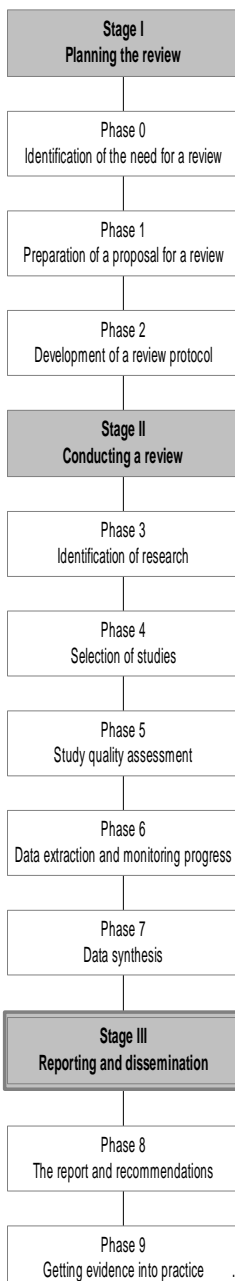

STAGE III

Reporting and dissemination



Preparing a report is the culmination of a review. A succinct report should allow readers to judge the validity and the implications of the review's findings. Preparing a manuscript of a systematic review article for publication in a peer-reviewed journal presents a unique challenge in order to condense a detailed process to comply with a journal's requirements. Additional dissemination strategies will be required to effectively target potential users and interested parties so that policies and practices are informed with any evidence contained in the review. Getting research into practice goes beyond dissemination because simply making the information available may not change practices. Targeted implementation strategies will usually be required to achieve this goal.

Phase 8 The report and recommendations

Phase 9 Getting evidence into practice

STAGE III

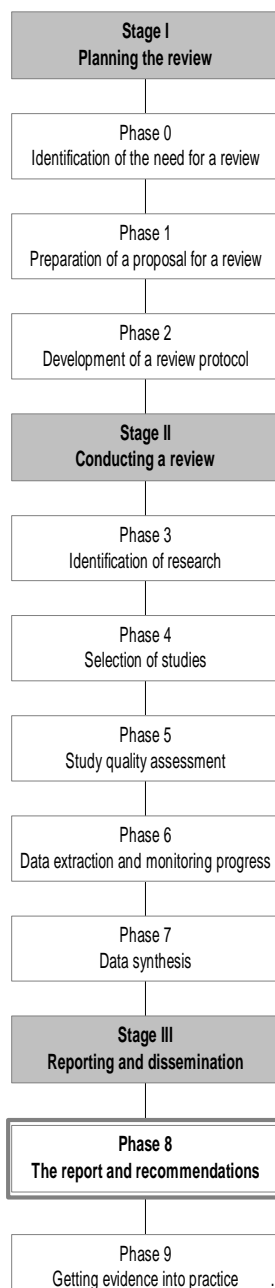
Reporting and Dissemination

PHASE 8

The report and recommendations

Khalid S Khan, Gerben ter Riet & Jos Kleijnen

This phase describes how to prepare a report and covers the objectives, methods, results and implications of a review. In order to be an effective part of a dissemination strategy, the report will need to meet the requirements of the target readership while still presenting scientific information in a clear, detailed and balanced way.



3.8.1	Report writing	4
3.8.2	Title of report	5
3.8.3	Authorship	5
3.8.4	Executive summary or abstract	5
3.8.5	Main text of the review	6
3.8.6	Acknowledgements	11
3.8.7	Conflict of interest	11
3.8.8	References and appendices	11
3.8.9	Peer review of the report	11
3.8.10	Key points	13
3.8.11	References	13

3.8.1 Report writing

Report writing is an integral part of a systematic review and it should be informed by the need to communicate effectively. Clear reporting enables readers to judge the validity and usefulness of the review for decision-making. The commissioning body will often specify the structure and length of the report required. However, to maximise the impact of the review, several other reporting formats may also be undertaken. For example, a journal article, a conference abstract, a scientific electronic preprint, an awareness bulletin for health professionals, a consumer bulletin, a web version of the consumer bulletin and a patient information leaflet may all be used to disseminate a review's findings. It is important that the needs of the potential audiences are taken into account in each format.

