

# Chapter 3: Maintaining reviews: updates, amendments and feedback

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Authors: Julian PT Higgins, Sally Green and Rob JPM Scholten.

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## Key points

- Systematic reviews that are not maintained may become out of date or misleading.
- The Cochrane Collaboration policy is that Cochrane Intervention reviews should either be updated within two years or include a commentary to explain why this is not the case.
- Any change to a Cochrane review is either an update or an amendment. Updates involve a search for new studies, any other change is an amendment.
- Cochrane reviews have a citation version. This chapter includes a list of criteria for determining when a new citation version is appropriate.
- In addition to a search for new studies, updating a Cochrane review may involve revision of the review question and incorporation of new methods.
- Feedback on Cochrane reviews informs the updating and maintaining process.
- The ‘Date review assessed as up to date’ is entered by review authors and is published at the beginning of a review. The criteria for assessing a review as up to date are given in this chapter.

## 3.1 Introduction

### 3.1.1 Why maintain a review?

The main aim of a Cochrane review is to provide the ‘best available’ and most up-to-date evidence on the effects of interventions for use by consumers, clinicians and policy makers to inform healthcare decisions. Since evidence on a given subject is generally dynamic and continually evolving, incorporating additional studies as they become available can change the results of a systematic review (Chalmers 1994). Therefore, systematic reviews that are not maintained run the risk of becoming out of date and even misleading. An important feature of Cochrane reviews is that review authors are

committed not only to preparing systematic reviews of evidence, but also to maintaining (and updating) these reviews on a regular basis.

### 3.1.2 How frequently should a review be revisited?

To date, there is little empirical evidence available to allow informed decisions about what is a reasonable and efficient approach to revisiting evidence in Cochrane reviews, although some guidelines do exist (Moher 2007, Shojania 2007a, Shojania 2007b). The Cochrane Collaboration policy is that reviews should either be updated within two years or include a commentary to explain why this is not the case. We define the term ‘update’ in Section 3.2.2. The two-year period starts from the date on which the review was assessed as being up to date (see Section 3.3.2).

In addition to the potential availability of new evidence, other developments may result in the need to revise a review. For example, within the clinical field, better tools or markers for characterizing sub-groups may have been developed, new treatment regimens may be available, or new outcome measures (or refined measurement methods of existing outcomes) may be in use. Furthermore, advances in the methods for conducting a Cochrane review may produce the need to revisit a review.

While conducting a review, authors may be able to judge if relevant research is being published frequently, and therefore may be able to predict and suggest the need for more frequent updating of the review. Alternatively, in some topic areas new data emerge slowly or are unlikely to emerge, and a review prepared many years earlier is still current and valuable. In these cases updating a review every two years may be unnecessary and wasteful (Chapman 2002). Review authors are advised to discuss with their Cochrane Review Group (CRG) if it is felt that their review does not need to be updated at least every two years. The reason why the review is not being updated in line with the Collaboration policy should be stated in the ‘Published notes’ section of the review.

## 3.2 Some important definitions

### 3.2.1 Introduction

Here we introduce and explain some important definitions used by The Cochrane Collaboration relevant to maintaining reviews, and their application to the publication of reviews. Section 3.3 deals specifically with the definitions and use of dates in describing events associated with the review. While much of this detailed information is technical, authors will need an understanding of these issues to ensure correct use of terms and dates in their review, and when completing the relevant fields in RevMan.

### 3.2.2 Updates and amendments:

Any change to a Cochrane review is either an **update** or an **amendment**.

An **update** *must* involve a search for new studies. If any new studies are found, these must be added to the relevant section of the review as included, excluded or ongoing studies (or ‘Studies awaiting classification’ if all reasonable efforts to classify it one of these ways have failed) before labelling the revised review as an update (see Section 3.2.5.1).

Any other change to a Cochrane review, and any change to a protocol, is an **amendment**, which could involve a little or a lot of work. These terms, and when to apply them, are described in more detail in Section 3.2.4.

### 3.2.3 Citation versions of Cochrane reviews and protocols

Each publication of a Cochrane review or protocol has a current **citation version**. For *reviews*, citation versions are considered to be major new publications and result in entries in reference databases such as MEDLINE and Science Citation Index (SCI). *Protocols* do not have citations in MEDLINE or SCI. Events triggering the creation of a citation version are listed in [Box 3.2.a](#).

