological rigour of primary studies in the relevant topic area should be identified and clearly described.

Each primary study should be assessed for methodological quality using a standardized assessment tool/scale. These criteria apply to meta-analyses as well. Review authors need to do more than just state quality-related data that was extracted. The implication of this data on a review's findings must be addressed. For example, just because review authors list sample sizes of the primary studies does not mean they have assessed study sample.

For Cochrane Reviews authors are required to conduct a standardized 'Risk of Bias' assessment (see http://www.cochrane-handbook.org/ Figure 8.6a). Their results are typically included in the Characteristics of Included Studies table. These characteristics translate to the Health Evidence quality assessment tool as follows:

If Cochrane authors assess	On the Health Evidence QA tool select						
Sequence generation →	Research design						
Allocation concealment →	Research design						
Blinding →	Source of bias						
Free of selective reporting →	Data collection						
Incomplete long-term/short-term outcome data	Data analysis						
*Authors describe assessing intention-to-treat analysis & whether incomplete data was dealt with correctly.							

The JADAD and EPOC tools are well-reputed and typically code Yes.

In some instances, different quality assessment criteria may be used for different study designs included in the same review. For example the EPOC tool has different criteria for interrupted time series studies, compared to randomized controlled trials.

For reviews of <u>qualitative primary studies</u> the following should be assessed and described for each included primary study:

- 1. Suitability of methodology/paradigm to the research question
- 2. Clear description of sampling strategy
- 3. Clear description of data collection and data analysis methods
- 4. Context sufficiently described so that relevance of findings to other contexts can be established
- 5. Rigour:
  - a. Audit trail (rationale for the research steps taken throughout the research process)
  - b. Coding agreed on by two or more authors
  - c. Deviant case analysis
- 6. Reflexivity (regarding researcher and the research process the researcher's reflections on their effect on the research and research process, and the effect of the research on them and how both of these may have affected the outcome/findings)

<sup>\*</sup>You should not have to conduct the quality appraisal, based on study characteristics provided.

# Overall Coding for Q6:

For a review of quantitative studies, place a check mark in the Yes column if an appropriate quality appraisal tool was assessed by two authors independently. For a review of qualitative studies, place a check mark in the Yes column if all six criteria were assessed by two authors independently.

#### Q7 Are quality assessments transparent?

For quality assessments to be transparent they must be presented in a table or detailed in text.

#### Overall Coding for Q7:

Place a check mark in the Yes column if two (or more) independent reviewers assessed each primary study for methodological quality, with a method of conflict resolution identified and the results presented.

**Q8** Quantitative: Was a standardized data extraction tool used, and was it appropriate to combine the findings of results across studies considering outcomes, study design, and heterogeneity? / Qualitative: Was a standardized data extraction tool used, and did the reviewers describe the similarities and differences across studies in sufficient detail to make the results meaningful?

It is important that primary study results be assessed for similarity prior to combining them (both statistically and/or non-statistically). The completion of a data extraction tool helps to ensure that data are extracted consistently form each study.

If a **meta-analysis** is conducted, a test for homogeneity or heterogeneity is the minimum requirement that should be assessed across studies prior to determining the overall effect size. If significant heterogeneity is detected, the author(s) should indicate use of a Random Effects Model, as opposed to a Fixed Effects Model.

On occasion, an author may indicate the presence of significant heterogeneity and still combine data using a Fixed Effects Model. This IS appropriate if analyses have been conducted with both the inclusion and exclusion of data sets that may notably skew results. The results of these separate analyses, however, MUST be reviewed for the reader's consideration. This process, often called 'sensitivity analysis', assesses the moderators that may have contributed to the heterogeneity.

If a **systematic review** or a **narrative review** is conducted for which statistical analysis is not appropriate, the results of each study should be depicted in graph/table format in order to assess similarity across the primary studies. Often the results will be in the form of a table, but in the case of a narrative review the results of each study will be described at length within the body of the review.

