



Contributing to the growth of Physical and Rehabilitation Medicine (PRM): call for a Cochrane Field in PRM

S. NEGRINI ^{1,2}, C. KIEKENS ³, J. J. MEERPOHL ⁴, D. THOMSON ⁵, M. ZAMPOLINI ⁶, N. CHRISTODOULOU ⁷, A. DELARQUE ⁸, C. GUTENBRUNNER ⁹, X. MICHAIL ¹⁰

The European Society of Physical and Rehabilitation Medicine (ESPRM), together with the European Journal of PRM and the PRM Section and Board of the European Union of Medical Specialists (UEMS), started an action to establish a relationship with Cochrane (formerly the Cochrane Collaboration). Cochrane is a global, independent network of researchers, professionals, patients, carers and people interested in health, with contributors from more than 130 countries. Its aim is to produce credible, accessible health information that is free from any conflicts of interest. Cochrane produces the Cochrane Library, an evidence-based resource that includes today more than 6300 Cochrane systematic reviews. Cochrane is made up of many different review groups and other entities (such as Centres and Branches), distributed around the world, that are mainly focused on specific healthcare problems (diseases, or organs). Inside Cochrane also Fields have been created, that focus on a dimension of health care other than a specific healthcare problem. A Cochrane Field represents a bridge between Cochrane and the stakeholders of the related healthcare area. The medical specialty of PRM is covering a broad medical domain: it deals with function, activities and participation in a large number of health conditions, mostly but not exclusively musculoskeletal, neurological and cardiorespiratory. Consequently, the currently more than 200 existing Cochrane Reviews are scattered among different groups. A PRM Field could greatly serve to the need of the specialty, spreading the actual Cochrane knowledge, focusing needs today not covered by Cochrane Reviews, facing the intrinsic methodological problems of the specialty. This paper introduces a call for the development of a PRM Cochrane Field, briefly reviewing what Cochrane is and how it is organized, defining the value and identifying a pathway toward the development of a PRM

¹Department of Clinical and Experimental Sciences
University of Brescia, Brescia, Italy

²IRCCS Fondazione Don Gnocchi, Milan, Italy

³Physical and Rehabilitation Medicine
University Hospitals Leuven, Leuven, Belgium

⁴German Cochrane Center, Medical Center
University of Freiburg, Freiburg, Germany

⁵Cochrane Child Health Field, Department of Pediatrics
University of Alberta, Edmonton, AB, Canada

⁶USL Umbria 2, Department of the Rehabilitation
Foligno Hospital, Foligno, Perugia, Italy

⁷UEMS Section of PRM
European University Cyprus Medical School
Nicosia, Cyprus

⁸Department de Médecine Physique et de Réadaptation
CHU Timone, Marseille, France

⁹Department of Rehabilitation Medicine
Hannover Medical School, Hannover, Germany

¹⁰European Society of Physical
and Rehabilitation Medicine, Paiania, Greece

Cochrane Field, and finally shortly reviewing the Cochrane reviews of PRM interest.

KEY WORDS: Physical and rehabilitation medicine - Cochrane review - Evidence-based medicine.

In March 2014 during the European Society of Physical and Rehabilitation Medicine (ESPRM) General Assembly in Bled the creation of an Evidence Based Medicine Committee was approved. It was immediately decided to approach Cochrane to strengthen the already ongoing relationship existing with the Official Journal of ESPRM, the European Journal of PRM. In fact, since 2007, the EJPRM published a series of reviews on the Cochrane contents,¹⁻⁵ and

Corresponding author: S. Negrini, University of Brescia, Don Gnocchi Foundation, Italy. E-mail: stefano.negrini@unibs.it