Some reviews undergo important changes (updates or amendments) that warrant new citations in the *Cochrane Database of Systematic Reviews (CDSR)* and new MEDLINE and SCI records (e.g. changes to conclusions, authors or correcting serious errors). We call these **new citation versions**. In addition, some new citation versions warrant additional highlighting in the *CDSR* (e.g. using a flag) – in particular, those that change their conclusions such that they should be read again. We refer to this special subset of new citation versions as reviews with **conclusions changed**. As all updated reviews are very important, even if they do not meet the criteria for a new citation version, all updated reviews should be highlighted as updated reviews in the *CDSR* (e.g. using a ‘New search’ flag).

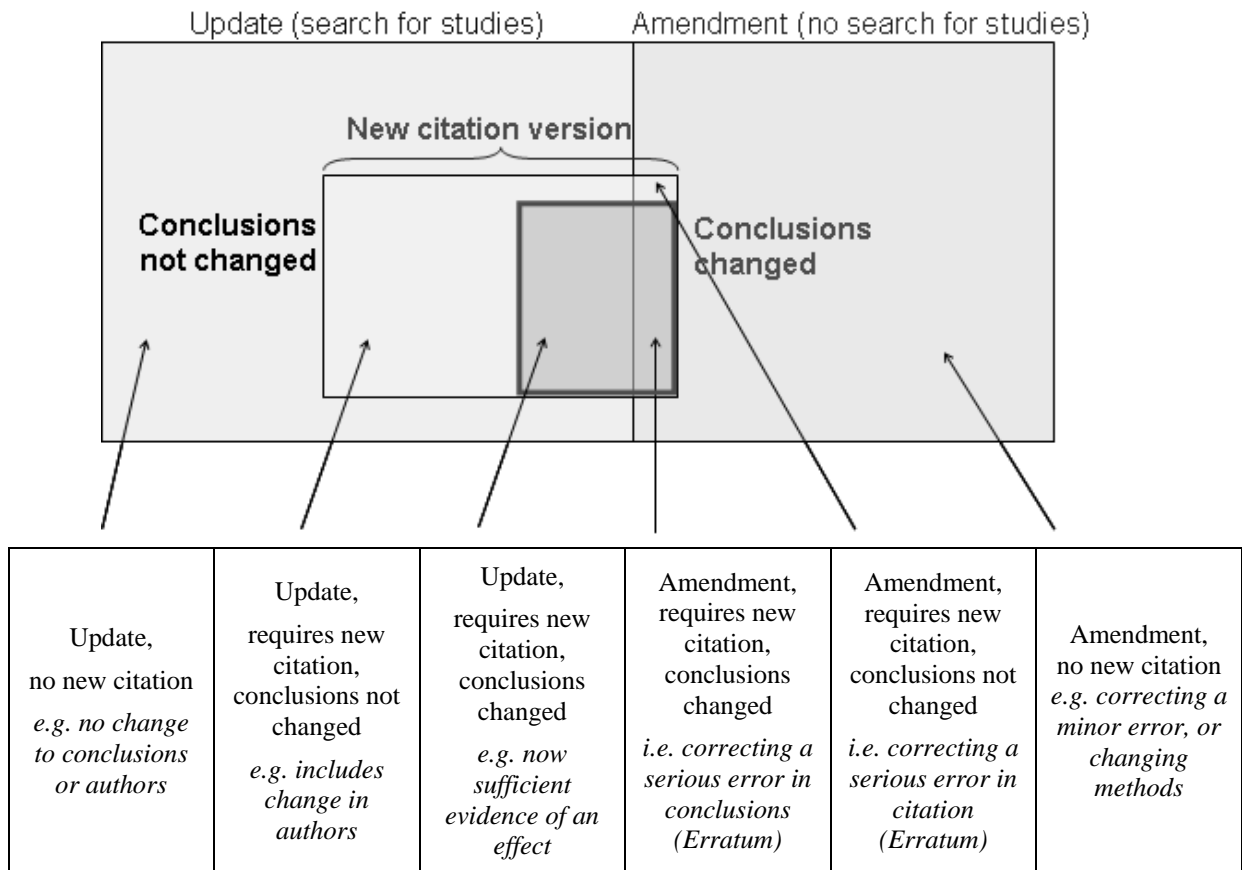
Protocols that undergo important changes (e.g. to authors or eligibility criteria) warrant a **new citation version**. Protocols are not listed in databases such as MEDLINE and SCI, so this affects only the citation quoted within *CDSR*. Protocols that change in such a way that they should be re-read by interested users warrant highlighting in the *CDSR* (e.g. using a flag). We call these protocols with a **major change**.

[Figure 3.2.a](#) summarizes these various types of changes to a Cochrane review, and [Figure 3.2.a](#) the types of changes to a Cochrane protocol.

