22 Overviews of reviews

Lorne A Becker and Andrew D Oxman

Key Points

- Cochrane Overviews of reviews (Overviews) are intended primarily to summarize multiple Cochrane Intervention reviews addressing the effects of two or more potential interventions for a single condition or health problem.
- In the absence of a relevant Cochrane Intervention review, Cochrane Overviews may additionally include systematic reviews published elsewhere.
- Overviews should be conducted in priority areas where a number of Cochrane Intervention reviews exist.
- Overviews have a similar structure to Intervention reviews, but include reviews rather than primary studies.
- Overviews include an 'Overviews of reviews' table designed to reflect the 'Summary of findings' tables in Cochrane Intervention reviews.
- Overviews should be updated when the included reviews are updated.

22.1 Introduction

22.1.1 Definition of Cochrane Overviews of reviews

Cochrane Overviews of reviews (Cochrane Overviews) are Cochrane reviews designed to compile evidence from multiple systematic reviews of interventions into one accessible and usable document. This chapter outlines the rationale for Cochrane Overviews and details the methods that authors and Cochrane Review Groups (CRGs) should follow in completing these reviews.

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22.1.2 Rationale for Cochrane Overviews

Cochrane Overviews are intended primarily to overview multiple Cochrane Intervention reviews addressing the effects of two or more potential interventions for a single condition or health problem. Cochrane Overviews highlight the Cochrane reviews that address these potential interventions and summarize their results for important outcomes.

It is important to note that there are other reasons for undertaking overviews of reviews. Cochrane Overviews of reviews can accommodate some, but not all of these objectives. Table 22.1.a outlines different reasons for overviewing systematic reviews and indicates which of these are suitable for publication as a Cochrane Overview. Before registering or publishing a Cochrane Overview, CRGs should ensure that a planned Overview is suitable for publication.

As can be surmised from Table 22.1.a, a central aim of Cochrane Overviews is to serve as a 'friendly front end' to *The Cochrane Library,* allowing the reader a quick overview (and an exhaustive list) of Cochrane Intervention reviews relevant to a specific decision. The primary audiences envisioned are decision makers (such as a clinicians, policy makers, or informed consumers) who are accessing *The Cochrane Library* for evidence on a specific problem. Once completed, Cochrane Overviews will be published as part of the *Cochrane Database of Systematic Reviews* in a format that allows readers to readily distinguish them from Cochrane Intervention reviews, Diagnostic test accuracy reviews and Methodology reviews.

22.2 Preparing a Cochrane Overview of reviews

22.2.1 Organizational issues

The impetus for initiation of a Cochrane Overview should be an area of priority where a number of Cochrane Intervention reviews exist. The identification of a need for an Overview could come from a team of interested authors, a CRG, or a grouping of CRGs. Fields or Centres might also set priority areas for Cochrane Overviews and attempt to find authors to undertake them. Authors of Cochrane Intervention reviews may take on the role of Overview author if they wish, but are not automatically required to do so. Authors of Overviews should be familiar with the methodology of Cochrane Intervention reviews, ideally having co-authored one.

One CRG will have editorial control over each Overview of reviews; titles and protocols should be submitted in the same way as for Intervention reviews. In most cases, all of the Cochrane reviews to be included in the Overview will be expected to come from a single CRG, and that CRG would have editorial responsibility. If it is anticipated that Cochrane reviews from more than one CRG will be included, for example in Overviews of reviews addressing an intervention used in the management of several conditions, the editorial process would be discussed among the relevant CRGs,

Table 22.1.a Reasons for overviewing reviews and their suitability for publication as a Cochrane Overview

Objective	Selection criteria	Examples of overviews	Suitable for inclusion as a Cochrane Overview of reviews	Comments
To summarize evidence from more than one systematic review of **different interventions** for the same condition or problem.	Cochrane Intervention reviews.	A Cochrane Overview of interventions for nocturnal enuresis (Russell 2006)	Yes.	This is the primary purpose of Cochrane Overviews (and should be referred to as an Overview of Cochrane reviews in the objectives section of the abstract and the text).
	Cochrane Intervention reviews and non-Cochrane systematic reviews.	Some *BMJ Clinical Evidence* chapters and an increasing number of health technology assessment (HTA) reports.	Possibly.	It may sometimes be appropriate to include non-Cochrane systematic reviews as well as Cochrane reviews, for example, if there are important interventions for which good quality systematic reviews have been published and a Cochrane review is not available. However, CRGs are encouraged to focus primarily on Overviews of Cochrane reviews as: • searching for and including non-Cochrane reviews in Overviews entails additional work and challenges • non-Cochrane reviews may not be accessible to users of *The Cochrane Library* • the primary aim of Cochrane Overviews is to summarize Cochrane reviews and to provide a user-friendly front end.