TABLE I.—*Cochrane Review of PRM interest in 2012.*²

Cochrane Group	Number of reviews
Musculoskeletal	40
Stroke	38
Back	26
Bone, joints and muscle trauma	20
Movement disorder	18
Neuromuscular disease	13
Pain, Palliative and Supportive Care	13
Airways	11
Dementia and cognitive impairment	10
Injuries	9
Developmental, Psychosocial and Learning Problems	7
Multiple Sclerosis	6
Heart	4
Cystic fibrosis and genetic disorders	4
Incontinence	3
Metabolic and endocrine disorders	3
Breast cancer	2
Eyes and vision	2
Neonatal	2
HIV/AIDS	2
Peripheral Vascular Diseases	2
Gynaecological Cancer	1
Menstrual disorders and Subfertility	1
Ear, Nose and Throat Disorders	1
Pregnancy and Child Birth	1
Renal	1
Wounds	1
Acute respiratory infections	1
Total	242

copublished some Cochrane Reviews.^{6, 7}

The best possible action chosen by ESPRM, from March 2015 in agreement with the PRM Section and Board of the European Union of Medical Specialists (UEMS), is the possible creation of a Cochrane PRM Field (PRM-CF). It was then decided, with the local Organizers of the International Society of PRM (ISPRM) Meeting in Berlin, June 2015, to launch in a specific Session a call to recruit possible participants to the new PRM-CF, and proceed towards its establishment.

The aim of this paper is to introduce this Session and clarify the main points of the call, briefly reviewing what Cochrane is and how it is organized, define the value and identify a pathway toward the development of a PRM-CF, and finally shortly review the Cochrane reviews of PRM interest.

Cochrane (formerly The Cochrane Collaboration)

Cochrane (formerly known as the Cochrane Collaboration) is a global, independent network of researchers, professionals, patients, carers and people interested in health, which was founded in 1993 (www.cochrane.org). Currently, Cochrane contributors from more than 130 countries work together to produce credible, accessible health information that is free from commercial sponsorship and other conflicts of interest. Many of the contributors are world leaders in their fields - medicine, health policy, research methodology, or consumer advocacy - and Cochrane groups are situated in some of the world's most respected academic and medical institution.

Cochrane contributors jointly produce the Cochrane Library, one of the most respected, evidence-based, resources for health care decision-making (<http://www.cochranelibrary.com>). Within the Cochrane Library more than 6300 Cochrane reviews (as of March 2015) are published; these systematic reviews identify, appraise and synthesise all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question following a rigorous methodology to reduce any biases. Cochrane reviews are mainly based on randomized controlled trials (RCTs), although, depending on the question, some do also include quasi-RCTs and other study designs.

Structure and organization of Cochrane

The Cochrane Collaboration is made up of many different groups, distributed around the world. The majority of these (called Review Groups) have the remit of producing Cochrane reviews. However, early in the life of Cochrane, the people involved at that time recognised the importance of establishing a mechanism for dissemination and knowledge translation of the findings of Cochrane reviews, and saw that the skills required for this type of work were not necessarily the same skills required for producing the reviews themselves. Therefore, another type of group was established within Cochrane, given the term of "Fields". Fields have the remit of disseminating the findings of the reviews to relevant stakeholders.

By definition, a Cochrane Field is an entity which focuses on a dimension of health care other than a

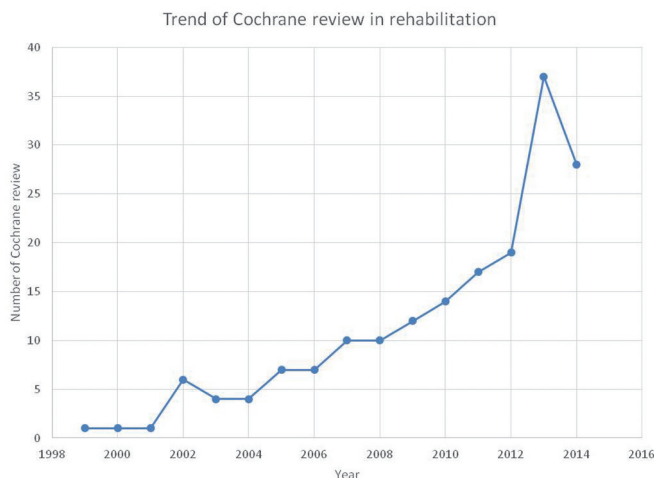


Figure 1.—Trend in time of Cochrane reviews in rehabilitation.

specific healthcare problem - such as the setting of care, the type of consumer, the type of provider, the type of intervention, or a major division of health care which embraces an area too large to be covered by a single Cochrane Review Group (CRG) – and represents its interests. A Cochrane Field represents somehow a bridge between Cochrane and the stakeholders of the related healthcare problem: this connection works in both direction, on one side spreading the evidence identified by Cochrane, on the other proposing the specific clinical needs to Cochrane (<http://community.cochrane.org/organisational-policy-manual/3421-definition-cochrane-field>).