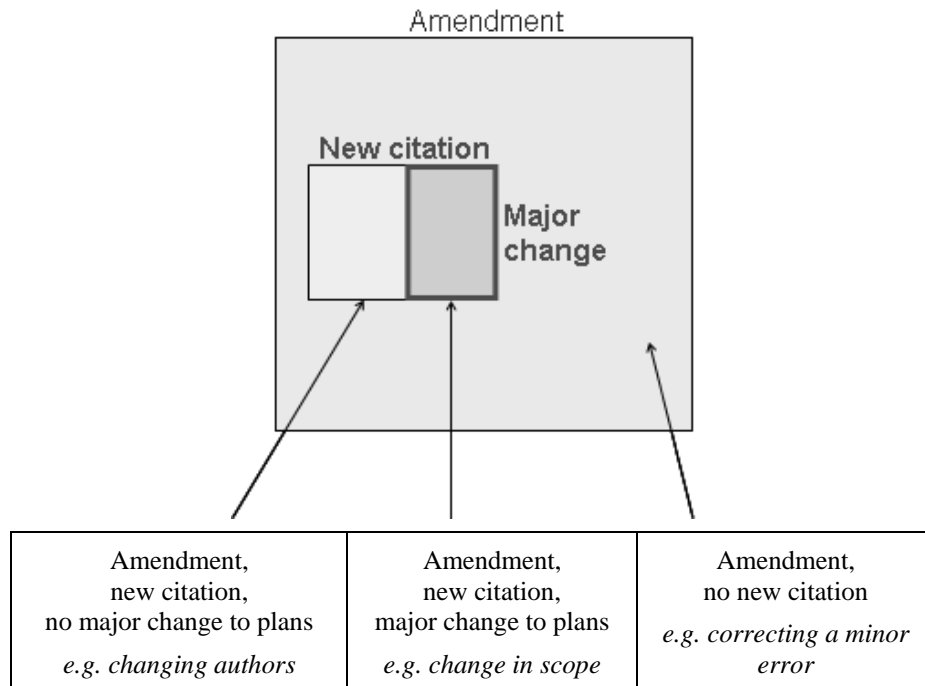
#### **Box 3.2.a: Events leading to the creation of a citation version of a Cochrane protocol or review**

1. A protocol is first published;
2. A protocol is re-published after declaring it to be a new citation version;
3. A review is first published (i.e. on conversion from a protocol to a review);
4. A review is re-published (amended or updated) after declaring it to be a new citation version;
5. A review is re-published after it has been withdrawn; or a review is created by splitting an existing protocol or review; or a review is created by merging existing protocols or reviews.

**Figure 3.2.a: Summary of changes to Cochrane reviews**



**Figure 3.2.b: Summary of changes to Cochrane protocols**



## 3.2.4 Application of terms to Cochrane protocols

### 3.2.4.1 Amendments to protocols

Any modification or edit (including withdrawal) of a published protocol gives the protocol the status of amended. It is not possible to ‘update’ a protocol. Amended protocols are re-published on the *CDSR*. A protocol may receive an amendment at any time. An amendment can involve much or little work, and result in big or small changes to the document.

### 3.2.4.2 New citation versions of protocols

An amended protocol may, at the discretion of the CRG, be published as a new citation version using the criteria in [Box 3.2.b](#). This changes the formal citation of the document within *CDSR*, although citations for protocols are not included in MEDLINE or SCI.

New citation versions of protocols are further classified as having a major change or not. A protocol with a major change will be highlighted on *CDSR*.

#### Box 3.2.b: Criteria for a new citation version of a Cochrane protocol

##### Criteria for a new citation version of a protocol: Major change

A protocol should be classified as a new citation version with major change if there has been an important change to the objectives or scope of the proposed review, usually through a change to the criteria for including studies. Such protocols will be highlighted as ‘Major change’ in the *CDSR* upon next publication.

##### Criteria for a new citation version of a protocol: No major change

A protocol should be classified as a new citation version with no major change if there has been an important change to the review team. Such protocols will not be highlighted in the *CDSR*.

### 3.2.4.3 Examples of changes to protocols that do not indicate a new citation version

The following amendments should not typically lead to a protocol being classed as a new citation version, unless the protocol also fulfils one or both of the two criteria in [Box 3.2.b](#). Such changes will result in an amendment to the published protocol, but the existing citation will be maintained.

- Changes to the text of the protocol (e.g. the Background section).
- Changes in planned methodology.
- Changes to the order of existing authors (other than a change in the first author), or deletion of authors.
- Corrections.

