



ACRM AMERICAN CONGRESS OF
REHABILITATION MEDICINE

Improving lives through interdisciplinary rehabilitation research

SYMPOSIA SPOTLIGHT CLINICAL PRACTICE • INTERNATIONAL

COCHRANE REHABILITATION, THE NEW INTERNATIONAL BODY TO SPREAD & STRENGTHEN EVIDENCE IN REHABILITATION MEDICINE

P R E S E N T E R S



Stefano Negrini, MD

Associate Professor in Physical and Rehabilitation Medicine
University of Brescia
Vigevano, Lombardia



Carlotta Kiekens, MD

Head of Clinic, department of Physical and Rehabilitation
Medicine
University Hospitals Leuven
Leuven, Vlaams-Brabant

TUE 5 NOV
12:45 PM - 2:00 PM



ACRM 
Annual Conference



Disclosures

Stefano Negrini

- Stock of ISICO (Italian Scientific Spine Institute), Milan, Italy

Charlotte Kiekens

- Nothing to disclose

This continuing education activity is managed and accredited by The Firm, Inc. in cooperation with ACRM. The Firm, Inc., ACRM, and all accrediting organization do not support or endorse any product or service mentioned in this activity.

The Firm, Inc. and ACRM staff has no financial interest to disclose.

Learning Objectives

At the conclusion of this activity, the participant will be able to:

1. understand the value of different evidence synthesis products
2. access Cochrane Evidence relevant to rehabilitation
3. discuss some of the main problems of evidence production in rehabilitation

Obtaining CME/CE Credit

Credit is only given to attendees who:

- Successfully complete the entire course/session.
- Evaluate the course – by completing an online survey.
- After you have completed the evaluation, an email will automatically be generated to you with a link to print your certificate.

The evaluation system will close 30 days after the date of the workshop.

Cochrane Rehabilitation

The international body to spread and strengthen evidence in rehabilitation medicine

Charlotte Kiekens, MD, Coordinator

Physical and Rehabilitation Medicine, UZ Leuven, Belgium
ISRPM WHO Liaison committee chair

[@CharlotteK](#) [@CochraneRehab](#)

Trusted evidence.
Informed decisions.
Better health.



Nothing to disclose

Trusted evidence.
Informed decisions.
Better health.





Trusted evidence.
Informed decisions.
Better health.

Media | Contact us | Community

Search...



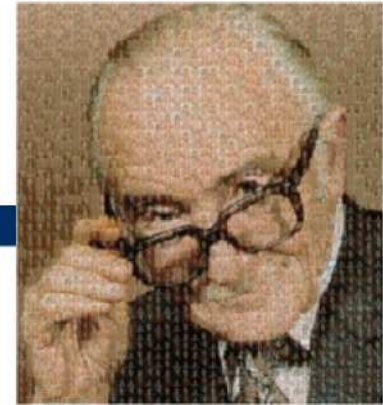
Our evidence

About us

Get involved

News and events

Cochrane Library



Our evidence

Global independent network with 11,000 members and over 68,000 supporters from more than 130 countries

A **world of improved health** where **decisions** about health and health care are **informed by high-quality, relevant and up-to-date synthesized research evidence.**

Cochrane Organization

Review Group Networks (8)

Review Groups: systematic reviews (68)

Methods Groups: development of methods for reviews (17)

Geographic Centres: local knowledge translation (48)

Fields: **knowledge translation** for a specific health community other than a condition (12)



Cochrane Fields

Focus on a **dimension** of health care other than a condition or topic

- the **setting** of care (primary care)
- the type of **consumer** (children, older people)
- or the type of **provider** (nursing)

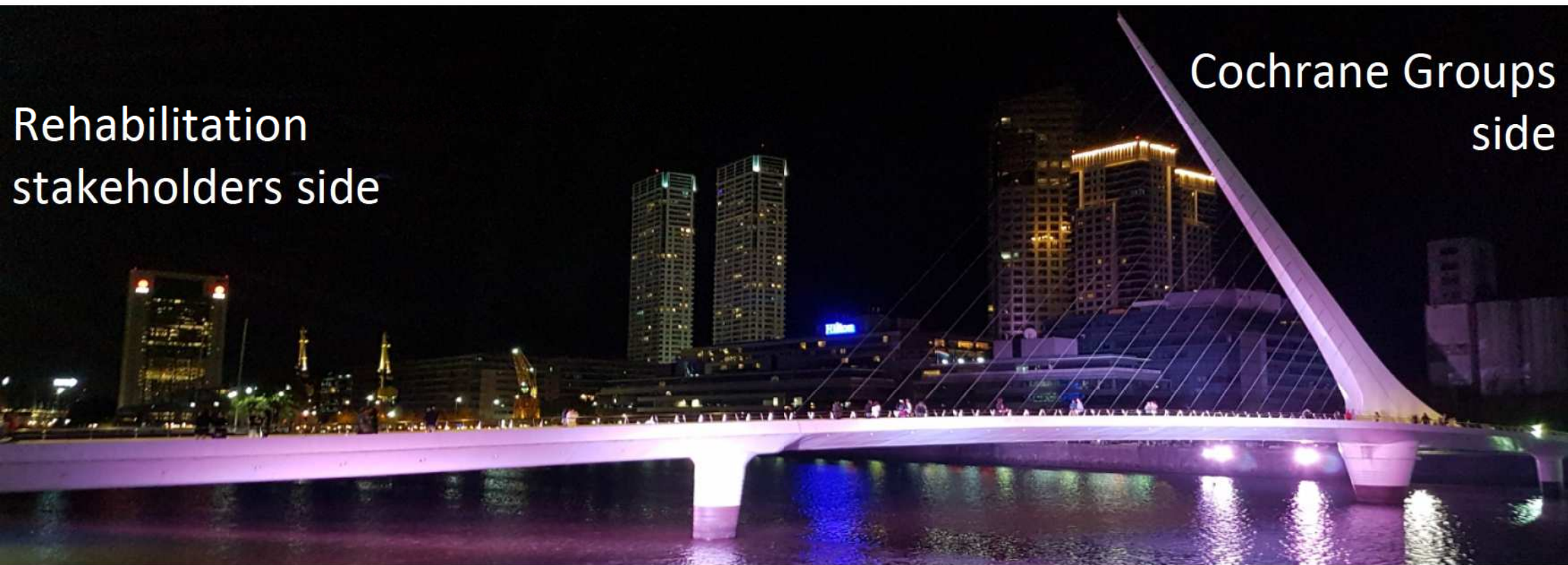
Cochrane Rehabilitation focuses on a specific **health strategy**

1. Cochrane Child Health
2. Cochrane Complementary Medicine
3. Cochrane Consumer Network
4. Cochrane Global Ageing
5. Cochrane Insurance Medicine
6. Cochrane Neurosciences
7. Cochrane Nursing Care
8. Cochrane Nutrition
9. Cochrane Pre-hospital and Emergency Care
10. Cochrane Primary Care
- 11. Cochrane Rehabilitation**
12. Cochrane First Aid
13. Sustainable Healthcare

Role of Cochrane Fields: a bridge, knowledge translation

Rehabilitation
stakeholders side

Cochrane Groups
side



Vision of Cochrane Rehabilitation

All **rehabilitation professionals** can apply
Evidence Based Clinical Practice

Decision makers will be able to take
decisions according to the best and most
appropriate evidence



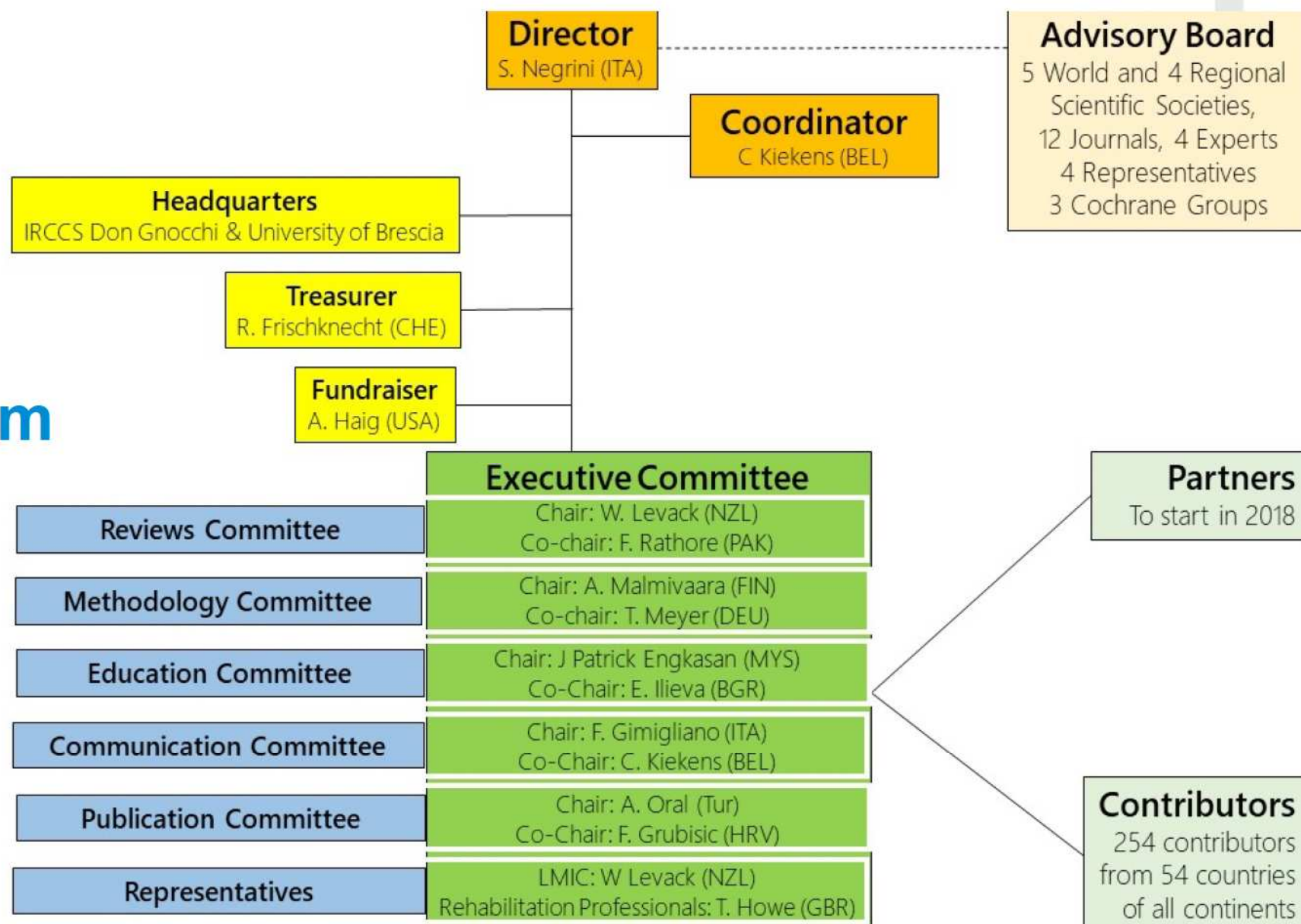
Mission of Cochrane Rehabilitation

Allow all rehabilitation professionals to combine the best available **evidence** as gathered by high quality Cochrane systematic reviews, with their own **clinical expertise** and the **values of patients**

Improve the methods for evidence synthesis, to make them coherent with the needs of disabled people and daily clinical practice in rehabilitation.



