

Cochrane workflow questionnaire and teleconference findings – brief report

Introduction

Cochrane has engaged with the consultancy firm Origin Editorial to support the work of selecting and implementing a new Editorial Management System (EMS). Cochrane has now selected Editorial Manager as the provider for its future EMS (see [announcement](#)), and is in the process of implementing this new system. As part of the planning for this change, Origin Editorial conducted questionnaires and teleconferences with Cochrane members between June and September 2020, to assess the workflows of Cochrane groups producing Cochrane content. The goals of these assessments were to use the findings to build a flexible and universal workflow for Cochrane content in a new EMS, and to engage the Cochrane community in preparation for the upcoming change.

The questionnaires and teleconferences (1 hour or longer) covered topics of workflow, communication, quality control, and reporting, and they were conducted with editors of Cochrane Review Groups (CRGs), Cochrane's Editorial Service, and editors and managers responsible for Cochrane Clinical Answers, Editorials, Special Collections and translations. Forty-one questionnaires and 47 teleconferences were completed.

This brief report provides the key information gathered during the assessments, the recommendations made by Origin Editorial, and the next steps for the EMS.

Findings

Building a flexible and universal workflow:

The assessments found that Cochrane content follows the general norms of scientific publishing, including:

- Acquiring content, for example assessing proposals for new reviews and inviting authors to write reviews on specific topics;
- Submitting content, for example submitting Review Manager (RevMan) files for protocols and reviews, collecting conflicts of interest declarations, and collecting author information relevant for protocol or review;
- Conducting peer review, for example identifying and inviting experts to peer review, and making editorial decisions.

The workflow assessments also identified key differences between Cochrane and standard practice within scientific publishing in the following areas:

- Cochrane provides author support in the development of content, for example providing searches via Information Specialists and providing tools such as RevMan;
- Cochrane has extensive quality assessment and control processes, including checking against Methodological Expectations of Cochrane Intervention Reviews (MECIR) standards, and document editing;
- Cochrane does not have standard role management, for example responsibilities for editors and staff differ from industry norms.

The assessments also identified that where there were differences in processes between and within CRGs, these differences fell into several categories:

- The use of the Archie (Cochrane's current EMS);
- The use of third-party software to support or replace Archie functionality;
- Responsibilities of people within teams (staff, editors, copyeditors);
- Peer-reviewer roles (consumer, clinical, statistical, methodological);
- The stage workflow tasks are performed;
- Specific internal workflows to handle needs not in scope of the current EMS.

These findings of similarities with industry norms, and the identification of differences within specific categories, show that a new EMS can successfully model Cochrane's workflows with adjustments made for differences in EMS technology. **Cochrane can achieve a universal workflow in a new EMS, while allowing enough flexibility to handle different content types.** The benefits of a universal workflow include a stable and consistent process that can provide reporting on acquiring content, submissions, and peer review.

Preparation for change:

The follow-up conference calls proved effective as a means of engaging with Cochrane teams and preparing for change. The calls were successful in gauging interest in the EMS project as well as assessing the perceptions of various teams. A general observation from the Managing Editors was that they were concerned about change; however, every call ended with a positive response to the new tools they can expect with the EMS. The main concerns expressed included:

- Lack of conviction in carrying through with the EMS;
- Having sufficient flexibility within the workflows;
- Implementing new policies or workflows;
- Addition to workload;
- Training timing and schedule.

Identification of key challenges that cannot be addressed by the implementation of a new EMS:

The questionnaire and follow-up conference calls highlighted challenges within Cochrane, that cannot be solved by the implementation of a new EMS.

Quality control

Cochrane protocols and reviews have a current quality-control process that costs thousands of staff hours per year. Managing Editors spend an average of 10-40 (or more) hours per initial submission in order to prepare an article to be sent out for peer review. CRGs handle this process differently as no standard process for evaluating incoming content exists between the CRGs. This leads to inefficiency and an inability to deliver a uniform Cochrane experience regardless of the CRG.

Copyediting and typesetting

The copyediting and typesetting workflows appear to be shared by the CRGs and copyeditors. The CRGs currently perform multiple rounds of manuscript editing when protocols and reviews have been submitted for editorial approval. When editing, the CRGs are "internally consistent" within the article. These differences in editing styles is important, as industry publications widely use electronic typesetters that automatically set the journal style within an article and perform functions such as reference formatting. The current process lends itself to potential human error, poor allocation of staff time, and confusion regarding overall style.

Role management

Roles and responsibilities vary widely between CRGs and within Cochrane. Managing Editors, for example, handle a huge variety of tasks ranging from author support, editing and writing content, peer-reviewer identification and management, and copyediting. Coordinating Editors and Contact Editors tend to perform tasks more in line with editorial board members or high-level peer reviewers.

Recommendations

Origin Editorial made the following recommendations for Cochrane’s workflows.

