The Systematic Review of Health Care Evidence

Methods, Issues, and Trends

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KEYWORDS

• Systematic reviews • Synthesis • Health care evidence • Methods

KEY POINTS

- The systematic review is a key component to the evidence based health care cycle.
- Systematic reviews bring together large amounts of information that can help support individual patient decision, inform guidelines, policy and can inform primary research.
- There are two main types of systematic reviews: qualitative and quantitative. The basic steps for each type of systematic review are the same; however, differences occur in the tools used to appraise the included studies and the method of synthesis.

WHAT IS A SYSTEMATIC REVIEW?

The systematic review is a key component to the evidence-based health care cycle, (**Fig. 1**).

A systematic review, as the name implies, is undertaken systematically. It is a structured body of work undertaken by a group of people according to an explicit methodology that is reproducible and answers a clearly focused question. Systematic reviews can be used to resolve uncertainty when primary research, reviews, and editorials disagree.

HOW DO THEY DIFFER FROM OTHER REVIEWS?

A word of caution: systematic reviews are not the same as literature reviews. A literature review done by one expert in the field might draw very different conclusions to another literature review done by another expert in the field; literature reviews are not reproducible (**Table 1**). Guidelines for the better reporting of systematic reviews

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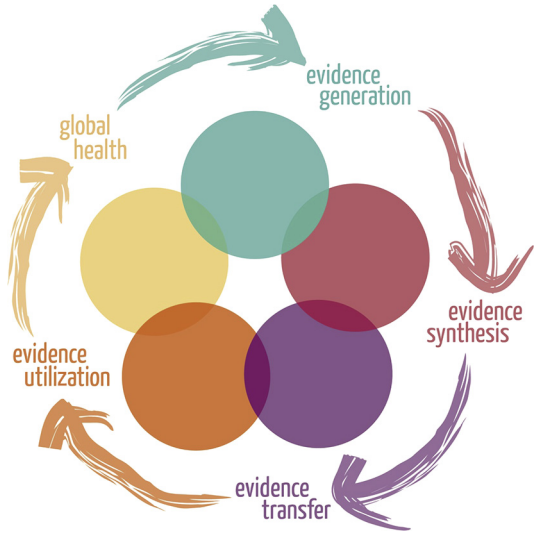

Fig. 1. Evidence based healthcare cycle.

were established in 1999 by the Quality of Reporting of Meta-analysis initiative[1] but are now superseded by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyse) statement for reporting systematic reviews and meta-analyses.[2] If you are ever in doubt as to whether a review has been undertaken systematically, then these guidelines serve as a useful checklist for the reporting of systematic reviews.

WHAT ARE SYSTEMATIC REVIEWS USED FOR?

Health care professionals are overwhelmed with unmanageable amounts of information. Systematic reviews bring together large amounts of information that can be easily digested that can help support individual patient decisions, inform guidelines and policy, and inform and direct research. Clinical studies may have insufficient power to detect modest but important effects; however, a meta-analysis can improve

Table 1
Differences between literature reviews and systematic reviews

	Literature Review	Systematic Review
Framing the question	Often broad	Well structured
Searching for the evidence	Not usually specified (not reproducible)	Clear and reproducible
Methodological quality of the evidence	Variable	Rigorous critical appraisal
Synthesis	Often qualitative summary	May be qualitative (with/without a meta-synthesis) or quantitative (with/without a meta-analysis) depending on the question
Interpreting the findings	May be biased	Usually evidence based