Organigram



The Executive Committee

1. **Stefano Negrini, MD (Italy) – Director**
2. **Carlotte Kiekens, MD (Belgium) – Coordinator**
3. Francesca Gimigliano, MD, PhD (Italy) – Communication Com
4. Frane Grubisic, MD (Croatia) – Publication Com
5. Tracey Howe, PT (United Kingdom) – Professional representative
6. Elena Ilieva, MD, PhD (Bulgaria) – Education Com
7. William Levack, PT, PhD (New Zealand) – Reviews Com
8. Antti Malmivaara, MD, PhD (Finland) – Method Com
9. Thorsten Meyer, Psy, PhD (Germany) – Method Com
10. Aydan Oral, MD (Turkey) – Publication Com
11. Julia Patrick Engkasan, MD (Malaysia) – Education Com
12. Farooq Rathore, MD (Pakistan) – Reviews Com; LMIC representative



Our activities, in line with the themes of the Cochrane Knowledge Translation Strategy



Packaging, push and support to implementation

Ensuring our users receive and can act on our reviews and products

Reviews Committee

- Review selection and website database

Communication Committee

- Website and social media

Publication Committee

- Cochrane Corners

Ebook (in production)



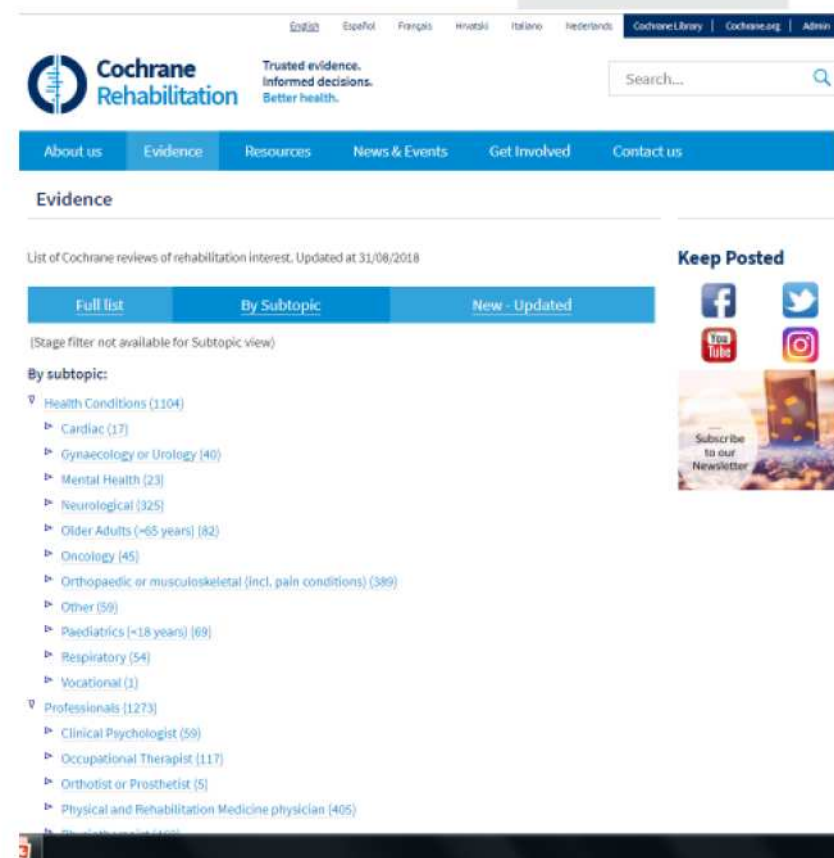
Reviews Committee

Tagged all the Cochrane reviews from 1996 to June 2019

Ongoing process to constantly update the results

One in 11 Cochrane reviews are on rehabilitation interventions, according to pragmatic inclusion criteria developed by Cochrane Rehabilitation.

Levack WM, Rathore FA, Pollet J, Negrini S. *Arch Phys Med Rehabil.* 2019



The screenshot shows the Cochrane Rehabilitation website. At the top, there is a navigation bar with links for English, Español, Français, Hrvatski, Italiano, Nederlands, Cochrane Library, Cochrane.org, and About. Below this is the Cochrane Rehabilitation logo and the tagline "Trusted evidence. Informed decisions. Better health." A search bar is located on the right. The main navigation menu includes links for About us, Evidence, Resources, News & Events, Get Involved, and Contact us. The Evidence section is currently selected, displaying a list of Cochrane reviews of rehabilitation interest, updated at 31/08/2018. The list is organized by subtopic, with options for Full list, By Subtopic, and New - Updated. The subtopics listed are Health Conditions (1104) and Professionals (1273). Under Health Conditions, the subtopics are Cardiac (17), Gynaecology or Urology (40), Mental Health (23), Neurological (325), Older Adults (>65 years) (82), Oncology (45), Orthopaedic or musculoskeletal (incl. pain conditions) (589), Other (59), Paediatrics (<18 years) (69), Respiratory (54), and Vocational (1). Under Professionals, the subtopics are Clinical Psychologist (59), Occupational Therapist (117), Orthotist or Prosthetist (5), and Physical and Rehabilitation Medicine physician (405).

Communication Committee



	2017	2018	2019
Website	4727	7073	
Newsletter	361	801	929
Twitter	715	1485	1821
Facebook	1292	2040	2382
Instagram	-	532	764
YouTube channel	28	76	2281
Blogshots	4	39	47

Cochrane News

- World Kidney Day
- Early bird registration and stipends now open for the Global Evidence Summit
- Anne Anderson Prize: recognizing the enhancement and viability of women in Cochrane
- New Cochrane Library Special Collection: Enabling breastfeeding for mothers and babies
- Breastfeeding: evidence on effective support and enablers for mothers and their babies



Latest News and Events



Keep Posted



Tweets by @CochraneRehab



Blogshots



Elektromechanische en robot ondersteunde training van de arm voor het verbeteren van activiteiten van het dagelijks leven, functie en spierkracht van de arm na een hersenbloeding

Elektromechanische en robot ondersteunde training, vergeleken met alle andere interventies, verbeteren activiteiten van het dagelijks leven en functie en spierkracht van de arm bij volwassenen na een hersenbloeding aan het einde van de behandeling.

Cochrane Review; 45 studies met 1619 volwassenen na een hersenbloeding, vergelijken elektromechanische en robot ondersteunde training van de arm vs. alle andere interventies.

Cochrane Review door: Cochrane Stroke Group

rehabilitation.cochrane.org | @CochraneRehab | #CochraneEvidence <http://bit.ly/RehabC2896879> Vertaald door Cochrane Belgium



Rehabilitación cardíaca basada en ejercicio para personas con dispositivos de asistencia ventricular implantables

Es incierto que la rehabilitación cardíaca basada en ejercicio reduzca la mortalidad, la re-hospitalización y la infección en personas con dispositivos de asistencia ventricular implantables en comparación con el cuidado usual.

VACÍO EN LA EVIDENCIA

Revisión de Cochrane; 2 estudios que incluyeron 40 adultos con dispositivos de asistencia ventricular implantables, que compararon la rehabilitación cardíaca basada en el ejercicio vs. el cuidado usual.

Revisión de Cochrane por: Cochrane Heart Group

rehabilitation.cochrane.org | @CochraneRehab | #CochraneEvidence <http://bit.ly/RehabC2812222> Traducción por Grupo Rehabilitación en Salud-Universidad de Antioquia



Yoga for stroke rehabilitation

We are uncertain whether yoga improves quality of life, balance, gait, depression, anxiety and disability in stroke survivors. Whether or not yoga has any adverse effects is also uncertain.

Cochrane Review; two studies with 72 people comparing yoga vs waiting-list control in adults with stroke

Cochrane Review by: Cochrane Stroke Group

rehabilitation.cochrane.org | @CochraneRehab | #CochraneEvidence <http://bit.ly/2BR5608>



Vježbanje kod reumatoidnog artritisa šaka

Vježbanje poboljšava snagu i jačinu pincetnog hvata obje šake, što može povećati funkciju šake i suradljivost pacijenta te može srednjoročno i dugoročno umanjiti bol. Nema izvještaja o nuspojavama vježbanja.

Autori pregleda nisu sigurni da li vježbanje poboljšava funkciju šake, snagu i jačinu pincetnog hvata samo lijeve ili desne šake te djeluje li na kratkoročno smanjenje boli.

Cochrane pregled: 7 studija u koje je uključena 841 odrasla osoba s reumatoidnim artritisom, usporedba sa stanjem bez vježbanja.

Cochrane sustavni pregled izradila: Cochrane grupa za mišićno-koštani sustav.

rehabilitation.cochrane.org | @CochraneRehab | #CochraneEvidence <http://bit.ly/RehabC289833> Prevodnik od strane: Hrvatski studiji za Rehabilitaciju i ortopediju medicinske fakulteta Sveučilišta u Zagrebu



La Riabilitazione vocazionale favorisce il ritorno all'attività lavorativa dopo lesioni traumatiche agli arti superiori

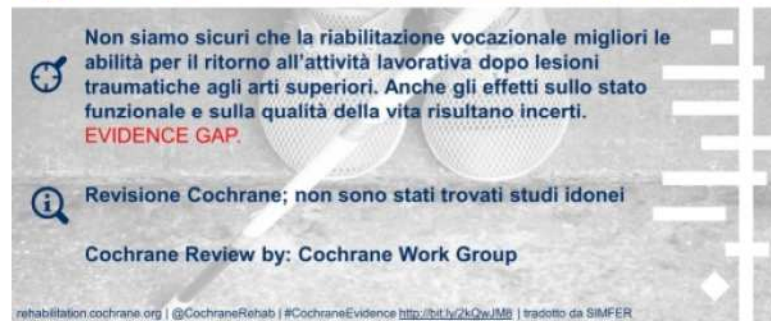
Non siamo sicuri che la riabilitazione vocazionale migliori le abilità per il ritorno all'attività lavorativa dopo lesioni traumatiche agli arti superiori. Anche gli effetti sullo stato funzionale e sulla qualità della vita risultano incerti.

EVIDENCE GAP.

Revisione Cochrane; non sono stati trovati studi idonei

Cochrane Review by: Cochrane Work Group

rehabilitation.cochrane.org | @CochraneRehab | #CochraneEvidence <http://bit.ly/2kQwJm8> | tradotto da SIMFER