This phase focuses mainly on the writing of commissioned reports and articles for peer-reviewed journals. A suggested structure for this is described in Box 8.1. However, reviewers should be aware of the specific instructions to authors which vary across commissioning bodies and journals. For example, the maximum permissible length of a report varies considerably. Journals allow the main text of an article to range in length

Box 8.1

Suggested structure of a systematic review report

Title

Executive summary or structured abstract

- Context
- Objectives
- Methods (data sources, study selection, quality assessment and data extraction)
- Results (data synthesis)
- Conclusions

Main text

- **Background**
- **Questions addressed by the review** (hypotheses tested)
- **Review methods** (how the research was conducted)
 - Data sources and search strategy
 - Study selection (inclusion and exclusion criteria)
 - Study quality assessment
 - Data extraction
 - Data synthesis
- **Details of the included and excluded studies**
- **Results of the review**
 - Findings of the review
 - Robustness of the results (sensitivity analyses)
- **Discussion** (interpretation of results)
- **Conclusions**
 - Recommendations for health care
 - Implications for further research

Acknowledgements

Conflict of interest

References

Appendices

from 2000 to 4000 words. However, commissioning bodies such as the Health Technology Assessment programme in England may allow up to 50,000 words, giving reviewers some freedom to explain in detail what they did, what they found and what it means. Electronic publishing, such as reviews published in the Cochrane Library,¹ has improved this situation as there is no maximum word length for reviews published in this format. The challenge reviewers face is to prepare a readable and interesting report while complying with the conventions of the chosen format and audience.

The findings of reviews may also be summarised in health information materials for consumers, patients and members of the public. Useful ideas and practical advice about the steps involved in planning and producing such information leaflets and materials are provided in a guide produced by the Health Services Research Unit at the University of Aberdeen.²

3.8.2 Title of report

The title of the report should be concise but informative. An indicative title, which gives the purpose of the review, is more commonly used in medical journals (such as 'Antimicrobial prophylaxis in hip replacement: a systematic review of randomised trials'). This approach is probably more suitable for a scientific readership.³ However if the reviewers' objective is to attract the attention of busy practitioners to get them to read the report, a declarative title that gives the conclusion of the review may be more effective (such as 'Antimicrobial prophylaxis prevents postoperative infections in hip replacement'). The use of such titles is on the increase but there is concern that they may exaggerate the findings of the studies.³ It is important that when a declarative title is used it should be a true reflection of the results.

3.8.3 Authorship

Systematic reviews are usually undertaken collaboratively, so the issue of determining credit and authorship should be considered seriously and early in the review process. This is because criteria for authorship are often misunderstood and this may lead to disputes.⁴ Criteria for authorship include a) conception and design or analysis and interpretation of data, b) drafting the article or revising it critically for important intellectual content, and c) final approval of the version to be published.⁵ To qualify for authorship all criteria must be met. Credit for conception and design of the review may be assigned at the beginning of the review. However, many other contributions, like literature searching and acquisition of studies, extraction, analysis and interpretation of data, scientific supervision, and drafting of the report and its critical revision prior to peer review, will emerge during the review. In general, acquisition of funding or collection of data or general supervision of the review group alone are not considered sufficient contribution for authorship. A final decision about authorship may be based on scoring the contributions of each reviewer.⁶

3.8.4 Executive summary or abstract

The information contained in the executive summary of a report or the abstract/summary of an article is important initially in attracting readers' attention and allowing them to judge quickly the quality of the review and the generalisability of its findings. Journals usually do not allow more than 250-300 words for a summary, however, the abstract of a commissioned report may contain up to 1000 words. This is the most important part of the report, as this may be the only text that is read by many readers (perhaps in

conjunction with the conclusions and recommendations section of the report). Therefore, the reviewers should, as much as possible, use non-technical and persuasive language without overemphasising the significance of their findings.

