



January 2017– SUPPORT Summary of a systematic review

# What are the effects of interventions to improve the use of systematic reviews in decision-making by health system managers, policy makers, or clinicians?

A number of interventions aiming to increase the use of systematic review evidence in decision-making are currently in use. These include summaries of systematic reviews designed to improve the accessibility of the findings (“information products”) and changes to organisational structures, such as employing specialist groups to synthesise evidence in order to inform local decision-making.

## Key messages

- **Summary of findings tables probably improve access to the main findings of a systematic review and may decrease inappropriate use of clinical interventions.**
- **Mailing printed bulletins that summarise the findings of systematic reviews may improve professional practice.**
- **Multifaceted interventions that include access to a database or information derived from systematic reviews and training to improve the use of that evidence by clinicians may have little or no effect on professional practice and patient outcomes.**
- **Tailored messages and knowledge brokers together with access to a database of systematic reviews may have little or no effect on self-reported use of research evidence by public health departments, compared to access to the database alone.**
- **The review found no studies of the effects of interventions targeted at health system managers or policymakers, and no studies from low-income countries.**



## Who is this summary for?

People wanting to improve the use of evidence by health system managers, policy makers, or clinicians

### ! 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:

Murthy L, Shepperd S, Clarke MJ, et al. Interventions to improve the use of systematic reviews in decision-making by health system managers, policy makers and clinicians. *Cochrane Database Syst Rev* 2012; 9: CD009401.

## 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](http://www.supportsummaries.org/glossary-of-terms)

**Background references on this topic:**  
See back page

# Background

Systematic reviews provide a transparent and robust summary of existing research. However, health system managers, national and local policymakers, and healthcare professionals can face several obstacles when attempting to utilise this evidence. These include dealing with a large volume of research evidence and difficulties making judgements about the applicability of evidence from systematic reviews. In an attempt to increase the use of systematic review evidence in decision-making, a number of interventions have been developed.

## 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/](http://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 identify and assess the effects of information products based on the findings of systematic review evidence, and organisational supports and processes designed to support the uptake of systematic review evidence by health system managers, policy makers, and healthcare professionals

Types of	What the review authors searched for	What the review authors found
<b>Study designs &amp; Interventions</b>	Randomised trials, interrupted time-series studies and controlled before-after studies of interventions intended to improve the uptake of evidence from systematic reviews in decision-making	Eight studies: <i>multifaceted interventions</i> (2 cluster-randomised trials); <i>summary of findings tables</i> (1 randomised trial); <i>analgesic league table</i> (1 randomised trial); <i>organizational intervention</i> (knowledge broker, access to systematic review repository, provision of tailored messages) (1 randomised trial); <i>dissemination of printed bulletins</i> (3 interrupted time-series studies)
<b>Participants</b>	Health system managers, policymakers and clinicians	Nurses (1 study); physicians and nurses (1); public health professionals (1); evidence-based practice workshop participants (1); healthcare professionals and students (1); National Health Service (NHS) clinicians and decision makers (3)
<b>Settings</b>	Any setting	UK (5 studies); Canada (1); Mexico and Thailand (1); setting not specified (1)
<b>Outcomes</b>	Utilisation of research, acceptability of the way information was presented, knowledge, utilisation of healthcare resources, patient-related outcomes	Utilisation of research (6 studies); utilisation of healthcare resources (costs) (3); knowledge (1 RCT); perceived understanding and ease of use (1); preferences and attitudes (1); patient-related outcomes (pain management and use of analgesia) (2)

**Date of most recent search:** March 2012

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

Murthy L, Shepperd S, Clarke MJ, et al. Interventions to improve the use of systematic reviews in decision-making by health system managers, policy makers and clinicians. *Cochrane Database Syst Rev* 2012; 9: CD009401.

# Summary of findings

The review identified eight studies that evaluated the effectiveness of different interventions designed to support the use of systematic review evidence decision-making.

## 1) Multifaceted interventions targeted at clinicians

Three studies evaluated the effects of multifaceted interventions on obstetric practice (1 each in Mexico, Thailand and the UK). One study evaluated the effects of a multifaceted intervention on patient outcomes (pain and use of analgesics) for patients on four orthopaedic wards in the UK. The interventions included access to a database (3 studies) or a league table of analgesic efficacy (1 study), training (interactive workshops or educational outreach), audit and feedback (2 studies), and a coordinator to assist use of the database (2 studies).

➔ **Multifaceted interventions to improve the use of evidence from systematic reviews by clinicians may have little or no effect on professional practice and patient outcomes. 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.

Multifaceted interventions to improve the use of evidence derived from systematic reviews in decision-making by clinicians		
<b>People</b>	Clinicians	
<b>Settings</b>	Secondary care settings in the UK (2 studies), Mexico (1) and Thailand (1)	
<b>Intervention</b>	Multifaceted interventions to support the use of evidence derived from systematic reviews	
<b>Comparison</b>	No intervention/usual care	
Outcomes	Median effect (range)	Certainty of the evidence (GRADE)
<b>Professional practice</b> for six obstetric practices (2 studies), four obstetric practices (1)	<b>Median effect</b> 3.5% improvement in desired professional practice (adjusted for baseline differences) (2.0% to 3.5%)	⊕⊕○○ Low <sup>1</sup>
<b>Patient outcomes</b> pain and use of analgesics (1 study)	There was little or no difference in the average amount of pain or use of analgesics	⊕⊕○○ Low <sup>2</sup>
<sup>1</sup> The size of the differences varied widely within each study and most of the effect estimates had wide confidence intervals. <sup>2</sup> There was a serious risk of bias and imprecision. GRADE: GRADE Working Group grades of evidence (see above and last page)		

## 2) Summaries of systematic reviews (information products) targeted at clinicians

Three studies evaluated the effects of information products targeted at clinicians.

