Standards for the REPORTING of new Cochrane Intervention Reviews (R1-R109)

Key points and introduction

Key points:

- **Authors should consult the MECIR reporting standards before and during writing up of their review.**
- **The reporting standards are compatible with key reporting guidelines developed by different bodies, including PRISMA.**
- **Abstracts and Plain language summaries need to be consistent with each other, and with the main text of the review.**
- **Clear and consistent reporting supports replication of systematic reviews and should make updating easier.**

Authors should consult these reporting Standards before and during writing up of their review. Adherence to the Standards will help authors to prepare an informative, readable review. It will also help to make editorial evaluation of their work efficient. It is especially important to declare and justify differences to the planned question or eligibility criteria, since these may indicate important changes to the scope of the review. Where any search, data collection and analysis methods used are different from those planned, this also needs to be reported and explained. The reporting Standards are available from within Review Manager (RevMan) software according to the heading or subheading to which they relate.

Several reporting guidelines are already available for primary studies and systematic reviews, and have been compiled by the Equator Network[1]. MECIR Standards are compatible with the core items in two key sources of reporting guidance for systematic reviews: the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA), and the US Institute of Medicine's standards for systematic reviews.

Accurately summarizing the key findings of a Cochrane Review in its Abstract and Plain language summary serves an important purpose in knowledge translation. These standalone summaries help to convey the results of the review to a broad audience. Authors should take particular care to ensure that conclusions drawn in the main text of the review under 'Implications for practice' and 'Implications for research' take account of the strength of evidence presented in the review, and are appropriately distilled in the Abstract and Plain language summary.

Authors and editors should ensure that all parts of the review are succinct and readable, so that someone who is not an expert in the area can understand it. The published review needs to signpost and structure information clearly to help orientate readers. Review methods should be reported in sufficient detail that others are in principle able to reproduce the findings. Clear reporting of the eligibility criteria and methods will also help future efforts to update and maintain the published version of the review.

Rachel Churchill
Professor of Evidence Synthesis and Co-ordinating Editor
Cochrane Common Mental Disorders Group
University of York

[1] The Equator Network is a Library for health research reporting that provides a searchable database.

Reporting review conduct (R1-R55)

Title and Authors (R1-R2)

Title and Authors

	Standard	Rationale and elaboration	Resources
R1	*Format of title*	***Highly desirable***	
	Follow the standard template for a Cochrane Review title		See *Handbook* Section II.1.3 Cochrane Training resource: defining the review question
R2	*Authors*	***Mandatory***	

	List names and affiliations of all authors		See *Handbook* Section II.2 Cochrane Training resource: writing a protocol

Abstract (R3-R18)

Abstract

Cochrane Training resource: common errors - summary versions of a review

Cochrane Interactive Learning: module 8 - reporting the review

	Standard	**Rationale and elaboration**	**Resources**
R3	*Writing the Abstract*	***Mandatory***	
	Prepare a structured Abstract to provide a succinct summary of the review. In the interests of brevity it is highly desirable for authors to provide an Abstract of less than 700 words, and it should be no more than 1000 words in length.	Abstracts are a prominent, publicly accessible summary of the review that need to stand alone. They should convey key information about the review question and its findings, and be informative to readers.	
R4	*Abstract, Background*	***Mandatory***	
	Summarize the rationale and context of the review.		See *Handbook* Section III.3.1
R5	*Abstract, Objectives*	***Mandatory***	
	State the main objective(s), preferably in a single concise sentence.	The objective(s) should be expressed in terms that relate to the population(s), intervention comparison(s) and, where appropriate, outcomes of interest.	See *Handbook* Section III.3.1
R6	*Abstract, Search Methods*	***Mandatory***	
	Provide the date of the last search from which records were evaluated and that any studies identified were incorporated into the review, and an indication of the databases and other sources searched.	Abstracts should aim to give readers brief, but key, information about the comprehensiveness of the search and the currency of the information summarized by the review. The Abstract must include the month and year of the set of searches up to which the conclusions of the review are valid. This date should reflect the date of the most recent set of searches from which all records have been screened for relevance and any studies meeting the eligibility criteria have been fully incorporated into the review (studies may be awaiting classification if, for example, the review authors are awaiting translation or	See *Handbook* Section III.3.1

		clarification from authors or sponsors). Abstracts do not need to report on recent repeat or 'catch-up' searches whose results have not been fully incorporated into the review. However, discretion should be applied if such searches identify a large body of evidence, the absence of which may affect the reliability of the conclusions. The amount of information regarding the search should be indicative of the process rather than provide specific details. In the interests of brevity certain details regarding the overall process may need to be moved to the full text of the review. Example: "CENTRAL, MEDLINE, Embase, five other databases and three trials registers were searched on [date] together with reference checking, citation searching and contact with study authors to identify additional studies".	
R7	*Abstract, Selection criteria*	***Mandatory***	
	Summarize eligibility criteria of the review, including information on study design, population and comparison.	Any extensions to eligibility criteria to address adverse effects, economic issues or qualitative research should be mentioned.	See *Handbook* Section III.3.1
R8	*Abstract, Data collection and analysis*	***Mandatory***	
	Summarize any noteworthy methods for selecting studies, collecting data, evaluating risk of bias and synthesizing findings. For many reviews it may be sufficient to state "We used standard methodological procedures expected by Cochrane."	This section of the Abstract should indicate the rigour of the methods that underpin the results reported subsequently in the Abstract. It does not need to replicate the detailed description of the methods given in the main text of the review. Details of how many people were involved in the screening process and collection of information about any included studies are not necessary in the Abstract. Key statistical methods may be given if not clear from the results that follow. The Abstract should prioritize	See *Handbook* Section III.3.1

		the disclosure of non-standard approaches. For example, rather than disclosing all domains applied in the assessment of bias, notable variations on the standard approach should be given, such as use of non-standard tools.	
R9	*Abstract, Main results: number of studies and participants*	***Mandatory***	
	Report the number of included studies and participants.	The total number of included studies should be stated. It might be appropriate to provide numbers of studies and participants for specific comparisons and main outcomes if the amount of evidence differs substantially from the total. Numbers of participants *analysed* should generally be presented in preference to numbers *recruited* (e.g. randomized); it is important to be clear which numbers are being reported. For some types of data there may be preferable alternatives to the number of participants (e.g. person-years of follow-up, number of limbs).	See *Handbook* Section III.3.1
R10	*Abstract, Main results: study characteristics*	***Highly desirable***	
	Provide a brief description of key characteristics that will determine the applicability of the body of evidence (e.g. age, severity of condition, setting, study duration).	Summarizing the study characteristics will provide readers of the Abstract with important information about the applicability of the included studies. This is particularly important if the included studies reflect a subgroup of those eligible for inclusion in the review, for example, if the review intended to address the effects of interventions across all age groups, but included studies that only recruited adolescents.	See *Handbook* Section III.3.1
R11	*Abstract, Main results: bias assessment*	***Mandatory***	
	Provide a comment on the findings of the bias assessment.	The 'Risk of bias' assessments are a key finding and form a fundamental part of the strength of the conclusions drawn in the review. If risks of bias differ substantially for different comparisons and outcomes, this should be mentioned.	See *Handbook* Section III.3.1
R12	*Abstract, Main results: findings*	***Mandatory***	