In some cases confidence intervals/effect sizes are NOT required. For a **review of reviews**, a narrative presentation is appropriate (e.g. "the intervention had a positive effect on 20% of participants"); ideally, with a table listing main features of each of the systematic reviews under review, or thorough, CONSISTENT discussion of the main features in the body of the review. If the review of reviews doesn't consistently present the actual numerical (or other qualitative) results (e.g. effect sizes from the original reviews) in the text, then it should score a **No**.

In general, trust the review author(s)' judgment of what is significant heterogeneity. A declaration of the specific number that was calculated (e.g. Chi-square score) is not mandatory.

**NOTE:** Despite extensive search strategies, some Cochrane reviews are unable to retrieve any applicable studies. In this case, a priori methodologies are often described. Subheadings alone, however, are sufficient to score a **Yes**, as Cochrane requires that they are filled in adequately before publication. Without a **Yes** for these criteria, these types of reviews will be of only Moderate quality, which may result in them being missed by users who are looking only for Strong reviews.

#### Overall Coding for Q8:

Place a check mark in the Yes column if data was extracted using a consistent approach and a test of homo/heterogeneity has been conducted if required and the corresponding model applied, or if the individual study results have been described graphically or narratively in a consistent manner. Please note that if study results are listed narratively, the information must have been provided consistently for all studies within the review text.

**Q9** Were appropriate methods used for combining or comparing results across studies such as using weighting, fixed or random effects analytic model as appropriate, sensitivity analysis as appropriate, coding, appropriate qualitative synthesis?

Whether a meta-analysis or a systematic/narrative review, the overall measure of effect should be determined by assigning those studies of highest methodological quality greater weight. In the case of meta-analyses, weighting may also be based on sample size, which is also acceptable.

If review authors have named a specific statistical software package (e.g. RevMan) they have used to combine data, this is sufficient for weighting, as the vast majority of this software incorporates the weighting of studies by a number of participants. Review authors may describe using the DerSimonian and Laird approach to random-effects meta-analysis which also incorporate weighting. Higgins and Green (2009) explain that:

"The random-effects method (DerSimonian 1986) incorporates an assumption that the different studies are estimating different, yet related, intervention effects [...] The method is based on the inverse-variance approach, making an adjustment to the study weights according to the extent of variation, or heterogeneity, among the varying intervention effects."

Cochrane Handbook for Systematic Reviews of Interventions Version 5.0.2., The Cochrane Collaboration, 2009. Available from http://www.cochrane-handbook.org

One may notice the inclusion of sensitivity analyses and/or funnel plot diagrams. These are useful for assessing the effect of study quality on results in the case of the former, and potential for publication bias in the case of the latter. While useful, these particular analyses are **not mandatory** for a review to acquire a **Yes** coding.

In a **narrative synthesis**, quality of EACH of the included studies must be discussed consistently throughout the conclusions/discussion section to receive a **Yes** for this criterion.

In some cases review authors disclose the QA scores of primary studies - in table format, for example - and discuss those scores, but do not actually 'weigh' them; essentially, allowing the readers to determine which ones have the most weight. This is NOT sufficient to score a **Yes** for this criterion, as the review authors should be doing all summative work. It IS appropriate, however, for review authors to state, for example: "only the studies with a quality score of 5 or above are included in the analysis."

Reviews that weight conclusions/discussion by primary study quality still receive a Yes even if < 3 quality parameters were assessed (as per QA criterion #6).

#### Overall Coding for Q9:

Place a check mark in the Yes column if a weighting system has been used in determining the overall impact. Also include the appropriate use of fixed or random effects model, sensitivity analysis, coding, appropriate qualitative synthesis.

