Cochrane Work

Evaluation of Review Group

2010-2015

Cochrane Work Group

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II. Executive Summary

In this report we evaluate the activities of the Cochrane Work Review Group over the years 2010-2015. We registered 38 new titles and another 20 review titles were transferred to us from other review groups. Currently our portfolio consists of 22 published reviews, 17 published protocols and another 15 titles in progress. Resources for basic editorial services are 2.6 FTE provided by the Finnish Institute of Occupational Health. We also obtained substantial external funding for Cochrane and non-Cochrane review production. Compared to the targets set in the business plan we made in 2010, we have met or exceeded targets in all areas except in generating external funding for basic editorial services and in utilising the full potential of the editorial board. Prioritising titles has been a useful exercise

Based on this evaluation and the comments we received, we will draw up a new five-year business plan by the end of August 2015. This business plan will also be the basis to formalise the relation with Cochrane in the form of a memorandum of understanding between the Finnish Institute of Occupational Health and Cochrane.

III. General Cochrane Work Review Group Description

Cochrane Work Review Group has been one of the more than 100 Cochrane groups since 2010 when it was registered as Cochrane Occupational Safety and Health Review Group. Following the Cochrane-wide rebranding project, the review group is changing its name in Cochrane Work during 2015. Cochrane is an international and independent not-for-profit organization, dedicated to producing up-to-date, accurate information about the effects of healthcare. It produces and disseminates systematic reviews of the effects of interventions aimed at improving health and safety at work or return to work and promotes the search for evidence in the form of clinical trials and other studies of interventions. The Cochrane Collaboration was founded in 1993 and it was named after the British epidemiologist, Archie Cochrane.

Cochrane Work focusses on the effectiveness of measures to prevent or treat occupational health outcomes: occupational diseases, work disability and occupational injuries. Occupational health outcomes are health conditions that arise from exposure to risk factors at work. Cochrane Work has built its operation on a five-year business plan approved by the board of the Finnish Institute of Occupational Health (FIOH). The business plan formed also the basis of its registration with Cochrane in 2010 and fulfils the Cochrane requirements of the core functions of review groups. From 2004 to 2010 FIOH also hosted the Cochrane Occupational Health Field which was the predecessor of the Cochrane Work Group with a much more restricted scope and autonomy.

The Work Group has an editorial base that is housed at and financed by the Finnish Institute of Occupational Health. The geographical locations are in Kuopio and Helsinki, Finland. The editorial base consists of a Coordinating Editor (0.8 FTE), a Managing Editor (1 FTE), a Trials Search Coordinator (0.6 FTE) and a Statistical Advisor (0.2 FTE). This input is based on Cochrane requirements (0.1 Coordinating Editor, 1.0 Managing Editor, 0.5 Trials Search Coordinator and statistical support). The group’s funding is derived from state support to FIOH.

The editorial base is in charge of the process of organising and publishing systematic reviews. This consists of the following tasks.

1. Deciding on new systematic review titles
2. Guidance, methodological training and support to authors of reviews

3. Organising of peer review
4. Judging if the quality of submitted protocols and systematic reviews fulfils the Cochrane MECIR standards[1]
5. Deciding on publication
6. Disseminating the results
7. Developing and innovating review methods

In addition, the editorial base carries out systematic reviews of occupational health and safety topics themselves, and is engaged in guideline development projects and primary intervention studies.

The editorial base is supported by an international editorial board of practitioners and researchers in the field that helps in judging the relevance and quality of systematic reviews and review topics (Appendix 1).

For more strategic questions and appointment of editorial base members and editorial board members, there is an international advisory board consisting of policy makers representing major stakeholders in the field such as the World Health Organization (WHO, see Appendix 2). The general director of FIOH, Harri Vainio, is the chairperson of the advisory board.

The editorial base maintains relations within Cochrane through the Cochrane board of coordinating editors of all other review groups and participating in meetings of all Cochrane managing editors and trials search coordinators. The board of coordinating editors is led by Dr David Tovey as the editor-in-chief.

In the business plan of the previous period 2010-2015, the main objectives were to organise review production in the field of occupational health and safety and become the world's leading producer of systematic reviews in this area. More concretely this was expressed as producing 25 new titles and 15 new reviews in the period 2010-2015.

[1] MECIR stands for Methodological Expectations for Cochrane Intervention Reviews, a set of about 80 criteria that should be met by all Cochrane Reviews.

IV. Description of activities and achievement of objectives

New Review Titles

Since 2010, we have received 109 requests to register new review titles. Of these, 38 led to a successful title registration, we rejected 32 and 19 authors never completed a full title registration form and were thus not taken into consideration. In addition to these requests from aspiring authors to register titles, we got 20 requests from other Cochrane Review groups to take over existing titles that were previously registered with their review groups. When we combine the number of titles we have registered (38), the number of titles that have been transferred to us from other groups (20) and subtract the four titles that stalled following title registration we arrive at our present situation of 54 registered titles that are published reviews (22) or in the pipeline (32). The titles cover a wide range of occupational health and safety topics from classic occupational health and safety problems such as noise-induced hearing loss and safety interventions in the construction industry to more recent problems such as decreasing sitting at work and personal protective equipment for healthcare workers treating patients infected with Ebola.

Table 1. Overview of our processing of title registration requests

Total requests for title registration received 2010-2015	109
Rejected straight away	32
Stalled before registration	19
Registered	38
Transferred from other review groups	20
Stalled after registration, not in process	4
Currently in process or published as reviews	54*

* See Appendix 4 for the full list of our active Cochrane reviews

We rejected 32 title registration requests because the titles did not fit into our scope (n = 3), one or more of the PICO elements (i.e. Participants, Interventions, Comparators and

Outcomes) were poorly defined (especially the interventions) (n = 14), the proposal addressed an aetiological question that is not amenable to investigation with a Cochrane review (n = 5), the proposed title overlapped with existing ones (n = 9) or we believed that the review team was not able to carry out the task due to lack of expertise and skills (n = 1). Having amassed a good deal of experience via processing all these proposals, we have decided to follow general Cochrane policy and to be very selective in registering new titles to prevent overburdening ourselves by having to support review author teams beyond what is currently possible.

