

Expert Searching: Living Evidence and Living Systematic Reviews: What You Need to Know



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Introduction

You may have been asked recently to collaborate on a new approach to evidence synthesis: living systematic reviews (LSRs). Another related term you may have heard is “living evidence,” which encompasses more synthesis types of work (guidelines, etc.). The Living Evidence Network (LEN) is also the name of the open group of methodologists and researchers, organized by Cochrane’s Project Transform, who are developing and promoting living approaches to the production of evidence syntheses. In this article, the authors discuss the evolution of LSRs and what the emerging living evidence landscape holds for information professionals.

What does it mean for evidence to be “living?”

Unlike rapid reviews, LSRs are not a new or abbreviated method for conducting reviews. Instead they are a new approach to evidence synthesis in which reviews are continually updated on the basis of frequent (monthly) searches [1]. Their purpose is to improve the currency, relevance, and usefulness of systematic reviews without compromising methodological rigor. LSRs thus retain core systematic review methods and can be applied to any review type (intervention effectiveness, qualitative, mixed methods, etc.). An LSR typically starts life with a baseline review before transitioning to living mode. The review protocol and baseline review must include an explicit commitment to conduct frequent searches, outline the search methods, and detail when and how the review will be updated when new relevant evidence is identified [1].

How is it possible for systematic reviews to be continually updated?

Citation screening is typically one of the most resource- and time-intensive steps when conducting systematic reviews, but it is also the most amenable to automation. In recent years, Cochrane has invested in new technologies to increase the efficiency of evidence-synthesis production. A well-performing machine-learning classifier that scores citations on their probability of being randomized controlled trials (RCTs) is now deployed in Cochrane review workflows and was evaluated in the pilot LSRs. The RCT Classifier can reduce screening load by up to 60%–70% by eliminating citations that are least likely to be randomized trials [2]. Cochrane Crowd, Cochrane’s citizen science crowd-sourcing initiative, is being used to reduce the screening burden even further. Both these technologies have made the task of maintaining LSRs much more feasible and achievable, allowing author teams to focus on those systematic review tasks that are best done by humans.

What are key considerations for health information professionals?

Increased workload that arises from greater frequency of searching, plus some of the practical and methodological challenges this poses, is an important consideration for health information professionals when embarking on LSRs. We addressed these issues in a recent webinar [3] and plan to follow up with a paper that will promote pragmatic information retrieval methods for LSRs and support health information professionals collaborating on living evidence projects.

Conclusions

We encourage health information professionals to join the [Living Evidence Network](#) (members can then join particular interest groups, including search). LSRs and other types of living evidence syntheses attempt to address a long-standing problem of currency in synthesis production that is highly relevant to our work. As methodologists with unique knowledge of updating systematic reviews and conducting evidence surveillance, we are critical players in LSRs and have much to contribute to the development of living approaches for information retrieval.

References

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