



August 2016 – SUPPORT Summary of a systematic review

## Do educational outreach visits improve health professional practice and patient outcomes?

Educational outreach visits entail the use of a trained person from outside the practice setting to meet with healthcare professionals in their practice. They provide information that may include feedback about professional performance with the intent of improving practice. This type of face-to-face visit is also called academic detailing and educational visiting. The intervention may be tailored based upon previously identified barriers to change or combined with other interventions, including reminders or interventions targeted directly at patients, such as recall clinics.

### Key messages

- **The quality of care delivered to patients**
  - Is improved by educational outreach visits alone and
  - May be improved more by educational outreach visits combined with organisational changes, than by educational outreach visits alone.
- **For prescribing, the effects are relatively consistent and small, but potentially important.**
- **For other types of professional performance, the effects vary more widely.**
- **Educational outreach visits may not be effective in low-income countries if resources are not available to provide clinical and managerial support.**



### Who is this summary for?

People making decisions concerning use of educational outreach visits in primary and community healthcare

#### ! 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:

O'Brien MA, Rogers S, Jamtvedt G, et al. Educational outreach visits: effects on professional practice and health care outcomes. Cochrane Database of Systematic Reviews 2007, Issue 4.

### 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

Educational outreach visits have been identified as an intervention that may improve the practice of healthcare professionals. Even small changes in practices, such as inappropriate prescribing, might be potentially important when many patients are affected.

## 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 assess the effects of educational outreach on health professional practice and patient outcomes

Types of	What the review authors searched for	What the review authors found
<b>Study designs &amp; Interventions</b>	Randomised trials of educational outreach to healthcare professionals by trained persons that may be from the same organisation, but not from the same practice site. The information given may include feedback about their performance.	69 trials were found.
<b>Participants</b>	Healthcare professionals responsible for patient care	Primary care physicians or teams practising in community settings (53 studies), physicians in hospital settings (6), nurses and nursing assistants (4), pharmacists/owners and counter attendants (2), dentists (1)
<b>Settings</b>	Any practice setting	Mostly primary and community healthcare settings. The studies were from the USA (23), the UK (22), Europe (14), Australia (8), Indonesia (2) and Thailand (1).
<b>Outcomes</b>	Objectively measured professional performance in a healthcare setting or healthcare outcomes. Studies that only measured knowledge or performance in a test situation were excluded.	Most studies reported multiple effect measures and many did not specify a primary outcome. Twenty-eight studies (34 comparisons) contributed to the calculation of the median for the main comparison of professional performance. Educational outreach was compared to another type of intervention, usually audit and feedback, in 8 trials (12 comparisons).

**Date of most recent search:** March 2007

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

O'Brien MA, Rogers S, Jamtvedt G, et al. Educational outreach visits: effects on professional practice and health care outcomes. Cochrane Database of Systematic Reviews 2007, Issue 4.

# Summary of findings

The review included 69 studies involving more than 15,000 health professionals. Most studies (36) were done in Europe, North America (23), and Australia (8). Three studies were conducted in middle-income countries in Asia.

## 1) Educational outreach compared to no intervention

There were 37 trials that reported changes in professional performance. The 12 studies that reported patient outcomes were largely inconclusive, even when improvements in health professional practice were found, most likely because of insufficient power to detect important differences in patient outcomes.

- Educational outreach improves appropriate prescribing. The certainty of this evidence is high.
- Educational outreach probably improves other practices. The certainty of this evidence is moderate.

### About the certainty of the evidence (GRADE) \*

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**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.

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**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.

Educational outreach compared to no intervention		
<b>People</b>	Healthcare professionals	
<b>Settings</b>	Primary and community healthcare	
<b>Intervention</b>	Educational outreach	
<b>Comparison</b>	No intervention (including educational materials alone)	
Outcomes	Absolute effect Median adjusted increase in compliance with desired practice* (interquartile range)	Certainty of the evidence (GRADE)
<b>Appropriate prescribing†</b>	4.8% improvement (3.0% to 6.5%)	⊕⊕⊕⊕ High
<b>Non-prescribing practices‡§</b>	6.0% improvement (3.6% to 16.0%)	⊕⊕⊕○ Moderate

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

\* Adjusted for baseline differences in compliance.

† Follow-up was short in most trials.

§ Management of patients at increased cardiovascular risk, with asthma or diabetes; or delivery of preventive services, including counselling for smoking cessation.