Q10 Do the data support the author's interpretation of the findings (consider quality assessment, contents of extraction sheet, other authors findings, search limitations, analysis limitations)

Consider the reported data and assess whether the review author's interpretation of the results of the primary studies are supported by the data. If no numerical values or p values/confidence intervals are given, then the reviewer cannot determine whether any conclusions are supported by the data and should respond No to criteria #10. In addition, if review authors failed to adequately assess methodological quality of the primary studies (i.e. criteria #6 is No), and also failed to weight the studies by quality or sample size (for meta-analyses) in their synthesis of results (i.e. criteria #9 is No), then the response to #10 should also be No, since it is difficult to determine agreement with review authors' conclusion(s) if no quality assessment has taken place, since it is possible that agreement with authors' overall conclusion(s) would differ if studies were of weak quality compared to very strong quality.

#### Overall Coding for Q10:

Place a check mark in the Yes column if the data for the primary studies supports the interpretations outlined in the review.

# **Overall Coding for the Review**

An overall assessment of the methodological quality of the review will be determined based on the results from each question. The total score is <u>out of 10</u>. Add all the check marks in the **Yes** column and add to the Total column under **Yes**. Do the same for the **No** column. Use the following decision rule to determine the overall assessment for the review based on the numbers in the Total columns.

- Reviews with a score of 8 or higher in the Yes column will be rated as Strong
- Reviews with a score between 5-7 in the Yes column will be rated as Moderate
- Reviews with a score of 4 or less in the Yes column will be rated as Weak

In the case that a score does not necessarily reflect your impression of the actual quality of a review (i.e., Strong/Moderate/Weak), consider revisiting some of the criteria and Yes and/or No scores, or discuss with a second reviewer, so that the corresponding quality category is a reflection of the review's overall methods and the score will be an accurate reflection for use by public health decision-makers.

# Quality assessment results for Question 2 and Question 3

Review author and year		1	2	3	4	5	6	7	8	9	10	Score	
Bersvendsen et al. 2018	Q2	+	+	+	Х	+	+	+	Х	+	+	8/10	High
Cochrane et al. 2016	Q2	+	+	+	+	+	+	+	+	+	+	10/10	High
Faria 2016	Q2	+	+	+	+	+	х	х	+	Χ	+	7/10	Moderate
Mjøsund et al. 2019	Q2&3	+	+	+	+	+	х	х	+	х	+	7/10	Moderate
Pettersson and Iwarsson 2017	Q2	+	+	+	+	+	X	Х	+	+	+	8/10	High
Ryburn et al. 2009	Q2	+	+	+	+	+	x	x	+	+	+	8/10	High
Sims-Gould et al. 2017	Q2	+	+	+	х	+	+	+	+	+	+	9/10	High
Tessier et al. 2016	Q2	+	+	+	+	+	+	+	+	x	x	8/10	High
Whitehead et al. 2015	Q2	+	х	+	+	+	+	+	х	+	+	8/10	High
Dibsdall 2019	Q3	+	+	+	+	Х	+	+	Х	+	+	8/10	High
Pearson et al. 2015	Q3	+	+	+	Х	+	+	Χ	+	+	+	8/10	High

The quality of the eight systematic reviews included in the question on effectiveness was generally high with six reviews of the eight reviews scoring 8 or above. Two reviews were rated as moderate quality.

The quality of the three reviews included in the question on success factors was high for two of three reviews. One review was rated as moderate quality.

# Appendix 4 Joanna Briggs Institute data extraction form for systematic reviews and research syntheses

# Parameter Study 1 Extraction

**First Author and year of publication** (e.g. Jones *et al.* 2020)

Objectives (report exact review question(s) and page number

### Participants (characteristics and numbers)

The defining characteristics of the participants in studies included in the research syntheses/review should be detailed, for example this may include diagnostic criteria, age, or ethnicity. The total number of participants that inform the outcomes relevant to the umbrella review question from all studies included studies should be presented.

#### Setting/context

Details of the setting of interest such as acute care, primary health care, or the community or a geographical location should be included. For some umbrella reviews, particularly those that draw upon qualitative research syntheses, the context that underpins the review question will be important to clearly reveal to the reader and may include but is not limited to consideration of cultural factors such as geographic location and specific racial or gender based interests.