Ever since the inception of Cochrane Occupational Health Field, that is, the predecessor to the review group, we have been interacting with researchers, policymakers and occupational health professionals to find out what topics should be addressed in new reviews. This is a labour-intensive process and, in addition, it is not easy to formulate good review titles. The requirement for a good review title is that there is uncertainty about the effects of an intervention but also that there are studies available that could possibly reduce the existing uncertainty. We carried out a title prioritisation project in order to be more focussed and not completely dependent on what is offered by review authors. We listed all possible interesting interventions for which there were no Cochrane Reviews and that to us seemed relevant for practice. We then asked our editorial and advisory board to rank them in order of priority. With this reduced list we asked the readers of our newsletter to rank the ten most important. This resulted in the following titles on the priority list:

- Change of culture in organisations for preventing occupational injuries,
- Interventions for preventing musculoskeletal symptoms/disorders,
- Interventions for preventing violence in healthcare*,
- Safety education and training for preventing occupational injuries,
- Ergonomic interventions for preventing back pain,
- Interventions for preventing falls from heights,
- Interventions to enhance physical fitness in workers*,
- Interventions for preventing pesticide exposure in low and middle income countries*,
- Ergonomic interventions for preventing knee pain and
- Accident investigation for preventing occupational injuries.

Three of these (*) have been taken up and the two teams are currently writing the protocols. We advocate the other titles on our webpages for potential authors to take up and we have advertised these in our newsletter.

We also participated in the Cochrane-wide prioritisation exercise with five titles. These are:

- Personal protective equipment for preventing infectious diseases due to contact with contaminated body fluids in health care staff,

- Interventions to prevent occupational noise-induced hearing loss,
- Education and training for preventing percutaneous exposure injuries in health care personnel,
- Interventions to implement lock-out-tag-out safety devices to prevent amputation injuries and
- Aggression management training for preventing violence toward healthcare workers.

This shorter list has evolved, albeit circuitously, from the prior one. It reflects both the difficulty of formulating titles in sufficient concrete detail and deciding upon the greatest need for information. The first title on the shortlist is our reaction to the Ebola epidemic with a review of the safety of personal protective equipment for health care workers. The second one is a much needed update of an important review. The third one will complete our portfolio of reviews about preventing needle stick injuries. The fourth one is a very concretely formulated title focused on an intervention in use in manufacturing using heavy machinery. The fifth one defines the intervention (aggression management training) better than the title we had on the previous priority list (Interventions for preventing violence in healthcare). Four out of five are currently proceeding and are included in the present list of 54 reviews in process (see Appendix 4). The review title about lock-out tag-out interventions is still waiting to be taken up.

Compared to stated objectives

Having registered 38 new titles and having accepted 20 title transfers from other review groups, we have far exceeded the stated objective of registering 25 new titles during our first five years of operation. Prioritising titles has been a useful exercise and will ensure maximum value for money.

Outlook

We expect that there will be a similar influx of about 10 to 15 new title registration requests per year in the near future. Given that most priority titles have been taken already, we need to undertake a new prioritisation exercise. We have to take into account that more precise and elaborated titles are needed and we have to include in new prioritisation rounds titles from the previous ones that have not been taken yet.

We list on our website all Cochrane reviews, protocols and registered titles that are relevant to occupational health and safety regardless of which Cochrane review group has registered or published them. Before 2010 all OSH reviews had to be published by other groups than us. This means that there are currently altogether 91 published reviews, 26 published protocols and 13 registered titles in the Cochrane Library that are relevant to workers. We

expect that more reviews and protocols will be transferred to us when the review groups currently hosting them cannot commit sufficient resources for their completion or updating.

Authors, guidance and support for review authors

We currently have 259 authors from 31 countries engaged in conducting our 54 reviews. Countries contributing more than ten authors are: Finland, Australia, Canada, Germany, Malaysia, the Netherlands, Switzerland, UK and USA. Of the total number, 13% are from low and middle income countries.

We provided support both on demand and via organised basic review skills courses in collaboration with Cochrane Finland and other Finnish EBM units. We organised Cochrane Systematic Review courses in 2010, 2011 and 2012. These were two-day courses in Kuopio and Helsinki. In 2015, we organised a broader three-day course on the use of EBM methods in occupational safety and health in Copenhagen. The demand for courses seems to be diminishing which might be due to the high costs of attending and the economic crisis. It could also be that activities by national Cochrane Centres and much better and professional learning material developed by Cochrane centrally have diminished the need for hands-on training by review groups. We will focus our efforts more on web-based training.

We prioritized author support for those review titles that we deemed most relevant and most practical. For example, we put great effort into systematic reviews on: needle stick injury prevention, preventing and treating shift work sleeping disorder, return to work interventions for persons with adjustment disorder, cancer or back pain. We also prioritised support for review authors that needed to update their reviews.

In general, our Trials Search Coordinator Kaisa Neuvonen constructs the search strategies for PubMed, Embase, Central and OSH-update for all review authors. In general this seems to be a satisfactory approach for disease and injury-related topics. However, for special topics there is always the need to consider specialty databases, such as PsychINFO for psychological topics. Due to limited resources we cannot provide this service for all reviews. In addition to designing the search strategies, she runs them and provides the authors with a file of references suitable for further processing in the author team’s chosen reference management software programme.

We provide all authors with a protocol template for a systematic review that contains the most used and most important methods that we would require to be there. We ask the authors to adjust the protocol to their specific review topic. This has greatly contributed to the quality of the published reviews.

For the Managing Editor and Coordinating Editor, we estimate that about 50% of our working time goes into author support. This can take either the form of supporting them during the process or of cleaning up and correcting the submitted texts of protocols and reviews to make sure that they fulfil Cochrane standards.

In general, the feedback from authors has been positive. There were, however, two complaints about the style of communication with the authors. We have reviewed and formalised our communication style. We do not have an instrument in place to measure our performance related to author support but it would be useful knowledge.

Compared to stated objectives

Having recruited 259 authors, we greatly exceeded our target of 40. We had not stated an objective with regard to author support. We promised to organise yearly courses but due to a lack of demand we slightly decreased the frequency.