(*Continued*)

Table 22.1.a (*Continued*)

Objective	Selection criteria	Examples of overviews	Suitable for inclusion as a Cochrane Overview of reviews	Comments
To summarize evidence from more than one systematic review of the same intervention for the same condition or problem where **different outcomes** are addressed in different systematic reviews.	Cochrane Intervention reviews.	An overview of Cochrane reviews of hormone replacement therapy (HRT) for menopause where outcomes may include bone density, menopausal symptoms, cardiovascular risk/ events, cognitive function etc.	Occasionally.	As a rule, individual Cochrane reviews should include all outcomes that are important to people making decisions about an intervention. However, occasionally, as with HRT, different outcomes have to a large extent been considered in different systematic reviews.
	Cochrane Intervention reviews and non-Cochrane reviews.	Some *BMJ Clinical Evidence* chapters and some HTA reports.	Rarely.	The considerations for including non-Cochrane systematic reviews are the same as those noted above.
To summarize evidence from more than one systematic review of the same intervention for **different conditions, problems or populations**.	Cochrane Intervention reviews.	An overview of Cochrane reviews of vitamin A for different populations and conditions.	Occasionally.	The same or similar interventions may sometimes be used for different conditions or different studies and reviews may focus on different populations. While an overview of these reviews is unlikely to be of interest to clinicians and patients deciding how best to address a specific problem, an overview may be relevant to policy makers or to addressing questions that cut across the different reviews.

	Cochrane Intervention reviews and non-Cochrane reviews.		Rarely.	The considerations for including non-Cochrane systematic reviews are the same as those noted above.
To summarize evidence about **adverse effects** of an intervention from more than one systematic review of use of the intervention for one or more conditions.	Cochrane Intervention reviews only or Cochrane Intervention reviews and non-Cochrane systematic reviews.	An overview of adverse effects of NSAIDs when used for osteoarthritis or rheumatoid arthritis or menorraghia.	Rarely.	While many Cochrane reviews report on adverse effects, few if any are designed primarily to assess rates of adverse effects. Many important adverse effects occur so rarely that their true prevalence cannot be accurately assessed from results of controlled trials. For these reasons, an overview based solely on Cochrane or other systematic reviews of controlled trials may not give an accurate picture of the adverse effect profile of a specific intervention – unless the systematic reviews it summarizes have been specifically designed to address the rates of adverse effects (see Chapter 14 for further information on the reporting of adverse effects in Cochrane reviews.

(*Continued*)

Table 22.1 (*Continued*)

Objective	Selection criteria	Examples of overviews	Suitable for inclusion as a Cochrane Overview of reviews	Comments
To provide a comprehensive overview of an area, including **studies not included in systematic reviews**.	Systematic reviews and studies not included in systematic reviews.	Some *BMJ Clinical Evidence* chapters, an increasing number of HTA reports or a synoptic review article for a journal.	No.	Including studies that have not previously been included in a systematic review may be appropriate in a number of circumstances, for example when undertaking a HTA report, developing a clinical practice guideline, or for resources such as *BMJ Clinical Evidence*. However, this is beyond the scope of what should be done in a Cochrane Overview. Authors of Cochrane Overviews should note when included reviews are out of date, particularly if new relevant studies have been published, and if there are relevant interventions for which a systematic review has not yet been published. However, they should not undertake an update of a systematic review or a new systematic review within the Overview.

and a decision made about which CRG(s) would take the editorial role, as currently happens for some reviews when more than one CRG is involved.

Authors of an Overview who identify studies not included in existing Cochrane Intervention reviews may consider approaching the relevant CRG to plan a new Cochrane review with a broader scope, to update an existing Cochrane review or to undertake a new Cochrane review for an intervention not already included in an existing review.

22.2.2 Methodological issues

Cochrane Overviews use different methods from Cochrane Intervention reviews; they summarize existing Intervention reviews rather than find and summarize or synthesize original studies. Key differences in methods between Cochrane Intervention reviews and Cochrane Overviews are summarized in Table 22.2.a.

Cochrane Overviews of reviews do not aim to repeat the searches, assessment of eligibility, assessment of risk of bias or meta-analyses from the included Intervention reviews. In addition, they do not typically aim to identify systematically any additional studies or to extract additional outcomes from studies. They do include assessment of limitations of included systematic reviews, and may include meta-analyses across reviews to provide indirect comparisons of the effects of different interventions on a given outcome. This is not to imply that overviews of systematic reviews that undertake a more detailed analysis including critical appraisal, new searches and new analyses are inappropriate, but they are not what is envisaged for Cochrane Overviews.

22.2.3 Updating Cochrane Overviews

Regular updating of Cochrane Overviews is very important and follows the usual process for the updating of Cochrane reviews (see Chapter 3). A Cochrane Overview will require updating whenever any of the included reviews are updated. In many cases, only minor changes to the Cochrane Overview will be required. For example, if no new studies were found in the update of a Cochrane Intervention review, only the information on the date of last update for that review would need to be changed in the Overview. However, whenever an update results in a change to the results and conclusions of an included Intervention review, the Overview will require more extensive revisions.

22.3 Format of a Cochrane Overview

22.3.1 Title and review information (or protocol information)

The title of an Overview should have the form: [Interventions or comparisons] for [health problem] in OR for [types of people, disease or problem and setting if specified].