# Description of Interventions/ phenomena of interest

Clear, succinct details of the interventions or phenomena of interest should be presented as described by systematic review author(s), including the type of intervention, the frequency, and/or intensity of the intervention. A statement of the phenomena of interest is also required where applicable.

#### **Databases and sources searched**

The number of sources searched should be reported. Though this will have been considered during critical appraisal of the research synthesis, reporting to the reader of the review will allow rapid and easy comparison between differences across included reviews and also consideration of potential for publication bias in the event that no formal analysis has been conducted. Where possible the names of databases and sources should be listed (i.e. if <5-10). The search range of each database should also be included.

#### Date Range (years) of included studies

The date range spanning from the earliest study that informs the included research synthesis to the latest should be reported. This is important information that allows for

### Parameter Study 1 Extraction

consideration of the currency of the evidence base not necessarily reflected in the year of publication of the research synthesis. If this is not readily identifiable in the table of study characteristics provided by the included synthesis, it should be discerned by scanning the date range of publications through the results section of the included systematic review.

# Number of primary studies included in the systematic review

Summary descriptive details of the included studies in the research synthesis should be reported. This includes the number of studies in the included research synthesis, the types of study designs included in the research synthesis, for example randomized controlled trials, prospective cohort study, phenomenology, ethnography etc., and also the country of origin of the included studies. The latter is important to allow the reader of the review to consider the external validity and generalizability of the results presented.

#### Types of studies included

#### Country of origin of incl. studies

### Appraisal instruments used

The instrument or tool used to assess risk of bias, rigour or study quality should be reported along with some summary estimate of the quality of primary studies in the included research synthesis. For example, for umbrella reviews that use the Jadad Scale, a mean score for quality may be reported whereas for checklist appraisals, reporting of cut-off score or any ranking of quality should be reported. An example of the latter would be exclusion of studies that score <3/10, and inclusion of four moderate quality studies (4-6/10) and two high quality studies (7-10/10).

#### **Appraisal rating**

# Method of analysis

The type of research synthesis as stated by the authors of the included review should be detailed. The method of analysis or synthesis used by the included research synthesis should be reported. For example, this may include narrative synthesis, vote counting, random effects meta-analysis, fixed effect meta-analysis, network meta-analysis, thematic synthesis, meta-aggregative synthesis or meta-ethnography.

#### **Outcome assessed**

Included here should be the outcomes of interest to the umbrella review question reported on by the research synthesis, i.e. the names or labels of the outcomes (see

# Parameter Study 1 Extraction

below for presentation of results).

#### Results/findings

The relevant findings or results presented by the included research syntheses must be extracted. For quantitative reviews, this will ideally be an effect estimate with 95% Cis or measure from a presented meta- analysis. Measures of heterogeneity should also be extracted where applicable. In the absence of this a statement indicating the key result relevant to an outcome may be inserted in the required field. For qualitative syntheses, the key synthesized finding should be extracted.

#### Significance/direction

#### Heterogeneity

#### Comments

There should be provision to extract and present in the table of included study characteristics any relevant details or comments on the included research synthesis by the authors of the Umbrella Review. These comments may be relevant details regarding the included research synthesis, for example, the congruence between the review results and conclusions, and for highlighting any potential methodological differences between the individual included reviews.