	Report findings for all important outcomes, irrespective of the strength and direction of the result, and of the availability of data.	Findings should typically include concise information about the size of effect and certainty of evidence for the outcome (such as risk of bias, consistency of effect, imprecision, indirectness and publication bias), for example using GRADE. Outcomes reported in the Abstract should not be selected solely on the basis of the findings. In general, the same outcomes in the Abstract should be presented in the Plain language summary and 'Summary of findings' tables. If no studies measured the outcome, *then a comment should be made to that effect.*	See *Handbook* Section III.3.1 Incorporating GRADE in Cochrane Reviews.
R13	*Abstract, Main results: adverse effects*	***Mandatory***	
	Ensure that any findings related to adverse effects are reported. If adverse effects data were sought, but availability of data was limited, this should be reported.	The Abstract of the review should aim to reflect a balanced summary of the benefits and harms of the intervention.	See *Handbook* Section III.3.1
R14	*Abstract, Main results: format of numerical results*	***Mandatory***	
	Present summaries of statistical analyses in the same way as they are reported in the review and in a standard way, ensuring that readers will understand the direction of benefit and the measurement scale used, and that confidence intervals are included where appropriate.	The standard format for reporting the results of statistical analysis includes an indication of the summary measure, point estimate and confidence interval, e.g. odds ratio 0.75 (95% confidence interval 0.62 to 0.89).	
R15	*Abstract, Main results: interpretability of findings*	***Highly desirable***	
	Ensure that key findings are interpretable, or are re-expressed in an interpretable way. For instance, they might be re-expressed in absolute terms (e.g. assumed and corresponding risks, NNTBs, group means), and outcomes combined with a standardized scale (e.g. standardized mean difference) might be re-expressed in units that are more naturally understood.	Absolute effects provide a useful illustration of the likely impact of intervention, and are usually easier to understand than relative effects. Units expressed on a standardized scale reflect the effect estimate as the number of standard deviations. This is not intuitive to many readers who may be more familiar with specific scales. Any re-expressed findings must have been presented in the same way in the main text of the review (see previous standard).	
R16	*Abstract, Authors' conclusions*	***Mandatory***	

	State key conclusions drawn.	Authors' conclusions may include both implications for practice and implications for research. Care must be taken to avoid interpreting lack of evidence of effect as evidence of lack of effect. Recommendations for practice should be avoided.	See *Handbook* Section III.3.1 and Section 15.6.1
R17	*Completeness of main review text*	***Mandatory***	
	Ensure that all findings reported in the Abstract and Plain language summary, including re expressions of meta-analysis results, also appear in the main text of the review.		See *Handbook* Section III.3.1 and Section III.4 Cochrane Training resource: Common errors - inconsistency & inaccuracy
R18	*Consistency of summary versions of the review*	*Mandatory*	
	Ensure that reporting of objectives, important outcomes, results, caveats and conclusions is consistent across the main text, the Abstract, the Plain language summary and the 'Summary of findings' table (if included).	Summary versions of the review should be written on the assumption that they are likely to be read in isolation from the rest of the review.	Cochrane Training resource: Common errors - inconsistency & inaccuracy

Background (R19-R25)

Background

Cochrane Training resource: writing a protocol

Cochrane Interactive Learning: module 2 - writing the review protocol

	Standard	**Rationale and elaboration**	**Resources**
R19	*Background*	***Mandatory***	
	Provide a concise description of the condition or problem addressed by the review question, definition of the intervention and how it might work, and why it is important to do the review.	Systematic reviews should have a clearly defined and well-reasoned rationale that has been developed in the context of existing knowledge. Outlining the context of the review question is useful to readers and helps to establish key uncertainties that the review intends to address	
R20	*Background headings*	***Highly desirable***	
	Include the four standard RevMan headings when writing the Background.	Four standard headings are included in RevMan ('Description of the condition',	See *Handbook* Section III.3.2

		'Description of the intervention', 'How the intervention might work', and 'Why it is important to do this review').	
R21	*Background references*	***Mandatory***	
	Back up all key supporting statements with references.	Claims or statements regarding aspects such as disease burden, morbidity, prevalence and mechanisms of action should be substantiated and, where available, supported by external evidence.	
R22	*Main objective*	***Mandatory***	
	State the main objective, where appropriate in a single concise sentence.	The primary objective of a Cochrane Review should be to assess the effects of one or more healthcare interventions on user-important outcomes, both intended and unintended. The objective should be expressed in terms that relate to the population(s), intervention comparison(s) and, where appropriate, to specify the outcomes of interest explicitly. Review users may be patients, carers, policy makers, clinicians, practitioners or others. MECIR conduct standard 2*:* Define in advance the objectives of the review, including participants, interventions, comparators and outcomes (PICO). Where possible, the format should be of the form "To assess the effects of *[intervention or comparison]* for *[health problem]* for/in *[types of people, disease or problem and setting if specified]*".	See *Handbook* Section III.3.2 and Section 2.3
R23	*Secondary objectives*	***Highly desirable***	
	State explicitly (as secondary objectives) any specific questions being addressed by the review, such as those relating to particular participant groups, intervention comparisons or outcomes.	The objectives should be expressed in terms that relate to the population(s), intervention comparison(s) and, where appropriate, outcomes of interest. *MECIR conduct standard 4:* Consider in advance whether issues of equity and relevance of evidence to specific populations are important to the review, and plan for appropriate methods to address them if	See *Handbook* Section III.3.2 and Section 2.4

		they are. Attention should be paid to the relevance of the review question to populations such as low-socioeconomic groups, low- or middle-income regions, women, children and older people.	
R24	*Economic evidence*	***Mandatory***	
	If health economics evidence is being reviewed, state this explicitly in the Objectives (as a secondary objective).	The primary aim of a Cochrane Review should be to assess the effects of one or more healthcare interventions on user important outcomes, both intended and unintended. These outcomes may include economic outcomes. If health economics evidence is being reviewed as an integrated economics component, this should be stated as a secondary objective.	See *Handbook* Section 20.2.2 CIL: module 9 - introduction to health economics
R25	*Qualitative research evidence*	***Mandatory***	
	If qualitative research evidence is being reviewed, state this explicitly in the Objectives (as a secondary objective).	The primary aim of a Cochrane Review should be to assess the effects of one or more healthcare interventions on user important outcomes, both intended and unintended. If qualitative research evidence is being included to 'extend' the review, this should be stated as a secondary objective.	See *Handbook* Section 21.4

Methods (R26)

Methods

	Standard	**Rationale and elaboration**	**Resources**
R26	*Reference protocol*	***Highly desirable***	
	Cite the protocol for the review.	The reader should be made aware that the review is based on a published protocol. This is particularly important if the review has been split into multiple reviews since the protocol was published. The most convenient place to reference the protocol for the review is under 'Other published versions of this review'. Since the protocol is usually no longer included in the CDSR once the review is published, it should be cited using the last publication citation for the protocol.	

		Archived versions of protocols can be accessed via the current version of the review.	