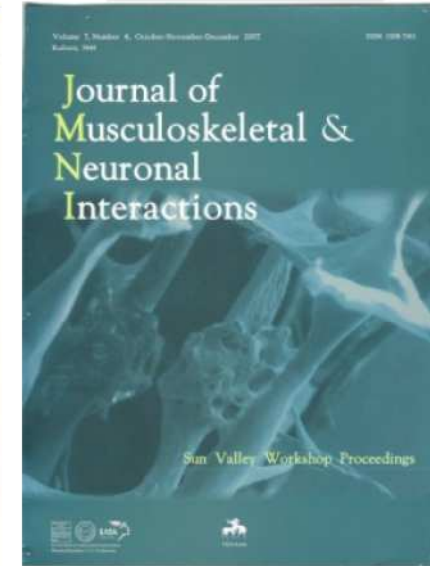
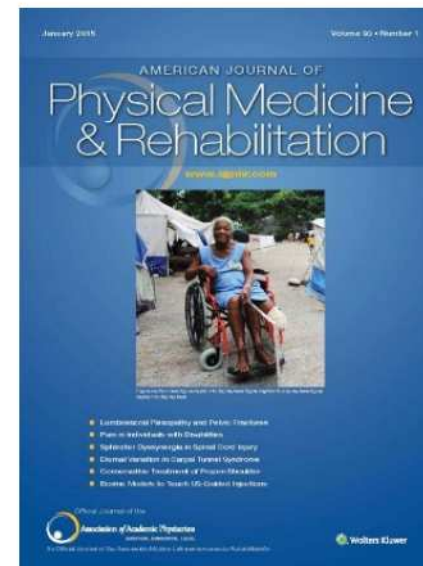
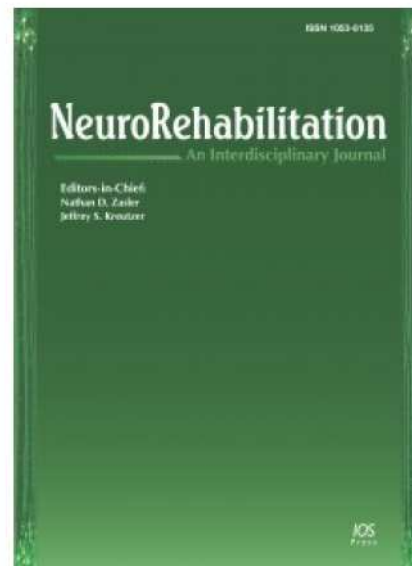
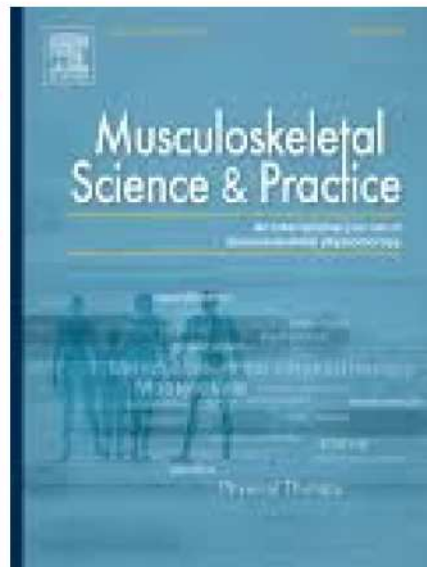
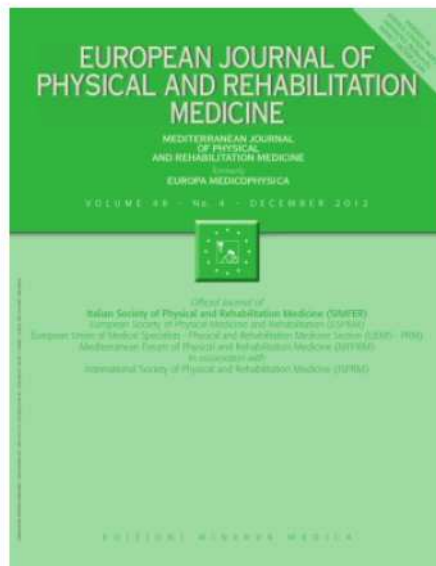




Publication Committee

Cochrane Corners (12 journals)

13 published, 8 in pre-press, 8 submitted





Cochrane Rehabilitation ebook

“**Live**” e-book available for free in Internet to be constantly updated including all [Cochrane reviews relevant to rehabilitation](#)

Contents

- Titles
- Abstracts
- Plain language summary
- Summaries for the different audiences
 - Students, health managers & politicians, clinicians
- Blogshots and other relevant products



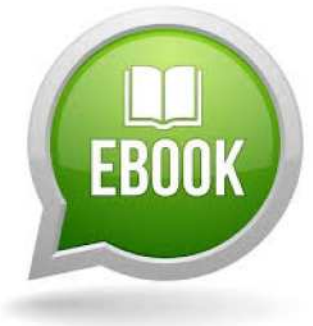
The Cochrane Rehabilitation ebook

Funded by the European Physical and Rehabilitation Medicine (PRM) Bodies (ESPRM, EARM, UEMS PRMS Section & Board)

Importance to Rehabilitation:

- **inform rehabilitation clinicians** on evidence based practice
- **educate** undergraduate and postgraduate rehabilitation students
- **support political actions** toward policymakers, patients' associations and other stakeholders
- **identify unmet needs of evidence synthesis** and activate correct prioritization for future work of Cochrane





The content summaries

Production of the summaries for different **target audiences**

- **rehabilitation professionals**, with ESPRM
- **PRM trainees, medical and all rehabilitation profession students**, with UEMS PRM Board
- **politicians**, with UEMS PRM Section
- **consumers**, with Cochrane

Translation into different languages

Continuous **updating**

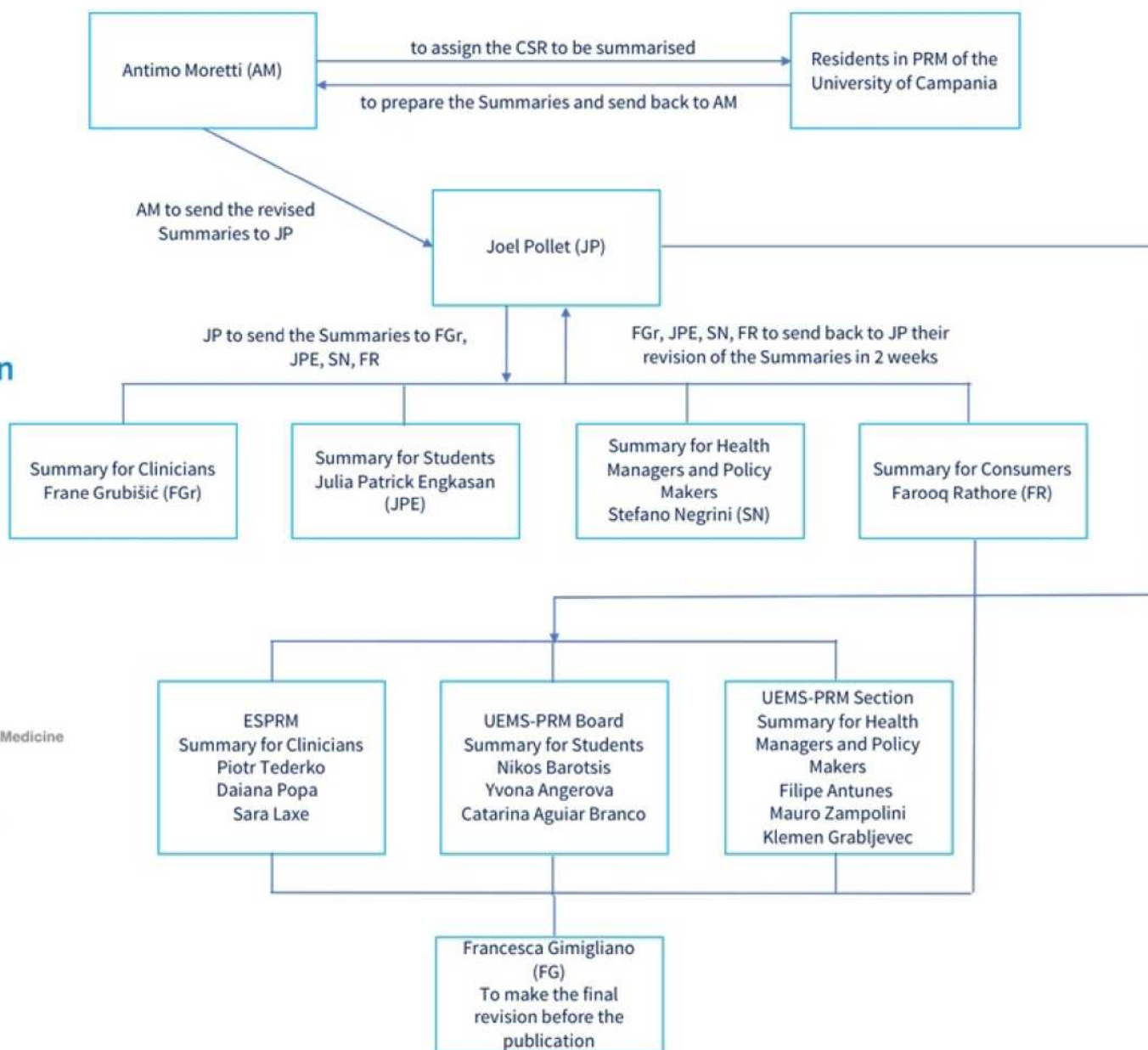


The ebook index

1. Rehabilitation approach to **Musculoskeletal** health conditions
2. Rehabilitation approach to **Neurological** health conditions
3. Rehabilitation approach to **Pain** health conditions
4. Rehabilitation approach to **Cardiovascular and Pulmonary** health conditions
5. Rehabilitation approach to **Internal medicine** health conditions
6. Rehabilitation approach to **Cancer- Organ Transplant and Immune-compromised** health conditions
7. Rehabilitation approach to **Pelvic floor** health conditions
8. Rehabilitation approach to **Psychiatric** health conditions
9. Rehabilitation approach to **Sport medicine** health conditions
10. Rehabilitation approach to **Pediatric** health conditions
11. Rehabilitation approach to **Geriatric** health conditions
12. Rehabilitation **management**
13. General **prophylaxis** approach using rehabilitation interventions



The ebook production chart





Trusted evidence.
Informed decisions.
Better health.

Search...



Browse

About us

Electromechanical-assisted training for walking after stroke

Reference	<p>Summary for health managers:</p> <p>Stroke is a major public health problem because it is the first cause of disability in the adult population. Worldwide incidence rates range between 144 and 373/100.000/yards.</p> <p>The guidelines of American Heart Association/American Stroke Association recommend robot assisted movement training to improve mobility after stroke in combination with conventional therapy. Cochrane evidence shows that robotic training combined with physiotherapy probably improves walking ability in people with stroke.</p> <p>The summary was prepared by: Author: Andrea Settembre Editors: Antimo Moretti, Stefano Negrini, Francesca Gimigliano Reviewers: Filipe Antunes, Klemen Grabljevec</p> <p>Approved by a vote from UEMS-PRM Section delegates at the General Assembly in Stockholm September 8th, 2018.</p>
Abstract	
Plain language summary	
Summary for clinicians	
Summary for students	
Summary for health managers	
Summary for consumers	

Diseases:

[2. Neurological > 2.3 Cerebrovascular Disorders](#)

[2. Neurological > 2.8 Spasticity](#)

Interventions:

[Rehabilitation in general](#)

[Exercises](#)

[Physical modalities](#)

[Assistive technologies](#)

[Technological interventions](#)

Electromechanical-assisted training for walking after stroke

Reference

Abstract

Plain language summary

Summary for clinicians

Summary for students

Summary for health managers

Summary for consumers

Summary for students:

Stroke is a major public health problem being the first cause of disability in the adult population. Three months after stroke, 20% of people remain wheelchair bound, and approximately 70% walk at a reduced velocity and capacity.

Body weight supported treadmill training, automated electromechanical gait training, and robotic assisted gait training devices have been developed to deliver gait therapy. The automated and robotic devices have the advantage of reduced dependence on therapists compared to body weight supported treadmill training.

This Cochrane systematic review assessed the effectiveness of automated electromechanical and robotic assisted gait training devices for improving walking after stroke.

It was reported that the use of electromechanical devices combined with physiotherapy when compared with physiotherapy alone may increase the chance of walking independently at the end of treatment in early post stroke people. The evidence for this outcome is of moderate quality and it is possible that the true effect might change with future studies. No improvement was reported in walking speed and distance. However, the evidence for both outcomes is low and it is very likely that future trials may change the quantitative effect, while the overall efficacy of the treatment may or not change.

The summary was prepared by:

Author: Andrea Settembre

Editors: Antimo Moretti, Julia Patrick Engkasan, Francesca Gimigliano

Reviewers: Nikolaos Barotsis, Yvona Angerova

Approved by a vote from UEMS-PRM Board delegates at the General Assembly in Stockholm September 8th, 2018.

Diseases:

[2. Neurological > 2.3 Cerebrovascular Disorders](#)

[2. Neurological > 2.8 Spasticity](#)

Interventions:

[Rehabilitation in general](#)

[Exercises](#)

[Physical modalities](#)

[Assistive technologies](#)

[Technological interventions](#)



Plan

To launch the ebook in May 2020 at ESPRM2020 in Belgrade.

The ebook will be freely available for all and will be a useful tool to spread certified evidence in a fast and practical way!