## 3.2.5 Application of terms to Cochrane reviews

### 3.2.5.1 Updates of reviews

An update to a Cochrane review is defined as any modification to the published document that includes the findings (including that of no new studies) from a more recent search for additional included studies than the previous published review. The review is said to have been updated. Update reviews are highlighted as ‘New search’ in the *CDSR*. Any newly identified studies must be incorporated into the updated review (and not left among ‘Studies awaiting classification’ unless all

reasonable efforts have been made to classify it as Included, Excluded or Ongoing). A review is still considered to be updated if a new and thorough search did not identify any additional studies.

This definition draws on a definition for an update of a systematic review as “a discrete event with the aim to search for and identify new evidence to incorporate into a previously completed systematic review” (Moher 2006). An update to a Cochrane review may involve much or little work, depending on the search results, and should in principle be undertaken at least every two years (see Section 3.1.2).

### 3.2.5.2 Amendments to reviews

An amendment to a Cochrane review is any modification or edit (including withdrawal) that does not include an update. The review is then said to have been amended. Examples of amendments include any or all of the following in the absence of a new search for studies: (i) a change in methodology; (ii) the correction of a spelling error; (iii) the re-writing of a Background section; (iv) the full inclusion of a study that was previously ‘awaiting classification’; or (v) the changing of conclusions on discovery of a major coding error. A Cochrane review may receive an amendment at any time. An amendment can involve much or little work, and result in big or small changes to the review.

### 3.2.5.3 New citation versions of reviews

A Cochrane review may be re-published as a new citation version. Only an update or an amendment can be given this status. Authors and CRGs jointly decide whether a review should be classified as a new citation version. There are six explicit criteria for classifying a review as a new citation version, and these are described in Box 3.2.c. With three specific exceptions (essential corrections to conclusions, urgent incorporation of new information and essential changes to the citation of the review), only updated reviews are eligible to be new citation versions.

New citation versions are further classified as ‘conclusions changed’ or ‘conclusions not changed’. Reviews marked as ‘conclusions changed’ are highlighted in the *CDSR*.

Reviews may be updated or amended between publications of new citation versions, and these updated or amended reviews will be published in the *CDSR* without triggering a new citation. Thus it is critical that the extent to which a review is up to date is reflected in the ‘Date review assessed as being up to date’ field within the review (see Section 3.3.2).

#### Box 3.2.c: Criteria for a new citation version of a Cochrane review

##### Criteria for a new citation version of a review: Conclusions changed

##### 1. Change in conclusions on an update

A review must be classified as a new citation version with conclusions changed if the Authors’ Conclusions change during an update to the extent that users of the review are recommended to re-read the review.

These conclusions may change as a result of adding (or removing) studies, changes in methodology, or important changes to the scope of the review (for example, new outcomes, comparisons, types of participants or developments in the intervention or its delivery). Changes in conclusions will almost invariably apply to implications for practice regarding the effects of the studied intervention(s). However, sometimes there will be an important change to the implications for research (for example, if newly included data have resolved

uncertainties that were highlighted as needing further research in the previous version of the review). All important changes to conclusions in a 'conclusions changed' review must warrant reporting (and be reported) in the abstract of the review.

## 2. Change in conclusions on correction of a serious error (Erratum)

A review must be classified as a new citation version with conclusions changed if the Authors' Conclusions change upon correction of a serious error to the extent that users of the review are recommended to re-read the review. Such changes are the sort that would warrant a published erratum in a traditional paper journal.

## 3. Change in conclusions on urgent incorporation of new information about the effects of an intervention

A review must be classified as a new citation version with conclusions changed if the Authors' Conclusions change upon urgent incorporation of new information on the effects of an intervention to the extent that users of the review are recommended to re-read the review.

### **Criteria for a new citation version of a review: Conclusions not changed**

#### 4. New authorship

An updated review may be considered to be a new citation version with conclusions not changed, at the joint discretion of the CRG and the authors, if a substantial amount of new information has been added, or if there have been important changes to the methodology, or if the review has undergone extensive replication or re-writing (not affecting the conclusions),

AND there has been an important change to the list of authors for citation (including a change in the first author, but usually not including re-ordering of other authors or deletion of authors), and all authors meet criteria for authorship as outlined in Chapter 4, Section 4.2.2.

The commitment that Cochrane review authors make to maintain their review may require extensive work to update a review, and this may not change the conclusions. Substantial amounts of work by the same review team should not lead to a new citation version if the conclusions do not change (as the review team already has the citation). However, when the review team changes through addition or replacement of authors, the review may be declared to be a new citation version to give appropriate credit to the new authors.

#### 5. Accumulation of changes

An updated review may be considered to be a new citation version with conclusions not changed, at the joint discretion of the CRG and the authors, if the citation version dates from more than five years ago AND the review now looks substantially different from the citation version, irrespective of any changes to the conclusions or authors. A review may look different, for example, due to rewriting, the addition of numerous studies, or due to a substantial modification of the methodology, which has accumulated over time.

