

Evidence-based practice in rehabilitation:

# Methodological challenges for Cochrane Rehab

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Kolloquium Frankfurt, March 2017

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# Overview

- What is the background to the present challenges?
- Is rehabilitation a special case in evidence-based health care approaches?
- What challenges have I encountered in doing evidence-based rehabilitation?
- Which issues have been raised by Cochrane Rehabilitation?
- What is the way forward?



# What is the background to the present challenges?



# background

- „era of assessment and accountability“, „revolution of medical care“ (Relman 1988 NEJM)
- Need for quality assurance and scientific foundation of health care
- Clear-cut orientation towards consequences of care: independent of reasons and motives for professional decisions, does the intervention do more good than harm? → core question of ebm
- Theoretical reasoning, plausibility or personal experience is insufficient to legitimate interventions
- Consequence: research evidence for practice is needed

# background

- Clinical study as the ideal of evidence base in research practice (cf. Chan et al. 2014)
- Example in Germany: development of rehab therapy standards (RTS) on grounds of research evidence („evidence-based therapy modules“)
- “Rehabilitation is effective” (Haaf 2005)  
EbM-rhetorics by responsible societal bodies



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# Is rehabilitation a special case in evidence-based health care approaches?



One side of the coin:

## No special case

- Need to legitimize what we are doing with patients in rehab care
- We have to know if what we do in rehab does more good than harm (and to what degree)
- Problem of unwarranted variation present in rehab, as in other health care fields
- Whether we like it or not: strong causal claims of interventions need a randomized study design



The turning side of the coin:

## Yes, it is a special case

- There are characteristics of rehab that interfere with a “simple” evaluative framework
- Problems of rehab embedded in social law framework (“right for rehab”)
- Service is strongly depended on the quality of the therapists (person-, not just intervention related)
- and on the quality of interdisciplinary team work







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**What challenges  
have I encountered  
in doing evidence-  
based  
rehabilitation?**



# Rehab as a special case

- Functional, multidimensional outcomes
- Outcomes are always personal to some degree
- Indication for medical rehab is equivocal (e.g. disorder vs. functional deficit, reduction vs. prevention of disability)
- Multidisciplinary approaches by definition
- Complexity of the intervention („black box“)
- Rehab success is to a high degree dependent on factors not in direct control of rehab professionals, validated intermediate outcome models important
- Unwarranted rehab care variation



# Rehab as a special case

Essential to distinguish between

- **1. studies that address single interventions**  
can give guidance for professionals which interventions to choose
- **2. studies that relate to the whole complex of rehab**  
can legitimize the whole approach and is in essence patient-centred
- **3. studies that relate to local evidence of single institutions**  
can help patients which rehab service to choose and commissioners in managing the rehab system





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# Which issues have been raised by Cochrane Rehabilitation?



## Proposal of issues to be addressed in Cochrane Rehab Methods Committee

- review how Cochrane review methods have been applied to reviews and protocols on rehab topic (e.g. how risk bias have been managed, how heterogeneity in study populations across trials have been managed etc.)
- collect and summarize publications on review methods for evidence based practices relevant to rehabilitation
- review of methods used in non-Cochrane systematic reviews on rehabilitation topics
- assess relevance of Cochrane reviews on rehab topics (incl. focus on low or middle income countries)



## Proposal of issues to be addressed in Cochrane Rehab Methods 'Committee

- identify and prioritize work on the development of methods for evidence synthesis in rehabilitation methodology
- identify and collate information (both within and external to Cochrane) on review methods to use with alternative study designs to RCTs to assess intervention effectiveness in rehab (e.g. single-case series design, benchmarking controlled trials etc.)
- develop methods for literature search on rehabilitation topics
- develop methods for consumer involvement in rehabilitation research



# What is the way forward?



# Knowledge translation: additional evidence needed

*„Evidence-based policy. You are told: use politics that work. And you are told: RCTs – randomized controlled trials – will show you what these are. That’s not so. RCTs are great, but they do not do that for you. What they tell you is true – that this policy produced that result there. But they do not tell you why this is relevant to what you need to bet on getting the result you want here. For that, you will need to know a lot more.“ (ix)*

Cartwright N, Hardie J (2012) Evidence-based policy. A practical guide for doing it better.  
Oxford: OUP.





## Resumee

- a lot to be done to put all Cochrane Rehab Methods Committee issues on track
- additional need for health services research / implementation research for knowledge translation
- we welcome contributions!

## Methodology committee

Chair: Dr. Antti Malmivaara (Finland)

Co-Chair: Prof. Thorsten Meyer (Germany)