# **Appendix 5 Characteristics of the included reviews for Question 2**

Author	Objectives	Intervention	Database search/ Date range of	Types of studies included	Country of origin	Appraisal instrument	Appraisal rating
(year) Bersvendsen et al. (2018) <sup>26</sup>	To provide a comprehensive and systematic review of current literature assessing home based reablement (HBR)	The main goal of HBR is to restore or increase a patient's level of functioning, thereby increasing the patient's self-reliance and consequently decreasing their dependence on healthcare services	included studies Scopus, EBSCOhost, CINAHL Plus (with full text), MEDLINE, Academic Search Complete, SocINDEX, Social Work Abstracts, Business Source Complete and Econlit/Not included	7 RCTs including 2 cluster RCTs 3 Prospective Longitudinal studies 1 Retrospective Longitudinal study	Australia = 5 New Zealand = 3 Norway = 2 US = 2	A checklist of 15 criteria was developed and used as the basis for the quality assessment	approximately 82% of the papers received scores of 5, 6 or 7 (scale of 0-7)
Cochrane et al. (2016) <sup>4</sup>	To compare time-limited home-care reablement services for maintaining and improving the functional independence of older adults (aged 65 and over) with usual home-care or waiting list control group	The reablement approach emphasises the active participation of an older person in working towards agreed goals that are designed to maximise independence and confidence	The Cochrane Central Register of Controlled Trials (CENTRAL); MEDLINE (OvidSP); Embase (OvidSP); PsycINFO (OvidSP); ERIC; Sociological Abstracts; ProQuest Dissertations and Theses; CINAHL (EBSCOhost); SIGLE (OpenGrey); AgeLine and Social Care Online. Plus reference lists of relevant studies and reviews as well as contacting authors in the field/Searches were up to date as of April 2015	2 RCTs	Australia = 1 Norway = 1	Two authors independently assessed and reported on the methodological risk of bias of the included studies in accordance with the Cochrane Handbook for Systematic Reviews of Interventions, and the Cochrane Consumers and Communication Group guidelines	Overall, Lewin 2013 was rated at high risk of bias on all domains. Tuntland 2015 was deemed to be largely adequate
Faria <i>et al.</i> (2016) <sup>27</sup>	(i) How has the cost- effectiveness of reablement been evaluated? (ii) What could be done better?	Intervention was considered to be reablement if it was a personalised, time-limited (up to 12 weeks), goal-oriented intervention, which focussed on restoring or maintaining function and/or managing everyday activities at home, delivered in the individual's usual place of residence	MEDLINE, MEDLINE in-Process, ASSIA, EconLit, Health Management Information Consortium (HMIC), NHS Economic Evaluations Database (NHS EED), and Social Care Online. In addition, discussions were held with experts within the wider project team to identify additional publications/ 1999-2014	Ten studies used data obtained in an RCT; two studies used a retrospective cohort design and one used a prospective cohort design	UK = 8 Australia = 3 New Zealand = 1 Sweden = 1	No formal quality appraisal of the studies is reported	None reported
Pettersson et al. (2017) <sup>5</sup>	The aim of this review was to get an overview of the scientific literature in this evolving research area, and investigate whether there is scientific evidence for positive effects of reablement services for older community-living people	Restorative/re-ablement home care services/home and community care" (in Denmark, Australia, and New Zealand) and "restorative care" (in the US)	CINAHL, PubMed, and Svemedþ(Swemed), All types of studies were considered, and reference lists in the publications were scanned. No gray literature was considered/2000-2014	Three RCT's, one controlled clinical trial, one pilot non-randomized controlled trial, one retrospective cohort study, one quasi-experimental, one cross-sectional study.	Australia = 3 New Zealand = 2 USA = 2 Denmark = 1	Given the character of the studies included in the review it was not feasible to conduct any systematic quality assessment and meta- analysis	Not reported
Ryburn <i>et al.</i> (2009) <sup>28</sup>	Do restorative programmes improve functional and	Possible interventions that could be considered restorative (i.e. ranging from	Age Line, MEDLINE, CINAHL and PsycInfo/1996-2008	Three non-randomised controlled trials using a matching group	USA UK	Informal 'appraisal' of included studies	Not clearly reported by study