Facilitating pull

Growing our users' capacity to find and use our reviews Education Committee

Ex. 2019

- 3 Workshops in 2 Scientific Meetings in 2 continents
- 3 Sessions in 2 Scientific Meetings in 2 continents
- 18 Presentations in 15 Scientific Meetings in 5 continents
- Area in the website with educational material under development

Cochrane Interactive Learning, Cochrane Training



Exchange

Engaging with our users to support their evidence informed decision making

Advisory Board

Participation in International and Regional Meetings (ex. **ACRM2019** 😊)

Partnerships (Memoranda of Understanding, MoUs)

30 Publications in Indexed journals



Advisory Board

3 Cochrane Groups: Italy, Musculoskeletal, Stroke

5 World Scientific Societies: ISPO, ISPRM, WCPT, WFNR, WFOT

4 Regional Scientific Societies: AMLAR, AOSPRM, ESPRM, UEMS-PRM Section

12 Journals: Am J PMR, **Arch PMR**, Aust Occup Ther J, Clin Rehabil, Dev Neurorehabil, Eur J PRM, JOSPT, J Rehab Med, Manual Ther, Neurorehab neural repair, Phys Ther, Prost Orthot Int, Ann PRM.

4 Experts: China, Colombia, Switzerland, USA

4 Representatives: consumers, LMIC (2), WHO

First meeting in Buenos Aires #ISPRM 2017

Second meeting in Paris #ISPRM 2018

Third meeting in Kobe #ISPRM2019



Partners

Partners

- ♦ Mission and Goals
- ♦ Perspective
- ♦ Organisational Chart
- ♦ Field Director
- ♦ Field Coordinator
- ♦ Executive committee
- ♦ Committees
- ♦ Advisory Board
- ♦ Community
- ♦ Activities
- ♦ **Partners**
 - ♦ Hosting and Financing
 - ♦ International and Regional Societies
 - ♦ Journals
 - ♦ National Societies
 - ♦ Universities, Hospitals, Research Centres and other organizations

Cochrane Rehabilitation has been signing Memoranda of Understanding in order to create partnerships with different Groups, Societies, Universities, Hospitals, Journals and other Rehabilitation stakeholders.

Partners are defined according to their relationships with Cochrane Rehabilitation as:

- **Hosting and Financing**
- **Financing and Strategic**
- **Strategic**
- **Journals**
- **National Societies**
- **Universities, Hospitals, Research Centres and other organizations**

Keep Posted



Prioritization exercise

Prioritization exercise completed,
involving 100 scientific societies
representatives from 39 Countries and
all continents

- Defined index of topics for rehabilitation
- Identified needs for new reviews for rehabilitation



Methodology committee

A think tank to help solving problems of EBM in rehabilitation

- Two surveys on EBM problems in Rehabilitation
- One poster at the Global Evidence Summit

Yearly journal special issues and/or sections on methodology:

- First one in EJPRM after 2-days meeting #ISPRM2018 in Paris
- Second meeting #ISPRM2019 Kobe scheduled in AJPMR
- Third meeting #ISPRM2020 Orlando scheduled in AJPMR

Workshops Sessions and Presentations in Scientific Meetings as reported above



Effective and Sustainable Knowledge Translation

Building a sustainable infrastructure for knowledge translation

- Executives not working in the Headquarters: 11 colleagues
- MoU signed with 32 partners for various activities
- People involved in various tasks and projects: 256 from 54 countries



Rewards

Page on the website

Milestones badges according to work performed

Cochrane membership (50 hours of work)



Here a list of the contributors that have actively collaborated with the different committees of Cochrane Rehabilitation in 2018.

Betty Bellard O'Keefe , USA	Francesca Cecchi , Italy	Francesco Agostini , Italy	Alberto Giattini , Italy
NL Contributor	NL Contributor	NL Contributor	Translator
Sara Laxe Garcia , Spain	Sabrina Paganoni , USA	David Morgenroth , USA	Saad Bindawas , Saudi Arabia
NL Contributor	Education Committee	Education Committee	Review Committee
Trudy Bekkering , Belgium	Sanobe Naz , Pakistan	Ana Poljicanin, Croatia	Alex Pollock, UK
Translator	Review Committee	Translator	Methodology Committee
Susan Armijo Olivo, Canada	Augusto Fusco, Italy	Livia Puljak, Croatia	Alexandra Chirica
Methodology Committee	Publication Committee	Publication Committee	Review Committee
Fateh Muhammad Al-Farabi	Paolo Patelli, Italy	Wajida Perveen	Catherine J. VanDerwerker
Review Committee	Review Committee	Review Committee	Review Committee

Cochrane Rehabilitation contributors of 2017.

Thank you ☺
Join us, follow us !

Receive Weekly Evidence in Rehabilitation

<http://rehabilitation.cochrane.org>

cochrane.rehabilitation@gmail.com

 **@CochraneRehab**



Evidence in Rehabilitation Between Facts and Prejudice

Stefano Negrini

Chair of Physical and Rehabilitation Medicine
University of Brescia, Don Gnocchi Foundation
Director of Cochrane Rehabilitation

Trusted evidence.
Informed decisions.
Better health.





Disclosure

Director of Cochrane Rehabilitation

Chief-Editor of the European Journal of Physical and Rehabilitation Medicine
(congress expenses)

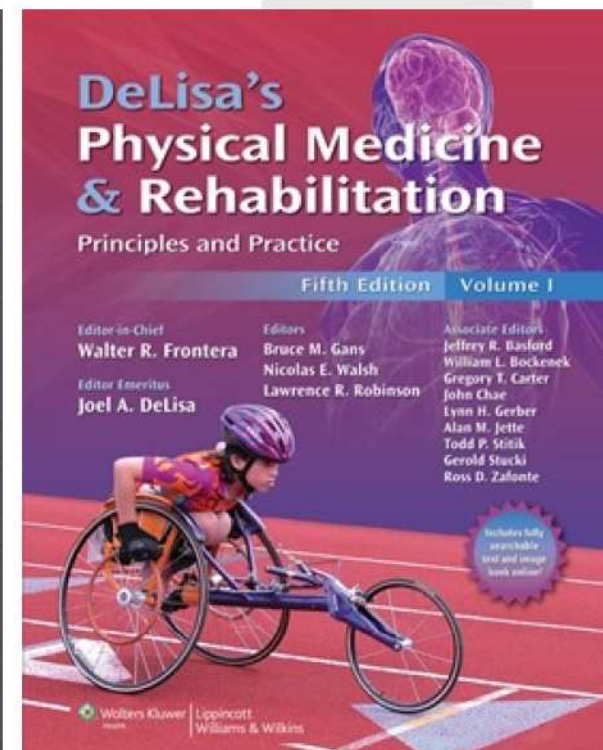
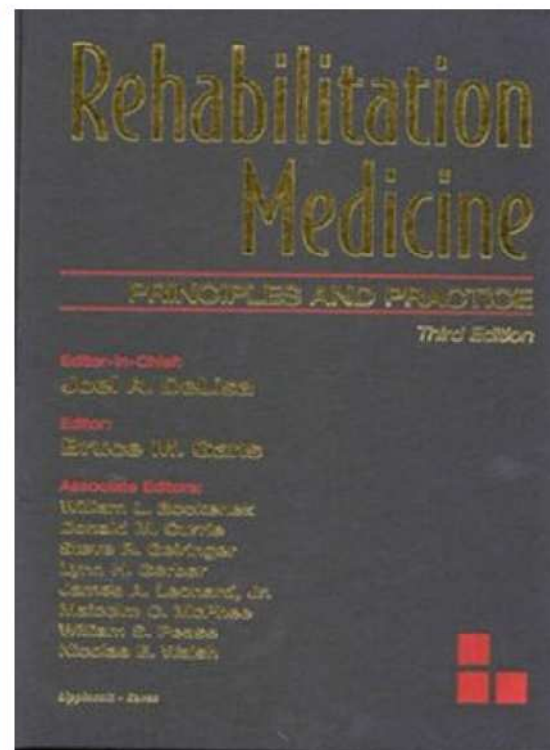
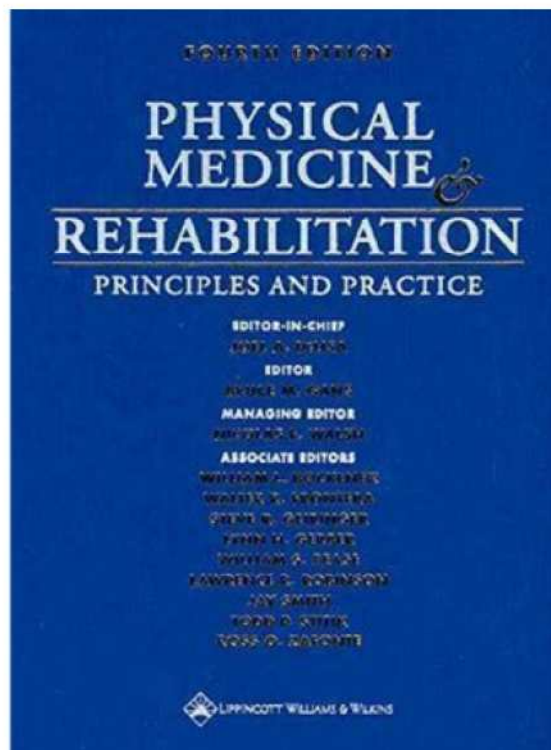
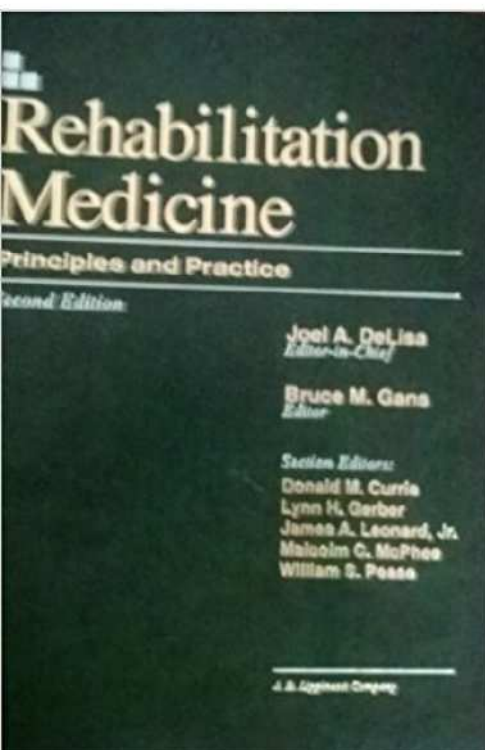
ISICO (Italian Scientific Spine Institute): stock

Medtronic: consultant



1. **Rauch A, et al.** Toward Strengthening Rehabilitation in Health Systems: Methods Used to Develop a WHO Package of Rehabilitation Interventions. **Arch Phys Med Rehabil.** 2019 Nov;100(11):2205-2211.
2. **Negrini S, et al.** Clinical replicability of rehabilitation interventions in randomized controlled trials reported in main journals is inadequate. **J Clin Epidemiol.** 2019 Oct;114:108-117
3. **Levack WMM, et al.** One in 11 Cochrane Reviews Are on Rehabilitation Interventions, According to Pragmatic Inclusion Criteria Developed by Cochrane Rehabilitation. **Arch Phys Med Rehabil.** 2019 Aug;100(8):1492-1498.
4. **Negrini S, et al.** The struggle for evidence in physical and rehabilitation medicine: publication rate of randomized controlled trials and systematic reviews is growing more than in other therapeutic fields. **Am J Phys Med Rehabil.** 2019 Apr;98(4):258-265.
5. **Negrini S, et al.** Cochrane Rehabilitation: 2018 annual report. **Eur J Phys Rehabil Med.** 2019 Apr;55(2):314–8.
6. **Negrini S.** DeLisa Lecture. Evidence in Rehabilitation Medicine: between facts and prejudices. **Am J Phys Med Rehabil.** 2019 Feb;98(2):88-96.
7. **Moretti A, et al.** The Cochrane Rehabilitation eBook: a knowledge translation tool to transfer evidence to different rehabilitation audiences. **Eur J Phys Rehabil Med.** 2018 Aug;54(4):622

DeLisa Lecture



Negrini S. DeLisa Lecture. Evidence in Rehabilitation Medicine: between facts and prejudices.
Am J Phys Med Rehabil. 2018 Aug 28. doi: 10.1097/PHM.0000000000001033.

