

Crowd-sourcing the identification of rehabilitation-relevant review

A Cochrane Rehabilitation initiative

William Levack,¹ **Stefano Negrini**,^{2,3} Farooq Rathore,⁴ Joel Pollet³

¹ University of Otago, New Zealand

² University of Brescia, Italy

³ IRCCS Fondazione Don Gnocchi, Milan, Italy

⁴ Bahria University Medical and Dental College, Pakistan

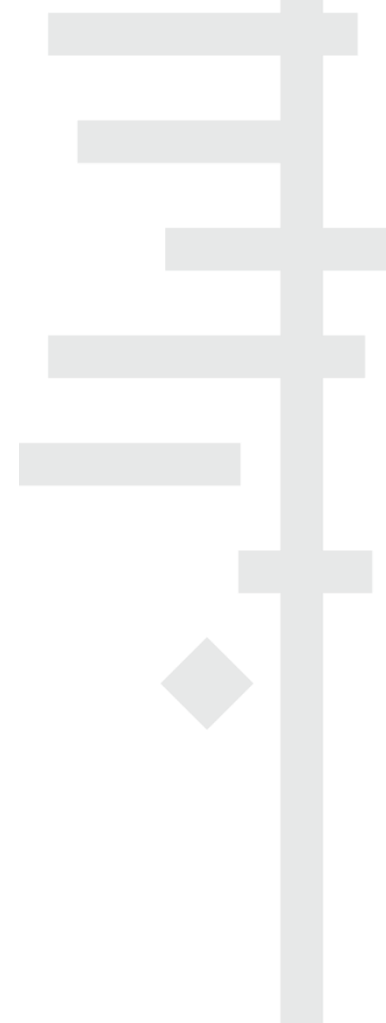
Trusted evidence.
Informed decisions.
Better health.





Disclosure

I have no actual or potential conflict of interest in relation to this presentation





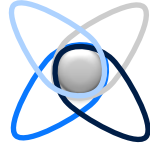
Cochrane Rehab Goals - Overview

1. Connect rehab stakeholders globally
2. Translate knowledge in rehab
3. Register rehab reviews
4. Educate rehab stakeholders
5. Develop rehab review methods
6. Promote Cochrane to Rehab & Rehab to Cochrane

Objective

- To identify, collate, and disseminate all Cochrane reviews about rehabilitation interventions





Background

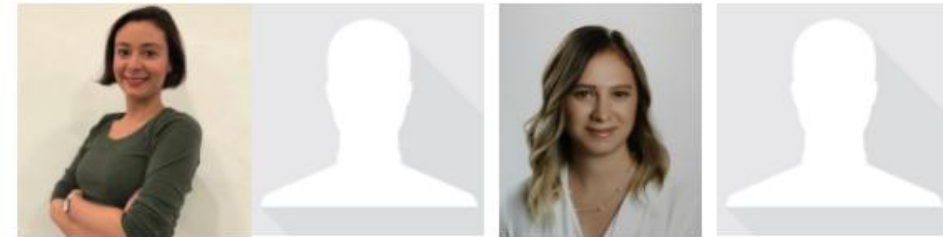
- “Tagging” work for Cochrane is done in Archie (Cochrane’s Information Management System)
- Tagging Cochrane reviews helps with:
 - Developing collections of review on specialist topics
 - Communicating interest in review from a Field to Cochrane Review groups
 - Identification of ‘gaps’ in the evidence base

Challenges

- There is no standardised process for Cochrane tagging work
- Definition of “rehabilitation” do not tell us what counts as a rehabilitation intervention.
 - Rehabilitation is: “a **set of interventions designed to optimize functioning and reduce disability** in individuals with health conditions in interaction with their environment.”
(WHO, 2017, p.2)
- Rehabilitation is interprofessional
- The scope of rehabilitation varies by professional and region globally
- There are currently over 10,000 titles in the Cochrane Library

Method

- We established an online, relational, membership-drive database, using “**Knack**” (www.knack.com)
- We put out a call for clinicians to contribute to this tagging work
- Two people (one physician; one AHP) independently screened Cochrane reviews



