

The evidence based research statement

To embark on research when there are no systematic reviews showing that a genuine uncertainty exists, particularly when the research involves people and animals, is unethical, unscientific, and wasteful. Researchers, research funders, research regulators and research ethics committees/institutional review boards, publishers of research, research institutions/educators, and information specialists often fail to use earlier research systematically when preparing to initiate, fund, or publish the results of new studies.

Below we set out stakeholders' responsibilities to meet the aims of evidence based research:

- No new studies without adequate systematic review of existing evidence showing new research is justified, and
- Efficient production, updating, and accessibility of systematic reviews

Aim 1: No new studies without adequate systematic review of existing evidence showing new research is justified

Researchers

- To prioritise research questions after taking systematic account of the totality of relevant earlier research and ongoing research
- To know how to search efficiently for relevant systematic reviews and ongoing studies. If the search indicates that there are no relevant, up-to-date systematic reviews, researchers should be aware of the options for preparing or updating the review needed
- To be able to assess the risk of bias in systematic reviews
- To be able to supervise students studying for higher degrees in using and preparing systematic reviews

Funding agencies

- To evaluate whether applicants for funds have used systematic reviews of prior research to identify and help to prioritise research questions or agendas
- To evaluate whether applicants have demonstrated adequate support for their proposed research by reference to systematic reviews of prior research
- To evaluate whether the designs of proposed new studies have been informed by systematic reviews of prior research

Research regulators, including research ethics committees/institutional review boards

- To evaluate whether applicants have shown adequate support for their research questions by reference to systematic reviews of prior research. This expectation extends beyond randomised trials
- To evaluate whether the designs of proposed new studies have been informed by reference to systematic reviews of prior research

Editors and reviewers

- To assess whether the rationale and design of studies are adequately described within the context of systematic reviews of prior research
- To evaluate whether description of earlier research is sufficient to enable interpretation of the results of submitted studies within the totality of relevant evidence
- To evaluate whether proposals for further research take account of earlier and ongoing research
- To evaluate whether proposals for further research include clear descriptions of target populations, interventions, comparisons, outcome measures, and study types

Educators

- To teach the importance of an unbiased approach to knowledge synthesis (systematic review)
- To teach how to seek or prepare and use systematic reviews when planning and interpreting additional research

Patients and consumers

- Before agreeing to participate in research, patients should demand that research projects have been informed by systematic review of what is already known

Aim 2: Efficient production, updating, and accessibility of systematic reviews

Systematic review specialists

- To participate in research and developmental activities to:
 - Improve the preparation and updating of systematic reviews
 - Develop automation of the preparation of systematic reviews
 - Develop tools for preparing systematic reviews more efficiently

Information specialists and librarians

- To help develop methods to increase the quality and currency of literature searches
- To participate in teaching researchers how to perform high quality searches for relevant studies
- To participate in research and developmental activities to:
 - Improve the production and updating of systematic reviews
 - Develop automation of the preparation of systematic reviews
 - Develop tools for preparing systematic reviews more efficiently

Information technologists, programmers, and artificial intelligence engineers

- To participate in research and developmental activities to:
 - Improve the production and updating of systematic reviews
 - Develop automation of the preparation of systematic reviews
 - Develop tools for preparing systematic reviews more efficiently

Funding agencies

- To support development and research to:
 - Improve the production and updating of systematic reviews
 - Develop automation of the preparation of systematic reviews
 - Develop tools for preparing systematic reviews more efficiently

Recommendations

- Instructions for authors should include requirements for evidence justifying the research for which publication is sought
- Systematic reviews should be recognised as research in their own right, comparable with other types of research activity
- A clear definition of a high quality systematic review should be prepared, agreed, and promoted