Criteria for considering studies for this review (R27-R32)

Criteria for considering studies for this review

Cochrane Training resource: defining the review question

Cochrane Interactive Learning: module 2 - writing the review protocol

	Standard	Rationale and elaboration	Resources
R27	*Eligibility criteria for types of study: study designs*	***Mandatory***	
	State eligible study designs, and provide a justification for the choice.	It is not necessary to explain why randomized trials are eligible (if that is the case), although it may be important to explain why other types of study meet the eligibility criteria of the review. MECIR conduct standard 9*:* Define in advance the eligibility criteria for study designs in a clear and unambiguous way, with a focus on features of a study's design rather than design labels. *MECIR conduct standard 11:* Justify the choice of eligible study designs.	See *Handbook* Section III.3.3.1 and Section 3.3
R28	*Eligibility criteria for types of study: study reports*	***Mandatory***	
	If studies are excluded on the basis of publication status or language of publication, explain and justify this.	Studies should be included irrespective of their publication status and language of publication, unless explicitly justified. *MECIR conduct standard 12:* Include studies irrespective of their publication status, unless exclusion is explicitly justified.	See *Handbook* Section III.3.3.1 and Section 3.4
R29	*Eligibility criteria for types of participants*	***Mandatory***	
	State eligibility criteria for participants, including any criteria around location, setting, diagnosis or definition of condition and demographic factors, and how studies including subsets of relevant participants are addressed.	Any notable restrictions on the eligibility criteria of the review should be given and explained (e.g. exclusion of people under or over a certain age, specific settings of intervention). MECIR conduct standard 5*:*	See *Handbook* Section III.3.3.1 and Section 3.2.1

		Define in advance the eligibility criteria for participants in the studies. *MECIR conduct standard 6:* Define in advance how studies that include only a subset of relevant participants will be addressed.	
R30	*Eligibility criteria for types of interventions*	***Mandatory***	
	State eligibility criteria for interventions and comparators, including any criteria around delivery, dose, duration, intensity, co-interventions and characteristics of complex interventions.	*MECIR conduct standard 7:* Define in advance the eligible interventions and the interventions against which these can be compared in the included studies.	See *Handbook* Section III.3.3.1 and Section 3.2.2
R31	*Role of outcomes*	***Mandatory***	
	If measurement of particular outcomes is used as an eligibility criterion, state and justify this.	Studies should never be excluded from a review solely because no outcomes of interest are reported. However, on occasion it will be appropriate to include only studies that measured particular outcomes. For example, a review of a multi-component public health intervention promoting healthy lifestyle choices, focussing on reduction in smoking prevalence, might legitimately exclude studies that do not measure smoking rates. *MECIR conduct standard 8:* Clarify in advance whether outcomes listed under 'Criteria for considering studies for this review' are used as criteria for including studies (rather than as a list of the outcomes of interest within whichever studies are included).	See *Handbook* Section Section III.3.3.1 and Section 3.2.4.1
R32	*Outcomes of interest*	***Mandatory***	
	Define in advance outcomes that are critical to the review, and any additional important outcomes, and define acceptable ways of measuring them.	Explain how multiple variants of outcome measures (e.g. definitions, assessors, scales, time points) are addressed. *MECIR conduct standard 14:* Define in advance outcomes that are critical to the review, and any additional important outcomes Also *MECIR conduct standards 15–18*	See *Handbook* Section Section III.3.3.1 and Section 3.2.4.1

Search methods for identification of studies (R33-R38)

Search methods for identification of studies

Cochrane Training resource: searching for studies

Cochrane Interactive Learning: module 3 - searching for studies

	Standard	Rationale and elaboration	Resources
R33	*Search sources*	***Mandatory***	
	List all sources searched, including: databases, trials registers, websites and grey literature. Database names should include platform or provider name (or both), and dates of coverage; websites should include full name and URL. State whether reference lists were searched and whether individuals or organizations were contacted.	*MECIR conduct standard 36*: Document the search process in enough detail to ensure that it can be reported correctly in the review. Also *MECIR conduct standards 24–31*	See *Handbook* Section III.3.3.2, Section 1.5, Section 4.3.1.1 and Section 4.4.5
R34	*Latest searches*	***Mandatory***	
	Provide the date of the last search and the issue or version number (where relevant) for each database for which results were evaluated and incorporated into the review. If a search was rerun prior to publication, and its results were not incorporated, explain how the results were dealt with, and provide the date of the search.	The review should provide the search date up to which studies have been retrieved and assessed for inclusion. This is the date to which the conclusions of the review are valid. It should reflect the date of the most recent set of searches from which all records have been screened for relevance and any studies meeting the eligibility criteria have been fully incorporated into the review (studies may be awaiting classification if, for example, the review authors are awaiting translation or clarification from authors or sponsors). Since the review is likely to have drawn on searches conducted across multiple databases, it is possible that searches were performed on more than one date. The earliest date of the most recent set of searches should be provided in the review text and as the hard-coded date of the last search. The remaining dates for other databases	See *Handbook* Section 4.4.10

		should be reported in an Appendix. If a 'catch-up' search was run subsequent to the review being written up, any relevant studies not yet assessed for inclusion should be listed in the section 'Studies awaiting assessment'. *MECIR conduct standard 37:* Rerun or update searches for all relevant sources within 12 months before publication of the review or review update, and screen the results for potentially eligible studies. *MECIR conduct standard 38:* Incorporate fully any studies identified in the rerun or update of the search within 12 months before publication of the review or review update.	
R35	*Search restrictions*	***Mandatory***	
	Specify and justify any restrictions placed on the time period covered by the search.	*MECIR conduct standard 35:* Justify the use of any restrictions in the search strategy on publication date or publication format.	See *Handbook* Section III.3.3.2, and Section 4.4.5
R36	*Searches for different types of evidence*	***Mandatory***	
	If the review has specific eligibility criteria concerning inclusion of additional studies such as studies of adverse effects, health economics evidence or qualitative research evidence, describe search methods for identifying such studies.	Some reviews extend beyond a focus on the effects of healthcare interventions and address specific additional types of evidence. These are discussed in the *Handbook*. MECIR conduct standard 26*: If the review has specific eligibility criteria around study design to address adverse effects, economic issues or qualitative research questions,* undertake searches to address them.	These are discussed in the *Handbook* Chapters 19, 20 and 21.
R37	*Search strategies for bibliographic databases*	***Mandatory***	
	Present the exact search strategy (or strategies) used for each database in an Appendix, including any limits and filters used, so that it could be replicated.	Search strategies that are available elsewhere (e.g. standard methodological filters, or strategies used to populate a specialized register) may be referenced rather than reproduced. Including the number of hits for each line in the strategy is optional. *MECIR conduct standard 36:*	See *Handbook* Section III.3.3.2, and Section 4.4.5

		Document the search process in enough detail to ensure that it can be reported correctly in the review. Also MECIR conduct standards 32–35.	
R38	*Search strategies for other sources*	***Highly desirable***	
	Report the search terms used to search any sources other than bibliographic databases (e.g. trials registers, the web), and the dates of the searches.	Some of this information might be better placed in an Appendix. *MECIR conduct standard 36:* Document the search process in enough detail to ensure that it can be reported correctly in the review.	See *Handbook* Section III.3.3.2, and Section 4.4.5