Table 22.2.a Comparison of methods between Cochrane Intervention reviews and Cochrane Overviews of reviews

	Cochrane Intervention reviews	Cochrane Overviews of reviews	Comments regarding Cochrane Overviews of reviews
Objectives.	To summarize evidence from studies of the effects of interventions.	To summarize evidence from systematic reviews of the effects of interventions.	Appropriate when there are two or more interventions for the same condition or problem presented in separate Cochrane Intervention reviews.
Selection criteria.	Describe inclusion and exclusion criteria for studies.	Describe inclusion and exclusion criteria for reviews.	Primarily only Cochrane Intervention reviews are included. Sometimes Cochrane Intervention reviews and other reviews found in *The Cochrane Library* (*Database of Abstracts of Reviews of Effects* or *Health Technology Assessment Database*) may be included. Occasionally other systematic reviews may be included.
Search.	Comprehensive search for relevant studies.	Typically search for only relevant Cochrane Intervention reviews.	May occasionally search for non-Cochrane systematic reviews.
Data collection.	From included studies.	From included systematic reviews.	If necessary, authors of Overviews may seek additional information from the authors of included systematic reviews or occasionally from the primary studies included in systematic reviews.
Assessment of limitations.	For included studies; i.e. risk of bias.	For included systematic reviews.	Authors of Cochrane Overviews should critically appraise included reviews using explicit criteria. Both general limitations (e.g. whether the review is up to date) and specific limitations should be considered (i.e. if a systematic review has limitations relative to the specific objectives of the Overview).
Quality of evidence.	Across studies for each important outcome.	So far as possible should be based on assessments reported in the included systematic reviews.	It is recommended that each Overview should include an assessment of the quality of evidence for each important outcome. If such an assessment was not done in included systematic reviews, authors of Overviews should try to do it. If it was done in included systematic reviews, authors of Overviews should critically appraise the judgements that were made and try to ensure that these judgements were made consistently across included reviews.

Table 22.2.a (*Continued*)

	Cochrane Intervention reviews	Cochrane Overviews of reviews	Comments regarding Cochrane Overviews of reviews
Analysis.	Syntheses of results across included studies for each important outcome.	Summary of review results; additional analyses may be undertaken for comparisons across reviews, typically indirect comparisons of multiple interventions.	So far as possible authors of Cochrane Overviews should rely on analyses reported in the included reviews. Occasionally data may need to be reanalysed, for example if different populations or subgroups are analysed in different reviews and it is possible to undertake comparable analyses across reviews.

The 'Interventions or comparisons' part of the title can take various formats, depending on the scope of the review. If all potential interventions with systematic review evidence are to be considered, this section should simply read 'Interventions for'. If the Overview is to be restricted to a subset of potential interventions, the title should indicate the subset, for example 'Surgical interventions for '. If two types of intervention are to be compared, the comparator should be included in the title, for example 'Surgical or pharmacological interventions for'.

All other review information is the same as for Intervention reviews, as described in Chapter 4 (Section 4.2).

22.3.2 Abstract

The content under each heading in the abstract should be as follows:

Background: This should be one or two sentences to explain the context or elaborate on the purpose and rationale of the Overview.
Objectives: This should be a precise statement of the primary objective of the Overview, ideally in a single sentence. Where possible the style should be of the form 'To summarize Cochrane reviews that assess the effects of *[interventions or comparisons]* for *[health problem]* for/in *[types of people, disease or problem and setting if specified]*'.
Methods: This section should succinctly address the search strategy used to identify systematic reviews for inclusion in the Overview and the methods used for data collection and analysis. The latter should be restricted to description of the guidelines used for extracting data and assessing data quality and validity and not include details of what data were extracted. The method by which the guidelines were applied should be stated (for example, independent extraction by multiple review authors).
Main results: This section should begin with the total number of systematic reviews included in the Overview, and brief details pertinent to the interpretation of the results

(for example, the quality of the included systematic reviews or a comment on the comparability of the reviews, if appropriate). It should address the primary objective and be restricted to the main qualitative and quantitative results (generally including not more than seven key results). The outcomes included should be selected based on their expected value in helping someone to make a decision about whether or not to use a particular intervention. If relevant, the number of studies and participants contributing to the separate outcomes should be noted, along with the quality of evidence specific to these outcomes. The results should be expressed in narrative as well as quantitatively if the numerical results are not clear or intuitive (such as those from standardized mean differences analyses). The summary statistics in the abstract should be the same as those highlighted in the text of the Overview, and should be presented in a standard way, such as 'risk ratio 2.31 (95% confidence interval 1.13 to 3.45)'. Both absolute and relative effects should be reported, if possible. However, review authors should be cautious about reporting absolute effects when control group risk for an outcome varies across studies or reviews (see Chapter 11, Section 11.5.5). If overall results are not calculated in an included review, a qualitative assessment or a description of the range and pattern of the results can be given. However, 'vote counts' in which the numbers of 'positive' and 'negative' studies (or reviews) are reported should be avoided.

Authors' conclusions: The primary purpose of the Overview should be to present information, rather than to offer advice. The Authors' conclusions should be succinct and drawn directly from the findings of the Overview so that they directly reflect the main results. Authors should be careful not to confuse a lack of evidence with a lack of effect. Assumptions should not be made about practice circumstances, values, preferences, tradeoffs; and the giving of advice or recommendations should generally be avoided. Any important limitations of data and analyses should be noted. Important conclusions about specific implications for research, including systematic reviews, should be included if relevant. Authors should not make general statements that 'more research is needed'.