Table 1: Recommendations for workflows from Origin Editorial

Workflow	Recommendation
Pre-submission queries/expressions of interest	<ul style="list-style-type: none"> • Centralise pre-submission queries into a Cochrane Web form, or within the EMS, and distribute to CRGs. • Evaluate queries and invite authors to submit proposals if deemed worthy (see next step).
Title Registration and acquiring content	<ul style="list-style-type: none"> • Invite authors to submit proposals via the EMS (allows for automated due dates, reminders, and full reporting of content in progress). • Receive proposals from authors via the EMS (allows for custom questions to be answered during submission). • Assign appropriate roles for review and discussion. • Decide whether to take proposals forward, and if so, invite protocols and trigger title registrations.
Quality Control	<ul style="list-style-type: none"> • Provide standard and more comprehensive templates for all protocols and reviews. • Build a standard quality control workflow with guidance on responsibility for changes. • Reject earlier and more often with an invitation to resubmit after extensive changes. • Require author training* and certification upon proposal acceptance. • Provide reference formatting and/or typesetting software in RevMan or the EMS. • Investigate use of UNSILO** manuscript evaluation tool as part of the EMS.
Peer review	<ul style="list-style-type: none"> • Standardise editor terminology, along with specific tasks and duties that each type of editor performs within the CRG. • Require CRG editors to provide names of potential reviewers to the Managing Editor.
Copyediting	<ul style="list-style-type: none"> • Provide access to an XML editor to avoid editing in RevMan. • Adopt a standard reference style, such as and National Library of Medicine (NLM) or American Medical Association (AMA) (allows authors to use Reference Management software). • Determine the responsibility of the CRG versus copyeditors with regard to editing.
Diagnostic Test Accuracy Reviews	<ul style="list-style-type: none"> • Assign to a DTA editor within the primary EMS. Once the workflow is complete, automatically reassign to the CRG editor.

Editorials	<ul style="list-style-type: none"> • Invite authors of editorials via the EMS (allows for automated due dates, reminders, and full reporting of content in progress). • Receive editorials from authors via the EMS.
Cochrane Clinical Answers, podcasts or other derivative products	<ul style="list-style-type: none"> • Invite authors of derivative products via the EMS, with links to primary source article (allows for links to accept/decline with automated reminders and due dates). • Receive derivative content from authors via the EMS. • Customise the peer-review workflow based on article type, with full reporting and automated deadlines.
Translations***	<ul style="list-style-type: none"> • Use editor forms to tag articles for priority translation and designate important languages. • Use the EMS for correspondence (for example Managing Editors could contact the Translations team via the EMS or notify the team of pending updates) • Use linked submissions in the EMS (translations may be linked to the submission record)

*Training programs could include online courses such as a video course combined with an embedded series of practical questions or monthly live webinars. Completion would provide a certification to write for Cochrane.

**UNSILO (<https://unsilo.ai/about-us/>) provides an API evaluation tool which employs machine learning to perform and assist in the QC process.

***The translation workflow is outside of the scope for the new EMS, and translations will continue to be developed using other systems; however, the EMS has several functions that could complement translation workflows.

Next steps

The next steps for this programme of work will include the customisation of Editorial Manager for Cochrane editorial workflows, considering the findings from the workflow questionnaires and teleconferences, and the recommendations made by Origin Editorial in Table 1. The recommendations in Table 1 in standard font are being considered by the [Project Team](#) and [Community Liaison Team](#) to build the workflows for the initial implementation of Editorial Manager. The recommendations in Table 1 in **bold** font require further consideration by the [Programme Board](#): some of these recommendations may or may not be implemented, or implemented after the initial roll out of Editorial Manager. As noted in the findings above, some of the challenges highlighted in Cochrane's processes, such as quality control, copyediting, and role management, cannot be resolved through the implementation of an EMS alone. These issues will need further consideration within Cochrane.

Once Editorial Manager has been customised for the initial implementation of Cochrane editorial workflows, the Cochrane Fertility Regulation Group will pilot Editorial Manager, and adjustments to the system will be made. This pilot will begin in November 2020 and will be followed by further implementation of the EMS to the other CRGs in the Children and Families Network, with a view of moving to live usage of the system in early 2021 for new editorial submissions. Further implementation will move forward on a Network-by-Network basis, and with other Cochrane editorial teams working outside of the Networks (for example teams responsible for derivative products).

The findings of the workflow assessment also highlighted that CRGs have concerns about the implementation of a new EMS, such as flexibility of workflows, workload and training. The EMS Community Liaison team is committed to supporting Cochrane through the transition, in particular to supporting Managing Editors. The team will play a key role in building and implementing workflows in Editorial Manager. While there may be some specific requests from the Cochrane Community that cannot be accommodated in Editorial Manager, the team will work towards a

system, with some flexibility, to meet Cochrane's needs. The implementation of Editorial Manager will also be managed to allow ample time for training and practice prior to going live. An in-depth training and support plan for all CRG staff is in development, and Cochrane's Community Support, Managing Editor Support, and EMS Community Liaison teams are being provided initial training on the system now. These teams will be in frequent communication with the CRG community throughout implementation of Editorial Manager, and CRGs will be fully supported as they move onto the new system in the coming year.

- Updates about the EMS programme of work are frequently posted on the EMS website on Cochrane Community; [visit the EMS site](#)
- [Learn more about Editorial Manager](#)
- Queries about Editorial Manager can be sent to the Cochrane support team (support@cochrane.org)

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