The executive summary of a report, or the abstract of an article, should be written in a structured format. Separate sections summarising the contents of the review in this manner allow readers to make a critical judgement about its conduct, results and conclusions.⁷⁻¹⁰ The context section should succinctly explain the importance of the review questions. The objectives section should provide a precise statement of the primary question addressed by the review followed by any secondary questions. The methods section should describe data sources, study selection, study quality assessment and data extraction (some journals will use these subheadings instead of methods). The results section should highlight the main findings (whether qualitative or quantitative) of the data synthesis. If meta-analysis has been used, the major outcomes that were pooled along with effect sizes and confidence intervals should be given. Sensitivity analyses should also be reported if they have implications for the interpretation of the results. The conclusions should arise directly from the results of the review and their clinical application should be clearly stated. The implications for future research should be addressed.

3.8.5 Main text of the review

3.8.5.1 Background information

The need for the review should be justified by describing clearly the problem for which evidence of effectiveness was sought. The historical, social, economic and biological perspectives may be used in describing the needs of the health care professionals and consumers who are to use the findings of the review. Description of patients/populations, course of disease, available treatment options, relevant outcomes and a descriptive summary of existing reviews and pertinent studies will help to set the scene and justify the need for a systematic review. The information gathered to write the background of the review proposal (see Phase 1.1.3) would be useful in writing this section of the report.

3.8.5.2 The review questions

Each one of the research questions that the review addressed should be described in detail, in terms of populations, interventions, outcomes and research designs, as highlighted in Phase 1.2.2. When writing for a journal, the questions are often included at the end of the background information in the introduction to the main text of the article.

3.8.5.3 Review methods

The methods used should be described in sections covering the search process and strategies, inclusion and exclusion criteria, assessments of relevance and validity of primary studies, data extraction, data synthesis, and investigation of differences between studies. The protocol produced at the beginning of the review will be helpful in writing this part. Reviewers should remember to document all protocol modifications that occurred during the course of the review (see Phase 1.2.9). Regardless of whether the

methods section is being written for a report or a journal article, sufficient information should be provided to allow for an approximate replication of the review process.

3.8.5.4 Details of the included and excluded studies

The details of the study selection process should be reported explicitly, preferably using a flow diagram (see Phase 2.4.3 and Box 4.2). A list of studies excluded from the review should also be reported, where possible, giving the reasons for each exclusion. In a report, these details could be included as an appendix (see Phase 3.8.8). However, when preparing a report for publication in a journal, it may not be possible to include this section in the printed journal, but these details can be provided in an electronic version of the journal or their availability from the authors can be referred to in a footnote.

3.8.5.5 Results of the review

The findings of data synthesis (see Phase 7) should be reported succinctly. The importance of non-quantitative data synthesis has been previously emphasised and the findings of this analysis should be tabulated and summarised narratively. Important characteristics of the studies should be presented. These should include details relating to the patient groups studied, the interventions and the outcomes assessed in each study. Details of study designs, other aspects of study quality should also be given in tabular form. A quick scan through these tables should allow the reader to judge if the studies are similar in terms of populations, interventions, outcomes and quality. For reviews of effectiveness, the estimates of effect from each of the studies should be tabulated or drawn along with their confidence intervals¹¹⁻¹³ (see Phase 2.7.4.3 and Box 7.5a). Readers should be able to see if the direction and magnitude of effects is related to study characteristics and quality. These non-quantitative analyses should allow readers to make a qualitative judgement about the effectiveness of an intervention. A similar approach can be adopted for the presentation of results of other types of reviews. Preparation of these tables is laborious and time consuming, but without them readers cannot understand the results and they will have difficulty in making sense of the quantitative syntheses.