22.3.3 Plain language summary

The plain language summary (formerly called the 'synopsis') aims to summarize the Overview in a straightforward style that can be understood by consumers of health care: see Chapter 4 (Section 4.4).

22.3.4 Text of a Cochrane Overview

The target audience for a Cochrane Overview is people who make decisions about health care (e.g. clinicians, informed consumers and policy makers) who already have some basic understanding of the underlying disease or problem and wish to discover the extent to which the potential interventions for the problem have been addressed in *The Cochrane Library*. The Overview should provide an overview of the findings of relevant Cochrane reviews, and direct the reader to the individual reviews for additional detail.

The text of a Cochrane Overview contains a number of fixed headings. Subheadings may be added by the author at any point. Certain specific headings are designated as 'recommended'. The content of recommended sections should be included in all Overviews, but the use of the actual subheading is not mandatory and should be avoided if they make individual sections needlessly short. Additional subheadings that may or may not be relevant to a particular review are also provided. In the rest of this section, the relevant category (fixed, recommended, optional) is noted for each of the headings described.

Background

This section should address the already-formed body of knowledge that comprises the context of the Cochrane reviews summarized in the Overview. The background helps set the rationale for the Overview. It should specify the research question(s) being addressed by the Overview, including a clear description of the condition of interest, the interventions, comparisons, and the outcomes considered. Furthermore, it should explain why the questions being asked are important. It should be presented in a fashion that is understandable to the users of the health care under investigation, and should be concise (generally around one page when printed). The background section should contain the following components. Although subheadings are not mandatory, they are recommended.

Description of the condition

The review should begin with a brief description of the condition being addressed and its significance. It may include information about the biology, diagnosis, prognosis and public health importance (including prevalence or incidence).

Description of the interventions

This section should mention all of the interventions currently available for the condition, whether or not the interventions have been evaluated in a Cochrane Intervention review. Where reasonable, grouping interventions will simplify the text (e.g. listing non-steroidal anti-inflammatory drugs rather than providing an exhaustive list of all such drugs by name). The possibility of concurrent use of different interventions (e.g. radiation plus chemotherapy) should be addressed, if applicable. The relative status of the various potential interventions in current clinical practice may be mentioned (if feasible).

How the interventions might work

Systematic reviews gather evidence to assess whether the expected effect of an intervention does indeed occur. This section might describe the theoretical reasoning why the interventions under review might have an impact on potential recipients of health care,

for example, by relating a drug intervention to the biology of the condition. Authors may refer to a body of empirical evidence such as similar interventions having an impact or identical interventions having an impact on other populations. Authors may also refer to a body of literature that justifies the possibility of effectiveness. References to existing literature should not include any discussion of the results of the systematic reviews contained in the Overview or the studies addressed in those reviews; this material should be covered in the Results section.

Why it is important to do this overview

The background helps set the rationale for the Overview, and should explain why the questions being asked are important. It should make clear why this Overview was undertaken, who the target audience is, and what decisions it is intended to help inform.

Objectives

This should begin with a precise statement of the primary aim of the review, including the intervention(s) reviewed and the targeted problem. This might be followed by a series of specific objectives relating to different participant groups, different comparisons of interventions or different outcome measures.

Methods

The Methods section in a protocol should be written in the future tense. The Methods section of the review should describe what was done to obtain the results and conclusions of the current version of the Overview. It should not discuss the methods of the underlying systematic reviews that are being summarized. Comments on the methods of these reviews should be addressed in the section 'Description of included reviews'. The Methods section should have a number of component subsections.

Criteria for considering reviews for inclusion

The Overview research question should guide selection of reviews for inclusion, including a clear description of the participants (condition or health problem), the interventions, comparison groups and outcomes of interest. In general, Overviews should include all Cochrane reviews that address one or more of the interventions available for the condition or health problem that is the topic of the Overview. However, in some cases the authors of the Overview may wish to restrict this focus in some way. For example, Overview authors may wish to restrict their scope to certain types of interventions (e.g. all drug therapies, excluding non-drug therapies). Restrictions would be particularly appropriate if the existing Cochrane reviews address varied clinical populations

(e.g. groups that differ by age, ethnicity, sex, stage of disease or types of co-morbidity). In making decisions to lump or split, it will be helpful to keep in mind the perspective of the decision maker reading the overview and to focus on the information that would be required to make an individual decision. For example, Cochrane Intervention reviews addressing prevention of a given condition should probably not be grouped in a single Overview with Intervention reviews addressing treatment of the same condition – since prevention decisions and treatment decisions are made for different populations. If such considerations are involved in the selection of reviews for inclusion in the Overview, they should be clearly spelled out in this section.

If non-Cochrane systematic reviews are included, this section should specify the criteria that will be used to determine whether non-Cochrane reviews are systematic reviews, and the criteria that will be used to determine which systematic reviews will be included when there are two or more reviews that address the same question.

Search methods for identification of reviews

This should address the methods used in the Overview to find Cochrane reviews or other systematic reviews. The search involved will be much simpler than the search strategies within a Cochrane Intervention review, because the basic search for underlying articles will have already been performed. If only Cochrane reviews are to be included in the overview, the search can be performed within the *Cochrane Database of Systematic Reviews* without the need to search other databases. If systematic reviews from other sources are included, this section should clearly outline the databases searched (e.g. *Database of Abstracts of Reviews of Effects* (Petticrew 1999)) and the search strategies and retrieval methods used.