**Summaries of systematic reviews targeted at clinicians:**

- probably increase the perceived accessibility of findings (moderate certainty evidence).
- may decrease inappropriate use of clinical interventions (low certainty evidence).

Summaries of systematic reviews targeted at clinicians		
<b>People</b>	General practitioners (1 study), surgeons (1), and diverse clinicians (1)	
<b>Settings</b>	Primary care in the UK (1 study), secondary care in the UK (1), and a workshop in Norway (1)	
<b>Intervention</b>	A mailed summary of a systematic review (2 studies) and a summary of findings table (1) with a systematic review	
<b>Comparison</b>	No intervention/usual care (2 studies) and a systematic review without a summary of findings table (1)	
Outcomes	Effect	Certainty of the evidence (GRADE)
<b>Professional practice</b> use of antidepressant drugs (1 study) and gromlet insertion (1 study)	Inappropriate use decreased	⊕⊕○○ Low <sup>1</sup>
<b>Perceived accessibility of the findings</b> proportion that perceived the main findings to be very accessible - 6 or 7 on a scale from 1 (very inaccessible) to 7 (very accessible)	<b>Difference</b> 24% more (41% versus 17%; P = 0.037)	⊕⊕⊕○ Moderate <sup>2</sup>
<sup>1</sup> Non-randomized (interrupted time series) studies <sup>2</sup> Serious risk of bias  GRADE: GRADE Working Group grades of evidence (see above and last page)		

## 3) Interventions targeted at public health departments

One study in Canada evaluated the added effects of tailored messages (one group) and tailored messages together with knowledge brokers (one group) together with access to a database of systematic reviews compared to access to the database alone.

- Tailored messages with or without knowledge brokers may have little or no effect on self-reported use of research evidence by public health departments.

# Relevance of the review for low-income countries

→ Findings	▷ Interpretation*
APPLICABILITY	
→ None of the included studies was conducted in a low-income country. Evaluated interventions included passive dissemination of systematic review evidence (in the form of bulletins) and multifaceted interventions (which provide access to, and training in the use of systematic review evidence).	▷ The impact of information products derived from systematic reviews (printed bulletins) and multifaceted interventions evaluated by the included studies is uncertain in low-income countries.
EQUITY	
→ The included studies did not report data regarding differential effects of systematic review information products and organisational processes (bulletins, multifaceted interventions) evaluated across different settings.	▷ The interventions evaluated (summary of findings tables, league tables, knowledge brokers, systematic review repositories) require information systems and technical skills that may be lacking in low-income settings. This may limit access and utilisation in low-income settings.
ECONOMIC CONSIDERATIONS	
→ No data were available from low-income settings. Three studies in high-income countries reported data on health resource utilisation (costs): implementation cost of a single educational visit, and costs of production / distribution and potential savings of bulletins summarising systematic review evidence.	▷ Costs of interventions intended to improve the use of systematic review evidence in decision-making include costs related to training, production, and dissemination of information products. Such costs may limit utilisation, and consequently effectiveness of these interventions in low-income countries.
MONITORING & EVALUATION	
→ There was no eligible study of interventions for improving use of research evidence in decision-making processes in low income countries.	▷ Randomised trials are needed to evaluate the effects of different interventions designed to support uptake of systematic review evidence in low-income countries.

\*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](http://www.supportsummaries.org/methods)

# Additional information

## Related literature

Tricco AC, Cardoso R, Thomas SM, et al. Barriers and facilitators to uptake of systematic reviews by policy makers and health care managers: a scoping review. *Implement Sci.* 2016;11:4.

Wallace J, Byrne C, Clarke M. Making evidence more wanted: a systematic review of facilitators to enhance the uptake of evidence from systematic reviews and meta-analyses. *Int J Evid Based Healthc* 2012;10(4):338-46.

Chambers D, Wilson PM, Thompson CA, et al. Maximizing the impact of systematic reviews in health care decision making: a systematic scoping review of knowledge translation resources. *Millbank Quarterly* 2011;89(1):131-56.

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(4):419-26.

Perrier L, Mrklas K, Lavis J, Straus S. Interventions encouraging the use of systematic reviews by health policymakers and managers: a systematic review. *Implementation Sci* 2011;6:43.

Dobbins M, Cockerill R, Barnsley J. Factors affecting the utilization of systematic reviews. A study of public health decision makers. *Int J Technol Assess Health Care* 2001;17(2):203-14.

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## Conflict of interest

None declared. For details, see: [www.supportsummaries.org/coi](http://www.supportsummaries.org/coi)

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This summary has been peer reviewed by Airton Stein. We did not receive any comments from the review authors.

## This review should be cited as

Murthy L, Shepperd S, Clarke MJ, et al. Interventions to improve the use of systematic reviews in decision-making by health system managers, policy makers and clinicians. *Cochrane Database Syst Rev* 2012; 9: CD009401.

## The summary should be cited as

Opiyo N. What are the effects of interventions to improve the use of systematic reviews in decision making by health system managers, policy makers and clinicians? A SUPPORT Summary of a systematic review. January 2017. [www.support-collaboration.org/summaries.htm](http://www.support-collaboration.org/summaries.htm)

## 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](http://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](http://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](http://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](http://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](http://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](http://www.evidence4health.org)

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