Data collection and analysis (R39-R55)

Data collection and analysis

	Standard	Rationale and elaboration	Resources
R39	*Inclusion decisions*	***Mandatory***	
	State how inclusion decisions were made (i.e. from search results to included studies), clarifying how many people were involved and whether they worked independently.	MECIR conduct standard 39: Use (at least) two people working independently to determine whether each study meets the eligibility criteria, and define in advance the process for resolving disagreements.	See *Handbook* Section III.3.3.3 and Section 4.4.10 Cochrane Training resource: selecting studies CIL: module 4 - selecting studies and collecting data
R40	*Data collection process*	***Mandatory***	
	State how data were extracted from reports of included studies, clarifying how many people were involved, whether they worked independently, and how disagreements were resolved. Describe data collection process for any reports requiring translation.	*MECIR conduct standard 43:* Use a data collection form that has been piloted. *MECIR conduct standard 45:* Use (at least) two people working independently to extract study characteristics from reports of each study, and define in advance the process for resolving disagreements.	See *Handbook* Section III.3.3.3, Section 5.4.1 and Section 5.5.2 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R41	*Requests for data*	***Highly desirable***	
	Describe attempts to obtain or clarify data from individuals or organizations.	*MECIR conduct standard 49:* Seek key unpublished information that is missing from reports of included studies.	See *Handbook* Section III.3.3.3 and Section 5.2.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R42	*Data items*	***Mandatory***	

	State the types of information that were sought from reports of included studies.	MECIR conduct standard 44: Collect characteristics of the included studies in sufficient detail to populate a table of 'Characteristics of included studies'.	See *Handbook* Section III.3.3.3 and Section 5.3.1 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R43	*Transformations of data*	***Mandatory***	
	Explain any transformations of reported data prior to presentation in the review, along with any assumptions made. Explain any procedures for extracting numeric data from graphs.	MECIR conduct standard 47: Collect and utilize the most detailed numerical data that might facilitate similar analyses of included studies. Where 2×2 tables or means and standard deviations are not available, this might include effect estimates (e.g. odds ratios, regression coefficients), confidence intervals, test statistics (e.g. t, F, Z, Chi^2) or P values, or even data for individual participants.	See *Handbook* Section 5.3.6 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R44	*Missing outcome data*	***Highly desirable***	
	Explain how missing outcome data were addressed.	Describe how assumptions are applied for missing data, e.g. last observation carried forward, or assumptions of particular values such as worst-case or best-case scenarios.	See *Handbook* Section III.3.3.3, Section 5.3.6 and Section 10.12.1 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R45	*Tools to assess risk of bias in individual studies*	***Mandatory***	
	State and reference the tool(s) used to assess risk of bias for included studies, how the tool(s) was implemented, and the criteria used to assign studies to judgements of low risk, high risk and unclear risk of bias.	If the *Handbook* guidance for undertaking 'Risk of bias' assessments was followed in its entirety, then a reference to the *Handbook* is sufficient to provide the criteria used to assign judgements. Justify any deviations from the tool. *MECIR conduct standard 52:* Assess the risk of bias for each study result contributing to an outcome in the 'summary of findings' table. For randomized trials, the RoB 2 tool should be used, involving judgements and support for those judgements across a series of domains of bias, as described in the Handbook. MECIR conduct standards 52 – 60.	See *Handbook* Section III.3.3.3, Section 7.1.2 and Chapter 8 Cochrane Training resources: assessing RoB included studies and RoB 2.0 webinar CIL: module 5 - introduction to study quality and risk of bias
R46	*Effect measures*	***Mandatory***	

	State the effect measures used by the review authors to describe effect sizes (e.g. risk ratio, mean difference) in any included studies or meta-analyses, or both.		See *Handbook* Section III.3.3.3 Cochrane Training resources: analysing dichotomous outcomes and analysing continuous outcomes CIL: module 6 - analysing the data
R47	*Non-standard designs*	***Mandatory***	
	If designs other than individually randomized, parallel-group randomized trials are included, describe any methods used to address clustering, matching or other design features of the included studies.	*MECIR conduct standard 70:* Consider the impact on the analysis of clustering, matching or other non-standard design features of the included studies.	See *Handbook* Section 6.2.1 Cochrane Training resource: analysing non-standard data & study designs CIL: module 6 - analysing the data
R48	*Studies with more than two groups*	***Mandatory***	
	If multi-arm studies are included, explain how they were addressed and incorporated into syntheses.	*MECIR conduct standard 66:* If multi-arm studies are included, analyse multiple intervention groups in an appropriate way that avoids arbitrary omission of relevant groups and double-counting of participants.	See *Handbook* Section III.3.3.3, Section 6.2.9 and Chapter 11 Cochrane Training resource: analysing non-standard data & study designs CIL: module 6 - analysing the data
R49	*Assessing heterogeneity*	***Mandatory***	
	Describe the methods used to identify the presence of heterogeneity between the studies in the review (e.g. non-quantitative assessment, I^2, Tau^2 or statistical test).	*MECIR conduct standard 69:* Take into account any statistical heterogeneity when interpreting the results, particularly when there is variation in the direction of effect. *MECIR conduct standard 62:* Undertake (or display) a meta-analysis only if participants, interventions, comparisons and outcomes are judged to be sufficiently similar to ensure an answer that is clinically meaningful. MECIR conduct standard 63*:* Assess the presence and extent of between-study variation when undertaking a meta-analysis.	See *Handbook* Section 10.10.2 and Section 10.10.3 Cochrane Training resource: exploring heterogeneity CIL: module 6 - analysing the data
R50	*Risk of reporting bias across studies*	***Highly desirable***	
	Describe any methods used for assessing the risk of reporting biases such as publication bias.		See *Handbook* Chapter 13 Cochrane Training resource: small study effects & reporting