Outlook

It is important to provide sufficient support to authors to be able to achieve a sufficient quality level. However, the level of support we can provide is highly dependent on the amount of resources that we have available. We will continue along current lines with providing most support for high priority titles and trying to get funding for these titles. It will be useful to better describe on our website the amount and content of support that we provide to authors in each phase of the review process.

Organising peer review

We still rely heavily on external peer review to maintain and increase the quality of our reviews. All protocols and reviews go out for external peer review by at least one, and preferably two content experts and one systematic review expert in addition to the review by the members of the editorial base team. As with all peer-review, there is a great variation in the effort needed to find reviewers. It is unclear which factors predict this and it is therefore difficult to anticipate. At times this significantly prolongs the time to complete the peer review. Nonetheless we still managed to obtain a sufficient number of peer referees and complete peer review at a high level of quality.

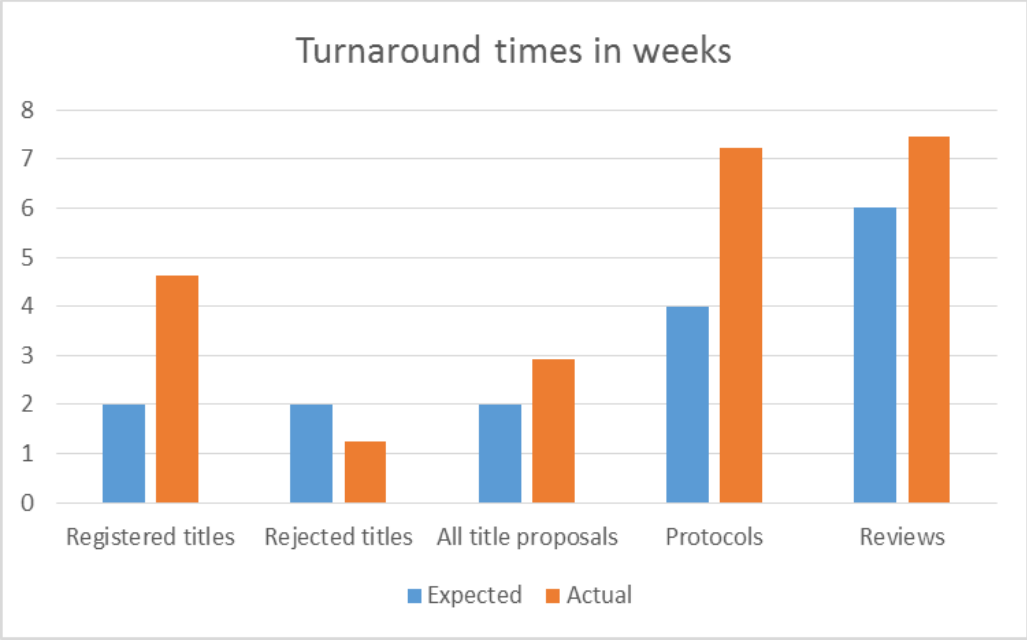
To provide the best possible author experience, we have stated that we will react to a title request within two weeks, to a submitted protocol within four weeks and to a submitted review within six weeks. In cases where we eventually registered the title, we managed to react to the submission of a review proposal form by sending our collated feedback on

average within 4.6 weeks (SD 4.5). This reflects the need to consult experts and other Cochrane groups to determine the best course of action. However, in cases where we were certain that a proposed title could not be accepted due to, for example, unclearly formulated PICO elements in the title, major overlap with an existing title or because the research question was an aetiological one, we were able to send a polite rejection on average 1.2 weeks (SD 1.8) after receiving these proposals. When we combine the processing time data for all title proposals regardless of outcome, our response time was on average 2.9 weeks (SD 3.8). This is almost one week longer than our promised turnaround time of two weeks.

Following the submission of protocols, we were able to complete the peer review process and send the authors our collated editorial feedback on average within 7.2 weeks (SD 3.1). This is three weeks more than our promised turnaround time of four weeks.

Following the submission of full reviews, we were able to complete the peer review process and send the authors our collated editorial feedback on average within 7.5 weeks (SD 2.5). This is longer than our promised turnaround time of six weeks.

Figure 1. Comparison of Cochrane Work peer review times – expected and actual



Outlook

We will improve our response times. We will continue with a root cause analysis to see where things go wrong and where we can take measures to improve.

Editorial board involvement

We involve one of our content editors on our editorial board at every stage of the review process. We ask them to make a judgement of the relevance and feasibility of every review title. At first we also asked them to summarise the peer reviewers' comments but we changed this because it seems more efficient to do this at the editorial base.

In addition, we have started to involve our editors in a quality improvement project. Sebastian Straube has written a short note to start developing a core outcome set for occupational health and safety studies.

In cases where persons from the editorial base are involved as authors of reviews, we assign the final decision about peer review changes and the decision about publication to one of our editors. This is an important safe guard against giving unjustified preference to our own reviews.

There were several changes and new appointments of editors. Taryn Young and Ira Madan stepped down due to a lack of time and Malcolm Sim, Deirdre Fitzgerald and Sebastian Straube were nominated by the advisory board and consequently appointed as their replacements. In addition, the advisory board nominated Leslie Stayner as a specialist editor to help with reviews about risk factors.

Judging the quality of submitted protocols and systematic reviews

Quality standards for Cochrane Reviews have been constantly increasing during the past five years, making it sometimes difficult to keep pace. The MECIR checklist is a useful tool to describe the minimum requirements for Cochrane Reviews. This is especially important to maintain the high Cochrane standards and make Cochrane Reviews stand out as the gold standard to which other systematic reviews published in medical journals are compared. We are particularly careful when checking for consistency between each conclusion in the discussion, implications for research and practice, abstract and plain language summary in all our reviews.

Instead of merely judging the product at the end of the process, we also try to be in touch with the authors in an earlier phase of the process. We try to give feedback when the authors have compiled a list of included studies, when they build their comparisons and when they conduct the GRADE appraisal.

Our strategy to establish and maintain a high quality level of reviews has paid off. The Cochrane Central Editorial Unit (CEU) screened all newly published reviews of each review group during 2013 and 2014 (see Appendix 3). After the screening process, the CEU decided that 14 groups had a constant high quality output and the Cochrane Work group was one of these 14 high achieving groups. Having achieved this status we no longer have to submit our reviews to a quality check by CEU prior to publication.