Data collection and analysis

This section should present a brief description of the methods used in the Overview. The following issues should be addressed:

Selection of reviews

The method used to apply the selection criteria to reviews identified in the search and whether the criteria are applied independently by more than one review author should be stated, along with how any disagreements are resolved.

Data extraction and management

The method used to extract or obtain data from the included reviews (for example, using a data collection form) should be described in this section. Whether data are

extracted independently by more than one author should be stated, along with how any disagreements are resolved. If relevant, methods for processing data in preparation for analysis should be clearly described. Authors should also describe what, if anything, is done to collect data that are missing from the included reviews.

Assessment of methodological quality of included reviews

Two different quality assessments must be addressed by the Overview authors in each Overview: the methodological quality of the reviews summarized in the Overview, and the quality of the evidence in these reviews, as described below.

The methods used in performing both types of assessment should be described in this section. For both assessments it is recommended that more than one review author should apply the criteria independently. This should be stated, along with how any disagreements are resolved. The tools used (e.g. GRADE) should be described or referenced, with an indication of how these assessments are incorporated into the interpretation of the results of the Overview.

Quality of included reviews The methods used to assess the methodological quality of the reviews included in the Overview should be described. There has been limited research on the assessment of quality, or risk of bias, in systematic reviews, and we are unable to recommend a specific instrument for reaching judgements about the quality of included reviews. However, some questionnaires and checklists are available (Oxman 1994, Shea 2006).

Quality of evidence in included reviews Cochrane Intervention reviews that use excellent methods may summarize evidence with important limitations, because of potential biases within and across the included studies, conflicting results across individual studies, sparse evidence or a lack of relevance (directness) to the review question (see Chapter 12, Section 12.2). The methods used in the Overview to determine the quality of the evidence in support of each of the Overview's conclusions should be summarized. Ideally, the information on which to base such assessments should be available in the 'Characteristics of included studies', 'Risk of bias' and 'Summary of findings' tables provided in the included reviews. It is now recommended that assessments of the risk of bias should be reported in a standardized way in Cochrane reviews (see Chapter 8) and that the GRADE approach should be used to assess the quality of evidence across studies for each important outcome for both Cochrane Intervention reviews and Overviews of Cochrane reviews (see Chapter 11, Section 11.5, and Chapter 12, Section 12.2).

Data synthesis

Many Overviews will simply extract data from the underlying systematic reviews and reformat them in tables or figures. However, in some cases Overviews may include indirect comparisons based on formal statistical analyses, especially if there is no

evidence on direct comparisons (Glenny 2005). Statistical methods for undertaking indirect comparisons, and for simultaneous meta-analyses of multiple interventions, are highly relevant to Overviews, and are discussed in Chapter 16 (Section 16.6). Evidence from indirect comparisons may be less reliable than evidence from direct (head to head) comparisons. If no included reviews have investigated direct comparisons, but studies of direct comparisons are known or believed to have been performed, then authors of Overviews should not attempt indirect comparisons. Authors who wish to undertake indirect comparisons or multiple-treatments meta-analyses should seek appropriate statistical and methodological support.

When more qualitative or narrative approaches are used, review authors should state what, if any, methods are used to standardize reporting of results across included reviews, including converting summary statistics and any standardization for different control group risks. Authors should be cautious when comparing absolute effects across reviews if there are differences in control group risks (see Chapter 11, Section 11.5.5).

Results

Description of included reviews

The description of included reviews should be concise, but provide sufficient detail to allow the reader to get an idea of the characteristics of participants included in the summarized reviews: the dose, duration, or other characteristics of the interventions. If there are important differences between these component reviews (e.g. differences in the review criteria for inclusion or exclusion of studies, different comparators, or the use of different outcome measures) these should be clearly noted. In addition, any discrepancies between the objectives and eligibility criteria of the included reviews and the objectives of the Overview should be noted. For example, the review authors may have omitted analyses of a specific subgroup or of a key outcome that was of particular interest to the Overview authors. If some reviews have been updated more recently than others, this should also be noted. Much of the material in this section can be summarized in a 'Characteristics of included reviews' table (see Section 22.3.6 for details).

Methodological quality of included reviews

Quality of included reviews

The general quality of the systematic reviews included in the Overview should be summarized, including any variability across reviews and any important flaws in individual reviews. The criteria that were used to assess review quality should be described or referenced under 'Methods' and not here. If it is felt to be important to provide details on how each included review was rated against each criterion, this should be reported in an Additional table and not described in detail in the text.

Quality of evidence in included reviews

The general quality of the evidence in the included reviews should be summarized, for example using GRADE for the most important outcomes (see also Chapter 13, Section 13.2).

Effect of interventions

The main findings on the effects of the interventions studied in the included reviews should be summarized here. The section should be organized around clinically meaningful categories rather than simply listing the findings of each included review in turn. These categories could include things such as types of interventions (drug treatments, surgical interventions, behavioural interventions, etc); stages of disease (presymptomatic, early disease, advanced disease); participant characteristics (age, sex, ethnicity); or types of outcomes (survival, functional status, adverse effects). Subheadings are encouraged if they make reading easier. The findings of individual reviews, and any statistical summary of these, should be included in summary tables or figures.