Monserat Gil Escudero

Madrid, Spain

Review Committee Contributor

Zaheer Gill

Review Committee Contributor

Esra Giray

Istanbul, Turkey

Review Committee Contributor

Amara Ilyas

Punjab, Pakistan

Review Committee Contributor



Sinan Kardeş

Istanbul, Turkey

Review Committee Contributor



Harry Mee

Cambridge, United Kingdom

Review Committee Contributor



Nuria Esther Meliàn Cruz

Madrid, Spain

Review Committee Contributor



**Elizabeta Leonid Popova
Ramova**

Bitola, Macedonia

Review Committee Contributor



Cristina Anastasia Rapidi



Vanessa A. Seijas

Method

- Disagreements resolved by the Review Committee
- The Review Committee also checked all 'included' reviews
- Results 'tagged' in Archie, and disseminated via:
<http://rehabilitation.cochrane.org/evidence>

Evidence

List of Cochrane reviews of rehabilitation interest.

Full list

By Subtopic

New - Updated

(Stage filter not available for Subtopic view)

By subtopic:

- ▾ Health Conditions (1084)
 - Cardiac (15)
 - Gynaecology or Urology (39)
 - Mental Health (31)
 - Neurological (298)
 - Older Adults (>65 years) (90)
 - Oncology (46)
 - Orthopaedic or musculoskeletal (incl. pain conditions) (375)
 - Other (68)
 - Paediatrics (<18 years) (64)
 - Respiratory (57)
 - Vocational (1)
- Professionals (1293)

Keep Posted



Criteria for inclusion and tagging

We focused on reviews on interventions that rehabilitation professional **provided**; not on reviews that are simply of interest, so...

INCLUDED:

- Meds prescribed by PMR doctors; rehab therapies provided by AHPs; prevention of secondary conditions; mental health interventions for people with primary non-mental health conditions (e.g. stroke)

EXCLUDED:

- All surgery; meds or therapies prescribed only by other specialists (rheumatologists, neurologists); interventions for non-disabled people (e.g. prevention of first-time stroke); reviews on general topics not specific to rehab

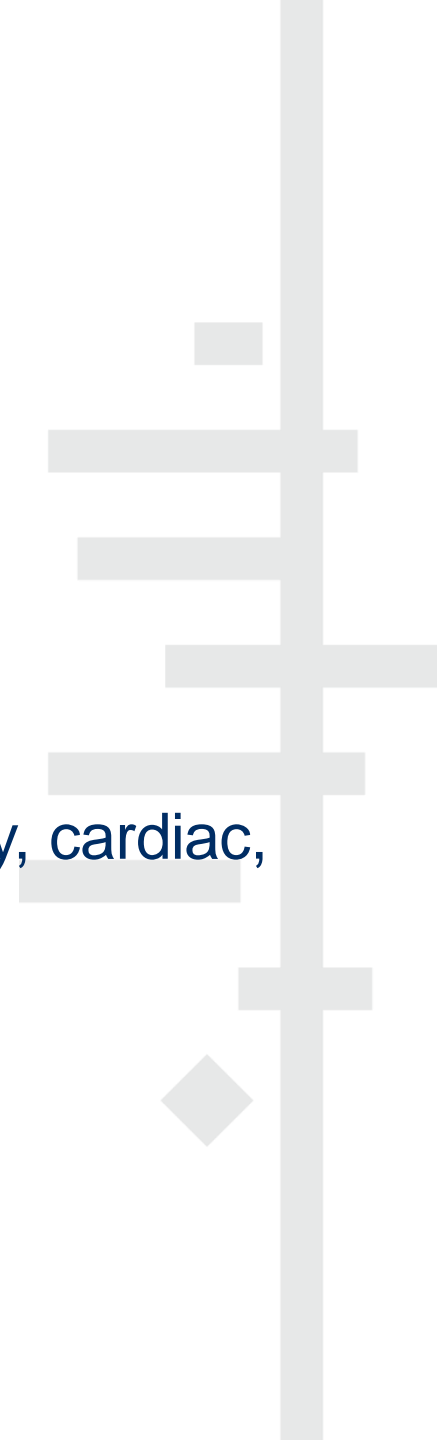
Additional tagging

Professional area

- Tagged on the basis of who provides the intervention

Broad clinical area

- E.g. Musculoskeletal, neurological, paediatric, older adults, respiratory, cardiac, oncological etc.