Compared with stated objectives

We aimed to be a high quality review production unit. Given the high level of Cochrane reviews in general and having been identified as one of Cochrane's best performing groups, we can say this objective has been exceeded. We promised to organise two meetings with the editorial board. Due to a lack of funding we only managed to organise one face to face meeting in connection with the International Commission on Occupational Health (ICOH) triennial conference in Cancun in 2012. It seems that the potential of the editorial board is underutilised and we are exploring mechanisms to improve on that. We will use virtual meeting tools to overcome the geographical separation.

Outlook

We aim to continue producing high quality protocols and reviews and review updates. We will explore ways to better realize the potential of the editorial board for example by involving them in quality improvement projects.

Published protocols and reviews

Numbers

During the period between 2010 and 2015 we published 28 protocols, averaging five to six per year. Within the same time we also published 22 full reviews. Fourteen of these we had guided from start to completion and seven had been transferred to us from six other Cochrane Review Groups. This means we published on average four reviews per year. See Appendix 4 for the full list of titles.

Relevance and impact

It is difficult to measure the relevance and impact of research in general. One general way of measuring is by means of the impact factor as the average number of citations in the previous two years. The latest overall impact factor of the Cochrane Library for 2013 measuring citations over 2012 and 2011 was 5.9. For the Work Review group this figure

was above average with 6.4, which places our review group as 16th out of 53 review groups.

It would be good to know how well the Cochrane Work reviews are used in guidelines but we only have anecdotal evidence of this. In a joint recommendation in 2012, NIOSH, FDA and CDC strongly recommended the use of blunt surgical needles where possible, as opposed to sharp surgical needles, for preventing needle stick injuries in health care. This was mainly based on our Cochrane review of the effects of using blunt needles instead of sharp needles on needle stick injuries (Parantainen 2010). Another piece of anecdotal evidence of our impact is the invitation to submit an evidence summary to JAMA of our review of pharmacological interventions for problems with sleep or being sleepy in shift workers (Liira 2014, Liira 2015). The same review was used for a press release by Cochrane when it was published and this generated a lot of publicity around the world. Along similar lines, OSHA concurred with the conclusions of our review on interventions to prevent occupational noise induced hearing loss. Given the lack of evidence, as shown by our review, that current interventions are effective, OSHA proposed to increase the legal requirements for employers to decrease workplace noise levels in 2010. Unfortunately, this proposal for better enforcement of OSH legislation did not make it. Dr David Michaels, assistant Secretary of Labor for Occupational Safety and Health, head of the OSHA administration, commented very positively on the findings of our review of workplace inspections to prevent occupational injuries and diseases. One of the recommendations of the review, to evaluate workplace inspections with a randomised controlled trial, is currently being implemented by OSHA.

The Finnish database Evidence Based Medicine Guidelines produced by Duodecim contains evidence summaries of most of the Cochrane Work reviews. We continue to teach physicians specialising in occupational health who come to spend their six-month stretch at FIOH to make these evidence summaries. We plan to make this option available to specialising physicians spending their six months at other FIOH locations in Finland. This requires filming lectures and organising feedback seminars via video connections.

The International Commission on Occupational Health organises three yearly congresses on occupational health and occupational medicine. The coordinating editor was invited to present the Cochrane Work reviews in key-note lectures at the 2012 congress in Cancun Mexico and at the 2015 congress in Seoul, Republic of Korea.

It is also difficult to measure the relevance of our output, especially at the international level. We believe that the reviews that are currently available in the Cochrane Library cover the most debated topics in occupational health and occupational medicine including a range of

occupational diseases, outcomes such as return to work, injuries and exposures and interventions such as vaccination, counselling, shift work schedules and personal protective equipment. This does not only hold internationally but also at the national Finnish level, where our review titles cover the strategic objectives of the FIOH. We also committed ourselves to titles that are relevant to modern working life such as interventions to decrease sitting.

Compared with stated objectives

We did not have any stated objectives but based on the above we believe that Cochrane Work did have an impact on practice (in particular via uptake of the results in clinical guidelines in Occupational Health) and research in the field of occupational health and occupational medicine. Even though the distinction between occupational health and occupational safety is not always clear, it seems that the impact on safety practice is less and more difficult to assure than in the health field. This could be partly due to the more "technical" nature of safety practice.

Outlook

We will continue to collect evidence of the impact of our work and our reviews with citation metrics, inclusion in guidelines and other relevant indices. We will also try to contact organisations producing guidelines about our upcoming reviews so that they could incorporate them in their decision making process. We will focus on new interventions and specifically on modern aspects of working life such as working remotely, aging and sustained employability or interventions to improve well-being.

Disseminating the results

Newsletter

We have produced a bi-monthly newsletter, which announces new review titles and new reviews. We sent the first issue of 2015 to 1681 subscribers. We have received positive feedback from readers on both the contents and the format of the newsletter.

Twitter and Wikipedia

We have a twitter account @CochraneWork with currently 336 followers that we use to actively disseminate our reviews. In addition, we use the twitter account of @FIOH with 1392 followers and our own personal twitter accounts. In addition we monitor the reactions to these efforts to improve on our dissemination strategy. The Altmetrics in our reviews indicate that this is a successful strategy. For example our review on pharmacological

interventions for sleeping problems in shift work had an Altmetric score of 152 which is exceptionally high. Also our review on interventions to decrease sitting at work scored high with an Altmetric score of 101.

Part of the success observed through the Altmetric hits refer to Wikipedia. We have recently joined forces with the National Institute of Occupational Safety and Health (NIOSH) from the USA to actively integrate the results of our reviews into existing Wikipedia entries. We have a list of priority topics that we will edit in Wikipedia: shift work, sitting and stress. It is a relatively easy and inexpensive but increasingly influential means of dissemination.

