



January 2017– SUPPORT Summary of a systematic review

What are the effects of interventions to encourage the use of systematic reviews in clinical decision-making?

Clinical decision-making is often not based on the best available evidence. Reasons for this vary, and may be related to factors within the healthcare setting, patients, or health practitioners. Interventions have been designed to encourage the use of systematic reviews in making clinical decisions as one way of improving clinical decision-making.

Key messages

- It is uncertain whether targeted multifaced or single interventions (such as training) improve informed decision-making by practitioners.
- Multifaceted interventions may improve awareness and use of evidence-based resources, such as searching for systematic reviews using online libraries.
- None of the included studies was conducted in a low-income country.



Who is this summary for?

People making decisions about improving clinical decision-making

! This summary includes:

- **Key findings** from research based on a systematic review
- **Considerations about the relevance of this research** for low-income countries

X Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

Perrier L, Mrklas K, Shepperd S, et al. Interventions encouraging the use of systematic reviews in clinical decision-making: a systematic review. *J Gen Intern Med* 2011; 26:419-26.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies

SUPPORT was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report:
www.supportsummaries.org/glossary-of-terms

Background references on this topic:
See back page

Background

Multifaceted and simple interventions – including components such as educational visits by experts, workshops and other types of training, reminders, audit and feedback, and provision of resources – have been evaluated to determine their effectiveness for improving clinical decision-making. These interventions have been targeted at different audiences with different outcome measures in different settings.

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here:

www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To assess the effectiveness of interventions for seeking, appraising, and applying evidence from systematic reviews in clinical decisions.

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Quantitative studies using any intervention to encourage use of systematic reviews in clinical decision making	Five randomised trials that examined strategies ranging from multifaceted to simple interventions
Participants	Healthcare practitioners of any specialty involved in providing patient care	Physicians (4 studies) – one each in Canada, Thailand, UK, and Uruguay; Midwives (3 studies) – one each in Thailand, UK, and Uruguay; Residents (1 study – Uruguay); Interns (1 study – Thailand); Students (1 study – Thailand); Dentists (1 study – Scotland)
Settings	All settings	Primary care (1 study), hospitals (3 studies), dental practice (1 study)
Outcomes	Change in professional performance (prescribing patterns, use of diagnostic tests), health outcomes for patients (return visits, adverse events, length of stay, decrease in admissions), and measures of health care provider satisfaction, knowledge, or attitude	All five studies provided objective performance measures. Patient health outcome measures and measures of healthcare provider satisfaction were not reported in any study.

Date of most recent search: July 2009

Limitations: This is a well-conducted systematic review with only minor limitations.

Perrier L, Mrklas K, Shepperd S, et al. Interventions encouraging the use of systematic reviews in clinical decision-making: a systematic review. *J Gen Intern Med* 2011; 26:419–26.

Summary of findings

This review includes five studies all conducted in middle- and high-income countries. All five trials reported some form of professional performance measure. Reported outcome measures varied and included measures of preventive performance, up-to-datedness of practice, prescription patterns, uptake of recommended practices, and other measures.

One study in 40 hospitals in Thailand and Mexico reported a measure of healthcare provider satisfaction, which was their awareness and use of the WHO Reproductive Health Library. This multifaceted intervention included organizational buy-in, use of facilitators, provision of print materials, and interactive workshops on using the WHO Reproductive Health Library.

- ➔ **It is uncertain whether multifaceted or simple interventions (such as use of facilitators and provision of printed materials) improve clinical decision-making as measured by professional performance. The certainty of this evidence is very low.**
- ➔ **Multifaceted interventions may improve awareness and use of the WHO Reproductive Health Library. The certainty of this evidence is low.**

About the certainty of the evidence (GRADE) *

⊕⊕⊕⊕

High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.

⊕⊕⊕○

Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.

⊕⊕○○

Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.

⊕○○○

Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

Interventions for encouraging use of systematic reviews in clinical decision-making

People	All healthcare practitioners providing care to patients
Settings	Hospitals, primary care and other healthcare settings
Intervention	Multifaceted or simple interventions (such as workshops, use of facilitators and provision of materials)
Comparison	No intervention

Outcomes	Impact	Certainty of the evidence (GRADE)
Changes in physician performance	It is uncertain whether interventions geared towards encouraging use of systematic reviews in clinical decision-making lead to positive changes in physician performance.	⊕○○○ Very low
	Interventions may improve awareness and use of libraries to search for systematic reviews.	⊕⊕○○ Low

GRADE: GRADE Working Group grades of evidence (see above and last page)

Relevance of the review for low-income countries

→ Findings	▷ Interpretation*
APPLICABILITY	
<ul style="list-style-type: none"> → All studies included in the review were conducted in middle- and high-income countries. → The studies included a variety of interventions including workshops, educational visits, provision of materials, and use of facilitators. 	<ul style="list-style-type: none"> ▷ The applicability of these findings to low-income countries is uncertain. ▷ Important issues to consider in adopting these interventions include acceptance by the end user and integration into the healthcare system.
EQUITY	
<ul style="list-style-type: none"> → The included studies did not report data regarding differential effects of the interventions across different population groups. 	<ul style="list-style-type: none"> ▷ Interventions that are effective could reduce health inequity if targeted at disadvantaged settings, as a result of providing better quality of care to disadvantaged populations. Conversely, they could increase inequity if targeted at both more and less advantaged settings, if they were more acceptable and easier to integrate into healthcare systems in more advantaged settings.
ECONOMIC CONSIDERATIONS	
<ul style="list-style-type: none"> → None of the included studies assessed costs associated with the interventions. 	<ul style="list-style-type: none"> ▷ The cost and cost-effectiveness of these interventions are uncertain. ▷ Implementing these interventions requires financial and human resources. The need for and availability of these resources need to be assessed prior to implementation.
MONITORING & EVALUATION	
<ul style="list-style-type: none"> → The review found that some interventions lead to positive changes but they did not adequately measure patient and practitioner-performance outcomes. → No studies of the effect of these interventions in low-income countries were found. 	<ul style="list-style-type: none"> ▷ Rigorous impact evaluations of these strategies should be considered before scaling up their use. ▷ These studies should be randomised trials and should use standardised outcomes that include changes in practitioner performance, changes in patient health outcomes, and measures of practitioner and patient satisfaction.

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low-income countries. For additional details about how these judgements were made see:

www.supportsummaries.org/methods

Additional information

Related literature

Arnold SR, Straus SE. Interventions to improve antibiotic prescribing practices in ambulatory care. Cochrane Database Syst Rev 2005; 4: CD003539.

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Conflict of interest

None declared. For details, see: www.supportsummaries.org/coi

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This review should be cited as

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About certainty of the evidence (GRADE)

The “certainty of the evidence” is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By “substantially different” we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE:
www.supportsummaries.org/grade

SUPPORT collaborators:

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the [Cochrane Collaboration](http://www.cochrane.org). The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries. www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries. www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries. www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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