Note should be made in this section of any outcomes that the Overview authors consider important but for which the review authors could not find evidence (either because no studies were found or because the studies identified did not report on the important outcome). In addition, this section should include a narrative summary of important results that can not easily be summarized using numerical data, and will not likely be included in the results tables of the Overview.

Authors should avoid making inferences in this section. A common mistake to avoid (both in describing the results and in drawing conclusions) is the confusion of 'no evidence of an effect' with 'evidence of no effect'. When there is inconclusive evidence, it is wrong to claim that the Overview shows that an intervention has 'no effect' or is 'no different' from the control intervention. In this situation it is more appropriate to report the data, with a confidence interval, as being compatible with either a reduction or an increase in the outcome.

Discussion

Summary of main results

Provide a concise summary here of the main findings, the balance between important benefits and important harms and highlight any outstanding uncertainties.

Overall completeness and applicability of evidence

Are the reviews included sufficient to address all of the objectives of the Overview? If not, what gaps are present? Have all relevant types of participants, interventions and outcomes been investigated? Describe the relevance of the evidence to the Overview

question. This should lead to an overall judgement of the external validity of the Overview. Comments on how the results of the Overview fit into the context of current practice might be included here, although authors should bear in mind that current practice might vary internationally and between populations.

Quality of the evidence

Do the reviews included in the Overview allow a robust conclusion regarding the objective(s) addressed in the Overview? The discussion might include whether all relevant studies were identified in the original review, whether all relevant data could be obtained, or whether the methods used (for example, searching, study selection, data collection and analysis) could have introduced bias. This may vary for different interventions, outcomes or clinical subgroups. If so, the discussion should clearly identify the quality of evidence for each of the key areas of interest.

Potential biases in the overview process

State the strengths and limitations of the Overview with regard to preventing bias. These may be factors within, or outside, the control of the Overview authors. The discussion might include whether all relevant reviews were identified and included in the Overview, whether all relevant data could be obtained, or whether the methods used (for example, searching, study selection, data collection and analysis) could have introduced bias.

Agreements and disagreements with other studies or reviews

Comments on how the included reviews fit into the context of other evidence might be included here, stating clearly whether the other evidence was systematically reviewed.

Authors' conclusions

This section should present the conclusions of the authors of the overview, not simply restate the varying conclusions of the authors of the included/underlying reviews. The primary purpose of this section should be to present information rather than to offer advice. Conclusions of the authors are divided into two sections as follows.

Implications for practice

The implications for practice should be as practical and unambiguous as possible. They should not go beyond the evidence that was reviewed and should be justifiable by the data presented in the review. 'No evidence of effect' should not be confused with 'evidence of no effect'.

Implications for research

This section should address the key clinical issues that remain unresolved after review of the evidence presented in the included/underlying reviews. If there are important potential interventions for the condition under consideration that have not been addressed in a Cochrane Intervention review, this gap should be clearly noted in this section. In addition to providing an agenda for future research, this section can be useful to clinical decision makers by clearly indicating the remaining areas of uncertainty.

Acknowledgements

This section should be used to acknowledge any people or organizations that the authors wish to acknowledge, including people who are not listed among the authors: see Chapter 4 (Section 4.5).

Contributions of authors

The contributions of the current co-authors should be described in this section: see Chapter 4 (Section 4.5).

Declarations of interest

Authors should report any present or past affiliations or other involvement in any organization or entity with an interest in the review that might lead to a real or perceived conflict of interest: see Chapter 4 (Section 4.5). Authors must state if they have been involved in a study included in a component review, or in authoring a systematic review included in the Overview.

Differences between protocol and review

It is sometimes necessary to use different methods from those described in the original protocol: see Chapter 4 (Section 4.5).

Published notes

See Chapter 4 (Section 4.5).

22.3.5 Reviews and references

Authors should check all references for accuracy.

22.3.5.1 References to reviews

A 'Reference ID' should be created for each included review, and used throughout the Overview. This would usually comprise the last name of the first author and the year of the most recent citation version for the review (e.g. Efron 2006). Where two or more reviews share the same first author and year, a letter may be added (e.g. Efron 2007a, Efron 2007b). Reviews are organized under two fixed headings as follows.

Included reviews Reviews that specifically meet the eligibility criteria and are included in the overview.

Excluded reviews Reviews (if any) that do not specifically meet the eligibility criteria and are not included in the overview.

22.3.5.2 Other references

Other references cited in the text, including those cited in the background and methods sections, should be listed.

22.3.6 Tables

Several types of tables should be considered for Overviews; all can be created as Additional tables in RevMan.

22.3.6.1 'Characteristics of included reviews' table

Each Overview should contain one or more tables using the format shown in Figure 22.3.a to allow readers to rapidly review the essential features of the Cochrane reviews included in the Overview.

Notes on completing columns

Review The 'Reference ID' for each included review (see Section 22.3.5.1).

Date assessed as up to date This column should list the date on which the included review was last assessed as up to date (see Chapter 3, Section 3.3.2). This date should

Review	Date assessed as up to date	Population	Interventions	Comparison interventions	Outcomes for which data were reported	Review limitations

Figure 22.3.a Template for a 'Characteristics of included reviews' table

be within approximately six months of a search for studies, and the results of this search should have been incorporated into the review.