Result

- 25 people contributed to the tagging work (12 PRM doctors, 12 PTs, 1 OT)
 - From 13 countries (8 Pakistan & India, 12 UK/Europe, 2 NZ, 1 Columbia, 1 Saudia Arabia, 1 USA)
- Each tagged 2 – 5930 titles (average 772, SD 1419)
- 13/25 contributor tagged over 100 titles each

Results

- 9376 title screened (published between 1996 – April 2018)
- 888 ‘rehabilitation’ titles identified (9.5% of all Cochrane publications)
 - 124 protocols; 764 completed reviews



Tagging by clinical area

Clinical areas	No. of titles categorised with this as the sole clinical area	No. of titles with this clinical area as one of many	Total
Cardiac	13	8	21
Gynaecology or urology	25	14	39
Mental health	12	10	22
Neurological	167	180	347
Older adults (>65 years)	30	61	91
Oncology	35	12	47
Orthopaedic/musculo (incl. pain)	265	140	405
Paediatrics (<18 years)	30	50	80
Respiratory	43	10	53
Other	32	21	53

Tagging by profession group

Clinical areas	No. of titles categorised with this as the sole clinical area	No. of titles with this clinical area as one of many	Total
Physician	212	185	397
Physiotherapy	261	206	467
Occupational Therapy	17	89	106
Speech Language Therapy	25	15	40
Rehabilitation Nursing	3	65	68
Clinical Psychology	14	33	47
Orthotist or Prosthetist	0	12	12
Other	4	474	478
Whole multidisciplinary team	0	104	104

Discussion

- Almost 1 in 10 Cochrane publications are about rehabilitation interventions
- Cochrane aim is “to put Cochrane evidence at the heart of health decision-making all over the world” (*Cochrane Strategy to 2020*)
- Cochrane must consider rehabilitation perspectives when developing & implementing its strategies
- Limitations: Lack of representation of OT, SLT, nursing, and other AHP to our work to date.

Full list

By Subtopic

New - Updated

(Stage filter not available for Subtopic view)

By subtopic:

- ▼ Health Conditions (1084)
 - ▷ Cardiac (15)
 - ▷ Gynaecology or Urology (39)
 - ▷ Mental Health (31)
 - ▷ Neurological (298)
 - ▷ Older Adults (>65 years) (90)
 - ▷ Oncology (46)
 - ▷ Orthopaedic or musculoskeletal (incl. pain conditions) (375)
 - ▷ Other (68)
 - ▷ Paediatrics (<18 years) (64)
 - ▷ Respiratory (57)
 - ▷ Vocational (1)
- ▷ Professionals (1293)

Keep Posted





Trusted evidence.
Informed decisions.
Better health.

Browse About us

Diseases

- ◆ 1. Musculoskeletal (10)
- ◆ 2. Neurological (17)
- ◆ 3. Cardiovascular and Pulmonary (3)
- ◆ 4. Pain (7)
- ◆ 5. Pediatric (2)
- ◆ 6. Geriatric (3)
- ◆ 7. Others (6)

Interventions

- ◆ Rehabilitation in general (18)
- ◆ Exercises (18)

Cochrane Rehabilitation ebook (alpha version)

Editors: Stefano Negrini, Antimo Moretti, Julia Patrick Engkasan, Frane Grubisic, Carlotte Kiekens, William Levack, Farooq Rathore, Francesca Gimigliano.

Editorial Boards: ESPRM (clinicians): Piotr Tederko, Daiana Popa, Sara Laxe;

UEMS-PRM Board (students): Nikolas Barotsis, Yvona Angerová, Catarina Aguiar Branco;

UEMS-PRM Section (health managers & policy makers): Filipe Antunes, Mauro Zampolini, Klemen Grabljevec;

Cochrane Rehabilitation (management): Joel Pollet.

The ebook collects all the reviews of Rehabilitation interest that can be searched according to thematic indexes

- 6. Geriatric (3)
- 7. Others (6)

Interventions

- Rehabilitation in general (18)
- Exercises (18)
- Education (12)
- Behavioural interventions (3)
- Manual medicine (1)
- Physical modalities (3)
- Interventional techniques (2)
- Assistive technologies (5)
- Technological interventions (1)
- Others (20)

European Physical and Rehabilitation Medicine Bodies Alliance, including:

UEMS-PRM Board (students): Nikolas Barotsis, Yvona Angerová, Catarina Aguiar Branco;

UEMS-PRM Section (health managers & policy makers): Filipe Antunes, Mauro Zampolini, Klemen Grabljevec;

Cochrane Rehabilitation (management): Joel Pollet.

