**Core features of the proposed new format for Cochrane Reviews and supporting evidence**

| **Aim of the new format** | **Evidence** | **Comments** |
| --- | --- | --- |
| More responsive to the needs of users | [“Our mission is to promote evidence-informed health decision-making by producing high-quality, relevant, accessible systematic reviews”](https://www.cochrane.org/about-us)  [“Cochrane exists so that healthcare decisions get better”](https://www.cochrane.org/about-us)  [User testing](https://bmcmedinformdecismak.biomedcentral.com/articles/10.1186/1472-6947-8-34) and reviews of Cochrane reviews have found that they are difficult for decision-makers to understand and use;[[1]](#footnote-1) e.g. they are long, there are frequently large numbers of comparisons and outcomes, there is frequently missing information about [outcomes](https://www.sciencedirect.com/science/article/pii/S0895435614003989%20and%20https:/systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-015-0060-0), particularly [adverse effects](https://linkinghub.elsevier.com/retrieve/pii/S0895-4356(06)00025-4),[[2]](#footnote-2) and they use unfamiliar language and jargon. Multiple efforts to develop derivative products based on Cochrane Reviews attest to the fact that Cochrane Reviews are not meeting the needs of decision makers. This includes summaries for health professionals, patients and the public (e.g. [BackInfo](https://linkinghub.elsevier.com/retrieve/pii/S0895-4356(06)00025-4)), and policymakers (e.g. [SUPPORT Summaries](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3040014/) and [public health summaries](https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-018-0307-z)).  Efforts to automatically generate short versions of Cochrane Reviews (by selecting parts of the full review) have had, at best, limited success, because the reviews are not designed or written in such a way that it is possible to create a short version that meets the needs of decision-makers by simply cutting and pasting parts of reviews as they are currently written and formatted.  Reactions from the Cochrane community to this project reflect widespread recognition of problems with the current format and the need for redesigning the format consistent with what we are proposing.[[3]](#footnote-3) | Cochrane Reviews are supposed to inform decisions; i.e. by health professionals, patients and the public, and policymakers. However, they are designed primarily for researchers and perceived as academic. They are not easy to understand and use for any of those key target audiences. Consequently, there are multiple efforts to create derivative products that meet the needs of those audiences. Moreover, efforts to create derivative products have found shortcomings in Cochrane Reviews that make it difficult to create those products. And when those products are created by Cochrane groups (e.g. SUPPORT Summaries prepared by EPOC), it wastes resources (which could be used to improve Cochrane Reviews and make them easier to understand and use) and lessens the value of Cochrane Reviews (since people in the key target audience would prefer to use a derivative product rather than the Cochrane Review).  There are needs for tailored derivative products that build on and go beyond what Cochrane Reviews can offer. However, there is also a need to improve the quality, understandability, and usefulness of Cochrane Reviews themselves. Recognition of this need is why this project has resonated to the extent it has within the Cochrane community. |
| Less time consuming to write | Cochrane reviews are long. [Due to the length of Cochrane Reviews, translation is limited, for the most part, to abstracts or plain language summaries](https://www.cochrane.org/news/translated-cochrane-evidence). | The proposed new format has the potential to reduce the time that it takes to write Cochrane Reviews by eliminating unnecessary redundancy (e.g. between the abstract and plain language summary), by shortening the length of the full text, and by focusing the writing efforts of review authors on the key text that is important for decision-makers. |
| Easier to edit and to peer review | The findings are reported inconsistently within Cochrane Reviews (in the abstract, plain language summary, results, tables, discussion, and conclusions)[[4]](#footnote-4) | The proposed new format has the potential to reduce the time that it takes to edit and peer review Cochrane Reviews by shortening the full text and focusing editorial efforts on the summary and full text (the top two layers of the review), and by eliminating unnecessary redundancy. |