Podcasts

Cochrane podcasts are short spoken summaries of a recent Cochrane review recorded by the authors themselves. They are accessible and brief, allowing everyone from healthcare professionals to patients and families to hear the latest Cochrane evidence in under five minutes. We have used our review on preventing occupational stress in healthcare workers (http://www.cochrane.org/podcasts/10.1002/14651858.CD002892.pub5) as a test case to learn how to produce podcasts and how to attract people speaking other languages to record different language versions. We aim to have every publication of a new or updated Cochrane Work review followed by the publication of a podcast in at least English.

NIOSH Science blog and other communication products

Together with our NIOSH colleague and Cochrane Work editor, Thais Morata, we wrote a blog on the NIOSH science blog page about preventing stress in healthcare (http://blogs.cdc.gov/niosh-science-blog/2014/12/11/hc-stress/). Our reviews have been mentioned in other NIOSH Blogs, and we plan to further utilize this mechanism. I addition, our review Interventions to reduce sitting was highlighted in NIOSH Total Workers Health Newsletter http://www.cdc.gov/niosh/twh/newsletter/twhnewsv4n2.html.

Evidently Cochrane blog

Our Managing Editor was invited to contribute a post to coincide with Men's Health Week in June 2014. The post highlighted the results of Cochrane Work reviews especially pertinent to working men.

Visually Cochrane blog

Our Managing Editor set up a new blog in the spring of 2015 to drive the discussion and crowdsourcing of infographics within Cochrane (www.visuallycochrane.net). Infographics have the potential to convey our results to wider audiences in a more intuitive format.

Crowd funding

Updating of Cochrane Reviews is a difficult process. We are setting up a crowd funding project together with the Finnish crowd funding organisation Mesenaatti.me to collect a small sum of money as an incentive for the first author of the workplace sitting review. The idea is that it will be both a way to disseminate the results of the review and Cochrane as well as an incentive for the updating. We will evaluate the success of this venture in 2016.

Influencing European Policy Makers

We tried to influence European policy makers in the area of OSH. We contacted the highest officials in the EU Department of Employment, Social Affairs and Inclusion responsible for OSH (Unit Health, Safety and Hygiene at Work) to notify that implementation of the findings of our review on the prevention of needle stick injuries had findings that should be implemented into practice and that this is not covered fully by the EU Sharps Directive. This led to a referral to EU OSHA as the EU agency responsible for informing parties on OSH. They put a temporary link on their website to the needle stick prevention review. In terms of dissemination and implementation, this has not had much impact. It is probably necessary to get this to a more political level.

Compared with stated objectives

We stated that we would actively promote Cochrane, produce a newsletter and publish Cochrane Reviews also in a Cochrane Corner in the journals OEM and SJWEH.

While we tried to motivate authors to contribute to the Cochrane Corner, we were not very successful. We provided three contributions (in 2011, in 2012 and one is in production 2015). We published a summary of the noise review in a peer reviewed journal and in a Brazilian textbook in Portuguese. We reproduced one full review in article format in the SJWEH. We feel, however, that this is very much a duplication of the effort to produce the review and we have not put effort into actively publishing reviews as journal articles.

We have exceeded our objectives in promoting Cochrane reviews and in producing a newsletter and podcasts and in actively using social media actively.

Outlook

We will continue our dissemination efforts through Social Media and Wikipedia and try to intensify international collaboration especially with other occupational health institutes, such as NIOSH in the US.

We are also looking into mechanisms to increase the number of reviews published in the Cochrane Corner in OEM. This could be done by more actively approaching review authors to share responsibility in dissemination activities.

Developing and innovating review methods

Non-randomised studies article

From the start as a Cochrane field, we have believed that it is important to focus on the inclusion of non-randomised studies in Occupational Health and Safety reviews. In the occupational health field it is obviously more difficult to conduct randomised controlled trials than in clinical medicine. Reasons for this are that the intervention is often conducted at the group level such as changing working conditions for a whole department or organisation, coupled with a lack of culture of experimentation and critical assessment of interventions in firms. We felt that Cochrane guidance was not very extensive in this area. Therefore, we undertook a survey of all Cochrane reviews that had included non-randomised studies and extracted the reasons for doing so and the methods that they had used. This resulted in guidance for inclusion of non-randomised studies in systematic reviews published in an article in the Journal of Clinical Epidemiology in 2014 [i]

Involvement in GRADE for environmental health

The GRADE working group [ii] took the initiative to better apply GRADE methods to reviews of environmental and occupational risks where the intention is to illustrate the magnitude of particular risks or to see if interventions can be applied to reduce or remove these risk factors. There are several areas where better guidance is needed such as including non-randomised and randomised studies, how to establish safe levels such as a lowest observed adverse effect level. The environmental health group will organise workshops and write papers about this problem to further the application of GRADE also in this area. We will actively participate.

Risk factor reviews

In occupational health, many control measures are based on the fact that a risk has been established. Often these measures are of a technical and regulatory nature such as banning the use of a chemical after it has been shown that it causes serious adverse health effects. The basis for such decision making should be, among others, a systematic review of human epidemiological studies. There is, however, no established guidance for such reviews. It has been shown that the quality of these reviews is highly variable and most are low quality

compared to intervention reviews. Many, but not all, Cochrane review methods can be applied to risk factor reviews. Areas where development is needed are: exposure-response modelling, risk of bias assessment and grading the overall quality. We took on several commissioned reviews to get more familiar with the problems and methods.[iii]

There is considerable interest in further developing these methods.

Infographics

Within Cochrane, Cochrane Work has taken the initiative to improve the methods to present the results of our reviews by means of infographics. So far, a blog has been set up (with two published posts so far) and collaboration has been established with many groups within Cochrane. [iv]

Compared with stated objectives

One of our objectives was to use 1.7 FTE for methodological work. This was too optimistic. Most of the working time went into editorial base services. Nevertheless, even with the available resources we managed to produce a sizeable output regarding the development of methods that are important for occupational health and safety interventions.

Outlook

We will continue work in the area of non-randomised and risk factor studies. We will continue efforts to obtain external funding for these types of reviews.