Cochrane Fields exist in many different areas: child health, complementary medicine, neurosciences, pre-hospital and emergency care, and primary care are just some examples. Over the years, Cochrane Fields have developed a number of innovative and creative initiatives for bringing Cochrane evidence to the attention of policy-makers, health professionals and consumers. The role of Fields is receiving more attention at the moment, as Cochrane has adopted a new strategy which, in part, aims to increase its interactions and relationships with other health care-related organisations around the world.

If finally started, the Cochrane Physical and Rehabilitation Medicine Field will strictly collaborate with the other already existing related Cochrane Fields. Specifically, contacts have been established with the “Rehabilitation and Related Therapies” Field, that has been founded as “Physiotherapy” Field, and whose interest remained mainly in physiotherapy. A team work

TABLE II.—Results of Cochrane Reviews on PRM for stroke in 2015.

Positive and conclusive	3
Positive	12
Uncertain	31
Negative	1

has been envisaged between the two Fields, not to duplicate efforts, and to strengthen reciprocally.

Cochrane reviews of physical and rehabilitation medicine interest

To have an example of the actual Cochrane PRM contents we performed a specific search. Up to April 2015 we found 189 results out of 8867 records making a search on “rehabilitation” in Title, Abstract, Keywords in the Cochrane Reviews. As another reference, in the last systematic review performed by the EJPRM in 2012,² a total of 242 reviews of specific PRM interest have been found (Table I). This is not a vast amount but, as shown in Figure 1, the number has been growing since 1999.

To deepen the actual evidence on PRM interventions, we specifically looked at the results of the meta-analyses published until 2015 by the Cochrane Stroke Group (47 review). We ranked the authors conclusions in: “positive and conclusive” if the results demonstrate a specific conclusion; “positive” if there are positive conclusions but not yet conclusive (suggestions); “uncertain” if the authors found insufficient evidence to support or refuse the efficacy; “negative” if the interventions have a negative effect. Results are reported in Table II. The uncertainty is mainly due to the lack of well designed studies, especially RCTs, that prevent to draw conclusion.

Value of a Cochrane physical and rehabilitation medicine field

For what PRM is concerned, Cochrane Groups have a “problem”: they are mainly focused on specific diseases (*e.g.*, Stroke Group), or organs (*e.g.*, Back Group). In fact, the medical specialty of PRM is covering a broad medical domain. It deals with function, activities and participation in a large number of

health conditions, mostly but not exclusively musculoskeletal, neurological and cardiorespiratory. It is different from most other specialties that are usually organ oriented, such as for instance cardiology, neurology or ophthalmology. After having established a rehabilitation diagnosis, the PRM physician prescribes and coordinates interventions performed by a multidisciplinary team of health professionals.

Cochrane reviews related to PRM exist, and in fact are numerous,² but are spread over several different Cochrane Groups, as the PRM interventions cover many pathologies and involve several disciplines. The available knowledge is spread and not easily accessible for PRM specialists and related health professionals. Therefore the need exists for a PRM Field within Cochrane.

Good quality evidence on PRM interventions is still relatively scarce, even if it is growing. On the other hand, health authorities increasingly require evidence before reimbursing interventions. Shrinking budgets in many Western countries are in conflict with growing needs emphasizing the need for cost-benefit studies.

Another major point related to the PRM specialty is its specific methodology. Due to the explained multifactorial specificities of the PRM specialty, there are difficult methodological issues in research: for instance, there is often an important human factor interfering with interventions, concerning the patient as well as the therapist. Obviously this is common also to other specialties, but in PRM human factors are intrinsic to the treatment, that is not only the technical act, but also the human interaction between the patient and therapist. Randomizing and blinding is often difficult or even impossible. Clarity on what is usually referred to as “conventional therapy” is frequently lacking. A Cochrane Field is the place where to encourage a debate to agree on solid research methods and tools compatible with these particularities. Obviously a close collaboration with related Cochrane Groups and Fields is mandatory.