Note that every review should include a date on which it was last assessed as being up to date. Therefore this criterion for declaring a review to be a new citation version should be used only for triggering a new citation for the review in reference databases such as MEDLINE and SCI, and not for determining the date on which events or changes occurred.

#### 6. Correction of serious error in citation (Erratum)

A review may be classified as a new citation version with conclusions not changed if a serious error in the citation record needs to be corrected. Such changes (e.g. to spelling of an author's name) are the sort that would warrant a published erratum in a traditional paper journal. An update is not necessary for an erratum. Critical errors that affect conclusions are covered under criterion 2 above.

#### 3.2.5.4 Examples of changes to reviews that do not indicate a new citation version

The following changes should not typically lead to a review being classed as a new citation version unless the review also fulfils one or more of the six criteria in [Box 3.2.c](#). Such changes will result in either an update or an amendment to the review, but the existing citation will be maintained.

- Addition of new studies.
- Changes in results of analyses (e.g. in effect estimates or confidence intervals), without a change of conclusions.
- Changes to the text of the review (e.g. the Background or Discussion sections).
- Changes in methodology.
- Changes to the order of existing authors (other than a change in the first author), or deletion of authors.
- Corrections.

### 3.3 Important dates associated with Cochrane reviews

#### 3.3.1 Introduction

There are several dates associated with a Cochrane review. Some of these are automatically generated by RevMan, and some need to be entered by the review author. These dates are important both to inform readers of the review and to facilitate management of review publication. It is essential that authors apply these definitions when entering dates into relevant fields during an update or amendment to a review.

#### 3.3.2 Date review assessed as up to date

Entered by review authors (reviews only, not protocols). On publication, this date is reproduced in a prominent place in the review to inform readers of how recently the review has been assessed as up to date. The criteria for assessing a review as up to date are listed in [Box 3.3.a](#).

A review might be considered to be up to date even if it has received only minimal edits for many years, for example if a recent search for studies identifies no new evidence since the review was published. All reviews submitted for publication must include a date on which the review was last assessed as being up to date. The date should be entered by the authors, and will often coincide with the date on which the authors submit the review for consideration to be published in the *CDSR*. It may be appropriate to amend the date on approval of the review for publication.

#### Box 3.3.a: Guidance for declaring a review as being up to date

The date a review is assessed as being up to date must be chosen so that the review (new, updated or amended) meets the following key criterion:

1. The evidence is up to date on the effects of the intervention(s)

The list of included studies should include all available evidence, and should result from a most recent search typically being within six months of the date on which the review is assessed as being up to date.

In addition, it is highly desirable, but not mandatory, that:

2. The methods of the review are up to date

All mandatory methods for Cochrane reviews (as described in the current version of the Cochrane Handbook for Systematic Reviews of Interventions) should be incorporated.

3. Factual statements are correct

Factual statements, for example, in the Background and Discussion, should not be unreasonably out-dated.

### 3.3.3 Date of search

This date is entered by review authors (for reviews only, not protocols). ‘Search’ here refers to the searches of all the databases searched for the review. If different databases were searched on different dates, the most recent date of the search for each database should be given within the text of the review and the earliest of the dates should be put in this field. For example, if the most recent searches of the following databases were on the following dates (MEDLINE 5 June 2007, EMBASE 12 June 2007, CRG’s Specialized Register 26 June 2007 and CENTRAL 28 June 2007) the ‘Date of search’ would be 5 June 2007.

### 3.3.4 Date next stage expected

Entered by review authors as:

- for protocols: the date on which the full review is expected; and
- for reviews: the date on which the next update is expected.

### 3.3.5 Date of last edit

This is recorded automatically in RevMan, based on any modification to the review, and will not be published. It will be used to determine the date on which the current published review first appeared exactly as it is.

### 3.3.6 Date declared review no longer needs to be updated

This date applies to very few reviews and should be employed with caution and in consultation with the Cochrane Review Group (CRG). A review that is no longer being updated is one that is highly likely to maintain its current relevance for the foreseeable future (measured in years rather than months). Such reviews are the exception rather than the rule, and the decision to stop updating a review should be negotiated with the CRG, and reviewed periodically. Situations in which a review may be declared to be no longer updated include:

- the intervention is superseded (bearing in mind that Cochrane reviews should be internationally relevant); and
- the conclusion is so certain that the addition of new information will not change it, and there are no foreseeable adverse effects of the intervention.