Author (year)	Objectives	Intervention	Database search/ Date range of included studies	Types of studies included	Country of origin	Appraisal instrument	Appraisal rating
	social well-being, ongoing use of services and cost-effectiveness	cognitive training to art therapy)			Australia		
Sims-Gould et al. (2017) <sup>6</sup>	What is the impact of reablement, reactivation, rehabilitation, and restorative (4R) programs for older adults in receipt of home care services?	2 distinct clusters of interventions located in this systematic review (1) "hospital to home" programs, in which participants are discharged from hospital wards with a 4R home care and (2) those that focus on clients receiving home care without a hospital stay immediately preceding	MEDLINE, EMBASE, PsycINFO, CINAHL (Cumulative Index to Nursing and Allied Health), SPORTDiscus and The Cochrane Library and reference lists/not reported	RCTs	Australia = 5 Norway = 2 Denmark = 1 USA = 1 England/UK = 3 New Zealand = 2 Netherland = 1	Cochrane Collaboration's Risk of Bias criteria	All studies were judged to have a high risk of bias
Tessier <i>et al.</i> (2016) <sup>7</sup>	To examine the effectiveness of reablement, and to identify factors that might contribute to successful implementation.	The intervention did not need to be called reablement or restorative care, but had to promote functional independence, be of short duration (6–12 weeks) and be provided by paid workers as part of home care services. The intervention had to be multidisciplinary in nature.	MEDLINE, CINAHL, PsycINFO and EBM Reviews/ 2001-2014	Four RCTs, four controlled before- and-after studies, one data linkage and one qualitative study,	Australia = 4 New Zealand = 4 USA = 1 UK = 1	Methodological quality of each study was assessed independently by two researchers) with the Critical Appraisal Skills Programme (CASP) tool for RCTs, and with the Assessment of Multiple Systematic Reviews (AMSTAR) tool for systematic reviews.	Seven out of 10 were considered to be of either excellent or good quality, while three were of fair quality
Whitehead et al. (2015) <sup>9</sup>	1.To determine what interventions for adult users of home care services, targeted at reducing dependency in personal ADL, have been provided and evaluated in the literature.  2.To determine the effectiveness of these interventions  3.To determine whether interventions involving delivery by occupational therapists differ in their effect to those that do not involve them	'Re-ablement'/'restorative home care' and programmes in which community-based interventions targeting reduced dependence in personal ADL were provided, but not described using this terminology	The Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, AMED, CINAHL, PsycINFO, OTseeker, PEDro, Web of Science, CIRRIE, and ASSIA published prior to/November 2014	Six RCTs and seven controlled before and after studies	USA = 4 England = 1 New Zealand = 2 Australia = 2 Canada = 3 Sweden = 1	Criteria developed by the Cochrane Effective Practice and Organisation of Care (EPOC)	Ten of the 13 studies (77%) were judged to be at high risk of bias in at least one domain, i.e. there was a high risk in the majority of the studies in the review. Only one study was judged to be at low risk of bias in all domains.