If quantitative synthesis is used, a table or diagram describing the results should indicate the relative weight that each study is given in the meta-analysis and the test for heterogeneity of study results should be given (see Phase 2.7.4.3 and Box 7.5b). In an effectiveness review, as well as reporting the results in relative terms the results should be given in absolute terms, if appropriate.¹⁴⁻¹⁶ This permits the clinical significance and possible population impact of the intervention to be assessed (see Phase 3.8.9). It is important that all subgroup analyses are reported. All investigations of the differences between the studies should be reported in full. All sensitivity analyses should be documented to allow readers to judge the robustness of the results, particularly where there are missing data, uncertainty about study inclusion, or where there are large studies that dominate the data synthesis. The space restrictions in printed journals often do not permit all of these results to be reported in detail. However, a footnote can be used to indicate how full details can be obtained from the authors. Alternatively, selective reporting in print can be accompanied by full reporting in an electronic version.

Box 8.2

Framework for the discussion section of a review

- **Statement of the principal findings of the review**
- **Strengths and weaknesses of the review**
 - Appraisal of quality of the review
 - Relation to other reviews particularly considering any differences in quality and results
- **Meaning of the review's findings**
 - Strengths and weaknesses of the evidence included in the review
 - Direction and magnitude of the effect observed in summarised studies
 - Applicability of the findings of the review
- **Recommendations**
 - Practical implications for clinicians or policymakers
 - Unanswered questions and implications for future research

*Based on structural conventions in discussion*¹⁷

3.8.5.6 Discussion

Readers often look to the discussion section of the report for help with interpreting the results of systematic reviews. However, there is concern about the state of the discussion sections of scientific articles published in the medical literature and a drive towards making them more disciplined.^{17, 18} Regardless of whether the discussion is structured or not, there is a view that it should build on the results, help with interpretation of the data, and explore the clinical relevance of the findings.¹⁹ A discussion of the validity of the evidence, considering potential biases in both the primary studies and the review, the strength of the causal evidence, the magnitude of the expected benefits, harms and costs, and the limitations these factors place on inferences, should help readers to understand the implications of the collated evidence for health care practice and policy.^{20, 21} Incorporation of the findings of qualitative research should also enhance the discussion section. A framework for writing the discussion section of a review is given in Box 8.2.

When interpreting the findings of reviews, evidence of the extent to which the results of included studies are applicable to usual care should be sought.²²⁻²⁵ Applicability or external validity is the applicability of the review's results in clinical practice. This depends on the extent to which the effects observed in a review truly reflect what can be expected in patients' routine care.²⁶ The task of generating meaningful and practical answers from reviews is not as easy as it seems in the first instance.²⁷ Moreover, reviewers should keep in mind that the evidence moderated by local needs and circumstances might lead to different applications.

One approach to examining the applicability of the results of effectiveness reviews is highlighted in Box 8.3.^{28, 29} If all the relevant outcomes potentially influenced by the interventions, including adverse outcomes are considered (see Phase 1.2.2), it will be possible to assess the magnitude of all beneficial and harmful effects in data synthesis (see Phase 2.7.4). During assessment of heterogeneity (see Phase 2.7.4.4), it may be possible to identify some factors with which the effect varies.³⁰ For example, the manner in which populations were recruited, features of the population and the settings

Box 8.3

Applying results of systematic reviews of effectiveness

- Consider all the beneficial and harmful effects
- Explore variations in the relative effects (both benefit and harm) and their reasons
- Explore whether relative effects (both benefit and harm) vary with risk level or severity of disease and control group event rates
- Compute the predicted absolute effects (both benefit and harm) according to disease severity
- Compare the benefits and harms

in which interventions were delivered, may be associated with different effect estimates. Similarly, intervention features, such as the timing, compliance or intensity, may be associated with improved or reduced levels of effectiveness. In particular, when the observed effects in individual studies differ substantially, the reviewer's primary focus should be to identify and incorporate pertinent factors that reduce heterogeneity and allow for optimum treatment strategies.³¹ Secondary analysis may be conducted to assess if a factor modifies the effect.³² Ideally this analysis should be done using individual patient data within studies³³ (see Phase 2.7.4.5). In addition, low risk patient groups may gain less benefit than high risk groups. Therefore reviewers should explore if the relative effect, e.g. the relative risk, varies with the control group event rate.³⁴⁻³⁶

Although the relative effect measures are useful for assessing the strength of the effect, to judge whether an intervention is worthwhile, the absolute magnitude of benefit is needed.¹⁶ This might be expressed as the absolute risk reduction, or as number needed to treat (NNT) or number needed to harm (NNH). The NNTs and NNHs should be interpreted taking account of differences in these measures across a range of prognoses. This is because for low risk patients absolute benefit may not outweigh the absolute harm.³⁷ Thus to apply the results, we also require information on prognosis. Finally, patients' preferences for the absolute and net benefits of interventions need to be considered to determine if the predicted absolute benefit has greater value than the harm and cost of treatment.