The review remains ‘no longer updated’ as long as the most recent ‘What’s new’ entry is a declaration of a ‘no longer updated’ review. If a subsequent ‘What’s new’ entry is added, the review is considered to be in line for updating as for other Cochrane reviews.

## **3.4 Considerations when updating a Cochrane review**

### **3.4.1 Where to start**

Few methodological studies have been conducted to inform decisions about how and when to update systematic reviews (Moher 2008), however this is a rapidly evolving area and the guidance contained in this chapter will be regularly updated in line with new knowledge from methodological research. An update to a Cochrane review should usually occur every two years and must involve a search for new studies. If new studies are identified, they must be assessed for inclusion and, if eligible, incorporated into the review. While preparing an update to a review, additional issues may be considered, for example:

1. any need for a change in research question and selection criteria of the review: e.g. addition of a new outcome or comparison, adding a newly specified subgroup analysis following improved methods for categorizing the condition; and
2. change to methodology: e.g. inclusion of ‘Risk of bias’ assessment of currently-included studies (Chapter 8) or the addition of a ‘Summary of findings’ table (Chapter 11).

### **3.4.2 Updating a review with an unchanged review question**

#### **3.4.2.1 Re-executing the search**

When there are no changes to the review question and selection criteria, searching for new studies is the first, and defining, step of the updating process. For CRGs with sufficient resources, the periodic identification of potentially relevant studies and forwarding of citations to review authors is an ongoing function of the editorial team (usually the role of the Trials Search Co-ordinator). In other instances, review authors will need to execute the search themselves. At a minimum, strategies to identify new studies for a review update should include re-executing the search strategy, forward from the ‘Date of search’ of the last update (see Chapter 6, Section 6.4.12).

Where there have been advances in search methods or the authors believe the search strategy from the original review could be improved, the new search will need to be executed for the period from the date of last search, and the additional or modified search terms applied to the search period covered in the original review.

#### **3.4.2.2 Updating reviews when no new studies are found**

When no new studies meeting the selection criteria are found, the review update will simply require that this finding be recorded in the relevant sections of the review. Revision of the text of the review may be required in the following sections:

1. Search methods (to ensure the appropriate ‘Date of search’ is recorded);
2. Description of studies in the Results section (to revise numbers of identified, screened and excluded studies if relevant);
3. Results (to ensure any dates are appropriate);
4. Authors’ conclusions (particularly if there is an ongoing need for further research);
5. Abstract and Plain language summary.

In addition to revision of the text of the review, authors will need to ensure that the relevant date fields are correct and reflect the updated status of the review (see Section 3.3), and the ‘What’s new’ table completed (see Section 3.5).

In order to alert readers of the review to the fact that they are reading an updated version, a sentence can be added to the Background section of the Abstract stating that this is an update of a Cochrane review (with the earlier version cited) and including the year the review was originally published and the dates of any previous updates. In the Background section of the review itself, this sentence can be expanded to include discussion of the findings of the original review.

Finally, it is important to check that nothing else in the review is out of date (e.g. references to other Cochrane reviews which may have been updated, information about prevalence or incidence of the condition of interest, statements like ‘recently, in 1998, it was shown that ...’, ‘next year, in 2002, there will be ...’). If there are changes or additions to the Acknowledgements and ‘Declarations of interest’ sections of the review these should be revised.

### **3.4.2.3 Updating reviews when new studies are found**

If new, potentially relevant, studies are found, they need to be assessed for inclusion in the review using the same process (and study selection form) as the original review (for information about study selection, see Chapter 5).

If new studies are to be included in the updated review, citations should be entered into RevMan, data collected (see Chapter 7), and risk of bias assessed (see Chapter 8). Data collected from the newly identified and included studies should be entered into RevMan and, if sensible, a (new) meta-analysis performed (Chapter 9). Where possible the methods employed in the review update should mimic those of the original review, unless explicitly altered (for example through developments in systematic review methods such as use of ‘Risk of bias’ tables or inclusion of ‘Summary of findings’ tables). In cases where methods differ from those of the original review, these differences and their justification should be documented in the ‘Differences between review and protocol’ section of the review.

The amount of revision required to the text of an updated review including new studies will depend on the influence of the new data on the results of the review. Examples range from the addition of small studies bringing about no change in the results or conclusions of the review (and so requiring very little revision of the text beyond that described in Section 3.4.2.2) through to increased certainty of pre-existing results and conclusions (requiring some modification of the text) and, in some cases, a change in the conclusion of a review (with the subsequent need for a major rewrite of the Results, Discussion, Conclusion, ‘Summary of findings’ table, Abstract and Plain language summary). In addition, the statements in the Abstract and Background sections of the review alerting readers to the fact that this is an update of an earlier review (see Section 3.4.2.2) should be included.