**In rehabilitation
there is
no EVIDENCE**

A constant **boulder
on rehabilitation
shoulders**



Overview

Rehabilitation vs other health sectors

-
-

Problems with evidence generation in rehabilitation

-
-

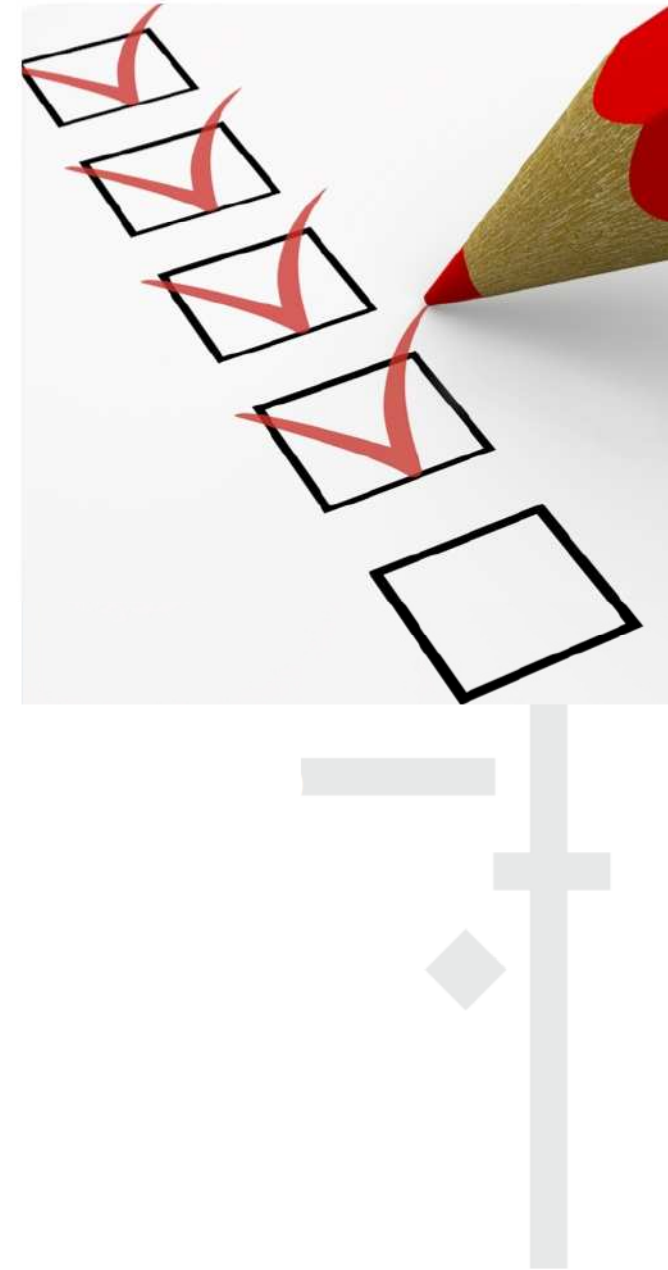
State of research in rehabilitation

-
-

Implementation of EBM in rehabilitation

-

Challenges in the implementation of EBM in rehabilitation



Overview

Rehabilitation vs other health sectors

- The *Cochrane Rehabilitation* project: **rehabilitation definition**
- The *Cochrane Rehabilitation* project: **ebook table of contents**

Problems with evidence generation in rehabilitation

- The *Cochrane Rehabilitation* project: **the Replicability of RCTs in Everyday PRM Clinics (REREP)**
- The *Cochrane Rehabilitation* project: **the RCT in rehabilitation checklist (RCTRACK)**

State of research in rehabilitation

- The *Cochrane Rehabilitation* project: **prioritization**
- The *Cochrane Rehabilitation* project with WHO: **Best Evidence for Rehabilitation (be4rehab)**

Implementation of EBM in rehabilitation

- Knowledge Translation efforts of *Cochrane Rehabilitation*

Some other future solutions for EBM in rehabilitation

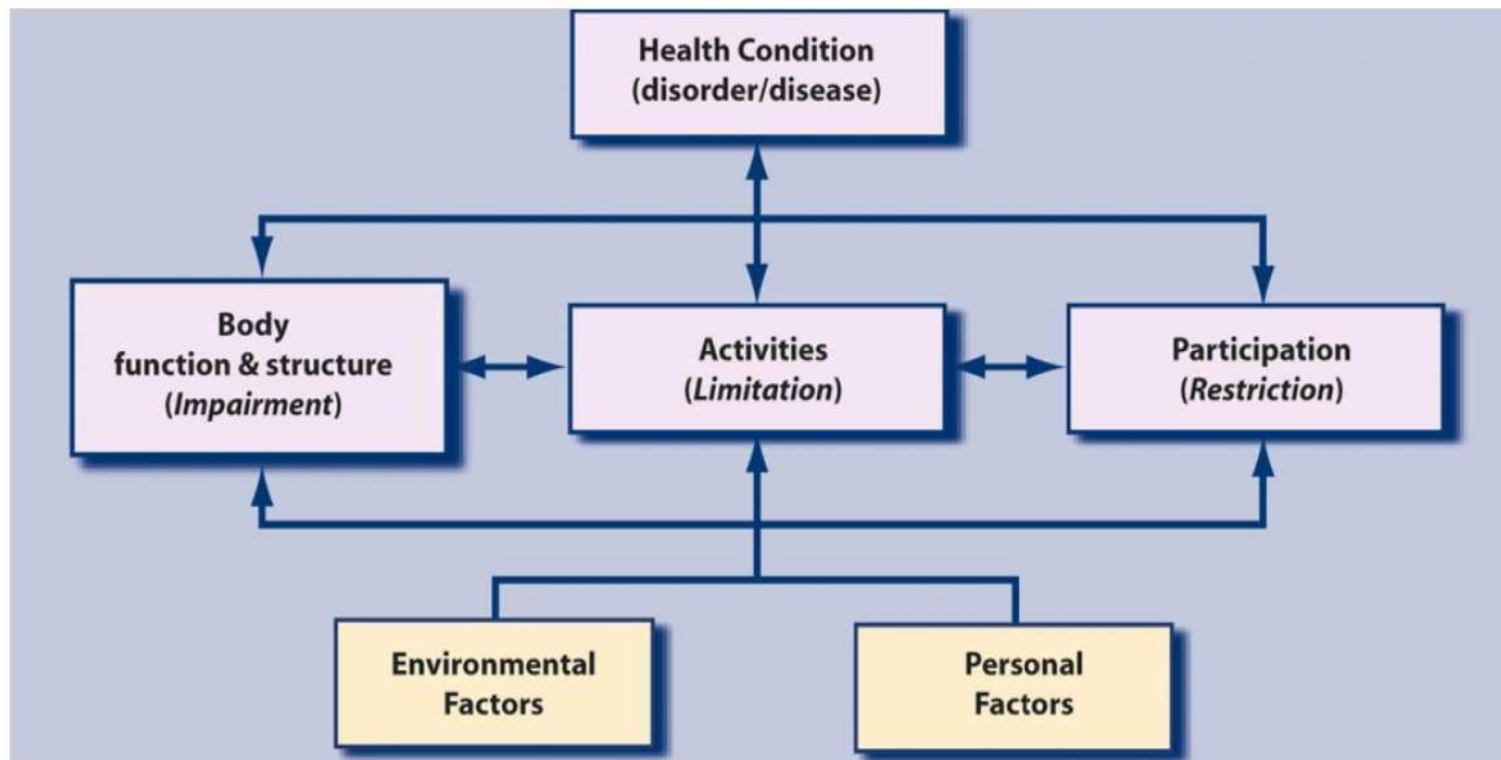




Rehabilitation vs other health sectors

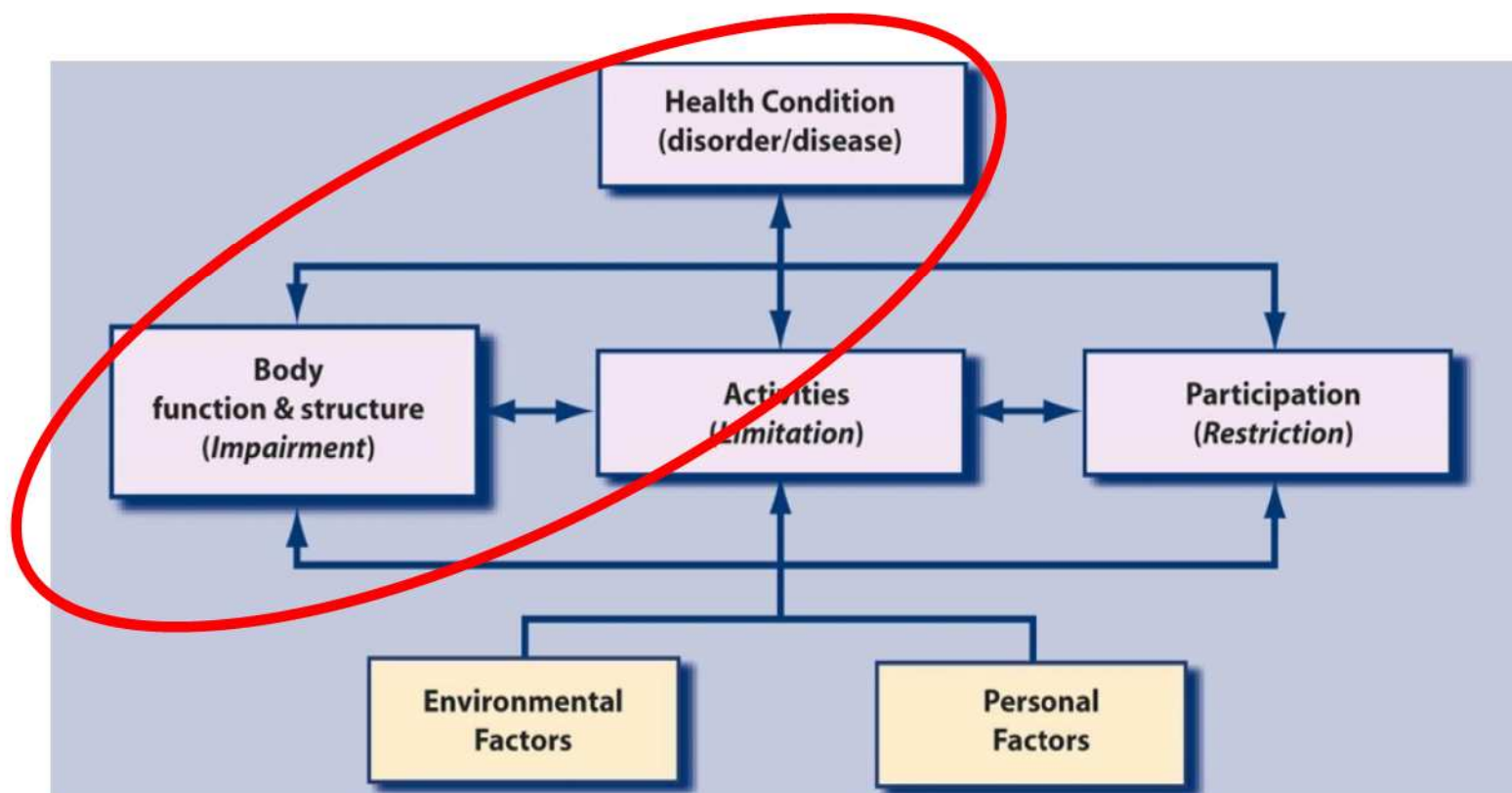
Trusted evidence.
Informed decisions.
Better health.

