Guidelines for Consumers Interested in Peer-reviewing Research - 1

An introduction to peer-reviewing Cochrane protocols and reviews.

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(1) Introduction

This document has been prepared to help people who are not health professionals or health service researchers, but who are interested in reading and commenting on research in the context of the Cochrane Collaboration. It is very important for health services research to be influenced by people who use these services. So we would like to say a big “Thank-you” to you for taking time to become involved.

This is one of a pair of documents, called “Guidelines-1” and “Guidelines-2”. The document you are now reading, “Guidelines-1”, gives some background information. If you decide you want to become involved in this work, then you can request a copy of “Guidelines-2”, which gives some practical advice on how to do this (see section 10).

This document has been arranged in sections explaining the work of the Cochrane Collaboration, how consumers may contribute, and explanations of some of the more technical and scientific terms you may come across. You might want to read this right through from beginning to end, or you could skip through and dip into the sections in any order. This folder also has room for you to store helpful information from other sources. For instance, you may be able to request an additional glossary from your Review Group Co-ordinator relevant to your particular area of interest.

A note about the term “peer-reviewing”

“Peer review is a refereeing process used to check the quality and importance of reports of research. An article submitted for publication in a peer-reviewed journal is reviewed by other experts in the area. It aims to provide a wider check on the quality and interpretation of a short report and to improve its quality” (The Cochrane Library Glossary).

There is some debate about the use of the term “peer-reviewing”. For example, some consumers have told us that they acknowledge that doctors and other health professionals (who have studied and trained for many years) have a distinctive contribution to make to research. These consumers, who feel that their own contribution is quite different, have questioned whether they are really health professionals’ “peers”. The concise Oxford dictionary defines “peer-group” as “a group of people of approximately the same age, status and/or interests”. In the context of peer-reviewing research, all reviewers have an interest in the topic and, in this context, consumers and health professionals can be considered “peers”.

After much discussion we have decided to use the term “peer-reviewing”. We discuss the term “peer-reviewing” further in section nine (see page 9 of this document).
(2) Do health treatments work? How can we find out?

How can we tell if a treatment is any good? We can compare it with other treatments for the same problem, or with no treatment. To do this, one group of people is given the new treatment and another group is given either an existing treatment or a “dummy” treatment (known as a placebo). A placebo looks identical to the new treatment (for example, if it was a tablet, like a headache pill, it would be the same shape and colour) but the placebo contains no active ingredients.

By assessing the health of the two groups after their treatment, we can tell which treatment is more successful – but only if the two groups of people were very similar before treatment began. Otherwise we might be misled. For instance, one group may be healthier subsequently not because their treatment was better, but because they were younger, or not so ill, or at less risk of ill health before treatment began.

One might try to match the two groups of people so that each group has a similar age range, sex ratio, good or ill health or risk of ill-health. Although one can match for some of the characteristics likely to be important, one can’t match for important factors that haven’t been identified or recorded. The only way of dealing with this problem is by allocating each person to one or other of the groups at random, as if tossing a coin.

The first step in a randomised controlled trial is thus to randomly assign each individual to one of two groups, the comparison groups. Because they compare similar groups, randomised controlled trials are particularly reliable for testing the effects of treatment. The results of randomised controlled trials may be published in any one of thousands of journals worldwide, or indeed not published at all, and studies found most easily tend to have over-optimistic results. So finding reliable information about the effects of care is particularly difficult, and often decisions about treatments are made without referring to the evidence from the relevant trials. Consequently, to find out what works, it is worthwhile searching research literature thoroughly to see if the answer is already known. This may require considerable work over many months, but it will be much less effort than conducting a new randomised controlled trial.
(3) Systematically searching and reviewing health care research

If someone decides to look at and comment on articles that have appeared in the medical or health literature on a particular topic they are ‘reviewing the literature’. They may review, say, all the drug treatments available for one type of heart disease. The review might be very specific and set out to find what evidence there is for prescribing one particular drug.

They may set about their task very methodically, following step by step an advance plan which covers (i) the way the existing studies are searched for, (ii) the ways in which, once relevant studies have been found, they are judged, in terms of their usefulness in answering the question the reviewers are interested in, and (iii) the ways in which the results of the separate studies might be brought together.

Following such a clear plan to identify and bring together all relevant studies, is ‘systematically reviewing the literature’. Some results may be presented as statistics, in one form or another, and statistical techniques can be used to combine results from more than one study (a ‘meta-analysis’).

Cochrane reviews are systematic reviews. The Cochrane Collaboration’s definition of a systematic review is as follows:

A review of a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analyses) may or may not be used to analyse and summarise the result of the included studies.