# **Appendix 6 Characteristics of the included reviews for Question 3**

Author	Objectives	Intervention	Database search/ Date range of	Types of studies included	Country of origin	Appraisal instrument	Appraisal rating
(year)			included studies				
Dibsdall (2019) <sup>29</sup>	What are the different roles of occupational therapists in reablement services? What are the contexts and mechanisms that lead to positive, or negative, outcomes for service users, carers and members of the reablement team?	Definition of reablement: Services working with people with physical difficulties or disabilities to assist them to learn or relearn to undertake daily living activities.  The reablement service: A service provided entirely by social care or by health and social care, worldwide. A service with occupational therapists (health or social care funded) either in the team or having input into the team	CINAHL, AMED, Cochrane Library, Embase, Medline, Social Policy and Practice, ASSIA, British Humanities Index, British Nursing Index International, IBSS, Social Services Abstracts, Sociological Abstracts, Worldwide Political Science Abstracts, Social Care Online	14 primary research studies (relating to 12 different Reablement services)  4 descriptive articles (3 Reports from organisations, 1 description of the development of a service)	UK and USA	Rigor and relevance	Detailed presentation in text and tables on relevance and rigour
Mjøsund <i>et</i> <i>al.</i> (2019) <sup>30</sup>	Identify and map existing evidence of how Physical Activity (PA) strategies are integrated and explored in studies of reablement for community dwelling older adults	Rehabilitative initiatives that aim to maximize functional ability and independence amonghome care service users, by offering intensive, time-limited, interdisciplinary, person-centred and goal-directed home care services	PubMed, Cochrane central register of controlled trials, Embase, PsycINFO, AMED, PEDro, CINAHL and Google Scholar/1996 to August 2019	5 RCTs, 5 non-randomized controlled trials, 2 non-controlled pre-post studies. One RCT long-term follow up study, four studies with mixed design, three studies based on quantitative research, and 23 qualitative studies, of which 15 focused on HCPs' perspectives, six on older adults' perspectives and two on family members perspectives	Norway = 12 Australia = 6 USA = 4 UK = 4 Denmark = 3 New Zealand = 1	This scoping review did not consider quality of the included studies	Not reported
Pearson <i>et</i> <i>al.</i> (2015) <sup>31</sup>	This paper reports a realist review conducted to develop a conceptual framework for intermediate care. Our review questions were:  1. What are the mechanisms by which community-based alternatives to acute inpatient care are believed to result in their intended outcomes?  2. What are the important contexts which determine whether the different mechanisms produce intended outcomes?	The intermediate care services examined in the 38 included studies were predominantly aimed at older people or were generic rather than being condition specific. Seventeen of the studies examined services offering both Admission Avoidance (AA) and Early Supported Discharge (ESD), and a further 17 examined ESD services. Only one study reported on an AA only service, while three studies were unclear about which service type they included	Medline, Medline in Process, Embase, Social Policy and Practice, HMIC, British Nursing Index, The Cochrane Library, Cinahl and Assia	A mix of qualitative, surveys and observational evaluations	UK = 32 Sweden = 2 Australia = 2 USA = 2	Wallace et al. (2004) tool for assessing the quality of applied social policy research	Not reported

# Appendix 7 Overlap of primary papers across systematic reviews for Question 2

Table 1 Overlap for the outcome home visits

Outcome home visits	Ryburn <i>et al.</i> (2009)	Whitehead et al. (2015)	Tessier et al.(2016)	Sims-Gould et al. (2017)	Bersevendsen et al. (2018)	Pettersson & Iwarsson (2017)	Overlap
	3 studies	7 studies	7 studies (8 re- ports: data from one study by Lew- in <i>et al.</i> 2013 was reported in 2 studies)	4 studies	4 studies	2 studies	
1. Kent <i>et al.</i> 2000	1						
2. Tinetti et al. 2002	1		1	1	1		4
3. Lewin <i>et al.</i> 2006	1						
4. Feldman <i>et al.</i> 1996		1					
5. Gottlieb et al. 2000		1					
6. Lewin <i>et al.</i> 2010		1					
7. Glendinning et al. 2010		1					
8.Glendinning et al.2011			1				
9.Zingmark et al. 2011		1					
10.Parsons et al. 2012							
11.King et al. 2012		1	1				2
12.Lewin et al. 2013a		1	1	1	1		4
13.Senior, et al. 2014			1			1	2
14.Lewin, et al. 2013a and b.			1			1	2
14.Lewin <i>et al.</i> 2013b			1				
15.Lewin & Vandermeulen 2010.			1		1		2
16.Tuntland 2015				1			
17.Lewin 2016							
Score 12.7 (high)							

Score 12.7 (high)



Table 2 Overlap for the outcome quality of life

Quality of life	Ryburn <i>et al.</i> 2009	Whitehead et al. 2015	Tessier <i>et al.</i> 2016	Sims-Gould <i>et al.</i> 2017	Bersevendsen <i>et al.</i> 2018	Pettersson & Iwarsson 2017	Cochrane <i>et al.</i> 2016	Over- lap
	1 study	5 studies	3 studies	6 studies	1 study	2 studies	2 Studies	
				*one study men- tioned in report and other five in a table, not explicit total number				
3. Lewin <i>et al.</i> 2006	1							
6. Markle-Reid 2002			1					
7. Marek <i>et al.</i> 2006			1					
9. Glendinning <i>et al.</i> 2010			1					
10.Glendinning et al.2011				1				
13.Parsons et al. 2012			1	1			1	3
14.King et al. 2012			1	1		1	1	4
23.Tuntland 2015					1			1 2
25.Cunliffe 2004					1			
26.Lewin 2016					1			
28.Senior 2014					1			
31.Lewin 2013								1
37. Comans et al.2010					1			
38. Melis et al.					1			