In terms of the applicability of summary findings from a review of cost-effectiveness, there is a genuine concern about the transferability of results between different settings. Judgements about transferability are determined by the degree to which the methods used allow replication of the results in the target setting. Ideally, the highest quality data on costs and clinical outcomes arising in the presence and absence of the interventions being evaluated are required. To facilitate an assessment of applicability, the methods used to estimate costs, effectiveness and utilities need to be as transparent as possible. In other words cost analysis should provide explicit details regarding the identification of the type and quantities of resource use, as well as the currency used (e.g. £, \$, Fr, Euro) and appropriate time frame considerations (see Phase 2.7.8). In a similar vein, details of the types of interventions compared and the

Box 8.4
Grading of practice recommendations

Grade	Level of Evidence	Effectiveness	Test Accuracy	Efficiency
A	1	High quality experimental studies without heterogeneity and with precise results	High quality studies with a blind comparison of test to reference standard in an appropriate population spectrum	High quality evaluations of important alternative interventions comparing all relevant outcomes against appropriate cost measurement, including a sensible sensitivity analysis
B	2/3	Low quality experimental studies, high quality controlled observational studies	Any <u>one or two</u> of the following: <ul style="list-style-type: none"> ▪ Narrow population spectrum ▪ Differential use of reference standard ▪ Reference standard not blind ▪ Case control study design 	Evaluations without relevant outcomes or without appropriate cost measurement
C	4	Low quality controlled observational studies, case series	Any <u>three or more</u> of the above.	Evaluations without sensible sensitivity analysis
D	5	Expert opinion	Expert opinion	Expert opinion

See hierarchies of evidence in Boxes 5.5, 5.10 and 5.13.
Modified from Sackett et al³⁹

care context in which they are provided along with the characteristics of the patients treated and their outcomes should also be transparent. Consideration of all of these factors will allow reviewers and readers to determine the implications of the predicted change in health (value of health gain) and resource use for practice in the target setting.

3.8.5.7 Conclusions

A commissioned report may have a separate section for conclusions but in a journal article it is usually incorporated at the end of the discussion section. Faced with the need to make decisions and limited time to read the whole report, many readers will go directly to the conclusions section of the review. Therefore, conclusions should be clearly worded and, to avoid misleading inferences, they must be based solely on the evidence reviewed. Reporting of graded practice recommendations in the conclusions of systematic reviews can greatly enhance the reviewers' ability to provide evidence-based 'bottom line' messages to readers.³⁸ This approach arises directly from the

quality assessment that focuses on the methodological strength of the evidence included in the review (see Phase 5). It has been used extensively and refined over time.^{28, 39} One recently updated approach to generating practice recommendations is shown in Box 8.4.

In addition to practical implications of the results for health care, the conclusions should focus on the implications for future research. The lessons of the review for development of new research (or research methods) should be documented.⁴⁰ Conclusions should also indicate a time period within which the findings of the review may be considered valid. This is usually a subjective judgement. However, reviewers may sometimes know of the dates when important trials in progress are going to be completed and this can help to plan an appropriately timed update of the review.

3.8.6 Acknowledgements

Most reviews have had input from many individuals. People who make substantial contributions (e.g. literature searching, data collection, editing assistance, etc.) but who do not fulfil the authorship criteria should be named in the acknowledgement section along with their specific contributions. It is customary to seek permission when acknowledging a contribution. Some journals insist on obtaining written permission, and may require a statement that if no acknowledgements are reported, then no persons other than the authors have made substantial contributions to the review.