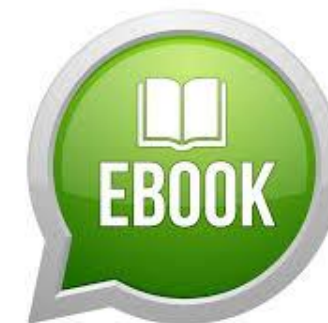
The ebook collects all the reviews of Rehabilitation interest that can be searched according to thematic indexes. For each review the summaries for different audiences are provided: researchers (abstract), practitioners, students, health managers & policy makers, consumers.

The ebook is financed and co-authored by the **European Physical and Rehabilitation Medicine Bodies Alliance**, including:

- European Union of Medical Specialists (UEMS), Physical and Rehabilitation Medicine Section & Board: <https://www.euro-prm.org/index.php?lang=en>;
- European Society of Physical and Rehabilitation Medicine (ESPRM): <http://www.esprm.net/>;
- European Academy of Rehabilitation Medicine (EARM): <http://www.aemr.eu/>

The ebook is produced in collaboration with the Residency School in Physical and Rehabilitation Medicine of the **University of Campania "Luigi Vanvitelli"** (Director Prof. Raffaele Gimigliano).





The prioritisation exercise

Definition of a **Summary** in agreement with the stakeholders

Identification of all relevant **Cochrane reviews**

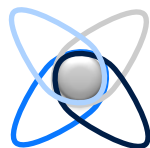
Matching between the Cochrane reviews and the summary

Identification of

- missing information
- redundancies



Pediatric	15. Juvenile Idiopathic Arthritis
1. Cerebral palsy	16. Marfan’s syndrome and Ehler Danlos syndrome
2. Spina Bifida	Marfan’s syndrome
3. Spinal Muscular Atrophy (SMA)	Ehler Danlos syndrome
4. Neonatal Brachial Plexus Injury	17. Neurofibromatosis
5 Torticollis	18. Mitochondrial syndromes in children
6. Congenital hip dysplasia	19. Sickle cell disease
7. Club foot	20. Down Syndrome
8. Scoliosis and other spinal deformities	21. Acquired cardiopulmonary disorders in children
Scoliosis	22. Tumors
Spinal deformities	a. Primary bone tumors: Osteogenic sarcoma
9. Osteochondrosis	b. Blood malignancies: leukemia and lymphoma
a. Scheuermann’s disease	Blood malignancies: leukemia
b. Osteochondrosis of Upper Extremity	Blood malignancies: lymphoma
i. Kienbock's disease	23. Pain in children and adolescents
ii. Panner's disease	Pain in children
c. Osteochondrosis of Lower Extremity	Pain in adolescents
i. Legg Calve Perthes disease	24. Mental Health in children and adolescents
ii. Blount’s disease, Osgood-Schlatter disease, and Sinding-Larsen Johansson	Mental Health in children
Blount’s disease	Mental Health in adolescents
Osgood-Schlatter disease	25: Language disorders in children/adolescents
Sinding-Larsen Johansson	Language disorders in children
iii. Sever’s disease and Köhler's disease	Language disorders in adolescents
Sever’s disease	
Köhler's disease	
10. Osteochondritis dessicans	
11. Osteogenesis Imperfecta	
12. Fractures in developing bone	
13. Slipped capitofemoral epiphyses	
14. Duchenne and Becker Muscular Dystrophy	
Duchenne Muscular Dystrophy	
Becker Muscular Dystrophy	



- Geriatric
- 2. Sarcopenia, Frailty and cachexia
 - Sarcopenia
 - Frailty
 - Cachexia
- 3. Delirium and dementia
 - Delirium
 - Dementia
 - a. Mild Cognitive Impairment
- 4. Polypharmacy in the elderly
- 5. Fall Prevention

Musculoskeletal

SPINE

1. Neck Pain/Radicular Neck Pain

Neck Pain

Radicular Neck Pain

- a. Cervical Radiculopathy
- b. Cervical stenosis
- c. Cervical Spondylotic Myelopathy
- d. Cervical Whiplash
- e. Cervical and Thoracic Zygapophysial joint arthropathy