ICF biopsychosocial model (WHO)



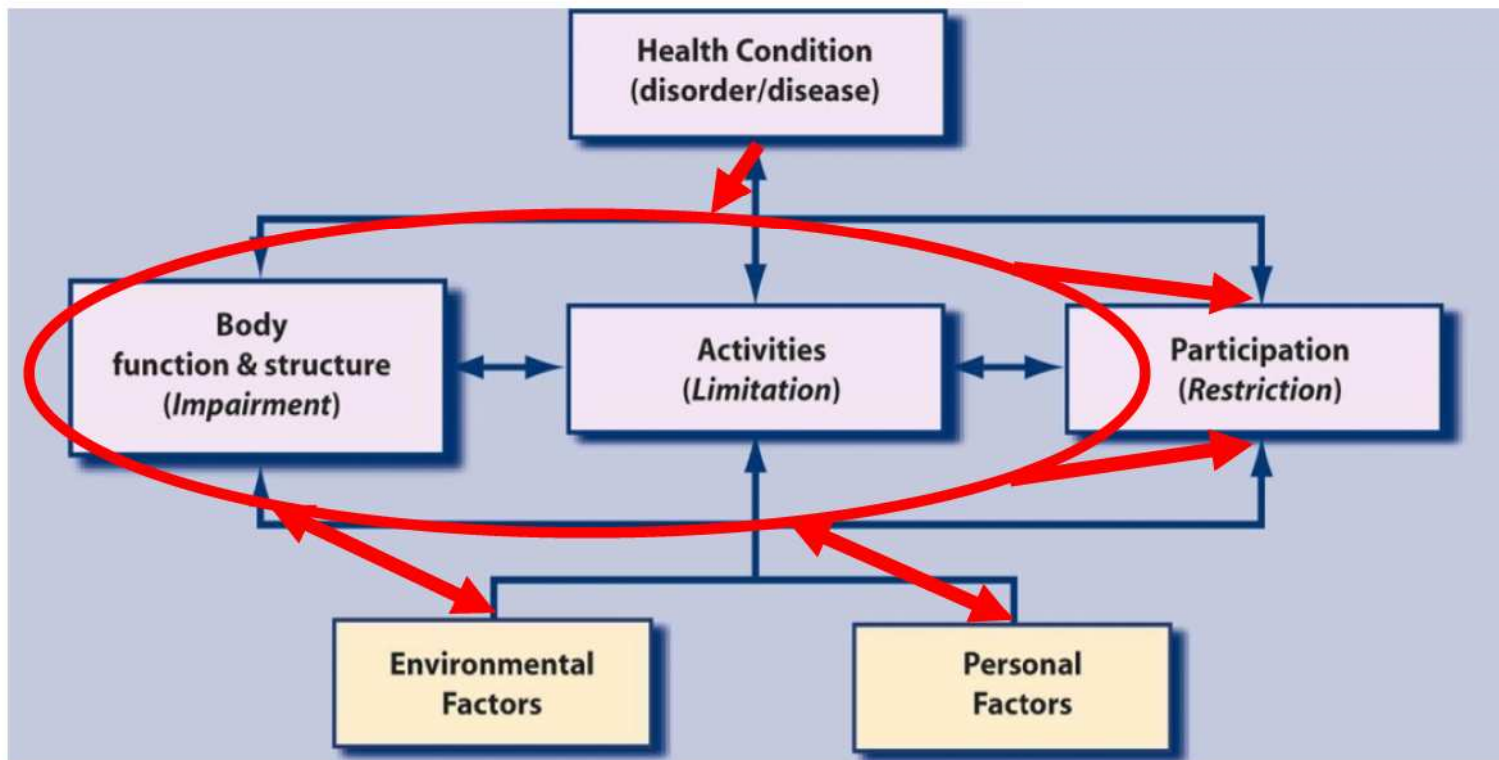
International Classification of Functioning, Disability and Health
World Health Organization 2001

«Classical» medicine



European Physical and Rehabilitation Medicine Bodies Alliance. White Book of Physical and Rehabilitation Medicine (PRM) in Europe. Chapter 3. A primary medical specialty: the fundamentals of PRM. 3rd Ed. Eur J Phys Rehabil Med 2018 (54): S1

Rehabilitation



European Physical and Rehabilitation Medicine Bodies Alliance. White Book of Physical and Rehabilitation Medicine (PRM) in Europe. Chapter 3. A primary medical specialty: the fundamentals of PRM. 3rd Ed. Eur J Phys Rehabil Med 2018 (54): S1

Core concepts of rehabilitation

	Classical medicine	Rehabilitation
Overall approach	Disease oriented	Person/functioning oriented (holism)
Diagnosis and prognosis	Medical	Functional and medical
Treatments	One modality at a time	Multimodal
Morbidities	Single	Multiple
Professional approach	Individual	Multi-professional team



European Physical and Rehabilitation Medicine Bodies Alliance. White Book of Physical and Rehabilitation Medicine (PRM) in Europe. Chapter 3. A primary medical specialty: the fundamentals of PRM. 3rd Ed. Eur J Phys Rehabil Med 2018 (54): S1

Rehabilitation has specific challenges for EBM that must be faced





Cochrane Rehabilitation project: Rehabilitation definition

Aim

To provide a definition that proves to be valid not only internally but also externally

Penile rehabilitation for postprostatectomy erectile dysfunction

Cochrane Systematic Review - Intervention | Version published: 23 October 2018

<https://doi.org/10.1002/14651858.CD012414.pub2>



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Yiannis A Philippou | Jae Hung Jung | Martin J Steggall | Stephen T O'Driscoll | Caitlin J Bakker | Joshua A Bodie | Philipp Dahm

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Key results

We found that the men who used these medicines on a scheduled basis may have had similar self - reported erections and quality of erections (based on questionnaires they filled out) as men who took no medication regularly or

Background

It does not exist a definition of rehabilitation worldwide recognized

World Health Organization defines rehabilitation as «a set of interventions designed to optimize functioning and reduce disability in individuals with in interaction with their environment»

This and other definitions have some shortcomings:

- The ability to clearly and consistently **differentiate** rehabilitation from “non-rehabilitation”
- The **acceptance** from all major stakeholders
- There is evidence that **rehabilitation is a whole** and not a “set of interventions”, being the sum more than the individual interventions

Methods

The project will follow three sequential phases:

- **Collection** of world definitions
 - Direct questions to Scientific Societies multiprofessionally about their own definition and definitions in use in their Country
- **Expert Consensus Meeting** (February 2020)
- A **Consensus** will be achieved through a Delphi process **within** the world of rehabilitation
- A **Consensus** will be achieved through a Delphi process **outside the world of rehabilitation**





Cochrane Rehabilitation project: ebook table of contents

Aim

To identify a table of contents of rehabilitation topics
as a reference for our ebook

Starting point: Books & Educational curricula

CHAP 1: Rehabilitation approach to **Pediatric** health conditions

CHAP 2: Rehabilitation approach to **Geriatric** health conditions

CHAP 3: Rehabilitation approach to **Musculoskeletal** health conditions

CHAP 4: Rehabilitation approach to **Cardiovascular and Pulmonary** health conditions

CHAP 5: Rehabilitation approach to **Neurological** health conditions

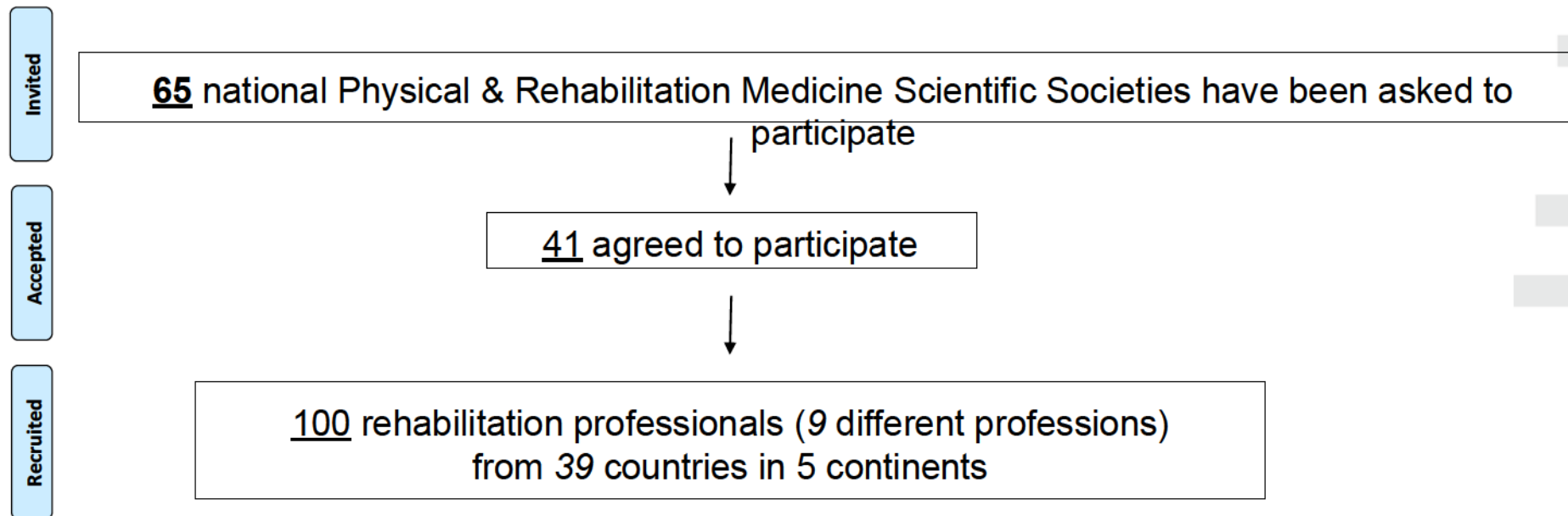
CHAP 6: Rehabilitation approach to **Cancer- Organ Transplant and Immune-compromised** health conditions