Other systematic review-related activities

Guideline Development

For a number of years, WHO has had a strictly evidence-based guideline policy. This means that there is a guideline handbook that sets rules for the development of all WHO guidelines and a guideline oversight committee that sees to the implementation of the handbook. For the occupational health area, WHO is currently developing a guideline on working safely with engineered nanomaterials. Cochrane Work was asked to support the guideline process. This started in 2014 partly with external funding and partly as an in kind contribution of FIOH to WHO. It is clear that there is a great need of methodological support since the methods of systematic reviews are not very well known in toxicology. The guideline is planned to be published in 2016. In 2010, we also participated in a project to collect evidence to underpin basic occupational health services.[v]

In addition, Cochrane Work supports the development of a guideline on environmental noise by the European WHO office for the environment. This guideline is also planned to be published in 2016. The contribution is in kind.

The Dutch Centre of Excellence of the Netherlands Society of Occupational Medicine (NVAB) also hired Cochrane Work to support their evidence based guideline process with the collection and synthesis of evidence. We participated in two projects: a guideline on reducing the workload due to lifting for preventing work-related low back pain[VI] and a guideline for computer work.

To better implement the results of reviews in Finland, we work with specializing occupational health physicians who write short summaries of the evidence in our reviews. These summaries are published by the Finnish Medical Society Duodecim in a database accessible through an online portal used by all healthcare workers in Finland. This database is highly valued by Finnish practitioners and is also marketed in English as Evidence-based Guidelines.

PEROSH

PEROSH, a collaboration of European national institutes of occupational health and safety, has established several collaborative working groups. Cochrane Work, through FIOH, participates in a clearing house of systematic reviews group. The objective is to collect available systematic reviews on important occupational health intervention, risk factor or prognosis questions and make these available on the Internet. Not much progress has yet been made but there is a well-established group that is willing to contribute. The group has therefore decided to focus on developing methods for risk factor studies.

Compared with stated objectives

We did not have stated objectives here.

Outlook

It seems that guideline development methods are needed and that this is expertise that we can provide. We intend to continue with these activities. This could possibly lead to participation in the Guidelines International Network (GIN).

Resources and finances

Resources

When we started we had funding for 3.7 FTE staff. Through natural turn-over this has been decreased to 2.6 with an additional 1 FTE externally funded. The initial idea was that all basic editorial functions could be performed with part-time input from the various disciplines. However, especially for the Trials Search Coordinator it turned out to be a more time consuming task. Probably because we have a diversity of reviews that require all different search strategies, this takes more time. Also guiding and developing review production is more time consuming than initially planned. This left very little room for developing methods.

Table 2. Editorial base funding as initially planned and situation in 2015

	Business Plan 2010 FTE	2015 FTE
Coordinating Editor	0.3	0.5
Managing Editor	0.7	1.0
Trials Search Coordinator	0.5	0.6
Statistical Advisor	0.2	0.2
Web Master	0.2	--
Methodological support	1.7	0.3
Review Production; externally funded		1.0
Total	3.6	3.6

The input of FIOH translates roughly to 300.000 Euros per year including overhead and social security. This includes 10.000 Euros travelling costs.

We also planned to run an annual bursary scheme with two bursaries of 5000 euros each. The idea behind it was that this would greatly increase production time available for high priority reviews. We organised this once in 2012 but due to budget cuts we were not able to continue this programme.

External funding for basic editorial services

We planned to have a substantial part of our budget financed by sources outside FIOH. Even though there were initial promises from other funders, we have not been able to materialize these. We have actively discussed funding possibilities with several potential funders such as US NIOSH and the Swedish FAS but as yet these efforts have not been fruitful.

External review funding

We actively applied for external funding to produce systematic reviews. We submitted project proposals to tenders for concrete projects. Work Safe British Columbia is a workers' compensation organisation in Canada that actively funds systematic reviews. We submitted a proposal for a review of workplace inspections for preventing occupational disease and injury which was funded. The Danish Work Environment Authority takes evidence-based decisions on compensation for occupational diseases. To this end they commission one or more reviews on specific occupational risk factors. We successfully applied for reviews on shift work as a cause of breast cancer, Manganese exposure as a cause of adverse health effects and on the effect of occupational knee load on knee osteoarthritis, bursitis and meniscal lesions. In addition, we applied several times for funding of reviews to the Finnish Work Environment Fund and got funding for a review of prognostic factors for occupational hearing loss. Altogether this amounted to 275.000 Euro. In addition, we got reimbursed for our activities in the various guideline projects. This amounted to 109.000 Euro. Altogether these side activities generated an income of 384.000 Euro between 2010 and 2015.

Comparison with objectives

The challenge for Cochrane Work is to somehow ensure adequate resources for activities of the editorial base. We nicely succeeded in organising a little over 75.000 Euro per year for review activities but this does not help fund the basic activities of the editorial base.

Outlook

We will continue to apply for external review funding and continue to be involved in guideline development. In addition, we have to renew our efforts to obtain funding from other sources to fund, at least partly, our basic editorial services. We will approach various national work environment funds and we will set up a task force to address the funding challenges.

V. Conclusion

In all areas the activities have exceeded the outlook in the business plan. The generation of funding for basic editorial services and the utilisation of the full potential of the editorial board remain our biggest challenges.

Based on this evaluation and the comments we have received (see Appendix 5), we propose to produce a new business plan for 2015-2020 and formalise the relationship with Cochrane in the form of a memorandum of understanding.

Appendix 1: Editorial board

Appendix 2 Advisory Board

Prof Harri Vainio * (Chairman)	Finnish Institute of Occupational Health, Finland
Dr Toshiaki Higashi	University of Occupational Environmental Health, Kitakyushu, Japan
Dr Evelyn Kortum *	WHO, Occupational Health Unit, Geneva, Switzerland
Dr Kristiina Mukala	Ministry of Health and Social Affairs, Finland
Prof Marjukka Mäkelä *	Finnish Branch of the Nordic Cochrane Center, Finland
Prof Jorma Rantanen *	International Commission on Occupational Health, Finland
Dr Paul Schulte *	National Institute of Occupational Safety and Health, US
Dr Jukka Takala	Workplace Safety and Health Institute, Singapore
Dr Jenny Job *	Safe Work Australia, Canberra, Australia

* Read and commented on this report

Appendix 3 Letter from David Tovey, Editor-in-chief of the Cochrane Library

London, 14.11.2014 18:50

Dear Jos and Jani,

As you know, a team based within the CEU has been screening all new Cochrane Reviews prior to publication for over 12 months now. This letter is to inform you that you are one of a select group of CRGs that we judge to be producing reviews that are consistently of a high standard, requiring minimal input or amendment, and sufficient in number for us to be confident in respect of future reviews.

