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.
# 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.support-collaboration.org/summaries/methods.htm](http://www.support-collaboration.org/summaries/methods.htm)

## 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

<table>
<thead>
<tr>
<th>Review objective: To assess the effects of educational outreach on health professional practice and patient outcomes</th>
</tr>
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<tbody>
<tr>
<td><strong>What the review authors searched for</strong></td>
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<tr>
<td><strong>Interventions</strong></td>
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<td><strong>Settings</strong></td>
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**Date of most recent search:** March 2007

**Limitations:** This is a good quality systematic review with only minor limitations.

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.

Educational outreach compared to no intervention

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Absolute effect</th>
<th>Number of studies</th>
<th>Quality of the evidence (GRADE)</th>
</tr>
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<tbody>
<tr>
<td>Appropriate prescribing†</td>
<td>Median adjusted increase in compliance with desired practice* (interquartile range)</td>
<td>28 studies</td>
<td>High</td>
</tr>
<tr>
<td>Non-prescribing practices§</td>
<td>Median adjusted increase in compliance with desired practice* (interquartile range)</td>
<td>28 studies</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

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.

About the quality of evidence (GRADE)

High: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low: We are very uncertain about the estimate.

For more information, see last page
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

<table>
<thead>
<tr>
<th>Findings</th>
<th>Interpretation*</th>
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<tbody>
<tr>
<td><strong>APPLICABILITY</strong></td>
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<tr>
<td>➤ 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.</td>
<td>➤ 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.</td>
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<tr>
<td></td>
<td>➤ Educational outreach visits may not be effective if resources are not available to provide clinical and managerial support.</td>
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<tr>
<td><strong>EQUITY</strong></td>
<td></td>
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<tr>
<td>➤ Overall, the included studies provided little data regarding differential effects of the interventions for disadvantaged populations.</td>
<td>➤ 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.</td>
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<tr>
<td><strong>ECONOMIC CONSIDERATIONS</strong></td>
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<td>➤ 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.</td>
<td>➤ 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.†</td>
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<tr>
<td></td>
<td>➤ The potential increased effectiveness of outreach visits compared with less resource intensive interventions needs to be weighed against the increased costs.</td>
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<tr>
<td><strong>MONITORING &amp; EVALUATION</strong></td>
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<tr>
<td>➤ 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.</td>
<td>➤ The impact of educational outreach visits should be monitored and the effects on practices other than prescribing should be evaluated prior to scaling up.</td>
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<tr>
<td></td>
<td>➤ 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.</td>
</tr>
</tbody>
</table>

*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: [http://www.support-collaboration.org/summaries/methods.htm](http://www.support-collaboration.org/summaries/methods.htm)

Additional information

Related literature

Getting evidence into practice. Effective Health Care 1999; 5:(1).
http://www.york.ac.uk/inst/crd/pdf/ehc51.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.support-collaboration.org/summaries/coi.htm

Acknowledgements
This summary has been peer reviewed by: Mary Ann O’Brien, Canada; Martin Eccles, UK; Tracey Perez Koehlmoos, Bangladesh; Dennis Ross-Degnan, USA; Tomás Pantoja, Chile; Merrick Zwarenstein, Canada

This summary should be cited as

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