CHAP 7: Rehabilitation approach to **Pelvic floor** health conditions

CHAP 8: Rehabilitation approach to **Pain** health conditions

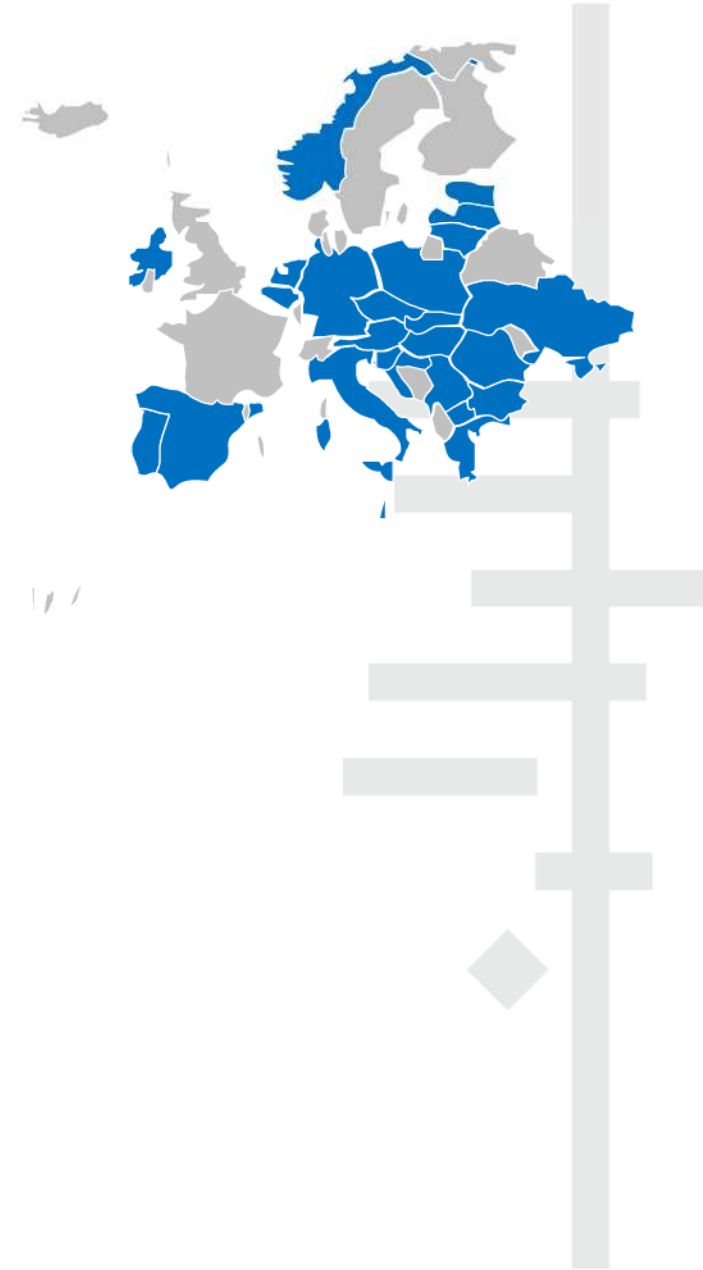
CHAP 9: Rehabilitation **management**

Participants



Participant countries: 26 Europe

- Austria
- Belgium
- Bulgaria
- Croatia
- Czech Republic
- Estonia
- FYROM
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Malta
- Montenegro
- Norway
- Poland
- Portugal
- Romania
- Russia
- Slovakia
- Slovenia
- Spain
- The Netherlands
- Ukraine



Participant countries: 13 world wide

5 Asia

- China
- Israel
- Malaysia
- Pakistan
- Turkey

4 Americas

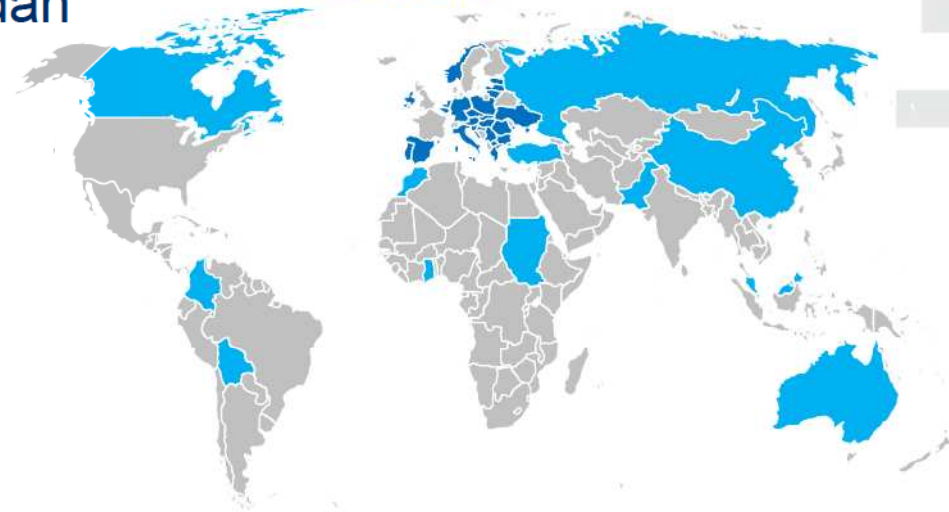
- AMLAR
- Canada
- Colombia
- Paraguay

3 Africa

- Ghana
- Morocco
- Sudan

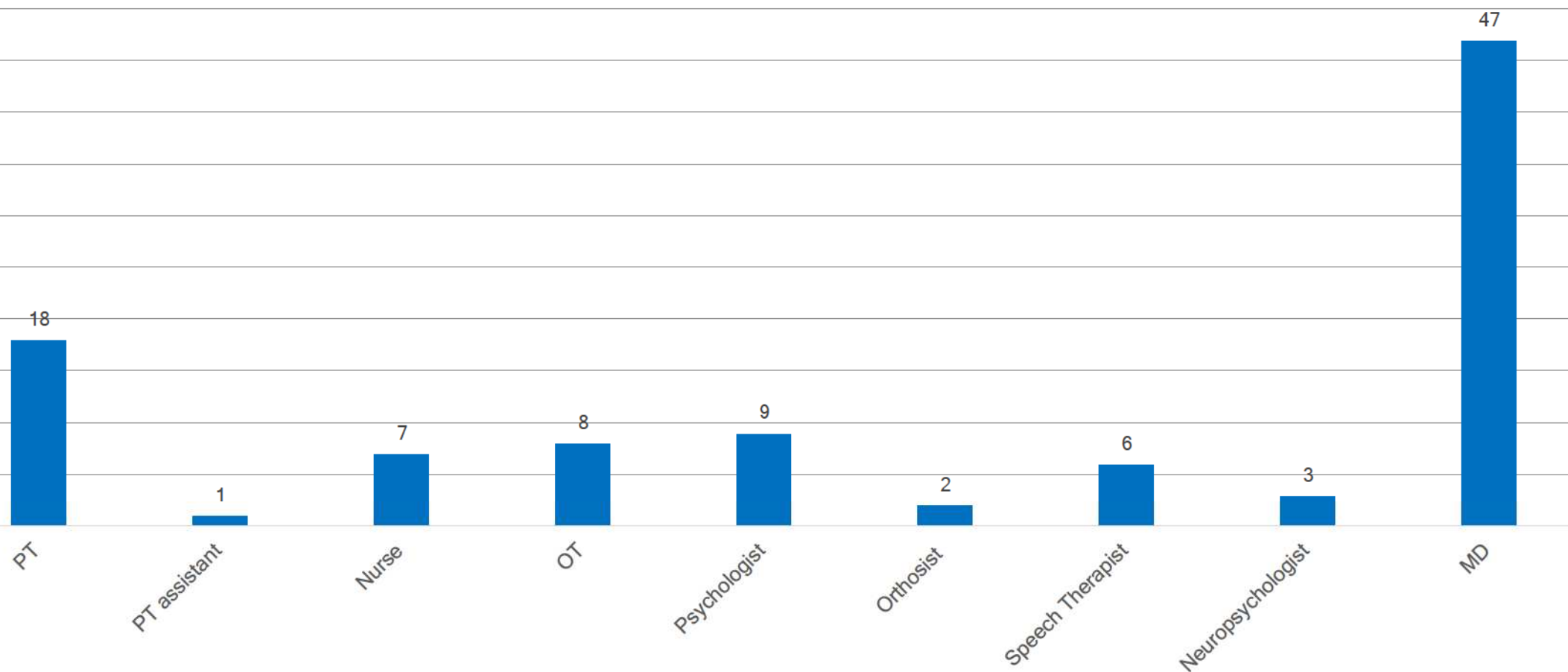
1 Oceania

- Australia



■ European countries
■ Extra-European countries

Profession distribution



Surveys

First Survey: validation and modification of the **index.**

- 58% response rate
- Addition of four chapters to the original nine and of several items to each chapter;

Second Survey: rating of the **importance of each chapter.**

- 55% response rate
- Neurological and Musculoskeletal are the most rated chapters

Third Survey: final **approval of the index**

- 60% response rate
- Some additional items added



13 Chapters: Rehabilitation approach to ... health conditions	Paragraphs	Reviews
Musculoskeletal	24	294
Neurological	28	246
Pain	16	134
Cardiovascular and Pulmonary	4	79
Internal medicine	9	4
Cancer- Organ Transplant and Immune-compromised	6	34
Pelvic floor	7	42
Psychiatric	6	20
Sport medicine	1	5
Pediatric	5	74
Geriatric	6	55
Rehabilitation management	8	47
General prophylaxis approach using rehabilitation interventions	6	25





Research problems in rehabilitation

Trusted evidence.
Informed decisions.
Better health.

Categories of problems in rehabilitation research

Design (2)

Patients selection (5)

Assignment and randomization (5)

Blinding (7)

Interventions (3)

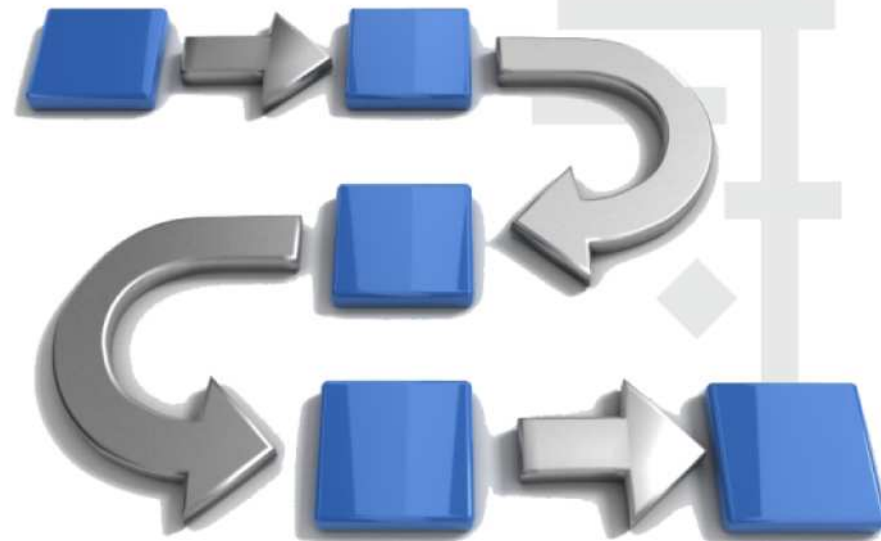
Attrition, follow-up and protocol deviation (6)

Outcomes (3)

Statistical analysis (8)

Conclusions (4)

Others (11)





Usual therapy (UT): the black box

Methods

- Systematic Review
- RCTs on rehabilitation for **lower limb after stroke** (2006-2016)

Results

- 86 papers (out of 1582): 9% **did not describe** the usual care group
- **64 different combinations of interventions** included in the UT groups
- 53 proposed only once, 8 twice, 3 in 3 papers (twice by the same group)
- **No correlation with quality of the paper**
- Gait training in 52%, balance in 51% of papers (in different combination), all the others less than 30%
- 18 different adjectives and 18 different nouns used to define UT
- In 2 articles 3 different definitions used, in 7 articles 2 different definitions



Usual therapy (UT): the black hole

Methods

- Systematic Review
- RCTs on rehabilitation for **lower limb after stroke** (2006-2016)

Results

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Multimodal approach

Different treatments provided together

Same treatments combined differently by different teams



Multimodal approach

Different treatments provided together

Treatments combined differently by different teams

Their combination gives the final result



Rehabilitation research methodological problems requires better understanding





Cochrane Rehabilitation project: **The Replicability of RCTs in Everyday PRM Clinics (REREP)**

