

## Relevant outcomes for insurance medicine

Cochrane Insurance Medicine (CIM) promotes the use of evidence regarding sick leave certification, disability evaluation, prognosis of claim duration, treatment of disabling conditions, and return to work interventions to inform decision-making. Preferably, there would be good evidence from large randomized controlled to inform practice. Several research institutes affiliated with CIM recently evaluated the literature for outcomes relevant to the field of insurance medicine to identify research gaps and recommend actions on a national or international level. Three initiatives were completed recently, independently of one another, which are summarized below. Following these initiatives a new project is planned to develop an international core outcome set on work participation.

### Project 1: Prevalence of insurance medicine outcomes in Cochrane reviews

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**Methods:** We investigated the prevalence of insurance medicine outcomes (e.g. sick leave, return to work) in Cochrane reviews. Sampling frame was the list of Cochrane priority update reviews (May 2015) which contained 321 reviews, protocols and titles from 49 review groups.

First we excluded all titles that were not at the protocol or review stage leaving 226 reviews and protocols for reviews. We then applied our inclusion criteria. *Population:* Systematic reviews on adults in working age with diseases that commonly result in temporary or permanent inability to work (sick leave, short-; long-term disability). *Interventions:* Health care interventions that may impact on the course and/or duration of the disease. *Outcomes:* Duration of sick leave, short-, long-term disability and their prevention; return-to-work and other work related disability outcomes as defined by Cochrane Work. This left 113 reviews and protocols.

Next, we screened the outcomes of each of the 113 reviews and protocols and checked for insurance medicine outcomes, categorized them as narrow outcomes like sick leave and return to work, broad (=surrogate) outcomes, like hospitalization, and cost-related outcomes like costs and economic evaluation. Fifty two percent (59/113) of reviews included insurance medicine outcomes.

In a third step, we used guidance literature from Germany (Social Pension Fund), Sweden, France and the Netherlands (Social Health Insurance) to assess how often at least one of the four guides listed the health conditions from the 113 systematic reviews. If listed, the health condition was considered to be of relevance to insurance medicine. Ninety percent (102/113) reviews covered a health condition that was mentioned in any of the guides.

**Results:** Although 90 % (102/113) of reviews covered a health condition with relevance for insurance medicine, only 52 % (52/102) reviews reported on insurance medicine outcomes. Only 17% (19/113) Cochrane reviews reported on narrow insurance medicine outcomes, like return to work.

Conclusion: Despite their societal relevance, insurance medicine outcomes are not sufficiently covered in Cochrane reviews. Cochrane review groups need to be sensitized to add insurance medicine outcomes to the standard outcomes of their reviews.

## **Project 2: Recommendation for operationalization and measurement of return to work and absenteeism in studies conducted by researchers working for Dutch research center for insurance medicine**

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Introduction: The Dutch Research Center for Insurance Medicine (KCVG) is a joint initiative of three research groups (departments of Academic Medical Centers) and the Dutch Social Security Institute. Their research includes evaluating interventions in the field of insurance medicine. However, the outcome measures used to evaluate these interventions varied between research groups and between research projects precluding comparisons between research projects. The aim of our project was to develop a core outcome set for work-related outcomes to be used by research projects of our Dutch research center.

Methods: A first step included an inventory of the outcome measures used by KCVG researchers. Our second step was a workshop with all junior and senior researchers in order to establish which outcome measures were deemed most relevant for our research. In a third step, this workshop was followed by a literature search (in Pubmed on November 2015) into the measurement properties of the selected outcomes. After the final step of consultation of stakeholders and grey (national) literature, an advice was formulated on how to define and measure the selected outcomes in future research.

Results: Two work-related outcome measures were selected as most relevant to our research; Return to Work and absenteeism. With regard to the definition of Return to Work outcomes, the following characteristics were considered; Return to Work outcomes should include a measure of duration before the event, an event of full or partial return to work, and the durability of the return to work. In the field of Dutch insurance medicine a relevant proxy for return to work is end of disability benefit. Moreover, 28 days is an often used criterion for the durability of a return to work in the Netherlands. Therefore, we advise researchers to include Return to work measures in their research defined as “Number of calendar days until a partial or full return to work [or end of benefit] lasting at least 28 days”.