(4) About the Cochrane Collaboration

The Cochrane Collaboration is named after Archie Cochrane, a doctor and epidemiologist (someone who studies patterns of disease and how these relate to the environment and ways of life). Just over 25 years ago, he aroused a lot of interest by pointing out that many decisions about healthcare are made without reliable, up-to-date evidence about the effects of different treatments. Some people continue to be surprised to hear this. They imagine that doctors who, after all, study both at university and in hospitals for many years, must be experts in health and medicine. But doctors face a serious challenge when research is being published every day all over the world. It appears in thousands of medical, scientific and health-related journals world-wide. The results of one study might be different from, or even contradict, the results of another study. Another problem is that many of the journals are written in a language different from that of the person trying to understand the research findings. And no matter how tempting, it would be wrong for someone to ignore reports written in a language they do not understand.

In order to meet the challenge of being informed, Cochrane proposed that all of the available evidence about the effects of each treatment should be gathered together and carefully reviewed, and that these reviews should be kept up to date. Such concerted efforts began in the area of pregnancy and childbirth and later spread to other areas of health with the opening of the UK Cochrane Centre in 1992. This was the beginning of an international endeavour. Now the Cochrane Collaboration is an international organisation that aims to help people make well informed decisions about health by preparing, maintaining and ensuring the accessibility of systematic reviews of the effects of healthcare interventions. The main activity of the Collaboration is the preparation of Cochrane reviews that are published electronically in successive issues of The Cochrane Database of Systematic Reviews in The Cochrane Library.

The Cochrane Collaboration comprises a number of groups, organised according to topic e.g. a particular health condition. So, for example, there is a Cochrane “Epilepsy” group and a “Pregnancy and Childbirth” group. Each group has many members with a variety of backgrounds, experience and expertise. Members might be doctors, nurses, researchers, health advisers and, of course, consumers. The activities of each group are monitored and co-ordinated by one person known as the Review Group Co-ordinator (RGC).
(5) About The Cochrane Library

The Cochrane Library is a collection of databases, published on disk and CD-ROM and updated quarterly, containing the Cochrane Database of Systematic Reviews, the Cochrane Controlled Trials Register, the Database of Abstracts of Reviews of Effectiveness, the Cochrane Methodology Register, and information about the Cochrane Collaboration.

The Cochrane Database of Systematic Reviews (CDSR) is the major product of the Cochrane Collaboration. It brings together all the currently available Cochrane Reviews and is updated quarterly. Collaborative Review Groups submit edited reviews and protocols of reviews and other information for inclusion in the CDSR.

A Cochrane Review is a systematic, up-to-date summary of reliable evidence of the benefits and risks of healthcare. Cochrane Reviews are intended to help people make practical decisions. For a review to be called a "Cochrane Review" it must be prepared and maintained by the Cochrane Collaboration. Review authors are expected to adhere to guidelines published in the Cochrane Handbook. The specific methods used in a Review are described in the text of the review. Cochrane reviews are published in the Cochrane Database of Systematic Reviews and readers are invited to comment on them to help authors improve them even after they are published.

A protocol is the plan or set of steps to be followed in a study. A protocol for a systematic review should set out clearly why the review is needed, what the review is about, and how the reviewers are going to do it: how they will look for, select and critically appraise studies, and collect and analyse data from the included studies. Protocols for Cochrane Reviews are the vehicles for publicly setting out the criteria that the reviewers will follow. They are published in the Cochrane Database of Systematic Reviews. People can send in comments on protocols in the same way as they can comment on full reviews.

The Cochrane Controlled Trials Register (CCTR) is a database of references to controlled trials in health care. These references have come from Cochrane groups, other organisations, MEDLINE, Embase and other bibliographic databases.

The Database of Abstracts of Reviews of Effectiveness (DARE) is a collection of structured abstracts and bibliographic references of systematic reviews of the effects of healthcare.

The Cochrane Methodology Register is a bibliography of articles and books about methodological issues relevant to summarising research evidence. Information about the Cochrane Collaboration is also available in The Cochrane Library, and on a website: www.cochrane.org.
Where can consumers access the Cochrane library? The Cochrane library is available in most good medical libraries so you could ask at your local teaching hospital or university. It is available in some public libraries so ask your local librarian. It is available at some charities and you could ask them directly or through their “helpline”. If you have access to the internet, abstracts of reviews are available on the world wide web at www.cochrane.org. Finally, check with your Review Group Co-ordinator (RGC) (see above) who might be able to offer advice.