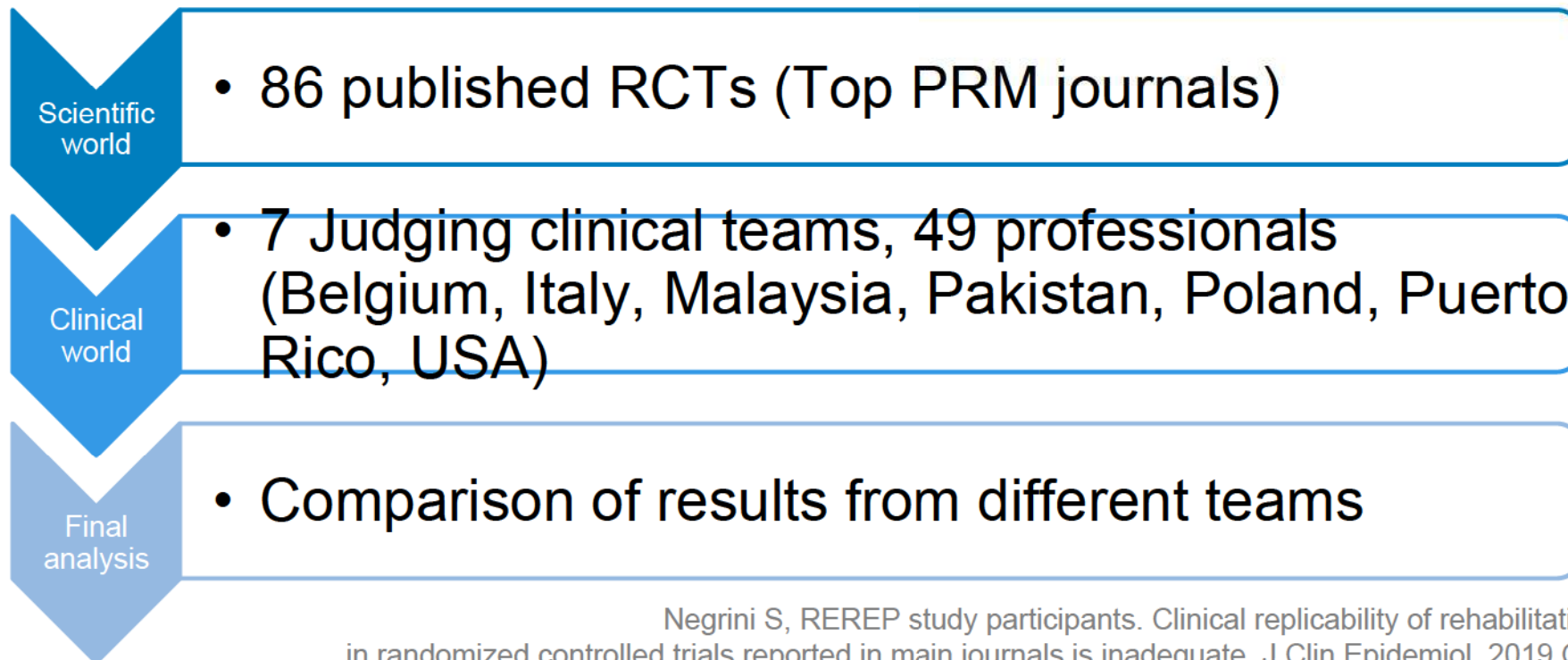
Aim

To check the clinical replicability of RCTs in
rehabilitation

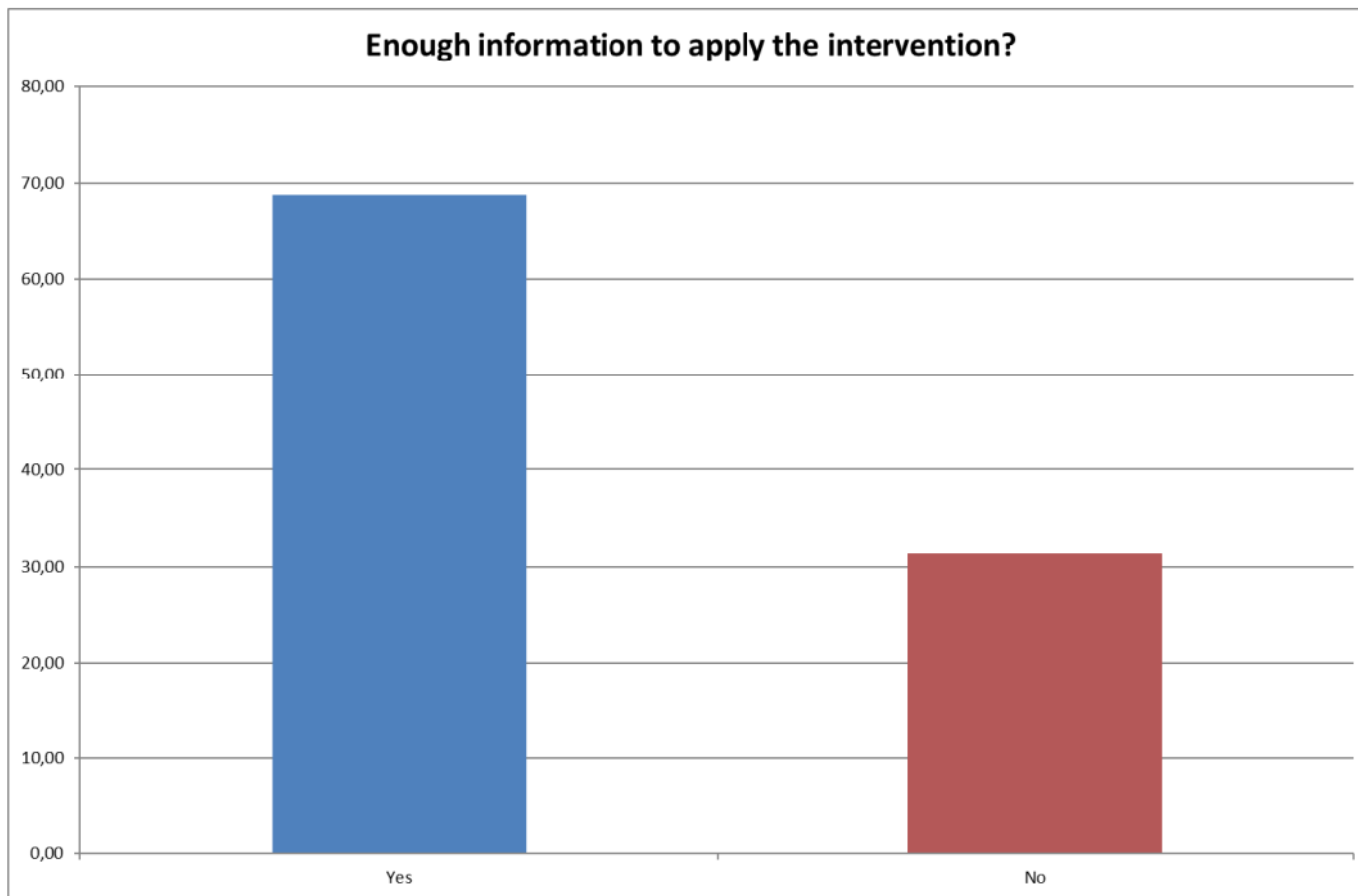
Trusted evidence.
Informed decisions.
Better health.



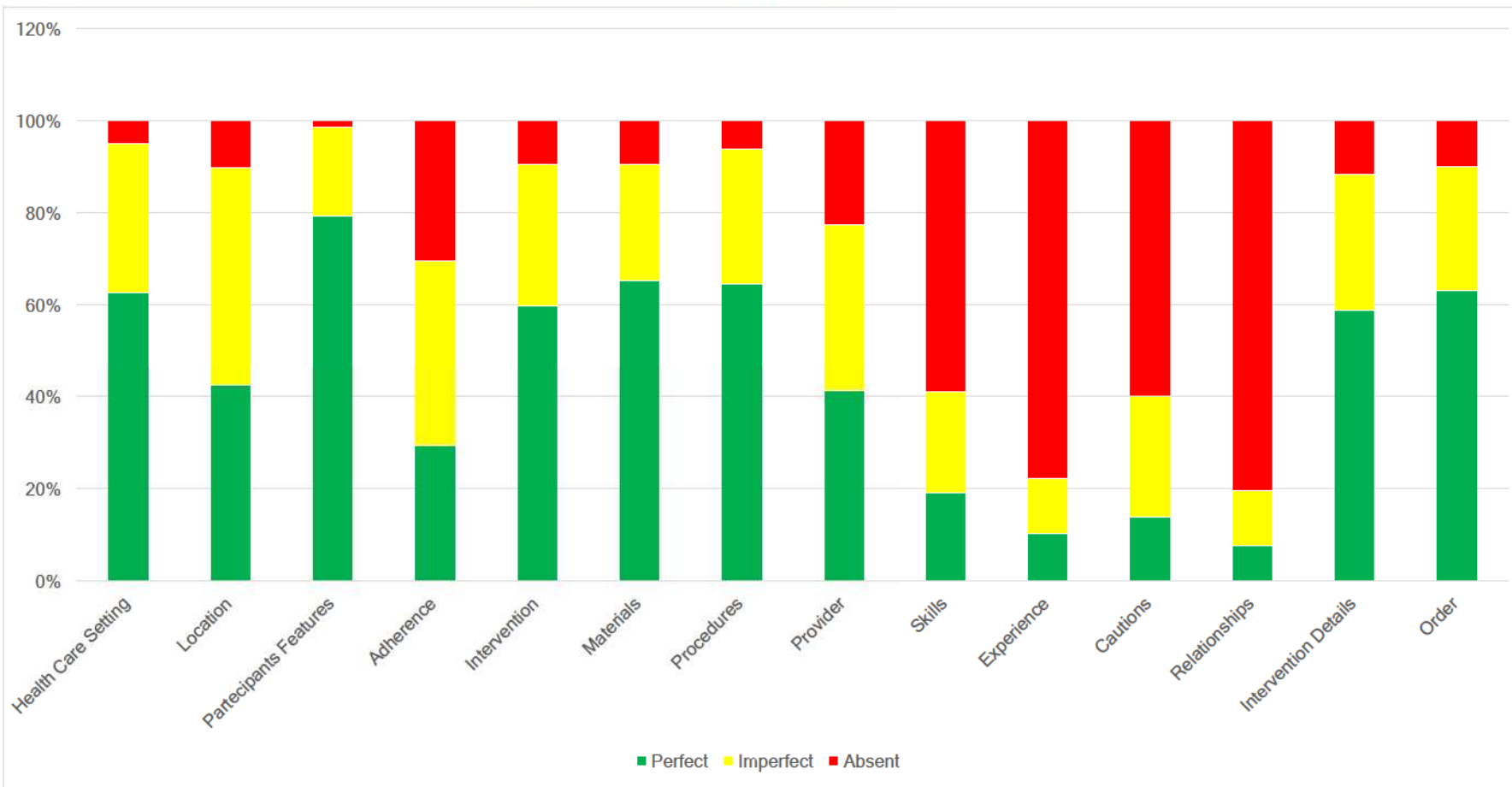
The Replicability of RCTs in Everyday PRM Clinics – the REREP Study



Negrini S, REREP study participants. Clinical replicability of rehabilitation interventions in randomized controlled trials reported in main journals is inadequate. J Clin Epidemiol. 2019 Oct;114:108-117



Negrini S, Arienti C, Pollet J, Engkasan JP, Francisco GE, Frontera WR, Galeri S, Gworys K, Kujawa J, Mazlan M, Rathore FA, Schillebeeckx F, Kiekens C; REREP study participants. Clinical replicability of rehabilitation interventions in randomized controlled trials reported in main journals is inadequate. *J Clin Epidemiol.* 2019 Oct;114:108-117



Negrini S, Arienti C, Pollet J, Engkasan JP, Francisco GE, Frontera WR, Galeri S, Gworys K, Kujawa J, Mazlan M, Rathore FA, Schillebeeckx F, Kiekens C; REREP study participants. Clinical replicability of rehabilitation interventions in randomized controlled trials reported in main journals is inadequate. J Clin Epidemiol. 2019 Oct;114:108-117