Authors will need to ensure that the relevant date fields are correct and reflect the updated status of the review (see Section 3.3.2), and the ‘What’s new’ table is completed (see Section 3.5). Finally, authors should check that nothing else in the review is out of date (e.g. references to other Cochrane reviews which may have been updated, information about prevalence or incidence of the condition of interest, statements like “recently, in 1998, it was shown that ...”, “next year, in 2002, there will be ...”). If there are changes or additions to the Acknowledgements and ‘Declarations of interest’ sections of the review these should be revised.

### **3.4.3 Revising review questions and selection criteria**

There may be occasions when, in addition to re-executing the search, an update to a review also involves a change to the review question, the study selection criteria, or both. For example, evolving technology may lead to the inclusion of a new comparison; or a category of patients (e.g. children in

addition to adults) or an important outcome (e.g. adverse effects) may not have been adequately addressed in the original review. If this is the case, the proposed changes and additions to the original protocol should be documented and justified in the 'Differences between protocol and review' section, explained in the text of the review (Background, Objectives and Methods sections) and highlighted in the 'What's new' table.

In addition, the search methods may need to be altered and re-executed to cover not only the period since the 'Date of search' of the previous version of the review, but also the period covered by the original review with the addition of new search terms relevant to any additional selection criteria. In some cases it may be sufficient to go back to the original search results and apply the updated selection criteria for inclusion of studies.

If a new comparison or a new outcome has been added to the review, it will be necessary to go back to the original included studies and check that they did not include any information relevant to this new outcome or comparison. The original data collection forms may need to be altered or extended, and piloted again, and new comparisons or outcomes may have to be added to the analyses.

Finally, the addition of new comparisons, populations or outcomes will result in the need for alteration of the text of the review (Background, Methods) and, if additional studies are identified and included, also to the Results, Conclusions, Plain language summary and 'Summary of findings' table.

#### **3.4.4 Splitting reviews**

In some instances, a review may become too large and it may be desirable to split the review into two or more new reviews. Splitting reviews into more narrowly defined review topics, with potentially fewer studies, may ease updating and allow for sharing of the updating burden between several review teams.

Splitting a review implies creating at least one new citation version of a review, and the formal link with previous versions of the review may be lost. Splitting a review sometimes involves withdrawing the original review. A decision to split a review should not be made lightly and always in consultation with the CRG's editorial board.

Cochrane Overviews of reviews (see Chapter 22) may facilitate the splitting of reviews, with the possibility of several more narrowly defined reviews (for example of single interventions for a particular condition) being combined in an Overview of all interventions for that particular healthcare condition.

#### **3.4.5 Amending the methodology of a review**

In addition to searching for new studies and revising the review question or study selection criteria, maintenance of a review may include amendment of the methodology of the review (Shea 2006). Methodological advances in systematic review conduct since publication of the original review may result in a need to revise or extend the methods of a review during an update. Review authors may decide to include a new analysis strategy in their updated review (for example, using statistical methods not previously available in RevMan). The introduction of 'Risk of bias' (Chapter 8) and 'Summary of findings' (Chapter 11) tables with RevMan 5, while not mandatory, provides the opportunity for reviews to be updated to include these new methods. Where a 'Risk of bias' table is to be added to a review, authors should decide whether to revisit the critical appraisal of studies included in previous versions of the review, updating all assessments of risk of bias, or whether to apply these new methods only to studies added in the update. In the published version of the review, a 'Risk of

bias' table should be generated including only those studies where data are entered (i.e. without blank rows).

As part of a review update, authors may wish to include a 'Summary of findings' table (Chapter 11). Outcomes selected for presentation in the 'Summary of findings' table should be those of importance to people making decisions about health care (usually the primary outcomes of the review), and should be selected prior to commencement of the update to reduce the risk of selectively reporting outcomes with significant results rather than those of importance.

Changes to methodology may imply changes to the original protocol of the review. These changes, and their justifications, must be explicitly provided in the 'Differences between protocol and review' section and the 'What's new' table.

### **3.4.6 Other changes to the review**

If there is a change in lead author, new authors have joined the team, or a new review team has updated the review, the by-line (list of authors) may need to be changed. The decision regarding who is named in the by-line of an updated review, and in what order, should relate to the historical contributions to the updated review coupled with approval of the final updated document. If an author is no longer able to approve an updated review, this author should not be listed in the by-line, but be mentioned in the Acknowledgements. The contributions of all authors to both the update and earlier versions of the review should be described in the 'Contributions of authors' section.

Changing authors of a review may have implications for awarding the review a new citation version (see Section 3.2.5.3).