			biases CIL: module 7 - interpreting the findings
R51	*Data synthesis*	***Mandatory***	
	Describe any methods used for combining results across studies. Where data have been combined in statistical software external to RevMan, reference the software, commands and settings used to run the analysis.	Decisions to depart from intended methods, for example an alternative statistical model, should be reported and justified. *MECIR conduct standard 62:* Undertake (or display) a meta-analysis only if participants, interventions, comparisons and outcomes are judged to be sufficiently similar to ensure an answer that is clinically meaningful.	Cochrane Training resource: intro to meta-analysis CIL: module 6 - analysing the data
R52	*Subgroup analyses*	***Mandatory***	
	If subgroup analysis (or meta-regression) was performed, state the potential effect modifiers with rationale for each, stating whether each was defined a priori or post hoc and how they were compared (e.g. statistical tests).	*MECIR conduct standard 22:* Predefine potential effect modifiers (e.g. for subgroup analyses) at the protocol stage, restrict these in number, and provide rationale for each. MECIR conduct standard 67: If subgroup analyses are to be compared, and there are judged to be sufficient studies to do this meaningfully, use a formal statistical test to compare them.	See *Handbook* Section III.3.3.3 and Section 10.11.3.1 Cochrane Training resource: exploring heterogeneity CIL: module 6 - analysing the data
R53	*Addressing risk of bias*	***Mandatory***	
	Describe how studies with high or variable risks of bias are addressed in the synthesis.	*MECIR conduct standard 57:* Address risk of bias in the synthesis (whether quantitative or non-quantitative). For example, present analyses that are stratified according to summary risk of bias, restricted to studies at low risk of bias or restricted to low-and-some-concerns of risk of bias.	See *Handbook* Section 7.6.1 and Chapter 8 Cochrane Training resources: assessing RoB included studies and RoB 2.0 webinar CIL: module 6 - analysing the data
R54	*Sensitivity analysis*	***Mandatory***	
	State the basis for any sensitivity analyses performed.	*MECIR conduct standard 71:* Use sensitivity analyses to assess the robustness of results, such as the impact of notable assumptions, imputed data, borderline decisions and studies at high risk of bias.	See *Handbook* Section 10.14 Cochrane Training resources: assessing RoB included studies and exploring heterogeneity CIL: module 6 - analysing the data
R55	*Summary of findings*	***Highly desirable***	
	State any methods for summarizing the findings of the review, including the	MECIR conduct standard 75: Justify and document all assessments of the certainty of	See *Handbook* Section 14.2.1 Common issues in Summary of

	assessment of the certainty of the body of evidence for each outcome.	the body of evidence (for example downgrading or upgrading if using GRADE). MECIR conduct standard 7*4*: Use the five GRADE considerations (risk of bias, consistency of effect, imprecision, indirectness and publication bias) to assess the certainty of the body of evidence for each outcome, and to draw conclusions about the certainty of evidence within the text of the review.	Findings tables. Incorporating GRADE in Cochrane Reviews. CIL: module 7 - interpreting the findings CIL: module 8 - reporting the review

Results (R56-R109)

Description of studies (R56-R72)

Description of studies

	Standard	Rationale and elaboration	Resources
R56	*Flow of studies*	***Mandatory***	
	Provide information on the flow of studies from the number(s) of references identified in the search to the number of studies included in the review, ideally using a PRISMA type flow diagram. Clarify how multiple references for the same study relate to the individual studies.	MECIR conduct standard 41*:* Document the selection process in sufficient detail to be able to complete a flow diagram and a table of 'Characteristics of excluded studies'. *MECIR conduct standard 42:* Collate multiple reports of the same study, so that each study, rather than each report, is the unit of interest in the review.	See *Handbook* Section III.3.4.1, Section 4.6.4, Section 4.6.2 and Section 5.2.1 Cochrane Training resource: searching for studies CIL: module 4 - selecting studies and collecting data
R57	*Lack of included studies*	***Highly desirable***	
	If a review identifies no eligible studies, restrict the Results section to a description of the flow of studies and any brief comments about reasons for exclusion of studies.	Under 'Risk of bias in included studies' and 'Effects of interventions', state "No study met the eligibility criteria". Any discussion of evidence not meeting the eligibility criteria of the review should be in the Discussion section.	See *Handbook* Section III.3.4.1
R58	*Excluded studies*	***Mandatory***	
	List key excluded studies and provide justification for each exclusion.	The table of 'Characteristics of excluded studies' is intended as an aid to users rather than a comprehensive list of studies that were identified but not included. List here any studies that a user might reasonably expect to find in the review to	See *Handbook* Section III.3.4.1 Cochrane Training resource: selecting studies CIL: module 4 - selecting studies and collecting data

		explain why they are excluded.	
R59	*Studies awaiting classification*	***Highly desirable***	
	List the characteristics of any completed studies that have been identified as potentially eligible but have not been incorporated into the review.	Users of the review will be interested to learn of any potentially relevant studies that have been conducted and are known to the review team, but have not yet been incorporated in to the review irrespective of their publication status. This will help them to assess the stability of the review findings. These should be listed in the table of 'Characteristics of studies awaiting classification', along with any details that are known. Authors should also consider the impact of not including these studies on the review findings as a potential limitation, and the extent to which they affect the implications for research.	See *Handbook* Section III.3.4.1 Cochrane Training resource: searching for studies CIL: module 3 - searching for studies
R60	*Ongoing studies*	***Mandatory***	
	Provide details of any identified studies that have not been completed.	Users of the review will be interested to learn of any potentially relevant studies that have not been completed. This will help them to assess the stability of the review findings. These should be listed in the table of 'Characteristics of ongoing studies', along with any details that are known. Cochrane Reviews should be mindful of research waste so it is useful to consider how ongoing studies might address the review question under 'Implications for research'.	See *Handbook* Section III.3.4.1 Cochrane Training resource: searching for studies CIL: module 3 - searching for studies
R61	*Table of 'Characteristics of included studies'*	***Mandatory***	
	Present a table of 'Characteristics of included studies' using a uniform format across all studies.	MECIR conduct standard 44: Collect characteristics of the included studies in sufficient detail to populate a table of 'Characteristics of included studies'.	See *Handbook* Section III.3.4.1 and Section 5.3.1 Cochrane Training resource: collecting data CIL: module 8 - reporting the review
R62	*Included studies*	***Mandatory***	
	Provide a brief narrative summary of any included studies. This should include the number of participants and a summary of the characteristics of the study populations and settings, interventions,		See *Handbook* Section III.3.4.1 CIL: module 8 - reporting the review

	comparators and funding sources.		
R63	*Table of 'Characteristics of included studies': methods*	***Mandatory***	
	Provide the basic study design or design features (e.g. parallel group randomized trial, cluster-randomized trial, controlled before and after study).	Even if the review is restricted to one study design, these tables should provide a comprehensive summary of each study. It is important that labels used to describe study designs are clearly defined in the review.	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R64	*Table of 'Characteristics of included studies': participants*	***Mandatory***	
	Provide sufficient information about the study populations to enable a user of the review to assess the applicability of the review's findings to their own setting.	Information presented in this table should reflect the baseline demographics of the study sample. In addition, it is helpful to state the eligibility criteria of the study.	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R65	*Table of 'Characteristics of included studies': sample sizes*	***Mandatory***	
	Include the sample size for each included study in the table of 'Characteristics of included studies'.	If sample sizes are available for each intervention group, these should be included. A convenient place is often within the box for Interventions, e.g. inserting "(n =)" after each listed intervention group.	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R66	*Table of 'Characteristics of included studies': interventions*	***Mandatory***	
	Provide sufficient information to enable users of the review to assess the applicability of the intervention to their own setting, and if possible in a way that allows the intervention to be replicated.	The components of all interventions (drug, non-drug, simple or complex) should be reported. Reporting guidelines have been developed for describing interventions used in primary research and review authors may find it useful to structure their description of interventions around the core attributes highlighted by TIDieR (Hoffman 2014). Lengthy explanations of interventions should be avoided. Citations to sources of detailed descriptions can be included.	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R67	*Table of 'Characteristics of included studies': outcomes*	***Mandatory***	
	Provide clear and consistent information about outcomes measured (or reported), how they were measured and the times at which they were	It should be clear whether main outcomes of interest in the review were measured in the study.	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data

