

Editorial Process for Cochrane Systematic Reviews of Diagnostic Test Accuracy

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Introduction

Cochrane Review Groups (CRG) are the teams who manage the publication of Cochrane systematic reviews. CRGs are made up of administrative staff, information scientists, clinicians, epidemiologists and statisticians with expertise of a particular medical speciality ¹. CRGs are led by a Coordinating editor and have an administrative, or editorial base, which manages the registration, peer review and publication of the reviews, communication with authors and editors and other members of the Cochrane Collaboration.

Each CRG editorial base has responsibility for assessing the clinical suitability of all reviews they publish. Because there are relatively few people with knowledge of the methods to prepare systematic reviews of diagnostic test accuracy a specific peer review process exists for these. The Diagnostic Test Accuracy Editorial Team (DTA ET) was convened by the Steering Group of the Cochrane Collaboration in 2008 and is an editorial board with expertise of the methods of systematic review of diagnostic test accuracy.

The DTA Editorial Team consists of methodologists, epidemiologists, statisticians and clinicians with knowledge of the methodology of diagnostic research, synthesis of evidence from diagnostic test accuracy studies and who are familiar with the content of the Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy ². Details of the DTA Editorial Team can be found here (<http://srdata.cochrane.org>)

The CRG and the DTA ET work together during the editorial process of DTA reviews. For a DTA review to be published both The CRG and the DTA Editorial Team must agree the work is of suitable quality. The peer review and editorial processes of individual CRGs vary and details can be found by asking the CRG ¹. The DTA ET follow a specific strategy for peer review and this is described in detail below.

Preparing a Cochrane DTA review is a multi stage process

When preparing a paper for publication in a conventional print journal authors typically approach the editors with a completed paper for peer review. Preparing Cochrane DTA reviews follows a process with many steps and DTA review authors do not, generally, approach the CRG with a completed review. Usually the DTA review authors contact the CRG before they start the review and the CRG's editorial base provides an input to the review process from the time the review authors first make contact.

The life of a DTA review has three main phases

- Title registration
- Preparation and publication of a Protocol
- Preparation and publication of the full-text Review

Proposed ideas for DTA reviews will be discussed with the CRG's editorial team. If accepted authors then prepare, using the Handbook for Systematic Reviews of Diagnostic Test Accuracy ^{2,2}, and subsequently publish a Protocol or plan for the review that includes background, rationale and all methods. Following this is the work

on the main review, with help available for problems with statistical or methodological issues and with searching for primary diagnostic research studies. At all stages of the process, the work is carefully checked by members of the CRG editorial team. Before publication the Protocol and Review are peer reviewed by the CRG and by the Cochrane DTA Editorial team (DTA ET).

Registration of a new Cochrane DTA review with a CRG

Authors make a request to prepare and maintain a Cochrane DTA review in advance of the synthesis of evidence. The CRG editorial base will assess each request to register a DTA review for suitability for publication on The Cochrane Library. Authors are asked to complete a Title Registration Form (TRF) outlining in detail the scope of their proposed review and the experience of their review authors. CRGs may either

- accept and register a review proposal or
- decline to accept a proposal.

CRGs assess if the

- proposed review falls in their scope,
- fits with their priorities,
- has a team with suitable experience and expertise to prepare a DTA review and is
- not duplicated elsewhere on the Cochrane Library.

CRGs may take into consideration the availability to authors of training and other reference materials before accepting a review title. Individual CRGs may apply other specific criteria when assessing proposals to register DTA reviews.

Peer review of Cochrane DTA protocols and reviews

Protocols for DTA reviews and the full-text systematic reviews are peer reviewed by the CRG and the DTA ET with the aim to assess

- the clinical usefulness and appropriateness of the focus of the review
- suitability of the methods to achieve the objectives of the review
- adherence to the methods described in the Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy.
- Interpretation of results and inferences drawn.

The details of the editorial process for each CRG varies and individual details can be found by contacting the specific CRG. Details of the editorial process of the DTA ET is described below. The process of peer review for both Protocols and Reviews follows the same 5 basic steps.

- The completed Protocol/Review is sent, by the CRG, out for peer review to clinical editors and peer reviewers and to the DTA ET for methodological peer review.
- The editors and peer reviewers prepare detailed reports for the authors.

- The authors revise the Protocol/Review and prepare a detailed response to the editors' and peer reviewers' comments and return these both to the CRG.
- The editors assess the revised Protocol/Review and the review authors' response to the editorial comments. If more work is required the material is returned to the authors. If no more work is required the Protocol/Review is considered suitable for publication.
- The CRG, with help from the authors will then copy edit and provide technical editing of the Protocol/Review in readiness for publication.