### **3.4.7 Editorial process**

After completion of the updating process, the review should be submitted to the editorial team for further processing. There is variation across CRGs in policies regarding when and if updated reviews go through the process of full editorial review. If an update involves no further analysis or change of result, it may not need to be refereed, however if there are new analyses, inclusion of new methods or changes to conclusion, the same pre-publication process as that of the original review is likely to be repeated.

On rare occasions a review needs to be withdrawn from the *CDSR*. This may be temporary (e.g. because the review is severely out of date, or contains a major error) or permanent (e.g. because the review has been split into a series of smaller reviews). The withdrawal of the review should be noted in the 'Published notes' section of the review. The review containing this withdrawal notice should be submitted for publication in each issue of the *CDSR*. If the withdrawal is temporary, the review may be re-instated when the content is judged to be satisfactory by the review authors and their CRG. If a review is withdrawn because its content has been merged with another review, a notice should be included in the 'Published notes' section to explain that it has been withdrawn for this reason.

## **3.5 'What's new' and History tables**

### **3.5.1 'What's new' events**

All updated and amended reviews and protocols should have a completed 'What's new' table, so that readers can quickly and clearly identify what has changed. The events added to the 'What's new' table

determine what status the protocol or review has in the *CDSR* including the use of flags or other devices to highlight them, and the assigning of a new citation version.

### 3.5.2 Completing the ‘What’s new’ table

Each row in a ‘What’s new’ or History table comprises:

- the date on which the event was undertaken or recorded;
- the type of event;
- a brief description of what changes were made.

Table 3.5.a and Table 3.5.b list the available ‘What’s new’ events for protocols and reviews, respectively. Authors should refer to the referenced section to select the appropriate event for inclusion in the ‘What’s new’ table. Withdrawal of a review should be associated with an ‘Amended’ event.

**Table 3.5.a: Available ‘What’s new’ events for protocols**

Type of event	Definition or discussion	Implication for published protocol
Amended.	See 3.2.2 and 3.2.4.1.	None.
Feedback incorporated.	See 3.6.	Protocol highlighted as ‘Comment’.
New citation: no major change.	See 3.2.4.2.	New citation.
New citation: major change.	See 3.2.4.2.	New citation. Protocol highlighted as ‘Major change’.

**Table 3.5.b: Available ‘What’s new’ events for reviews**

Type of event	Definition or discussion	Implication for published review
Amended.	See 3.2.2 and 3.2.5.2.	None.
Updated.	See 3.2.2 and 3.2.5.1.	Review highlighted as ‘New search’.
Feedback incorporated.	See 3.6.	Review highlighted as ‘Comment’.
New citation: conclusions not changed.	See 3.2.3 and 3.2.5.3.	New citation (e.g. MEDLINE record); re-sets impact factor counter.
New citation: conclusions changed.	See 3.2.3 and 3.2.5.3.	Review highlighted as ‘Conclusions changed’. New citation (e.g. MEDLINE

		record); re-sets impact factor counter.
No longer updated.	See <a href="#">3.3.6</a> .	None.

While it is technically possible to enter several events into the ‘What’s new’ table, authors should be aware that the table should include information only about the changes since the last version. Importantly the table must not have more than one new citation entry or more than one update entry (previous events should be moved to the History table).

### 3.5.3 History table

Entries in the ‘What’s new’ table should be moved to the History table when they no longer apply to the latest version of the protocol or review. In addition, the History table will include the following information, which should be completed automatically by the Collaboration’s information management system:

- year and issue protocol first published;
- year and issue review first published; and
- year and issue of each new citation version.

## 3.6 Incorporating and addressing feedback in a Cochrane review

There is a formal mechanism on *The Cochrane Library* to facilitate and manage feedback from users of reviews. Feedback, formerly called Comments and Criticisms, is designed to “...amend reviews in the light of new evidence...to reflect the emergence of new data, valid feedback, solicited or unsolicited, from whatever source” (Chalmers 1994).

Feedback on a review can be received at any time after publication and will be sent to the Feedback editor of the responsible CRG. This editor will ensure that the feedback and language is appropriate and then will pass it on to review authors for response (usually required within one month of sending). When responding to feedback, authors are asked to:

- confine the response to the points made in the feedback;
- reply to every substantive point, explicitly stating whether the author agrees or disagrees with the feedback and providing supporting evidence where necessary;
- describe any changes made to the review in response to the feedback; and
- reply in clear and plain language.

Updating a review provides the opportunity to incorporate feedback into the review, addressing valid concerns and adding any additional studies identified through the feedback mechanism.

## 3.7 Chapter information

**Authors:** Julian PT Higgins, Sally Green and Rob JPM Scholten.

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