	measured.		CIL: module 4 - selecting studies and collecting data
R68	*Table of 'Characteristics of included studies': dates*	***Highly desirable***	
	Include the dates when the study was conducted in the table of 'Characteristics of included studies'.	If dates are not available then this should be stated (e.g. "Study dates not reported").	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R69	*Table of 'Characteristics of included studies': funding source*	***Mandatory***	
	Include details of funding sources for the study, where available.	Details of funding sources should be placed in this table rather than as part of the 'Risk of bias' table. Including an extra row in the table of 'Characteristics of included studies' is encouraged.	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R70	*Table of 'Characteristics of included studies': declarations of interest*	***Mandatory***	
	Include details of any declarations of interest among the primary researchers.	Declarations of interest should be placed in this table rather than as part of the 'Risk of bias' table. Including an extra row in the table of 'Characteristics of included studies' is encouraged.	See *Handbook* Section III.3.4.1 and Section 5.3 Cochrane Training resource: collecting data CIL: module 4 - selecting studies and collecting data
R71	*Choice of intervention groups in multi-arm studies*	***Highly desirable***	
	If a study is included with more than two intervention arms, restrict comments on any irrelevant arms to a brief comment in the table of 'Characteristics of included studies'.	Intervention arms that are not relevant to the review question should not be discussed in detail, although it is useful to clarify (in this table) that such arms were present. *MECIR conduct standard 50:* If a study is included with more than two intervention arms, include in the review only intervention and control groups that meet the eligibility criteria.)	See *Handbook* Section 5.3.6 Cochrane Training resource: analysing non-standard data and study designs CIL: module 6 - analysing the data
R72	*References to included studies*	***Mandatory***	
	List all reports of each included study under the relevant Study ID.	It is important that all reports are listed, and are grouped by study. Marking one report as the primary reference is helpful where appropriate.	

Risk of bias in included studies (R73-R75)

Risk of bias in included studies

Cochrane Training resource: assessing RoB included studies and RoB 2.0 webinar

Cochrane Interactive Learning: module 5 - introduction to study quality and risk of bias

	Standard	Rationale and elaboration	Resources
R73	*'Risk of bias' table*	***Mandatory***	
	Present at least one 'Risk of bias' table for each study that is included in a synthesis, with judgements about risks of bias, and explicit support for these judgements.	'Risk of bias' presentation tools in RevMan should be used wherever possible. MECIR conduct standard 52: *Assess the risk of bias for each study result contributing to an outcome in the 'summary of findings' table. For randomized trials, the RoB 2 tool should be used, involving judgements and support for those judgements across a series of domains of bias, as described in the Handbook.* *Also* MECIR conduct standards 52 – 60	See *Handbook* Section 7.1.2 and Chapter 8
R74	*Summary assessments of risk of bias*	***Highly desirable***	
	Present an overall risk of bias assessment across domains for each key outcome for each included study, and ensure that these are supported by the information presented in the 'Risk of bias' tables.	*MECIR conduct standard 56:* Summarize the risk of bias for each key outcome for each study.	See *Handbook* Section 7.5 and Chapter 8
R75	*Risk of bias in included studies*	***Mandatory***	
	Provide a brief narrative summary of the risks of bias among the included studies.	It may be helpful to identify any studies considered to be at low risk of bias for particular key outcomes.	

Effects of interventions (R76-R99)

Effects of interventions

Cochrane Interactive Learning: module 8 - reporting the review

	Standard	Rationale and elaboration	Resources
R76	*Use of 'Data and analysis' headings*	***Mandatory***	
	Ensure appropriate use of any	Appropriate use of the	

	heading hierarchy of Comparisons, Outcomes, Subgroups and Study data in the 'Data and analysis' section.	hierarchy in RevMan5 ensures consistency of structure across reviews. It is confusing for the user if outcomes are listed against the heading 'Comparison' and interventions listed against the heading 'Outcome or subgroup'. This standard will not be required when using the study-centric data structure of RevMan Web.	
R77	*Presenting data*	***Highly desirable***	
	Ensure that simple summary data for each intervention group, as well as estimates of effect size (comparing the intervention groups), are available for each study for each outcome of interest to the review. These appear by default when dichotomous or continuous outcome data are analysed within RevMan.	Simple summaries such as numbers of events, means and standard deviations should be presented for each treatment group when available. This is achieved primarily by using the 'Data and analyses' section of the review, for dichotomous and continuous outcomes. For other outcomes, these should typically be presented in tables labelled 'Other data'. When data for each separate intervention group are available for outcomes analysed as 'generic inverse-variance' data, these might be presented in Additional tables.	See *Handbook* Section III.3.4.4.
R78	*Number of studies and participants*	***Mandatory***	
	State how many studies and how many participants contributed data to results for each outcome, along with the proportion of the included studies and recruited participants potentially available for the relevant comparison.	It is unlikely that the same number of studies will contribute data to every outcome of interest. Specific studies may contribute different numbers of participants for different outcomes. Therefore, for each comparison, it is helpful to indicate to readers what proportion of the relevant included studies and recruited participants contribute data to each outcome. Failure to disclose this may be misleading.	
R79	*Source of data*	***Highly desirable***	
	State the source of all data presented in the review, in particular, whether it was obtained from published literature, by correspondence, from a trials register, from a web-based data repository, etc.	Transparency of data source enables validation or verification of data by others, including editors or readers of the review.	
R80	*Multiple outcome data*	***Mandatory***	
	Describe any post hoc decisions that might give rise to accusations of selective	Transparent disclosure of post hoc decisions will enable readers of the review to assess	See *Handbook* Section 3.2.4.1 and Section 5.4.1

	outcome reporting, for example when there were multiple outcome measures (e.g. different scales), multiple time points or multiple ways of presenting results.	the credibility of the results of the review for themselves. Post hoc decisions to change the definition or priority of outcome measures must be reported and justified under 'Differences between the protocol and review'. MECIR conduct standard 16: Define in advance details of what are acceptable outcome measures (e.g. diagnostic criteria, scales, composite outcomes). *MECIR conduct standard 17:* Define in advance how outcome measures will be selected when there are several possible measures (e.g. multiple definitions, assessors or scales). *MECIR conduct standard 18:* Define in advance the timing of outcome measurement.	
R81	*Ordering of results and 'Data and analysis' section*	***Highly desirable***	
	Organize results to follow the order of comparisons and outcomes specified in the protocol, following in particular the distinction between primary and secondary outcomes.	Review authors must avoid selective reporting of analysis results in a way that depends on the findings. The best way to achieve this is to follow a well-structured protocol and present results as outlined in that protocol. However, sometimes a pragmatic decision needs to be made that an alternative arrangement is preferable, particularly with regard to comparisons. This choice should be explicitly justified.	
R82	*Prespecified outcomes*	***Mandatory***	
	Report synthesis results for all prespecified outcomes, irrespective of the strength or direction of the result. Indicate when data were not available for outcomes of interest, and whether adverse effects data were identified.	To avoid selective outcome reporting (in truth or in perception), the review should address all outcomes specified in the protocol.	
R83	*Statistical uncertainty*	***Mandatory***	
	Accompany all effect size estimates with a measure of statistical uncertainty (e.g. a confidence interval with a specified level of confidence such as 90%, 95% or 99%).	Confidence intervals are the preferred method for expressing statistical uncertainty.	Cochrane Training resource: intro to meta-analysis