3.8.7 Conflict of interest

Conflict of interest is defined as ‘a set of conditions in which professional judgement concerning a primary interest (such as patients' welfare or the validity of research) tends to be unduly influenced by a secondary interest (such as financial gain)’.⁴¹ There is nothing wrong with having such competing interests and they do not constitute dishonest behaviour.⁴² The declaration of conflict of interest simply makes the reader aware of the possibility that authors' judgements may or may not have been influenced by other factors. Reviewers need to be explicit about any conflict of interest because such transparency is important in maintaining the readers' confidence.

3.8.8 References and appendices

References must be prepared carefully and the use of bibliographic software will make this easier (see Phase 2.3.9). The style of citation will often be specified by the commissioning body or the journal. A list of references cited in the main text should be produced in the specified format. In addition, separate lists of studies included in the review and the studies excluded from the review may be produced (see Phase 3.8.5.4). These may be included as appendices. Appendices may also be used for documenting the full details of search strategies (see Phase 2.3.11), the raw data of included studies, and details of other relevant information, as appropriate.

3.8.9 Peer review of the report

Academics and subject specialists in the expert panel (see Phase 1.1.6) assembled at the beginning of the project (and patients and carers, if appropriate) should be asked to peer review the report and comment on its scientific quality and completeness. This peer review may also be undertaken independently by the commissioning body prior to publication and dissemination of the report. Draft manuscripts may also be posted on

Box 8.5

Meeting agenda C: Report revisions and dissemination

- MC.1 Discuss and agree on revisions to be made in the light of the peer review process.
- MC.2 Discuss with the advisory group and disseminators, the important messages for dissemination and possible formats, audiences and approaches.
- MC.3 Agree dates for submission of the final report, further involvement and meetings between the reviewers and disseminators.

Other meeting agendas appear in Box 2.7 and Box 6.2

institutional websites or on electronic preprint servers, allowing an opportunity for feedback from a large number of interested parties.⁴³ Such electronic preprints or eprints may be excluded by some journals from formal publication on the grounds that they constitute prior publication.⁴⁴ However, the attitudes around eprints are changing and many journals treat them as a form of early communication, like a conference presentation or abstract, exempting them from policies designed to limit prepublication publicity.^{43, 45} When posting an eprint, a warning along the lines of: 'Electronic preprint. This research has not yet been accepted for publication by a peer-reviewed journal: please do not quote' may be used by reviewers.⁴⁶ Regardless of whether an eprint was posted or not, medical journals almost invariably seek additional external peer review.^{47, 48} When feedback from external reviewers is available, a final report incorporating revisions in the light of the peer review can be prepared. A record of all the comments provided by the referees and the manner in which reviewers incorporated them in the report should be kept by the reviewers.

In addition to scientific peer review, members of the advisory group including purchasers, providers and consumers, should also be asked to assess the relevance and potential usefulness of the review. They may recommend additions or alterations that would help in identifying the main messages for dissemination and important target audiences, as well as possible formats and approaches. This should be discussed as part of a formal meeting agenda (see Box 8.5).

Reviewers may also consider submitting their review for inclusion within the Cochrane Database of Systematic Reviews. This may require some adaptation to conform to Cochrane methods and style but should enhance both the accessibility of the review and its potential to be updated as new relevant research is identified.

Another way to enhance the potential accessibility of a completed review is to send it to CRD for consideration for inclusion in DARE.

3.8.10 Key points about reporting

- The manner in which a review is reported will affect the ways in which its findings are received and implemented. Reporting should be clear, taking into account the needs of the potential readership.
- The executive summary or abstract is important in gaining the reader's attention. Therefore, the abstract should include enough relevant detail to allow readers to quickly make a judgement about the validity of the review's recommendations.
- The main text of the report should describe the scientific approach used in the review. The methods should be reported in sufficient detail to allow replication by others. The findings of the review should be reported with clinically meaningful measures of effect.
- Those making health policy and clinical decisions may not have the time to read the whole report. Therefore conclusions should be clearly worded and they must arise directly from the findings of the review. Any practical implications of the review should be graded according to the strength of the evidence.