| **Core features** | **Evidence** |
| --- | --- |
| Use a layered approach | There is much evidence that decision makers prefer evidence from systematic reviews to be provided in a layered format: a short summary with the key messages followed by content that is increasingly detailed.[[5]](#footnote-5) This format is also called ‘graded-entry’. A layered format is helpful to readers for several reasons:   * People tend to scan information first, to estimate its relevance and potential value, before deciding to read it. Short summaries can facilitate scanning. * When people decide to start to read, many jump straight to the abstract and conclusions. Many people only read the abstract. Providing a short summary up front makes the parts readers are looking for easier to find. * Different audiences have different needs regarding the amount of detail they want. When content is layered, readers can control the amount of detail presented to them according to their own needs, which may differ over time. * A layered document structure encourages information providers to write clearly and succinctly, something they might not otherwise prioritize. |
| Reduce repetition by combining the abstract and the plain language summary in the top layer | The information in the abstract and plain language summary is largely the same. There is some [evidence](https://bmcmedinformdecismak.biomedcentral.com/articles/10.1186/1472-6947-8-34) that health professionals prefer the plain language summary over the abstract, and the feedback regarding combing the abstract and plain language summary has been uniformly positive so far. |
| Making the first summary of findings table part of the top layer (outside of the pay wall) | Evidence of the value of the SoF is widely accepted and SoF tables have become a mandatory feature of Cochrane Reviews. But there is substantial variation in the quality of SoF tables and many Cochrane Reviews still do not include SoF tables.  Words and numbers have different strengths and weaknesses for presenting the effects of interventions. The main argument for using numbers is that they are precise, whereas words can mean different things to different people.[[6]](#footnote-6) This can lead to misunderstanding. On the other hand, words are easier and more natural to use than numbers, allowing for fluidity in communication. They also may be easier to understand for people with poor numerical skills. In addition, words can quickly convey the “gist” of effects. This can be useful in situations where a precise understanding is not necessary and a rough understanding of the direction of effect is sufficient. Brief verbal summaries can also help people decide whether to continue on to more precise or detailed information.[[7]](#footnote-7) Moreover, some people may not want numbers or may have difficulty understanding numerical information.  For these reasons, it is helpful to use both words and numbers to present the effects of interventions. The fact that some people may not be interested in numbers is not a reason not to provide them for those who can benefit from numerical information. User tests of various formats of Cochrane Review summaries using words, numbers, or both suggest that users prefer a combination.[[8]](#footnote-8) Standard expressions presented alongside numerical results can help users feel more confident in their understanding of the numbers.7  People’s preference for words or numbers also depends on the manner in which they are presented. For example, people may experience numbers in text as off-putting and complicated, and therefore prefer numbers in tables. Other advantages to using summary of findings tables to present numerical information about the effects of treatments, include:[[9]](#footnote-9)   * Tables are more efficient for presenting numbers in the text, since the headings do not need to be repeated. * Tables facilitate putting standard expressions alongside the numbers. * People who are not interested or have difficulties with numbers can easily hop over tables or can just focus on selected information in tables, such as standard expressions.   In addition to greatly improving the understandability and usefulness of the top layer, including the first SoF table in the top layer and using it as the basis for how findings are reported (using standardised plain language statements) can help to improve the quality of those tables by ensuring that review authors and editorial teams focus attention on them and ensure that they are done well. |
| Making the full text concise and easy to read in the second layer | This is consistent with other presentations using a layered approach and so far the feedback on this has been uniformly positive. |
| Putting much of the methods, tables, figures, and additional information in appendices, in the third layer | Much of this information is primarily of interest to researchers and technical support staff (e.g. methodologists supporting guideline groups, policy advisors). Many of the people who have user-tested the new format and the people in the advisory group have been researchers, and so far, they have not indicated any displeasure or problems with this information being in the third layer. |
| Making the characteristics of included studies “table” a proper table | Currently this is very long text that requires a huge proportion of the copy editing budget (according to Karla), is done inconsistently, and is rarely used. The new format replaces this with a table of the key characteristics (relevant to the review), similar to what would be found in many reviews in top tier journals. |

| **Additional changes** | **Evidence** |
| --- | --- |
| More information to help put the findings of the review into a decision-making context | Patients and the public, health professionals, and policymakers need and want additional information to help them put the findings of systematic reviews of effects in a decision-making context. Evidence from interviews and designing derivative products for each of these target audiences supports this (see, for example, links to references above).[[10]](#footnote-10) |
| A new standard table summarising what the review authors searched for and found | This replaces the long boring text under Description of studies at the beginning of the Results section in the current format (which is rarely read). It is a simple table with two columns. We use these tables in [SUPPORT Summaries](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3040014/) and users found them useful and valued them. Feedback from user testing the new format for Cochrane Reviews and from the advisory group has also been consistently positive. |
| A new standard table for applicability of the evidence | This table goes under the heading Applicability of the evidence in the Discussion section and replaces the text in that section. It is a simple table with two columns: Findings and Interpretation. It makes the judgements made by review authors more transparent and directly linked to the review findings. We included a similar table in in [SUPPORT Summaries](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3040014/) and users found them useful and valued them. Feedback from user testing the new format for Cochrane Reviews and from the advisory group has also been consistently positive. |
| A new table for agreements and disagreements with other studies or reviews | This is a simple table which can have two or more columns. It replaces the text under that heading in the Discussion section. It improves the consistency of reporting and makes this information easier for users to browse, to get the gist of, and to find |
| Changes to standard headings | These have been made in relation to the changes noted above and based on feedback. |
| Changes to layout/design | The design has been kept consistent with the new *Cochrane Library* platform.  We have introduced three tabs for navigation between layers of the reviews and to make the three layers immediately recognisable.  Other changes to the layout/design, based largely on feedback, include:   * some changes to the information about the review under the title; * partially hiding (collapsing) the first SoF table so it is easy to find and expand, but is not off-putting for users who may not be familiar with them or comfortable with tables and numbers; and * hiding most other tables and figures, but making them easily identifiable and accessible using hyperlinks and using thumbnail pictures, which in addition to making it easy to identify the figures and tables, breaks up the text. |
| Changes to navigation/menu | Some changes have been made to the navigation menu to make it consistent with changes to the format and more intuitive. |