The quality of the reviews that we have seen from your group indicates that processes are already in place to substantially address the main focus of the screening process. As a consequence we would not look to screen your reviews from now on. We are still prepared to offer screening to your group but on a more limited basis.

As you will be aware the screening project was intended to run for a limited period of time from its inception. We are mindful of the value that many groups place on screening, but urgently need to free up some time and resource to address the problems we have encountered with some of the groups who have performed less creditably. We have decided that we should try to focus our efforts and that for high performing groups such as yours screening should proceed on a more restricted basis.

We propose that in the future we will only screen your reviews either on demand, or as part of a dedicated project which samples randomly. Should you wish the CEU to screen a new review from your group you will need to invite us before sign off has occurred and to cite a specific reason. This reason might be that the review addresses a particularly important or controversial question, or it has findings that you suspect are likely to be controversial. In such an instance we would be pleased to provide an appraisal irrespective of the place of the review in the editorial process. We would also be content to provide some support to you with reviews that have had a difficult journey through the editorial process.

We would like to stress that this decision is based solely on the parameters that we have built into the screening process: implementation of protocol methods, interpretation and inconsistency. We have not screened reviews on writing style and only in a few extreme cases have we used the clarity of written English as the basis for the outcome of screening. We recognise the importance of this issue however, and indeed intend that the issues of readability and clear writing will be a priority over the next 12-24 months.

We would like to take this opportunity to congratulate you on achieving consistently high standards in the reviews we have screened from you. Our wish is that others should aspire to join this category of groups in the future and with that in mind we would like to make this list public. If you have any objection to being included in this list please let us know.

If you would like to discuss any aspect of our decision further, please feel free to get in touch.

Best wishes,

David Tovey & Toby Lasserson

Toby Lasserson | Senior Editor, *The Cochrane Library*
Cochrane Editorial Unit | Cochrane Central Executive

Appendix 4 List of review titles

List of published reviews (Pub Rev), published protocols (Pub Prot) and registered titles (Reg Title) up to date on June 17, 2015

Stage		Title	First Author
Pub Prot	Work	Interventions for obtaining and maintaining employment for adults with severe mental illness, a network meta-analysis	Schaafsma, Frederieke G
Pub Prot	Work	Workplace interventions for treating work-related rhinitis and rhinosinusitis	Muhamad, Nor Asiah
Pub Prot	Work	Workplace interventions for preventing work-related rhinitis and rhinosinusitis	Muhamad, Nor Asiah
Pub Prot	Work	Education and training for preventing percutaneous exposure injuries in health care personnel	Liira, Helena
Pub Prot	Work	Interventions for increasing the uptake of immunisation in healthcare workers	Tuckerman, Jane
Pub Prot	Work	Ergonomic interventions for preventing musculoskeletal disorders in dental care practitioners	Mulimani, Priti
Pub Prot	Work	Economic incentives to enhance safety behaviour in workers for preventing occupational injuries	Miller, Paul SJ
Pub Prot	Work	Behavioural interventions for promoting respiratory protection use in workers	Luong Thanh, Yen B
Pub Prot	Work	Return to work coordination programmes for improving return to work in workers on sick leave	Kunz, Regina
Pub Prot	Work	Human resource management training of supervisors for improving health and well-being of employees	Kuehnl, Andreas
Pub Prot	Work	Optical correction of refractive error for preventing and treating eye symptoms in computer users	Heus, Pauline
Pub Prot	Work	Interventions for prevention of bullying in the workplace	Gillen, Patricia A
Pub Prot	Work	Interventions to support return-to-work for patients with coronary heart disease	Euler, Ulrike
Pub Prot	Work	Exercise training to improve exercise capacity and quality of life in people with non-malignant dust-related respiratory diseases	Dale, Marita T
Pub Rev	Asthma	Workplace interventions for treatment of occupational asthma	de Groene, Gerda J
Pub Rev	BJMT	Conservative interventions for treating work-related complaints of the arm, neck or shoulder in adults	Verhagen, Arianne P
Pub Rev	BJMT	Ergonomic design and training for preventing work-related musculoskeletal disorders of the upper limb and neck among office workers	Hoe, Victor CW
Pub Rev	CCDAN	Preventing occupational stress in healthcare	Ruotsalainen, Jani H

		workers	
Pub Rev	CCDAN	Interventions to improve return to work in depressed people	Nieuwenhuijsen, Karen
Pub Rev	CCDAN	Pharmacological interventions for sleepiness and sleep disturbances caused by shift work	Liira, Juha
Pub Rev	CCDAN	Non-pharmacological interventions for preventing job loss in workers with inflammatory arthritis	Hoving, Jan L
Pub Rev	CCDAN	Person-directed non-pharmacological interventions for preventing and treating sleepiness and sleep disturbances caused by shift work	Erren, Thomas C
Pub Rev	CCDAN	Adaptation of shift work schedules for preventing and treating sleepiness and sleep disturbances caused by shift work	Erren, Thomas C
Pub Rev	ENT	Interventions to prevent occupational noise-induced hearing loss	Verbeek, Jos H
Pub Rev	GynCan	Interventions to enhance return-to-work for cancer patients	de Boer, Angela GEM
Pub Rev	Injuries	Vocational rehabilitation for people with acquired brain injury	Turner-Stokes, Lynne
Pub Rev	Injuries	Heat acclimation for protection from exercise- and environment-induced heat stress	Minett, Geoffrey M
Pub Rev	Injuries	Interventions to prevent injuries in construction workers	van der Molen, Henk F
Pub Rev	Injuries	Cognitive rehabilitation for occupational outcomes after traumatic brain injury	Suresh Kumar, K
Pub Rev	Injuries	Pre-employment examinations for preventing occupational injury and disease in workers	Schaafsma, Frederieke G
Pub Rev	Injuries	Functional capacity evaluations for the prevention of occupational re-injuries in injured workers	Reneman, Michiel F
Pub Rev	Injuries	Interventions for preventing injuries in the agricultural industry	Rautiainen, Risto
Pub Rev	Injuries	Alcohol and drug screening of occupational drivers for preventing work-related injury	Montano, Cecilia
Pub Rev	Injuries	Workplace interventions to prevent work disability in workers on sick leave	Anema, Johannes R
Pub Rev	Work	Personal protective equipment for preventing highly infectious diseases due to contact with contaminated body fluids in health care staff	Verbeek, Jos H
Pub Rev	Work	Gloves, extra gloves or special types of gloves for preventing percutaneous exposure injuries in healthcare personnel	Verbeek, Jos H
Pub Rev	Work	Workplace interventions for reducing sitting at work	Shrestha, Nipun
Pub Rev	Work	Blunt versus sharp suture needles for preventing percutaneous exposure incidents in surgical staff	Saarto, Annika
Pub Rev	Work	Interventions for improving employment outcomes for workers with HIV	Robinson, Rachel
Pub Rev	Work	Organisational interventions for improving wellbeing and reducing work-related stress in teachers	Naghieh, Ali

