August 2008 – 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

- **Educational outreach visits alone or combined with other interventions improve the quality of care delivered to patients.**
- **For prescribing, the effects are relatively consistent and small, but potentially important.**
- **For other types of professional performance, the effects vary widely from small to modest improvements.**
- **Educational outreach visits may not be effective in low- and middle-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 health care.

This summary includes:

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

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 – an international collaboration funded by the EU 6th Framework Programme to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries.
www.support-collaboration.org

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

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. This summary is based on an update of a Cochrane review first published in 1997 and focuses on the effects of educational outreach in improving healthcare professional practice and patient outcomes.

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- and middle-income countries. The methods used to assess the quality of the review and to make judgements about its relevance are described here: www.supportsummaries.org/methods

Knowing what's not known is important

A good quality review might not find any studies from low- and middle-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.

About the systematic review underlying this summary

Review objective: To assess the effects of educational outreach on health professional practice and patient outcomes

	What the review authors searched for	What the review authors found
Interventions	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
Participants	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).
Settings	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).
Outcomes	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 good quality 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.

- ➔ **There is high quality evidence that educational outreach can improve appropriate prescribing.**
- ➔ **There is moderate quality evidence that educational outreach can improve other practices.**

About quality of evidence (GRADE)

⊕⊕⊕⊕
High: It is very likely that the effect will be close to what was found in the research.

⊕⊕⊕◯
Moderate: It is likely that the effect will be close to what was found in the research, but there is a possibility that it will be substantially different.

⊕⊕◯◯
Low: It is likely that the effect will be substantially different from what was found in the research, but the research provides an indication of what might be expected.

⊕◯◯◯
Very low: The anticipated effect is very uncertain and the research does not provide a reliable indication of what might be expected.

For more information, see last page.

Educational outreach compared to no intervention

Patient or population: Healthcare professionals
Settings: Primary and community health care
Intervention: Educational outreach
Comparison: No intervention (including educational materials alone)

Outcomes	**Absolute effect** Median adjusted increase in compliance with desired practice* (interquartile range)	Number of studies	Quality of the evidence (GRADE)
Appropriate prescribing[†]	**4.8% improvement** (3.0% to 6.5%)	28 studies	⊕⊕⊕⊕ High
Non-prescribing practices[†§]	**6.0% improvement** (3.6% to 16.0%)	28 studies	⊕⊕⊕◯ 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.

- **There is low quality evidence that educational outreach can improve health professional practices compared to audit and feedback.**
- **Organisational changes, such as introducing a prevention coordinator, may be more effective than outreach visits alone.**

Relevance of the review for low- and middle-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ **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.**	▷ *The use of educational outreach visits in low and middle-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.* ▷ *Educational outreach visits may not be effective if resources are not available to provide clinical and managerial support.*
EQUITY	
➔ **Overall, the included studies provided little data regarding differential effects of the interventions for disadvantaged populations.**	▷ *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.*
ECONOMIC CONSIDERATIONS	
➔ **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.**	▷ *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.†* ▷ *The potential increased effectiveness of outreach visits compared with less resource intensive interventions needs to be weighed against the increased costs.*
MONITORING & EVALUATION	
➔ **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- and middle-income settings.**	▷ *The impact of educational outreach visits should be monitored and the effects on practices other than prescribing should be evaluated prior to scaling up.* ▷ *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.*

*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- and middle-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

Grimshaw JM, Shirran L, Thomas R, Mowatt G, Fraser C, Bero L, Grilli R, Harvey E, Oxman AD, O'Brien M. Changing provider behavior: An overview of systematic reviews of interventions. Medical Care 2001; 39:Supplement 2, II-2 - II-45.

Getting evidence into practice. Effective Health Care 1999; 5:(1). http://www.york.ac.uk/inst/crd/pdf/ehc51.pdf

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. http://www.rebeqi.org/?pageID=36&ItemID=18

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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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The summary should be cited as

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Keywords

evidence-informed health policy, evidence-based, systematic review, health systems research, health care, low and middle-income countries, developing countries, primary health care.

About quality of evidence (GRADE)

The quality of the evidence is a judgement about the extent to which we can be confident that the estimates of effect are correct. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the type of study design (randomised trials versus observational studies), five factors that can lower confidence in an estimate of effect (risk of bias, inconsistency of the results across studies, indirectness, imprecision of the overall estimate across studies, and publication bias), and three factors that can increase confidence (a large effect, a dose response relationship, and plausible confounding that would increase confidence in an estimate). For each outcome, the quality 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 a Collaborative Review Group of the Cochrane Collaboration: an international organisation that aims to help people make well informed decisions about health care by preparing, maintaining and ensuring the accessibility of systematic reviews of the effects of health care interventions. www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking. Focusing on low- and middle-income countries, EVIPNet promotes partnerships at the country level between policy-makers, researchers and civil society in order to facilitate both policy development and policy implementation through the use of the best scientific evidence available. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration aiming to promote the generation and use of health policy and systems research as a means to improve the health systems of developing countries. www.who.int/alliance-hpsr

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