A possible path to the development of a PRM Cochrane Field

At the moment of writing this paper, 33 PRM European Delegates inside ESPRM and/or UEMS-PRM Section and Board from 21 European Countries have

confirmed their participation as well as the support of their national Scientific Society to the initiative.

The development of a PRM-CF requires:

- establishing a relationship between Cochrane entities and PRM stakeholders (already in place with ESPRM, UEMS-PRM, EJPRM and National European Societies);

- recognising PRM systematic reviews: identifying and tagging in Archie (Cochrane’s Information Management System) the reviews, protocols and titles that are relevant to the Field’s scope; establishing communication mechanisms with Cochrane Review Groups (CRG); generating a list of relevant Cochrane publications to be disseminated to stakeholders; identifying gaps in existing Cochrane evidence;

- undertaking dissemination activities (already partially underway with EJPRM): reformatting or summarizing Cochrane reviews and disseminating to stakeholders; publishing Cochrane reviews in journal article format in specialist journals; identify priorities for review topics, and bringing these priority topics to the attention of CRGs.

For these actions to occur, there is a need to develop a formal entity that is made up of people and groups. At this stage we need to identify people who would like to:

- serve in an official Position: Director, Coordinator, Trial Search Coordinator (to identify relevant trials), Specialized Database Coordinator (make relevant trials accessible through a specialised register), Regional and/or PRM Bodies/Societies representatives, Advisory Board;

- work in specific functions: fund raising, website, methodology in PRM, establishing connections with Cochrane groups, umbrella Reviews of PRM reviews from various Cochrane groups, educational EBM activities.

After the session during the Berlin meeting, another meeting of the ESPRM and UEMS-PRM Section and Board, that are the actual promoter organizations, will be held in St. Petersburg in September 2015, where the next steps will be discussed. According to Cochrane rules, they will include:

- identification of the Reference Cochrane Centre and the Mentoring Field;

- a formal Exploratory Meeting (probably in Spring 2016): as per Cochrane requirements it will be a stand-alone meeting of 1.5 days that will serve as final start-up of the initiative;

- registration with Cochrane.

Conclusions

A PRM-CF could greatly serve to the need of the specialty, spreading the actual Cochrane knowledge, focusing needs today not covered by Cochrane Reviews, and facing the intrinsic methodological problems of the specialty. With this Editorial and the Session of the ISPMR Berlin Meeting, and with other subsequent initiatives that will be developed in further exploratory meetings, we want to make a call to recruit people and resources to develop the PRM Cochrane Field.

References

1. Zaina F. Cochrane reviews: evidence in rehabilitation. *Eur J Phys Rehabil Med* 2008;44:65-6.
2. Zaina F, Negrini S. EJPRM systematic continuous update on Cochrane reviews in rehabilitation: news from December 2011 to February 2012. *Eur J Phys Rehabil Med* 2012;48:57-70.
3. Negrini S, Minozzi S, Taricco M, Ziliani V, Zaina F. A systematic review of physical and rehabilitation medicine topics as developed by the Cochrane Collaboration. *Eur Medicophysica* 2007;43:381-90.
4. Negrini S, Imperio G, Villafañe JH, Negrini F, Zaina F. Systematic reviews of physical and rehabilitation medicine Cochrane contents. Part 1. Disabilities due to spinal disorders and pain syndromes in adults. *Eur J Phys Rehabil Med* 2013;49:597-609.
5. Negrini S. Systematic reviews of physical and rehabilitation medicine Cochrane contents. Introduction. *Eur J Phys Rehabil Med* 2013;49:595-6.
6. Lacasse Y, Martin S, Lasserson TJ, Goldstein RS. Meta-analysis of respiratory rehabilitation in chronic obstructive pulmonary disease. A Cochrane systematic review. *Eur Medicophysica* 2007;43:475-85.
7. Hoffmann T, Bennett S, Koh C, McKenna K. The Cochrane review of occupational therapy for cognitive impairment in stroke patients. *Eur J Phys Rehabil Med* 2011;47:513-9.

Epub ahead of print on May 15, 2015.

