Single and combined strategies for implementing changes in primary care: a literature review

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Authors' objectives
To assess the effectiveness of different strategies, applied alone or in combination, for implementing changes in primary care practice.

Searching
MEDLINE and the registers of references for 21 scientific journals were searched from 1980 to 1992; the search terms were provided. In addition, the reference lists of identified studies were checked.

Study selection
Study designs of evaluations included in the review
The included studies were randomised controlled trials (RCTs) and studies with a non-equivalent group design with pre- and post-tests.

Specific interventions included in the review
Studies of a strategy for implementing changes in physician practice routines were eligible. The included studies were of strategies that were: competence orientated (66%) (educational materials, group education, individual instruction); performance or behaviour orientated (76%) (feedback, reminders); social influence (11%) (peer review); and physical support (8%) (practice support). The time span for the individual studies varied enormously: from a single session to feedback over 5 years.

Participants included in the review
Only studies of primary care physicians in general practice or primary care were included.

Outcomes assessed in the review
Studies that assessed the effect on physician behaviour were eligible. The effects on physicians' knowledge or skills, patients outcomes, or a combination of these were also reviewed.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Methodological quality was assessed in terms of study design only: 20% were RCTs; 23% were non-randomised trials. The authors did not state how the papers were assessed for quality, or how many reviewers performed the quality assessment.

Data extraction
The data were extracted using a standardised form. The authors did not state how many reviewers performed the data extraction, or how any disagreements were resolved.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative overview. No statistical pooling was used because of large variations in the participants investigated, study settings and types of effect studied. The interventions were considered effective if the
post-intervention between-group differences (RCTs) or differences in pre-test post-test differences (non-equivalent group designs) were statistically significant at the 5% level.

How were differences between studies investigated?
The following study characteristics were considered: type of intervention, methodological quality, and the effectiveness of the strategies reported. The review findings were presented separately for single strategies and combined strategies.

Results of the review
There were 75 studies in total: 27 RCTs, 26 non-randomised controlled trials and 22 trials without a control (including one group pre- and post-tests, non-equivalent groups, studies in which only the study group was pre-tested). The total number of physicians included could not be calculated. Only 50 studies appear to have been included in the two syntheses, and details of only 27 RCTs and 17 selected non-randomised controlled trials were presented.

Feedback, reminders and group education were the most frequently studied interventions. The most frequently studied combinations were educational materials with feedback, and group education with feedback. The studies varied in the type of behaviour change desired, the specific interventions applied, the duration of the intervention and methodological quality. Some studies showed statistically significant effects.

Single strategies (16 studies).
Educational material alone did not generally result in physician behaviour change. Group education sometimes appeared to achieve some behaviour change, but not with respect to all goals. Individual instruction appeared effective in most studies. Feedback appeared effective in some studies, but the effect may disappear shortly after the intervention is stopped. In addition, the importance of advice as part of the feedback was unclear. Reminders seemed generally to be effective, but not always with respect to all goals.

Combination strategies (34 studies).
The combination of educational materials and feedback appeared effective, but it was not always more effective than the separate strategies. Group education and feedback appeared effective and was more effective than feedback alone. The combination of feedback and reminders produced mixed effects. Feedback and peer review generally seemed effective, but the effects were weakest in the RCT.

Authors' conclusions
Individual instruction, feedback and reminders seemed to be the most effective single strategies. The most effective combined strategies appeared to be individual instruction added to other strategies and the combination of peer review and feedback.

CRD commentary
The review used clear inclusion criteria, but no details of any attempts to limit reviewer bias were described. The authors acknowledged their search was limited and that more articles might have been retrieved if they had searched more databases and used a wider set of keywords. It was unclear from the review how studies were selected for inclusion in the narrative synthesis: only 50 of the 75 studies identified appear to have been used. The key characteristics of some of the included studies were summarised in tabular format, arranged according to the study design. The authors' decision not to combine the results statistically seems entirely appropriate given the different study contexts and characteristics. The authors' notes of caution concerning the methodologies of the trials were also appropriate, as was the tentative nature of the conclusions.

Implications of the review for practice and research
Practice: There are no obvious ways to bring about behaviour change among general practitioners. However, interventions should address the barriers to change experienced by the target practitioners, and it may be preferable to use multiple approaches that address several barriers simultaneously.
Research: More primary research in this area is needed, and attention to methodological quality is essential.

Bibliographic details

PubMedID
7953212

Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.