(6) How do people review research systematically?

They:

- state the objectives of the review; what questions are being addressed in the review?
- outline eligibility criteria;  
  - the sort of studies to be included 
  - the kinds of people, interventions, and outcomes the included studies must address  
  - the scientific methods used in the included studies.
- search for studies (published and unpublished) that may meet eligibility criteria; in journals, in databases and by asking people interested in the area.
- list the characteristics of each study identified and assess the quality of its design (as in 2 above).
- decide which studies to include and which to exclude (by applying criteria in 2 above) and justify each decision.
- assemble as high a proportion of the data as possible, if possible with assistance or involvement of authors of individual studies.
- analyse data from eligible studies. Use statistical synthesis of data (meta analysis), if appropriate and possible.
- prepare a structured report of the review, stating aims, describing materials and methods, and reporting results.
(7) What is a consumer?

Consumers are patients, carers, long-term users of services, organizations representing consumers’ interests, members of the public who are the potential recipients of health promotion programmes and groups asking for research because they believe they have been exposed to potentially harmful circumstances, products or services.

The Cochrane Collaboration defines “consumer” as follows:

a Consumer (healthcare consumer) is someone who uses, is affected by, or who is entitled or compelled to use a health related service, and

a Consumer advocate or representative is a consumer who is actively involved with other consumers and able to represent the perspectives and concerns of that broader group of people. A consumer advocate or representative should be linked with other consumers, accountable to them, and should not have a conflict of interest in that role.

(8) Why are consumers’ comments so valuable?

Consumers can make many useful and important contributions to health care research because they tend to highlight aspects of the research that are relevant to them, such as:

- outcomes important to patients,
- the importance of long term outcomes,
- patients’ views about health care,
- taking account of social relationships within healthcare and everyday life, and
- patients’ needs for information and support.

Professionals, on the other hand, tend to focus more on different aspects of the research work, such as the scientific and economic aspects.
(9) About “peer-reviewing”

Peer-reviewing is a critical part of the process to ensure the quality of Cochrane protocols and reviews. The idea of peer-reviewing is that the draft manuscript of a protocol or review is given to some people not directly connected with the work to critique and suggest ways it could be improved.

The editors of the relevant Review Group and the systematic reviewers take these comments into account in developing the final version that will be published *in The Cochrane Database of Systematic Reviews*. The authors, identified as “systematic reviewers” in the previous sentence, may receive a complete copy of reviewers’ comments, or the editors may re-work them in some way. This process has been used by medical journals for a long time, and adding consumers to the people chosen to comment on the draft manuscript brings valuable additional expertise to the process. It is often done in such a way that the reviewers cannot identify the people providing the comments, but this secrecy is gradually being replaced by greater openness.

(10) The Cochrane Consumer Network

The Cochrane Consumer Network is a group of consumers, consumer groups, and others interested in supporting consumer participation within the Cochrane Collaboration. Membership is free of charge, and enables consumers to receive copies of newsletters and other publications, and to participate in the Consumernet and Consumer Discussion List (via E-mail). There are two types of membership - Consumer membership and Supporting membership.

The Cochrane Consumer Network aims to support and enhance consumer involvement in the Collaboration. It is a formal member (‘registered entity’) of the Collaboration, is supported by the Australasian Cochrane Centre, Monash University, Melbourne, Victoria, and is based at the Flinders University, in Adelaide, South Australia.

The Network has members in 47 countries - from Australia to Zimbabwe. The Consumer Network is coordinated by two consumer advocates from Australia (Hilda Bastian – convenor, and Sue Pluck - coordinator).
(11) What to do next

We hope that this document has been a useful introduction to contributing as a consumer peer-reviewer to the work of the Cochrane Collaboration. You may have some further questions and you might like to discuss the work with your Review Group Co-ordinator or with the Cochrane Consumer Network.

If you have decided that you would like to become involved in the work of the Cochrane Collaboration, please contact your Review Group Co-ordinator. If you are unclear who your Review Group Co-ordinator is, the person who helped you obtain these Guidelines might be able to help.

A companion document “Guidelines-2” is also available. It explains how to get started and offers practical advice on peer-reviewing. It can be obtained through your Review Group co-ordinator.

To help us try to improve consumer reviewing, please send us your comments on this document and tell us about your experiences as a consumer reviewer (see last page).

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(11) Your ideas...

We have learnt about consumer peer reviewing from consumers themselves. We would like to learn more. So this space is for your ideas: what you think of this folder, what you think about consumers peer reviewing, and whether you have any advice for us or for other consumers.

Please get in touch to tell us your ideas:

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