Population Use this column to note any specific features of the population covered in the Cochrane review, i.e. any restrictions in age, sex, ethnicity, stage of disease, co-morbidity, etc should be noted here.

Interventions List the specific interventions covered within the scope of the review, whether or not studies with data concerning those interventions were identified and included in the Cochrane review.

Comparison interventions List the types of comparison interventions that were used (e.g. placebo, no-treatment or alternative intervention control groups).

Outcomes for which data were reported Include important outcomes for which the review presented data, whether or not the outcomes are included in the summary data presented in the Overview.

Review limitations In this column, provide a brief description of any important limitations of methods used in the Cochrane (or other) review. Do not use this column to summarize the quality of studies identified in the review – that information can be included in the 'Overview of reviews' table (see Section 22.3.6.2).

22.3.6.2 'Overview of reviews' table

Each Overview should contain one or more tables using the format shown in Figure 22.3.b to summarize its results. This format has been designed to reflect (as much as possible) the format of 'Summary of findings' tables: see Chapter 11 (Section 11.5) for additional guidance. If the Overview addresses more than one clinical population (e.g. groups that differ by stage or severity of disease, co-morbidities, or other factors likely to affect the outcomes under study) then separate tables should be used for the different clinical populations. Clearly the exact form may vary with review topics but each table should include both beneficial and harmful outcomes, the frequency or severity of these outcomes in the control groups, estimates of the relative and absolute

Interventions for [Condition] in [Population]							
Outcome	**Intervention and Comparison intervention**	Illustrative comparative risks (95% CI)		**Relative effect (95% CI)**	**Number of participants (studies)**	**Quality of the evidence (GRADE)**	**Comments**
		Assumed risk	Corresponding risk				
		With comparator	**With intervention**				
Outcome #1							
	Intervention/Comparison #1						
	Intervention/Comparison #2						
	Etc…						
Outcome #2							
	Intervention/Comparison #1						
	Intervention/Comparison #2						
	Etc…						
Outcome #3							
	Intervention/Comparison #1						
	Intervention/Comparison #2						
	Etc…						

Figure 22.3.b Template for an 'Overview of reviews' table

effects of the interventions, indications of the risk of bias (which may vary by outcome and comparison), and any comments.

Template for an 'Overview of reviews' table

Figure 22.3.b provides a template for an 'Overview of reviews' table. The intention is to make the format for this table as similar as possible to that used for 'Summary of findings' tables. If the recommended format for 'Summary of findings' tables changes, the recommended format for this table will change as well.

The row headings The rows should be organized by outcome, beginning with the primary outcome of interest. Within each outcome a series of rows should provide the results from the various intervention or comparison pairs for which data are available. Generally, one or more rows for adverse outcomes should be included, even if the included reviews did not report results for these.

Notes on completing columns

1. Outcomes The main beneficial and harmful outcomes should be listed (those most relevant to participants, preferably determined prior to completing the results of the Overview to avoid the potential of selection of reported outcomes based on significance and not clinical importance). The number of outcomes should not exceed seven. Important outcomes for which no data are available may be listed in the table as well.

If there are multiple interventions being compared, the table should be primarily organized by outcome, with rows included in each outcome subsection that present data comparing the results of two interventions regarding that outcome.

2. Assumed risk (With comparator) Representative comparator group risks should be provided for each row. These might be obtained from control group risks as reported in the included Cochrane reviews. If there is important variation in control group risks, two or three representative rates should be included for each row of the table – representing a low risk, moderate risk and high risk population. Whenever possible, indicate the types of participants to which a given control group risk may apply in this column, in the comments column or in a footnote.

3. Corresponding risk (With intervention) This column is intended to show the expected absolute risk upon intervention at the one, two or three assumed comparator risks cited in the previous column. The numbers can be calculated by applying the relative effect to each assumed risk for the same row (see Chapter 11, Section 11.5.4).

4. Relative effect For dichotomous outcomes, the risk ratio or odds ratio should generally be used. So far as possible the summary statistic that is used should be standardized across included reviews even if different reviews used different summary statistics in their analyses. The 95% confidence interval should be included to provide a measure of uncertainty. This may be calculated using either a fixed or random-effects model; however, the same model should be used for all results relative to a given outcome.

5. Number of participants and studies In many cases, the number of studies and participants for whom data are available for a specific outcome and treatment comparison will be less than the total number of studies and participants reported in the Cochrane review from which the data are extracted (because the Cochrane review may include studies that did not report on a specific outcome or a specific comparison). If so, the number of studies and participants reported in this column should reflect only the subset providing data for the comparison and outcome of interest.

6. Quality Comment on the quality of the evidence for each row of the table (note that, because different rows may contain data extracted from different Cochrane reviews or from different studies within an individual Cochrane review, the quality of evidence may vary from row to row). Use of the specific evidence grading system developed by

the GRADE group (GRADE Working Group 2004) is recommended and is incorporated in the software available to authors of Cochrane reviews for preparing 'Summary of findings' tables. The system and methods employed to grade quality of evidence should be described in the Methods section of the Overview.