Technical and copy editing

Cochrane systematic reviews are highly structured documents. The Cochrane Library is a database style Journal and it is important that authors follow guidance on where, within the review, specific information is placed within the review. All Cochrane systematic reviews must be prepared using RevMan³, specific software that facilitates publication. During the life of the review the CRGs assist authors in the use of RevMan and to fulfil criteria for placement of text and formatting. Before publication specific style rules and rules regarding placement of text are checked and edited^{4,5}.

Publication

Both the CRG and the DTA ET must agree that a protocol or full-text review is suitable for publication before it can be published. In rare cases, for example if a protocol or review does not meet minimum quality criteria, permission to publish may be declined. The process of accepting a review for publication differs from that of print journals in which many papers are sent to the journal for consideration and therefore many papers are rejected. CRGs select carefully which reviews they accept at the title registration stage and may work with authors to assist them to follow appropriate research methods and to respond to peer reviewers' comments. Once a protocol or review is approved for publication authors will be contacted to sign 'Licence to publish' forms.

The DTA ET Peer Review Process

The DTA ET peer review assessment is in three phases.

Phase 1 Assessment of Protocol/Review and preparation of peer review reports

Phase 2 Preparation of Contact Editor report, discussion by DTA ET and publication decision.

Phase 3 Assessment of revised Protocol/Review and permission to publish.

Phase 1 Assessment by peer reviewers

The process starts when the DTA ET receives a Protocol/Review from a CRG.

The Protocol/Review is assigned to a DTA ET Contact Editor. The Contact Editor assigns three peer reviewer experts and sends the Protocol out for peer review comments. Typically the three experts comprise

- An information expert with experience of searching for diagnostic test accuracy studies.

- A statistician with expertise in meta-analysis of data from studies of diagnostic test accuracy
- An epidemiologist or similar with expertise in systematic review of diagnostic test accuracy.

The experts are given 2 to 3 weeks to prepare a report on the Protocol/Review and are asked to assess if

- methods outlined in the Protocol/Review are suitable to allow the objectives of the Protocol/Review to be met
- background and rationale adequately set out the clinical problem
- interpretation of the results obtained is met by the level of evidence found and if the
- inferences drawn from the results are appropriate.

Phase 2 Synthesis of comment and discussion

At the end of the 2 to 3 week consultation period the DTA ET Contact Editor collates the comments from the peer reviewers and presents these with the Protocol/Review at the DTA ET monthly meeting. All protocols and reviews are discussed by the DTA ET Editors at meetings held each month. The DTA ET discuss the review and agree if the Protocol/Review is ready for publication or requires a little more work, or considerable additional work. The DTA ET Contact Editor then writes a report with three parts

- Contact Editor Report for the CRG editors
- Contact Editor Report for the authors
- DTA ET peer review report from the three specialist peer reviewers (anonymous).

The Contact editor report includes the DTA ET Decision. This is the recommendation from the DTA ET to the CRG. Typically the recommendations are that the Protocol/Review is

- Acceptable or Acceptable with Minor revisions
- Requires revision and resubmission
- Requires substantial revision and resubmission (possibly to include a second round of peer review).

The DTA ET Contact Editor's reports are all sent to the CRG where the CRG editors may assess the DTA ET report and recommendations alongside their own peer review report. The CRG and DTA ET Contact Editor may wish to be in contact to discuss particular aspects of the Protocol.

The CRG sends the authors the

- Contact Editor Report for the authors
- DTA ET peer review report from the three specialist peer reviewers (anonymous).

and requests that authors provide a

- revised Protocol/Review and a
- response to the numbered list of DTA ET requested changes.

Phase 3 Assessment of revised Protocol/Review

The CRG send to the DTA ET the revised Protocol/Review and the authors' detailed response to both the Contact Editor Report for the authors and the DTA ET peer review reports from the three peer reviewers.

The DTA ET Contact editor assesses the revised Protocol/Review and will either approve it for publication or ask the author to revisit specific points. In certain circumstance the DTA ET Contact Editor may ask DTA ET Peer reviewers to reassess the Protocol/Review. The CRG are notified and if suitable for publication the CRG will initiate technical editing and copy editing in preparation for publication.

Cochrane systematic reviews of diagnostic test accuracy must not be published until both the CRG editors and the DTA ET have approved the Protocol/Review for publication.

Reference List

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4. Macle hose, H. G. *Cochrane Style Guide*. (4th edition [Beta]). 2008. (GENERIC)
5. Smidt N, Deeks JJ, Moore TTH. Guide to the contents of a Cochrane review and protocol. In: Deeks JJ, Bossuyt PM, Gatsonis C, eds. *Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy*. 2008;