

## Systematic reviews and meta-analysis of intervention studies

### *Background*

Cochrane's goal is to summarize all available evidence on the effectiveness of health care interventions and the accuracy of diagnostic tests by preparing systematic reviews and to make them easily accessible by publishing those reviews in The Cochrane Library ([www.thecochranelibrary.com](http://www.thecochranelibrary.com)). Cochrane systematic reviews are conducted according to clearly defined steps. This workshop is targeted at people who wish to learn how to prepare a systematic review about health care interventions and forms a coherent basis for systematically reviewing, analysing and interpreting therapeutic evidence.

### *Objectives*

On day one of this two-day workshop participants learn to formulate clear clinical review questions about health care interventions, to design a search strategy for identifying studies, to formulate criteria for inclusion of studies, to select studies for further processing and to assess the methodological quality ('risk of bias') of Randomised Controlled Trials (RCTs). Attention will also be paid to Cochrane, the work processes (team, logistics, planning, contact with Review Groups) and the free software Review Manager (RevMan 5), in which a Cochrane Review is written and meta-analysis is performed. The second day is devoted to meta-analysis, presenting and interpreting the results by constructing Summary of Findings tables (including assessing the quality of the evidence with GRADE) and formulating the conclusions. We will follow Cochrane guidance for preparing a Cochrane systematic review of interventions (see <https://training.cochrane.org/handbook>).

At the end of the second day, we also offer Cochrane authors the opportunity to work on their own review, with the support of staff members of Cochrane Netherlands.

After successful completion of the workshop, participants will:

1. know the various steps involved in conducting a systematic review of interventions;
2. be able to write a protocol for an intervention review;
3. be able to frame the review question and define criteria for inclusion and exclusion of studies;
4. understand the principles of conducting sensitive search strategies for RCTs;
5. be able to assess the risk of bias of RCTs (Cochrane's risk of bias tool);
6. be able to perform meta-analysis of RCT results by the use of RevMan;
7. be able to explore heterogeneity in study findings;
8. be able to construct Summary of Findings Tables and to assess the certainty of the evidence with GRADE;
9. be able to interpret and present the results.

## **Target audience**

The workshop is directed to review authors, healthcare workers, clinicians, researchers, guideline developers and policy makers, who wish to know more about systematically reviewing and understanding therapeutic evidence.

## **Prerequisites**

1. Having experience in assessing literature and knowledge of the principles of epidemiology and biostatistics are an advantage, but not necessary.
2. To prepare for the course we advise participants to perform the RevMan 5 Tutorial. This is an exercise to familiarise oneself with the software and the process of making a systematic review. The Tutorial is delivered as a PDF (see Help menu in the programme).
3. Participants are asked to bring their own laptop with RevMan 5 installed and to make an account (for free) at <https://gradepro.org/>

## **Topics**

- Developing a protocol for a Cochrane systematic review of interventions.
- Framing the study question, defining the title, objectives and criteria for inclusion of studies.
- Introduction to study identification.
- Assessment of methodological quality (Cochrane's Risk of Bias tool).
- Data extraction.
- Principles of meta-analysis.
- Use of RevMan.
- Investigating and interpreting heterogeneity (subgroup analyses).
- GRADE for interventions.
- Making the results understandable for non-experienced end-users.

## **Workshop Style**

The workshop consists of interactive, plenary presentations with ample room for discussion, small group exercises and computer exercises. Participants are asked to do some preparatory work before the workshop and to do some self-study during the workshop.

Participants are asked to bring their own laptop with RevMan installed and to make an account (for free) at <https://gradepro.org/>.

## **Faculty**

- Anneke Damen, PhD, Cochrane Netherlands and Julius Center, Utrecht.
- Pauline Heus, PhD, Cochrane Netherlands and Julius Center, Utrecht.
- Lotty Hooft, PhD, Cochrane Netherlands and Julius Center, Utrecht.
- René Spijker, MSc, Cochrane Netherlands, Utrecht, and Amsterdam University Medical Center, Amsterdam.

All facilitators have ample experience with the preparation of intervention reviews and are member of various Cochrane Methods Groups.

## **Language**

English (unless all participants are Dutch).

### ***Dates, insurance & cancellation***

See our [website](#) for exact dates.

On day 1, we will start at 10:00 h AM. The last day, the course will end 16:00 h PM the latest.

NB: For this course a minimum number of participants is required. Six weeks before the first day of the course we will decide whether the course will go ahead. Participants from abroad should take account of this when making travel arrangements.

A full refund will be available if you notify us by email up to 30 working days before the date of the event. Refunds are not available if you cancel your place within 30 working days before the date of the event. The organization does not accept liability for individual medical, travel or personal insurance. Participants are strongly advised to take out their own personal insurance policies. In case an unforeseen event would force the organization to cancel the meeting, the organization will fully reimburse the participants registration fees, but will not be responsible for the refund of travel and accommodation costs.

### ***Course fees***

- Cochrane authors (see below for the definition): € 295.-
- Non-Cochrane authors: € 595.-

A participant will be considered as a Cochrane author, if at least the title of his/her review has been accepted by the pertinent Cochrane Review Group or if (s)he is registered as (co-)author by a Cochrane Review Group.

### ***Registration and additional information***

To register for the course or to receive additional information, you can contact the course organizer at Cochrane Netherlands, Sabine van Dijk- van der Sluijs, [PAOJuliusCenter@umcutrecht.nl](mailto:PAOJuliusCenter@umcutrecht.nl).

For more information on the content of the course, you can send an e-mail with your question(s) to [cochrane@umcutrecht.nl](mailto:cochrane@umcutrecht.nl).

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