Pub Rev	Work	Occupational safety and health enforcement tools for preventing occupational diseases and injuries	Mischke, Christina
Pub Rev	Work	Devices for preventing percutaneous exposure injuries caused by needles in healthcare personnel	Lavoie, Marie-Claude
Pub Rev	Work	Workplace pedometer interventions for increasing physical activity	Freak-Poli, Rosanne LA
Pub Rev	Work	Interventions for preventing the spread of infestation in close contacts of people with scabies	FitzGerald, Deirdre
Pub Rev	Work	Interventions to increase the reporting of occupational diseases by physicians	Curti, Stefania
Pub Rev	Work	Vocational rehabilitation for enhancing return-to-work in workers with traumatic upper limb injuries	Chi, Ching-Chi
Reg Title	Work	Web-based stress management for preventing stress and reducing sick leave in workers	Kuster, Anootnara T
Reg Title	Work	Education and training for preventing and minimising workplace aggression directed toward healthcare workers	Hills, Danny J
Reg Title	Work	Humidification of indoor air for reducing dryness symptoms and preventing upper respiratory infections in educational settings and at the workplace	Flatz, Aline
Reg Title	Work	Pharmaceuticals for treating noise-induced hearing loss in workers	Davis, Rickie R
Reg Title	Work	Pharmaceuticals for preventing noise-induced hearing loss in workers	Davis, Rickie R
Reg Title	Work	Educational interventions for preventing occupational pesticide exposure among farmers in low and middle income countries	Bhaumik, Soumyadeep
Reg Title	Work	Technical interventions at the workplace for preventing occupational asthma	Curti, Stefania
Reg Title	Work	Workplace interventions for preventing job loss in workers with alcohol and drug abuse	Liira, Helena

Appendix 5 Summary of comments we received on this evaluation

We received comments from ten of out of 14 members of our editorial board and from six out of nine members of our advisory board. In addition to extensive edits to improve grammar and style, the comments suggested a range of developments not only to the evaluation report but to the ways in which we can organise our activities more efficiently and transparently in the next five-year period from 2015 to 2020.

The point that generated the most feedback was the length of peer review discussed on pages 11-13. Our editors generally felt that our response times were rather good especially when compared to those of other Cochrane review groups. However, these comparisons are based on our editors' personal experiences only and not on a formal comparative analysis of average response times. We could explore possibilities for conducting such analyses but the danger is that the result could be seen as merely underlining other Cochrane groups' poorer performance. To us relative speed is not as important as our commitment to efficiency and a good author experience.

Our editors especially commented on the poor demand for training discussed on pages 10-11. Many thought that given the economic situation it is understandable that many people cannot afford travelling to Finland for two or three days. Hence many suggested looking into organising online courses. Cochrane already has good general online training but they are available only for people who have registered a Cochrane review title. Then again, our hidden agenda of recruiting authors among attendees of our basic systematic review methods courses has not paid off. We will consider supplementing the current array of online courses with materials specific to Cochrane Work reviews.

The title prioritisation work discussed on pages 8-9 was also seen as important and needing further development. We will communicate existing priority titles better to aspiring authors and start planning of a systematic mechanism for scoping and prioritisation of new titles.

The issue of funding produced a number of suggestions to increase efforts to approach more funding organisations such as various national work environment funds and to participate in EU framework programmes. Another approach to funding is of course to try and obtain external experts' working time instead of money. Many suggested seeking collaboration with, for example, guideline producing organisations such as Guidelines International Network and the Finnish Duodecim. We will take all these suggestions under advisement.

References

[i] Ijaz S, Verbeek JH, Mischke C, Ruotsalainen J. Inclusion of nonrandomized studies in Cochrane systematic reviews was found to be in need of improvement. J Clin Epidemiol. 2014 Jun;67(6):645-53.

[ii] www.gradeworkinggroup.org

[iii] We got several reviews commissioned by the Danish Work Environment Authority that commissions every year one or more systematic reviews of the health effects of occupational risk factors. We reviewed shift work as a cause of breast cancer and exposure to Manganese as a risk for adverse health effects. Currently, we are undertaking a review of knee load as a risk for knee osteoarthritis.

Ijaz S, Verbeek J, Seidler A, Lindbohm ML, Ojajärvi A, Orsini N, Costa G, Neuvonen K. Night-shift work and breast cancer--a systematic review and meta-analysis. Scand J Work Environ Health. 2013 Sep 1;39(5):431-47.

[iv] See visuallycochrane.net

[v] Verbeek J, Ivanov I. Essential Occupational Safety and Health Interventions for Low- and Middle-income Countries: An Overview of the Evidence. Saf Health Work. 2013 Jun;4(2):77-83.

[VI] Kuijer PP, Verbeek JH, Visser B, Elders LA, Van Roden N, Van den Wittenboer ME, Lebbink M, Burdorf A, Hulshof CT. An Evidence-Based Multidisciplinary Practice Guideline to Reduce the Workload due to Lifting for Preventing Work-Related Low Back Pain. Ann Occup Environ Med 2014;26:16.