With regard to absenteeism, three possibilities were considered; frequency of absenteeism spells, duration of an absenteeism spell, and volume of absenteeism (frequency X duration) in a certain period of time. Volume in a certain period was considered most relevant for our stakeholders as it relates best to costs of absenteeism. In case of an economic evaluation of an intervention, researchers are advised to use register data from the Dutch Social Insurance Institute. Self-report measures were found to be sufficiently valid to be used in other evaluation research. When using self-reported of absenteeism, volume measures are more accurate compared to frequency and duration measures. Currently, not one specific

instrument can be advised to measure self-reported absenteeism, but a maximum recall of two months should be observed.

Conclusion: A recommendation was provided regarding operationalization and measurement of Return to Work and absenteeism in studies conducted by KCVG researchers.

### **Project 3: Overview of 7 Cochrane reviews reporting on interventions that focus on work and measure work participation**

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**Aim:** This project aimed to gain insight in the types and characteristics of work related outcomes and outcome measures and definitions. A non-exhaustive overview was performed of seven Cochrane reviews reporting on interventions that focused on work and measured work related outcomes. The research recommendations and discussion sections from these seven Cochrane reviews were also reviewed and summarized on the topic of work related outcomes.

**Methods:** To gain insight in the types of work participation outcomes reported in reviews we searched the Cochrane database using the following search terms: return to work, work participation, work disability, job loss and vocational rehabilitation. We selected seven Cochrane reviews that both measured a work related outcome as well as a work directed intervention (the primary aim of the intervention was to promote work participation).

**Results:** Seven Cochrane reviews reported both on work directed interventions and focused on work participation (Van Oostrom 2009, Hoving 2014, Schaafsma 2013, De Boer 2011, Khan 2009, Nieuwenhuijsen 2014, Arends 2012). A summary of some of the findings of this overview of seven Cochrane reviews is provided below.

Cochrane reviews report:

- a variety of work participation outcomes including return to work (RTW), sick leave, absenteeism, work status, functional status, productivity or work functioning
- outcomes measured at different follow up times, from a few weeks to 4 years after baseline
- different definitions or cut points for RTW or sick leave. Examples to illustrate this: partial vs full RTW, 100% RTW, workers with no RTW, RTW in steady employment, event data (RTW rate, sick leave rate) vs time to event data (time between reporting sick and RTW), average length sick leave, absence of work days, mean monthly sick leave, sick leave past 10 days.
- different minimal time periods (at work) to qualify for RTW: for example at least 4 weeks back at work to qualify for RTW, recurrences that count / do not count as RTW
- different definitions for work status at baseline: both patients with paid employment and no employment are selected. This has consequences for the applicability of certain outcome measures (current work functioning requires a person to be currently working).
- different methods / sources to measure work participation: including self-report data (often retrospectively such as number of absenteeism days in past weeks, months or

years), existing questionnaires (such as health and productivity questionnaire, HPQ) or database systems from occupational health services or insurance companies.

Furthermore, review authors from Cochrane reviews concluded that there is a need for more standardized ways of measuring work participation, in particular RTW and sick leave.

Conclusion: RTW and sick leave are frequently measured, using different methods, with different definitions, and there seems to be a lack of consensus between RCTs regarding their use. There is a need for an international core outcome set (COS) on the topic of work participation.

### **Future developments: International core set development**

We think that the results of these projects show that there is a need for a clear and universally agreed core outcome set for work participation that is relevant to the field of insurance medicine, on an international level. Several studies have made recommendations on standardizing outcome measures for work participation but to date no core set has been developed using Core Outcome Set (COS) methodology (<http://www.comet-initiative.org>). Within Cochrane Insurance Medicine the availability of a Core Outcome Set on work participation would allow systematic reviewers to compare the results of different randomized clinical trials. In addition, trial researchers could be persuaded to include this minimal set of outcomes in future trial protocols, in addition to other outcomes. The inclusion of a core outcome set does not prohibit the concurrent use of other outcomes. In collaboration with a group of international experts, including Cochrane Insurance Medicine (CIM), a research project is planned early 2017 at the Coronel Institute of Occupational Health in the Academic Medical Center (AMC), Amsterdam. The aim of this project is to develop an international core set of outcome measures on work participation, relevant to the field of IM.

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