Cervical Zygapophysial joint arthropathy

Thoracic Zygapophysial joint arthropathy

- f. Brachial plexopathy
- g. Thoracic outlet syndrome

2. Back Pain/Radicular Low Back Pain

Back Pain

Radicular Low Back Pain

- a. Lumbar disc disorders
- b. Lumbar Radiculopathy
- c. Lumbar stenosis
- d. Lumbar spondylosis without myelopathy
- e. Lumbar spondylolisthesis
- f. Sacroiliac joint disorders
- g. Coccygeal disorders
- h. Sacral Plexopathy, Sciatalgia

Sacral Plexopathy

Sciatalgia

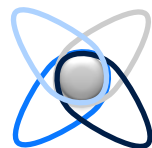
3. Compression Fractures of the Spine

4. Failed Back Surgery Syndrome

5. Spine infections

6. Seronegative spondyloarthropathy

7. Scoliosis



	Reviews			Protocols		
	Approved	Reviewer 1	Reviewer 2	Approved	Reviewer 1	Reviewer 2
1. Musculoskeletal	176	19	46	50	7	13
2. Neurological	221	7	42	31	3	11
3. Cardiovascular and Pulmonary	70	12	12	13	4	3
4. Pain	128	7	5	12	0	3
5. Pediatric	35	1	14	8	4	1
6. Geriatric	20	0	8	11	0	0
7. Others	39	9	5	8	2	1
Total	689	55	132	133	20	32

1. Musculoskeletal
2. Neurological
3. Cardiovascular and Pulmonary
4. Pain
5. Pediatric
6. Geriatric
7. Others
Total

Index	
Without reviews/protocols	With at least 1 review/protocol
93	68
40	35
1	14
8	15
38	16
5	5
10	14
195	167



	Orphan reviews			Orphan protocols		
		Reviewer 1	Reviewer 2		Reviewer 1	Reviewer 2
1. Musculoskeletal	18	11	1	5	4	0
2. Neurological	2	12	4	0	3	0
3. Cardiovascular and Pulmonary	0	3	0	0	1	0
4. Pain	2	0	2	0	0	0
5. Pediatric	0	8	0	2	1	1
6. Geriatric	6	1	3	1	0	0
7. Others	13	6	4	0	0	2
Impossible to allocate	10	16	1	3	2	1
Total	33	46	14	6	7	4

Prioritization: Consensus through Delphi

First Round: Index

- Should the topic already present be kept ? (Y/N Likert 5)
- Propose any topic in which PRM intervention can be given that is not in the index

Second Round: Index

- Should the new proposed topics be introduced ? (Y/N Likert 5)
- Should an excluded topic be included ? (Y/N Likert 5)

Third Round Topics

- Topic covered
 - Is the area (musculoskeletal, neurological...) represented enough ? (Y/N Likert 5)
 - Inside each area, are all the relevant topic represented enough ? (Y/N Likert 5)
- Topics not covered (black holes)
 - Should the topic be covered ? (Y/N Likert 5)
 - With which priority ? (Likert 5)



Last steps

Cochrane Rehabilitation Headquarters

- Mapping of literature on the single topics (RCTs/CCTs/other)
- Combination of prioritization with mapping

European PRM Bodies

- Motion for research in PRM
 - Review Cochrane
 - Primary studies
- Motion for methodological research in PRM
 - Need for methodology for other kind of studies

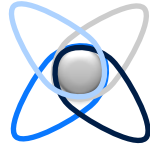


Prioritization process

One PRM delegate per Country who accept to participate in the process and follow it regularly

Problems

- Limit to Europe
 - how to involve other rehabilitation professionals ?
- Expand beyond Europe
 - involvement of other regions of the world (ISPRM?)
 - Involvement of other rehabilitation professionals (WCPT, WFOT, ISPO?)



Conclusion

- Our tagging work is now available on the Cochrane Rehabilitation website
- It feeds into the Cochrane Rehabilitation eBook and other projects.
- We are now exploring how this work can inform the PICO Annotation project within Cochrane
- Our work is ongoing



Thank you!

Receive Weekly Evidence in Rehabilitation

<http://rehabilitation.cochrane.org>
cochrane.rehabilitation@gmail.com



@CochraneRehab

stefano.negrini@unibs.it
[@ProfNegrini](#)
www.dongnocchi.it - www.unibs.it

Trusted evidence.
Informed decisions.
Better health.