**Changes that may require a separate project/process before being implemented**

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| --- | --- |
| **Other changes** | **Evidence** |
| Interactive summary of findings tables | [Interactive SoF tables](https://isof.epistemonikos.org/#/) have a number of advantages over static SoF tables. Implementing these in The Cochrane Library has already been identified as a priority. |
| Table summarising intervention details | Intervention details are rarely fully considered or completely reported in systematic reviews, limiting the reproducibility and usability of systematic reviews.[[11]](#footnote-11) Improving the consideration and description of interventions in systematic reviews, such as by providing a summary table with details, is likely to contribute improved decision making. |
| Subgroup analysis tables + grading | There are huge problems with the conduct and reporting of subgroup analyses, and most reported subgroup effects are not credible.[[12]](#footnote-12) We propose that subgroup analyses should be [planned in protocols](https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/Resources-for-authors2017/what_are_explanatory_factors.pdf), the credibility of subgroup effects should be assessed explicitly using standard criteria,[[13]](#footnote-13) and subgroup effects should be reported using standard language, similar to plain language statements for overall effects.[[14]](#footnote-14) |
| Implications for research | There are at least three possible ways of structuring these tables:  1) with rows for further trials (evaluations), systematic reviews, and other types of research (like in our rewritten example reviews – see the rewritten Antibiotic prescribing example);  2) with rows for GRADE criteria (see See table 9 from article <https://onlinelibrary.wiley.com/doi/abs/10.1002/jrsm.1313>, suggested by Elie Akl in Advisory Group feedback Round 2), or  3) with rows for EPICO (see EPOC guidance for both Elie’s suggestion and EPICO: <https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/Resources-for-authors2017/implications_for_research.pdf> |
| Evidence to decision tables | Recommendations for practice require assumptions about values (particularly the relative importance of the desirable and undesirable effects of an intervention), knowledge about the specific context(s) for which recommendations are intended, and judgements that are beyond the scope of a systematic review. Therefore, Cochrane reviews should not make recommendations. However, evidence to decision tables[[15]](#footnote-15) can be used as a structure for helping authors and users of Cochrane Reviews think through the [implications for practice](https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/Resources-for-authors2017/implications_for_practice.pdf). |
| Messages for media | A curated site is needed to make podcasts, press releases, and other KT products produced by review groups and other Cochrane groups more accessible and to help ensure the quality of these. They should be lined to from the top layer of the review. This also could improve the visual appeal of the top layer by introducing a picture. |

1. Key findings from user testing with health professionals included that: unfamiliar language/jargon caused confusion; too dense, too much text; important content too far down on page; not interested in reading whole review; Forrest plots unfamiliar and not intuitively located; perceived as an academic resource; plain language summaries appreciated. [↑](#footnote-ref-1)
2. Summaries of findings in Cochrane reviews. Methods Groups Newsletter, June 2004. [↑](#footnote-ref-2)
3. For example, the following comments were made by CoEds at the midyear meeting this year: “Looks fantastic! When can it be rolled out?” “This is fantastic. I approve. This must be the way forward. However, you said this would make it easier for authors, but there are some extra demands on authors, such as information on equity and economics.” “A great initiative! Can we make the forest plots more interactive? Can we link to Revman so that this is possible?” “My only question is why has this taken so long? “Regarding the merging of the PLS and the abstract, this sounds like a good idea. Until recently, our abstracts and PLS were different but neither were good. After working with Cochrane Norway, our PLS are better and more useful than our abstracts.” “Absolutely great! Can you make sure we can cut and paste from one part of the review to the other so that the chances of inconsistencies are reduced?” Feedback from the advisory group for this project also reflect the enthusiasm for redesigning Cochrane Reviews to better meet the needs of decision-makers. [↑](#footnote-ref-3)
4. For example, the editor who writes plain language summaries for Cochrane Reviews (Claire Glenton) systematically compares how findings are reported throughout the review by summarising this information in a table, and she consistently finds inconsistencies. [↑](#footnote-ref-4)
5. Rosenbaum SE, Glenton C, Nylund HK, Oxman AD. User testing and stakeholder feedback contributed to the development of understandable and useful Summary of Findings tables for Cochrane Reviews. J Clin Epidemiol 2010; 63:607-19.

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10. ***Additional information that can be helpful to different target audiences:***

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    | --- | --- | --- |
    | **Patients and the public** | **Health professionals** | **Policymakers** |
    | What is (are) the intervention(s)? | Indications and contraindications | What are the policy options? |
    | Who can use the intervention(s)? | Delivery of the intervention(s) | Equity considerations |
    | What other options are there? | Cautions | Economic considerations |
    | How do people experience the intervention(s) | Counselling patients | Monitoring and evaluation considerations |
    | Is there anything else that someone should know before using the intervention(s) | Anything else that health professionals should know before using the intervention(s) | Anything else that policymakers should know before deciding on one of the policy options |

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15. Alonso-Coello P, Schünemann HJ, Moberg J, et al. GRADE Evidence to Decision (EtD) frameworks: A systematic and transparent approach to making well-informed healthcare choices. 1. Introduction. BMJ 2016; 353:i2016. [↑](#footnote-ref-15)