3.1.11 References

1. The Cochrane Collaboration. *The Cochrane Library [database online and cd-rom]*. Oxford: Update Software, 2000. [cited 2000 October]. Available from: URL: <http://www.update-software.com/cochrane/cochrane-frame.html>
2. Entwistle V, O'Donnell M. *A guide to producing health information [internet monograph]*. Aberdeen: University of Aberdeen, Health Services Research Unit, 2000. [cited 2000 December]. Available from: URL: <http://www.abdn.ac.uk/hsru/guide.htm>
3. Goodman NW, Smith R. Survey of active verbs in the titles of clinical trial reports: Informative titles in the BMJ. *BMJ* 2000;320:914-915. Available from: URL: <http://bmj.com/cgi/content/full/320/7239/914>
4. Bhopal R, Rankin J, McColl E, Thomas L, Kaner E, Stacy R, et al. The vexed question of authorship: views of researchers in a British medical faculty. *BMJ* 1997;314:1009.
5. International Committee of Medical Journal Editors. Guidelines on authorship. *BMJ* 1985;291:721.
6. Rafal RB. A standardised method for determination of who should be listed as authors on scholarly papers. *Chest* 1991;99:786.
7. Squires BP. Structured abstracts of original research and review articles. *Can Med Assoc J* 1990;143:619-622.
8. Mulrow CD, Thacker SB, Pugh JA. A proposal for more informative abstracts of review articles. *Ann Intern Med* 1988;108:613-615.
9. Haynes R, Mulrow CD, Huth E, Altman D, Gardner M. More informative abstracts revisited. *Ann Intern Med* 1990;113:69-76.
10. Moher D, Cook D, Eastwood S, Olkin I, Rennie D, Stroup DF, et al. Improving the quality of reports of meta-analyses of randomised controlled trials: the QUOROM statement. *Lancet* 1999;354:1896-900.
11. Walter S. Methods of reporting statistical results from medical research studies. *Am J Epidemiol* 1995;141:896-906.
12. Pocock SJ, Hughes MD. Estimation issues in clinical trials and overviews. *Stat Med* 1990;9:657-671.
13. Gardner MJ, Altman DG, editors. *Statistics with confidence: confidence intervals and statistical guidelines*. London: British Medical Journal; 1989.

