

Systematic Prospective Assessment of Rapid Knowledge Synthesis (SPARKS): a prospective controlled study

Rationale

Decision-makers such as international organizations, governments, and hospitals use knowledge synthesis to decide what works best in healthcare, and the systematic review is the gold standard for high-quality evidence. Rapid reviews, products where systematic review methods are streamlined, have gained prominence because of the need for more timely evidence. However, it is unclear whether rapid reviews produce the same high-quality results to support decision-making and their use may mislead decision-makers. To date, there have been no prospective studies comparing rapid reviews and systematic reviews on the same topic.

Implications

Through this study, we hope to: advance the science of knowledge synthesis and knowledge translation; provide a guideline for knowledge synthesis producers globally regarding the conduct of knowledge synthesis and where efficiencies may be gained; and enhance timeliness and quality of decisions made by patients, clinicians, and policy-makers.

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Link to Protocol Registration:

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Background

- Rapid reviews are knowledge synthesis products where systematic review processes are streamlined to accommodate a decision-maker's budget or time constraints. However, the reliability of rapid reviews is unknown and decisions based on rapid reviews may carry a higher risk of being incorrect. A prospective study comparing rapid reviews to systematic reviews on the same topic is needed.

Objective

- To compare the quality, efficiency, and decisions made between rapid reviews and systematic reviews on the same topic.

Methodology

- SPARKS will be a prospective controlled study comparing 25 rapid reviews to 25 systematic reviews on the same topic.
- Systematic reviews commissioned to knowledge synthesis centres will be assessed for eligibility. The systematic review will form the control, while the rapid review will form the intervention and be conducted concurrently by another centre selected from the remaining centres.
- A knowledge user panel, established for each rapid review, will rank research questions and mimic real-life by using the results from the rapid review to inform decisions.
- We will compare the following between systematic reviews and rapid reviews:
 - Results, conclusions, and strength of evidence
 - Prospectively collected process data (e.g. time spent on each review step, staff costs)
 - Decisions made, relevance, and trustworthiness of results; from surveys and interviews of knowledge user panels and systematic review commissioners
- Our analyses will include:
 - Calculating agreement between the results, comprehensiveness, risk of bias, and decisions made for rapid reviews and systematic reviews
 - Quantitatively analyzing process outcomes by examining the number of hours and cost for each step of the review
 - Summarizing survey data descriptively
 - Analyzing interview data qualitatively

Knowledge Translation Strategy

- We will disseminate findings to the study team network, and more broadly as publications, presentations, methods manuals, and a peer review manual.

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