R84	*P values*	***Highly desirable***	
	If reporting P values, provide exact P values (e.g. P = 0.08 rather than P > 0.05).	Effect estimates with confidence intervals are the preferred method of presenting numeric results. P values should not be used as an alternative to confidence intervals and should not be used to divide results into 'significant' or 'non-significant'; exact P values portray the strength of evidence against the null hypothesis.	See *Handbook* Section 15.3.2
R85	*Tables and Figures*	***Mandatory***	
	Link to each Table and Figure.	All tables and figures should have a brief descriptive caption and must be referred to in numerical order in the review text.	
R86	*Number of Tables and Figures*	***Highly desirable***	
	Keep the number of Tables and Figures low to convey key findings without affecting the readability of the review text.	Tables (typically implemented as Additional tables) and Figures (including RevMan flow charts, RevMan forest plots and imported graphics) may be added to reviews and included in the body of the text. Reviews should try and avoid including more than six such Tables and Figures in total. Further Tables and Figures can be included as supplementary material (e.g. as 'Data and analysis' forest plots or within Appendices).	
R87	*Consistency of results*	***Mandatory***	
	Ensure that all statistical results presented in the main review text are consistent between the text and the 'Data and analysis' tables.	Errors can be introduced, particularly when analyses are rerun.	
R88	*Direction of effect*	***Mandatory***	
	State whether findings indicate a clear direction of benefit.	Where results indicate that an intervention is better or worse than another intervention, it is important to make it clear which intervention is favoured. This is the case particularly when different scales are combined using standardized mean differences.	Cochrane Training resource: intro to meta-analysis
R89	*Interpretability of results*	***Mandatory***	
	Ensure that key findings are interpretable, or are re-expressed in an interpretable way. For instance, they might be re-expressed in absolute terms (e.g. assumed and corresponding risks, NNTBs,	Absolute effects provide a useful illustration of the likely impact of an intervention, and are usually easier to understand than relative effects. They may need to be accompanied, however, with information about	Cochrane Training resources: analysing dichotomous outcomes and analysing continuous outcomes

	group means), and outcomes combined with a standardized scale (e.g. standardized mean difference) might be re-expressed in units that are more naturally understood. If minimally important differences were prespecified or are available, these should be provided to aid interpretation.	assumed baseline risks. Confidence intervals should be presented for NNTBs and similar summary measures. Re-expressing relative effects as absolute effects often requires the specification of assumed (e.g. untreated) risks, and the source of these should be provided. Results expressed as standardized mean differences reflect the number of standard deviations' difference between mean responses. This is not intuitive to many readers who may be more familiar with specific scales. Ideally, minimally important effect sizes should be specified in the protocol.	
R90	*Studies without usable data*	***Mandatory***	
	Comment on the potential impact of studies that apparently measured outcomes, but did not contribute data that allowed the study to be included in syntheses.	There is good evidence of selective outcome reporting among clinical trials. Outcomes that are believed to have been measured but are not reported in a usable format may therefore be systematically different from those that are usable, and introduce bias. 'Usable' in this sense refers both to incorporation in a meta-analysis and to consideration in non-statistical syntheses of findings. Authors might consider using a table to indicate which studies contributed data to the outcomes of interest in the review. MECIR conduct standard 40: Include studies in the review irrespective of whether measured outcome data are reported in a 'usable' way.	See *Handbook* Section 4.6.3
R91	*Missing outcome data*	***Highly desirable***	
	Discuss the implications of missing outcome data from individual participants (due to losses to follow-up or exclusions from analysis).	*MECIR conduct standard 64:* Consider the implications of missing outcome data from individual participants (due to losses to follow-up or exclusions from analysis).	See *Handbook* Section 10.2.1
R92	*Skewed data*	***Highly desirable***	
	Discuss the possibility and implications of skewed data when analysing continuous outcomes.	MECIR conduct standard 65: Consider the possibility and implications of skewed data when analysing continuous outcomes.	See *Handbook* Section 10.5.3 Cochrane Training resource: analysing continuous

			outcomes CIL: module 6 - analysing the data
R93	*Forest plots*	**Highly desirable**	
	Present data from multiple studies in forest plots (using the 'Data and analyses' structure in RevMan) wherever possible, providing it is reasonable to do so.	Presenting data in forest plots can be useful, even if the studies are not combined in a meta-analysis.	Cochrane Training resource: intro to meta-analysis CIL: module 6 - analysing the data
R94	*Multiple subgroup analyses and sensitivity analyses*	***Highly desirable***	
	If presenting multiple sensitivity analyses or different ways of subgrouping the same studies, present these in summary form (e.g. a single Table or Figure) and not in multiple forest plots.		Cochrane Training resource: exploring heterogeneity CIL: module 6 - analysing the data
R95	*Labels on plots*	***Mandatory***	
	Label the directions of effect and the intervention groups in forest plots with the interventions being compared.	By default, RevMan currently uses 'experimental' and 'control' within labels. It is helpful to replace these with more specific intervention names, and essential if the ordering is swapped (or for head-to-head comparisons). Directions of effect should be used as consistently as possible within a review.	Cochrane Training resource: intro to meta-analysis CIL: module 6 - analysing the data
R96	*Risk of bias across studies*	***Highly desirable***	
	Present results of the assessment of risk of bias across studies (and across domains) for each key outcome, and state whether this leads to concerns about the validity of the review's findings.	Considerations of risk of bias across studies are required for assessments of the certainty of the body of evidence (e.g. using GRADE).	Cochrane Training resources: assessing RoB included studies and RoB 2.0 webinar CIL: module 5 - introduction to study quality and risk of bias CIL: module 7 - interpreting the findings
R97	*Reporting biases*	***Highly desirable***	
	Present results of any assessment of the potential impact of reporting biases on the review's findings.	MECIR conduct standard 73: Consider the potential impact of reporting biases on the results of the review or the meta-analyses it contains.	See *Handbook* Section 13.4 Cochrane Training resource: small study effects and reporting biases CIL: module 7 - interpreting the findings
R98	'*Summary of findings' table*	***Mandatory***	
	Present a 'Summary of findings' table according to recommendations described in the *Handbook* (version 5 or later).	Specifically: include results for one clearly defined population group (with few exceptions); indicate the intervention and the comparison intervention;	Cochrane Training resource: GRADE approach to evaluating evidence quality Incorporating GRADE in

		include seven or fewer patient-important outcomes; describe the outcomes (e.g. scale, scores, follow-up); indicate the number of participants and studies for each outcome; present at least one baseline risk for each dichotomous outcome (e.g. study population or median/medium risk) and baseline scores for continuous outcomes (if appropriate); summarize the intervention effect (if appropriate); and include a measure of the certainty of the body of evidence for each outcome. Efforts should be made to incorporate information presented in 'Summary of findings' tables (such as absolute effects, certainty ratings and downgrading decisions) in other parts of the review including the Abstract, Plain language summary, Effects of interventions, Discussion and Authors' conclusions.	Cochrane Reviews CIL: module 8 - reporting the review
R99	*Assessments of the certainty of the body of evidence*	***Mandatory***	
	Provide justification or rationale for any measures of the certainty of the body of evidence for each key outcome. If a 'Summary of findings' table is used, use footnotes to explain any downgrading or upgrading according to the GRADE approach.	*MECIR conduct standard 74:* Use the five GRADE considerations (risk of bias, consistency of effect, imprecision, indirectness and publication bias) to assess the certainty of the body of evidence for each outcome, and to draw conclusions about the certainty of evidence within the text of the review. *MECIR conduct standard 75:* Justify and document all assessments of the certainty of the body of evidence (for example downgrading or upgrading if using GRADE).	See *Handbook* Section 14.2.1 Cochrane Training resource: GRADE approach to evaluating evidence quality Incorporating GRADE in Cochrane Reviews CIL: module 7 - interpreting the findings CIL: module 8 - reporting the review