## 2) Educational outreach compared to another intervention

Eight trials compared interventions that included educational outreach to another type of intervention (such as audit and feedback or reminders) to improve health professional practices such as better documentation of care, preventive cardiovascular care or prostate specific antigen testing in primary care. Interventions that included outreach visits appeared to be more effective than audit and feedback alone. The differences tended to be small, similar to the differences between outreach visits and no intervention. One trial found a large improvement (39%) in the care of patients with cardiovascular risk factors with outreach visits and a prevention coordinator compared to outreach visits alone. One trial measured patient outcomes. It found an increase in the percentage of patients achieving blood pressure control after clinicians received an educational outreach visit that included audit and feedback as well as a reminder.

- **Educational outreach may improve health professional practices compared to audit and feedback. The certainty of this evidence is low.**
- **Organisational changes, such as introducing a prevention coordinator, may be more effective than outreach visits alone. The certainty of this evidence is low.**

# Relevance of the review for low-income countries

→ Findings	▷ Interpretation*
APPLICABILITY	
<p>→ Only three of the 62 included studies were from middle-income countries and clinical and managerial support was provided for the outreach visit in all of the studies. The effects were highly consistent across settings for improvements in prescribing.</p>	<p>▷ The use of educational outreach visits in low-income settings is likely to result in small but potentially important improvements in prescribing, whereas the impact on other types of professional performance are uncertain.</p> <p>▷ Educational outreach visits may not be effective if resources are not available to provide clinical and managerial support.</p>
EQUITY	
<p>→ Overall, the included studies provided little data regarding differential effects of the interventions for disadvantaged populations.</p>	<p>▷ Some co-interventions such as feedback about healthcare professionals' performance, reminders or interventions targeted directly at patients (e.g. recall clinics) might require information systems that are not available in low resource settings.</p>
ECONOMIC CONSIDERATIONS	
<p>→ Several studies reported the costs of educational outreach visits and potential savings. Only two studies from high-income settings reported an economic analysis. The levels of organization and support in the included studies were potentially greater than what is available outside of research settings.</p>	<p>▷ The cost of educational outreach visits may limit scaling up, although at least one study in a low resource setting in South Africa (published after this review) found that educational outreach visits for improving the quality of asthma care would be worthwhile and affordable.†</p> <p>▷ The potential increased effectiveness of outreach visits compared with less resource intensive interventions needs to be weighed against the increased costs.</p>
MONITORING & EVALUATION	
<p>→ There is limited evidence of the effectiveness of educational outreach visits for non-prescribing practices and the cost-effectiveness of educational outreach visits in low-income settings.</p>	<p>▷ The impact of educational outreach visits should be monitored and the effects on practices other than prescribing should be evaluated prior to scaling up.</p> <p>▷ For prescribing and non-prescribing practices the potential cost-effectiveness of educational outreach visits should be estimated using local data (e.g. for travel and personnel costs). When there is important uncertainty, evaluation should be undertaken prior to scaling up.</p>

\*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)

† Zwarenstein M, Bheekie A, Lombard C, et al. Educational outreach to general practitioners reduces children's asthma symptoms: a cluster randomised controlled trial. *Implementation Science* 2007; 2:30.

# Additional information

## Related literature

Grimshaw JM, Thomas RE, MacLennan G, Fraser C, Ramsay C, Vale L et al. Effectiveness and efficiency of guideline dissemination and implementation strategies. *Health Technol Assess* 2004; 8:(6).  
<http://www.hta.nhs.uk/fullmono/mon806.pdf>

NorthStar – how to design and evaluate quality improvement interventions in healthcare: NorthStar is a tool that provides a range of information, checklists, examples and tools based on current research on how to best design and evaluate quality improvement interventions.  
<https://www.dropbox.com/home/NorthStar>

Baskerville NB, Liddy C, Hogg W. Systematic review and meta-analysis of practice facilitation within primary care settings. *Ann Fam Med* 2012; 10:63–74.

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## Conflict of interest

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

## Acknowledgements

This summary has been peer reviewed by: Mary Ann O'Brien, Martin Eccles, Tracey Perez Koehlmoos, Dennis Ross-Degnan, Tomás Pantoja, Merrick Zwarenstein, and Hanna Bergman.

## This review should be cited as

O'Brien MA, Rogers S, Jamtvedt G, et al. Educational outreach visits: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* 2007, Issue 4.

## The summary should be cited as

Ciapponi A, García Martí S. Do educational outreach visits improve health professional practice and patient outcomes? A SUPPORT Summary of a systematic review. August 2016.  
[www.supportsummaries.org](http://www.supportsummaries.org)

## 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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