Score 7.1 (moderate)



Table 3 Overlap for the outcome physical functioning

Outcome physical functioning	Ryburn <i>et al.</i> (2009)		Whitehead <i>et al.</i> (2015)	Tessier <i>et al.</i> (2016)		Sims-Gould <i>et al.</i> (2017) 10 individual studies	Bersevendsen <i>et al.</i> (2018)	Pettersson & Iwarsson (2017)	Cochrane <i>et al.</i> (2016)	Over- lap
	3 studies		10 studies	3 studies		we could identify but the reporting of studies in this review was unclear and conflated when re- porting outcomes	4 studies	3 studies	2 studies	
1. Kent <i>et al.</i> 2000		1								
2. Tinetti <i>et al.</i> 2002		1	3	l	1					3
3. Lewin <i>et al.</i> 2006		1								
6. Markle-Reid 2002			3	L						
7. Marek <i>et al.</i> 2006			=	L						
8. Lewin <i>et al.</i> 2010			3	L	1					2
9. Glendinning et al. 2010			=	L						
10.Markle-Reid et al. 2011			1	<u>l</u>						
11.Zingmark et al. 2011			1	L						
12.Parsons et al. 2012			1	<u>l</u>						
13.King et al. 2012			1	L						
14.Lewin <i>et al.</i> 2013			1	<u>l</u>						
16.Senior, et al. 2014						1				
18.Parsons, et al. 2013					1	1		1		3
21.Lewin G & Vandermeule	n 2010.							1		
22.Tuntland 2015						1		1		1 4
23.Lewin 2014								1		
24.Cunliffe 2004						1				
25.Lewin 2016						1				



Outcome physical functioning	Ryburn <i>et al.</i> (2009)	Whitehead <i>et al.</i> (2015)	Tessier <i>et al.</i> (2016)	Sims-Gould <i>et al.</i> (2017)	Bersevendsen <i>et al.</i> (2018)	Pettersson & Iwarsson (2017)	Cochrane <i>et al.</i> (2016)		Over- lap
28.Guralnik 2000				:	l				
29.Winkel 2015						-	L		
30.Lewin 2013				:	I	:	1	1	4
31.Burton 2013						:	L		2
34.Courtney 2012				:	l				
35.Kjerstad& Tuntland 2016				<u>-</u>	L				

Score 6.0 (moderate)



Table 4 Overlap for the outcome risk of admission to residential care

Risk of admission to residential care	Tessier <i>et al.</i> 2016	Bersevendsen et al. 2018	Pettersson & Iwarsson 2017	Cochrane et al. 2016	Overlap
	1 study	2 studies	2 studies	1 study	
2. Tinetti <i>et al.</i> 2002			1	1	
14.King et al. 2012				1	
15.Lewin <i>et al.</i> 2013					1
28.Senior 2014	1		1		

Score 20 (very high)

Table 5 Overlap for the outcome acute hospital use

Acute hospital use	Tessier et al. 2016	Sims-Gould et al. 2017	Bersevendsen et al. 2018	Petters	sson & Iwarsson 2017	Cochrane et al.2016	Overlap
	1 study	4 studies	4 studies	1 study	1	2 studies (but both affiliated)	
2. Tinetti <i>et al.</i> 2002			1	1	1		3
15.Lewin <i>et al.</i> 2013						1	
24.Lewin 2014		1	1	1		1	4
25.Cunliffe 2004			1				
28.Senior 2014				1			
37. Tinetti <i>et al.</i> (2012)				1			
38. Donald (1995)			1				

Score 17.9 (very high)