Discussion (R100-R101)

Discussion

Cochrane Interactive Learning: module 8 - reporting the review

	Standard	Rationale and elaboration	Resources
R100	*Discussion headings*	***Highly desirable***	
	Include the standard RevMan headings when writing the Discussion.	Five standard headings are included in RevMan ('Summary of main results', 'Overall completeness and applicability of evidence', 'Certainty of the evidence', 'Potential biases in the review process, 'Agreements and disagreements with other studies or reviews').	See *Handbook* Section III.3.5
R101	*Limitations*	***Mandatory***	
	Discuss limitations of the review at study and outcome level (e.g. regarding risk of bias), and at review level (e.g. incomplete identification of studies, reporting bias).	Review authors must explicitly state the limitations of their review. One aspect that is easily overlooked is that of adverse effects. In particular, if the review methods do not allow for detection of serious or rare adverse events, or both, the review authors must explicitly state this as a limitation. Additional considerations here include currency and completeness of the search, completeness of data collection processes, assumptions made regarding classification of interventions, outcomes or subgroups, and methods used to account for missing data. MECIR conduct standard 73*:* Consider the potential impact of non-reporting biases on the results of the review or the meta-analyses it contains.	See *Handbook* Section 13.4

Authors' conclusions (R102-R103)

Authors' conclusions

Cochrane Interactive Learning: module 8 - reporting the review

	Standard	Rationale and elaboration	Resources
R102	*Conclusions: implications for practice*	***Mandatory***	
	Provide a general interpretation of the evidence so that it can inform healthcare or policy decisions. Avoid making recommendations for practice.	When formulating implications for practice base conclusions only on findings from the synthesis (quantitative or narrative) of studies included in the review. The conclusions of the review should convey the	See *Handbook* Section III.3.6 and Section 15.6.1 Incorporating GRADE in Cochrane Reviews.

		essence of the synthesis of included studies, without selective reporting of the particular findings on the basis of the result, and without drawing on data that were not systematically compiled and evaluated as part of the review.	
R103	*Conclusions: implications for research*	***Mandatory***	
	If recommending further research, structure the implications for research to address the nature of evidence required, including population, intervention comparison, outcome, and type of study.	Researchers and research funders are an important user group of Cochrane Reviews. Recommendations for future research should offer constructive guidance on addressing the remaining uncertainties identified by the review. This is particularly important for reviews that identify few or no studies. Include any information about completed or ongoing studies that are likely to address the review question.	

Acknowledgements (R104)

Acknowledgements

	Standard	**Rationale and elaboration**	**Resources**
R104	*Acknowledgements*	***Mandatory***	
	Acknowledge the contribution of people not listed as authors of the review, including any assistance from the Cochrane Review Group, non-author contributions to searching, data collection, study appraisal or statistical analysis, and the provision of funding.		See *Handbook* Section III.3.7 Cochrane Training resource: writing a protocol

Contribution of authors (R105)

Contribution of authors

	Standard	**Rationale and elaboration**	**Resources**
R105	*Contributions of authors*	**Mandatory**	
	Describe the contributions of each author to the review.		See *Handbook* Section III.3.7 Cochrane Training resource: writing a protocol

Declarations of interest (R106)

Declarations of interest

	Standard	Rationale and elaboration	Resources
R106	*Declarations of interest*	***Mandatory***	
	Report any current or recent (within the 36 months prior to registration of the review) financial interests relevant to the topic of the review. This means payments from any commercial organization with an interest in the topic of the review. Include the dates of the involvement. Report any current or recent (within 36 months prior to registration of the review) non-financial relationships and activities that have a direct and obvious connection to the topic of the review. Include the dates of the involvement. Report involvement in any study that may be eligible for inclusion in the review.	Cochrane has two Conflict of Interest policies relating to Cochrane Library content. Which policy applies to a particular review depends on whether the review was registered before or after 14 October 2020. For reviews registered after 14 October 2020 the CoI Policy for Cochrane Library Content (2020) applies and for reviews registered before 14 October 2020 the Commercial Sponsorship Policy (2014) applies. Declarations of interest should be stated according to the relevant CoI policy and must be consistent with interests declared on the Disclosure of Potential Conflicts of Interest form.	See *Handbook* Section III.3.7 and EPPR Disclosure of potential conflict of interest by author policy Cochrane Training resource: writing a protocol

Differences between protocol and review (R107-R108)

Differences between protocol & review

	Standard	Rationale and elaboration	Resources
R107	*Changes from the protocol*	***Mandatory***	
	Explain and justify any changes from the protocol (including any post hoc decisions about eligibility criteria or the addition of subgroup analyses).	*MECIR conduct standard 13:* Justify any changes to eligibility criteria or outcomes studied. In particular, post hoc decisions about inclusion or exclusion of studies should keep faith with the objectives of the review rather than with arbitrary rules.	See *Handbook* Section 3.2.1
R108	*Methods not implemented*	***Mandatory***	
	Document aspects of the protocol that were not implemented (e.g. because no studies, or few studies, were found) in the section 'Differences between protocol	Including a record of methods that were not implemented helps to retain specific details of the protocol. By doing so, the next version of the review can be seen to be coherent with	See *Handbook* Section III.3.7

	and review', rather than in the Methods section.	what was planned in the protocol.	

Sources of support (R109)

Sources of support

	Standard	Rationale and elaboration	Resources
R109	*Sources of support*	***Mandatory***	
	List sources of financial and non-financial support for the review and the role of the funder, if any.		See *Handbook* Section III.3.7 Cochrane Training resource: writing a protocol

Reference

Reference

Hoffmann TC, Glasziou PP, Boutron I, Milne R, Perera R, Moher D, et al. (2014) Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. BMJ 2014;348:g1687. doi: 10.1136/bmj.g1687

Citation

Citation

Please cite this section as: Churchill R, Lasserson T, Chandler J, Tovey D, Thomas J, Flemyng E, Higgins JPT. Standards for the reporting of new Cochrane Intervention Reviews. In: Higgins JPT, Lasserson T, Chandler J, Tovey D, Thomas J, Flemyng E, Churchill R. *Methodological Expectations of Cochrane Intervention Reviews*. Cochrane: London, February 2022.