

Cochrane Information Specialists' Executive feedback – defining the future of Evidence Synthesis in Cochrane

The Cochrane Information Specialists Executive (CIS Exec) have created this rapid response document to convey our early ideas on how Cochrane Information Specialists can contribute to the future of Evidence Synthesis in Cochrane.

We acknowledge with sadness that funding cuts from NIHR and the restructure of Cochrane may lead to a reduction in the number of Cochrane Information Specialists (CISs) in our community, whilst recognizing that the changes may immediately affect some regions of the world more than others. However, facing the future, we see the following opportunities and roles for CIS:

1. Members of a Central Editorial Service Team or Methods Support Unit

We envisage an ongoing role within a central editorial service team and Methods Support Unit for some CISs who can peer review search strategies, check search methods against Cochrane quality standards, check study flow diagrams and undertake other search-related editorial and methodological checks.

2. Supporting the production of Cochrane systematic reviews in the new Evidence Synthesis Centres

There will still be a vital role for CISs in the construction of search strategies, running of searches, writing of search methods, and other activities associated with the production of systematic reviews published in the Cochrane Library, if high review quality is warranted. This applies to intervention reviews and especially to other, more complex review types.

3. Using the skills and knowledge of our community to generate new income streams for Cochrane - a 'pool' of Cochrane trained Information Specialists

The Cochrane Information Specialists Survey (undertaken in 2020 and recently circulated by this Executive team) included a SWOT analysis. In this analysis, the IS community is shown to hold considerable experience, with almost three quarters having been in post for 6+ years.

There is an opportunity to leverage this experience, CIS could generate income for Cochrane by undertaking fee-based tasks for external evidence synthesis groups and guideline developers. These tasks could include:

- Developing and running searches for non-Cochrane research teams working on evidence synthesis.
- Peer reviewing search strategies for non-Cochrane research teams/offering quality assurance for search methods.

- Providing online search support clinics for non-Cochrane research teams.
- Delivering external-facing training sessions on searching for systematic reviews, to the researcher and information specialist communities.

For an example of the kind of charged-for literature searching service envisaged, see the web page of the [Lucid literature searching service](#) at the University of Leeds.

4. Developing the commercial potential of CENTRAL, the Cochrane COVID-19 Study Register and PICO annotation

- We see important opportunities to maintain and improve CENTRAL making it *the* go-to source for RCT and qRCT evidence. This alone would signify a step-change in the study identification process for evidence products reliant on evidence from RCTs/qRCTs.
- CIS have the expertise and experience to help develop an enhanced, curated version of CENTRAL, going beyond RCTs and qRCTs (a current example being the Cochrane Covid-19 Study Register). With the move towards a single authority record housed within the CRS, expert metadata curation will be essential in achieving FAIR (Findable, Accessible, Interoperable, Reusable) data principles. Other topic specific, highly specialized curated databases could be envisioned, such as e.g. nutritional cohort studies or diabetes cohort studies, classified according to their outcomes.
- CIS have the knowledge and skills to manage the data, ensuring that records are consistent and maintained to a high standard, that irrelevant records are removed and that processes are followed to provide the best experience for users. Helping to maintain CENTRAL should be a formal requirement for each Evidence Synthesis Centre.
- We would like to see commercial benefit generated from the work of the CISs who have PICO annotated many systematic reviews and studies for the Cochrane Library and CENTRAL. CISs could likely suggest new developments to better harness the potential of this work, e.g.
 - Development of the search interface.
 - Development of upstream trial surveillance feeds linked to PICO searches.
 - Use of PICO searches to create subsets of topic specific records that could be marketed commercially – potentially based on some of the more complete specialized registers maintained by current CISs.

5. Taking a leading role in search methods development and grant application for evidence synthesis

- Cochrane Information Specialists have a great reputation among the global information retrieval community, due to the rigorous search standards we employ and the impact our work has on the integrity of the evidence in our systematic reviews. We see opportunities to capitalize on that reputation and take a leading role in furthering information retrieval science for evidence synthesis:
 - Identify, lead and work on relevant grants related to information science in health evidence production.
 - Updating and maintenance of the Cochrane Handbook chapters on searching.
 - Development and validation of innovative methods and processes for efficient study identification (e.g. machine learning).
 - Development of search expertise in support of the wider range of evidence synthesis now being undertaken, e.g. searching beyond RCTs, prognosis reviews.
 - Preparing and maintaining Cochrane Methodology Reviews of research relevant to searching for systematic reviews and other healthcare literature.
 - Ensuring coherence of Cochrane guidance on search methods, e.g. integrating MECIR, PRISMA-S etc.

Conclusion

The role of information specialists in the future of Cochrane is vital for four reasons:

- 1) ensuring the quality of evidence syntheses by adhering to and advancing search standards;
- 2) devising and contributing to marketable information products such as specialised study databases and commercial search services;
- 3) advancing information retrieval methods contributing to the efficiency of review production.
- 4) widely recognised expertise and experience of CISs is vital to maintaining Cochrane's leadership role among producers of systematic reviews.