14. Cook RJ, Sackett DL. The number needed to treat: a clinically useful measure of treatment effect. *BMJ* 1995;310:452-454.
15. Forrow L, Taylor WC, Arnold RM. Absolutely relative: How research results are summarised can affect treatment decisions. *Am J Med* 1992;92:121-4.
16. Laupacis AL, Sackett DL, Roberts RS. An assessment of clinically useful measures of the consequences of treatment. *N Engl J Med* 1988;318:1728-1733.
17. Docherty M, Smith R. The case for structuring the discussion of scientific papers. *BMJ* 1999;318:1224-1225. Available from: URL: <http://bmj.com/cgi/content/full/318/7193/1224>
18. Education Group for Guidelines on Evaluation. Guidelines for evaluating papers on educational interventions. *BMJ* 1999;318:1265-1267. Available from: URL: <http://bmj.com/cgi/content/full/318/7193/1265>
19. Skelton JR, Edwards SJL. The function of the discussion section in academic medical writing. *BMJ* 2000;320:1269-1270. Available from: URL: <http://bmj.com/cgi/content/full/320/7244/1269>
20. Gelber RD, Goldhirsch A. Interpretation of results from subset analyses within overviews of randomised clinical trials. *Stat Med* 1987;6:371-378.
21. Matt GE, Cook TD. Threats to the validity of research synthesis. In: Cooper H, Hedges LV, editors. *Handbook of research synthesis*. New York, NY: Russell Sage Foundation; 1994. pp. 503-520.
22. Cowan CD, Wittes J. Intercept studies, clinical trials and cluster experiments: to whom can we extrapolate? *Control Clin Trials* 1994;15:24-29.
23. Bailey KR. Generalising the results of randomized clinical trials. *Control Clin Trials* 1994;15:15-23.
24. Davis CE. Generalising from clinical trials. *Control Clin Trials* 1994;15:11-14.
25. Rubins HB. From clinical trials to clinical practice: generalising from participant to patient. *Control Clin Trials* 1994;15:7-10.
26. Glasziou P, Guyatt G, Dans A, Dans L, Straus S, Sackett D. Applying the results of trials and systematic reviews to individual patients. *Evidence-Based Medicine* 1998;3:165-166.
27. Yusuf S. Obtaining medically meaningful answers from an overview of randomized clinical trials [with discussion]. *Stat Med* 1987;6:281-294.
28. Guyatt G, Sackett D, Sinclair J, Hayward R, Cook D, Cook R. Users' guide to the medical literature. IX. A method for grading health care recommendations. *JAMA* 1995;274:1800-1804.
29. Glasziou PP, Irwig LM. An evidence based approach to individualising treatment. *BMJ* 1995;311:1356-1359.
30. Thompson SG. Why sources of heterogeneity in meta-analysis should be investigated. *BMJ* 1994;309:1351-1355.
31. DerSimonian R, Levine RJ. Resolving discrepancies between a meta-analysis and a subsequent large controlled trial. *JAMA* 1999;282:664-670.
32. Oxman AD, Guyatt GH. A consumers guide to subgroup analyses. *Ann Intern Med* 1992;116:78-84.
33. Stewart LA, Parmar MKB. Meta-analysis of the literature or of individual patient data: is there a difference? *Lancet* 1993;341:418-422.
34. Thompson S, Smith T, Sharp S. Investigating underlying risk as a source of heterogeneity in meta-analysis. *Stat Med* 1997;16:2741-58.

35. Walter S. Assessing the relationship between effect size and baseline risk in the context of meta-analyses. *Stat Med* 1997;2883-2900.
36. Sharp S, Thompson S, Altman D. The relation between treatment benefit and underlying risk in meta-analysis. *BMJ* 1996;313:735-738.
37. Sackett D. Applying overviews and meta-analyses at the bedside. *J Clin Epidemiol* 1995;48:61-66.
38. Canadian Task Force on the Periodic Health Examination. The periodic health examination. 1. Introduction. *Can Med Assoc J* 1979;121:1193-1254.
39. Sackett D, Straus S, Richardson W, Rosenberg W, Haynes R. Guidelines. In: Sackett D, Straus S, Richardson W, Rosenberg W, Haynes R, editors. *Evidence-based Medicine: How to practice and teach EBM*. 2nd ed. Edinburgh: Churchill Livingstone; 2000.
40. Eagly AH, Wood W. Using research synthesis to plan future research. In: Cooper H, Hedges LV, editors. *Handbook of research synthesis*. New York, NY: Russell Sage Foundation; 1994. pp. 485-500.
41. Thompson DF. Understanding financial conflicts of interest. *N Engl J Med* 1993;329:573-576.
42. Smith R. Beyond conflict of interest. *BMJ* 1998;317:291-292. Available from: URL: <http://bmj.com/cgi/content/full/317/7154/291>
43. Delamothe T, Smith R, Keller MA, Sack J, Witscher B. Netprints: the next phase in the evolution of biomedical publishing. *BMJ* 1999;319:1515-1516. Available from: URL: <http://bmj.com/cgi/content/full/319/7224/1515>
44. Kassirer JP, Angell M. The Internet and the journal. *N Engl J Med* 1995;332:1709-1710.
45. Smith R. What is publication? A continuum. *BMJ* 1999;318:142.
46. Delamothe T. Electronic preprints: what should the BMJ do? Clear labelling might be the answer. *BMJ* 1998;316:794-795.
47. Squires BP. Biomedical review articles: what editors want from authors and peer reviewers. *Can Med Assoc J* 1989;141:195-197.
48. Squires BP. Biomedical manuscripts: what editors want from authors and peer reviewers. *Can Med Assoc J* 1989;141:17-19.