7. Comments The aim of this field is to provide additional comments to help interpret the information or data identified in the row. For example this may be on the validity of the outcome measure or effect modification. Important caveats about the results should be flagged here. Not all rows will need comments, so it is best to leave a blank if there is nothing of importance to comment on.

Continuous Outcome Measures Continuous outcome measures can be shown in the Overview table, but should be clinically meaningful. This requires that the units are clear and that these units are readily interpretable, for example days of pain or frequency of headache are readily interpretable. However, many scales are not readily interpretable by non-specialist clinicians or patients, for example points on a Beck Depression Inventory or quality-of-life score. For these, a more meaningful presentation might be to express results in terms of risks (e.g. of a 50% improvement) where possible, as discussed in Chapter 12 (Section 12.6).

The labelling of the outcomes should also be kept simple. For example, 'ability to perform everyday functions' would be preferred to 'functional status'. If specific details of outcome definitions are required, these might be added as footnotes.

Heterogeneity A detailed discussion of heterogeneity generally should not be part of the summary table. However, if either (i) heterogeneity made important changes to the clinical or statistical significance; or (ii) there were important effect modifiers, then these should be reported in the Comments column. Occasionally an important effect modification may require a separate row or separate table to describe, for instance, difference in effect of endarterectomy for different grades of stenosis.

22.3.6.3 Other tables

Other tables may be used for information that cannot be conveniently placed in the text, in 'Characteristics of included reviews' tables or in 'Overview of reviews' tables. Examples include the following:

- Information to support the background.
- Details of search methods.
- Details of quality assessments of included reviews.
- 'Summary of findings' tables for included reviews prepared by the authors of the Overview and not found in the included reviews.

22.3.7 Figures

The addition of one or two (at most) figures may help readers of an Overview better appreciate differences in effectiveness of the interventions being compared in the review. The preferred format for Overview figures is the 'forest top plot' where each row in the figure represents the results (summary effect and 95% confidence interval) of a meta-analysis comparing two interventions. Each figure should address a single outcome, but may include several pair-wise comparisons of interventions. Direct comparisons, calculated indirect comparisons, and calculated combinations of direct and indirect comparisons may be included in the same figure, but must be clearly labelled. The text should provide information about the methods used in such calculations. An example of a forest top plot using data from the overview on enuresis (Russell 2006) is included in Figure 22.3.c.

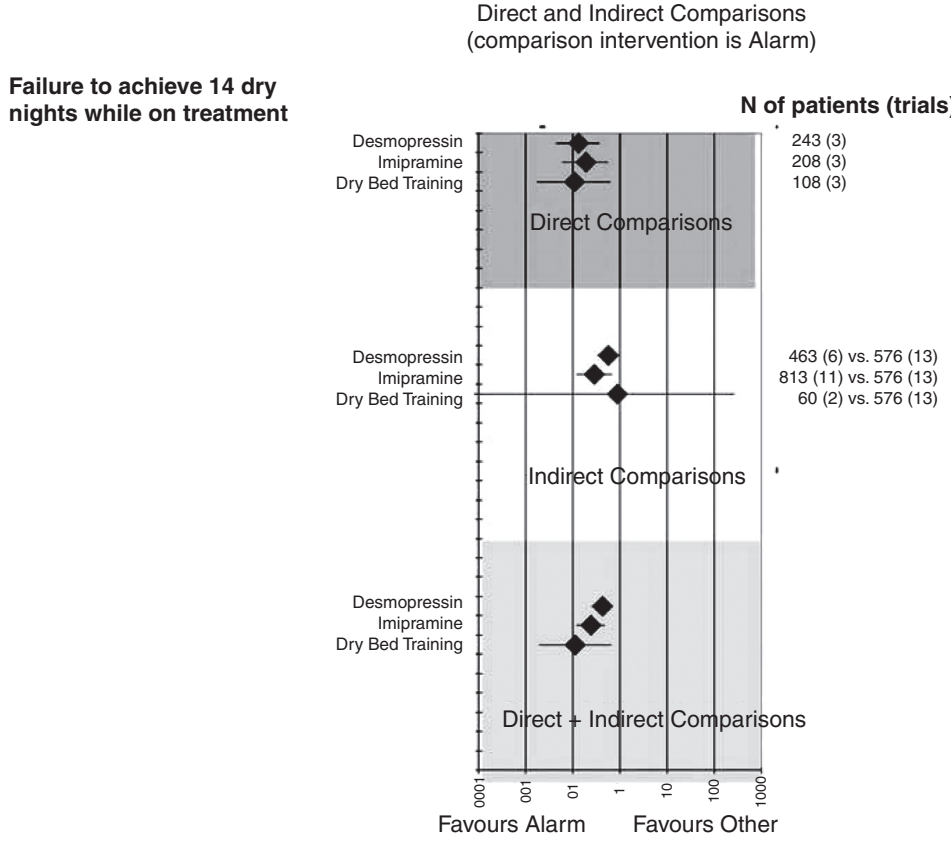

Figure 22.3.c Example of a 'forest top plot' comparing interventions for enuresis in children. This example was prepared using Microsoft Excel

22.4 Chapter information

Authors: Lorne A Becker and Andrew D Oxman.

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22.5 References

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