Educational and organizational interventions to improve the management of depression in primary care: a systematic review

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CRD summary
This review assessed organisational and educational interventions for depression in primary care. The authors concluded that guidelines and educational strategies are unlikely to be effective by themselves, and that the implementation of the effective complex strategies will require considerable investment in primary care services. It was unclear whether the results were consistent among studies and this casts doubt on the authors' conclusion.

Authors' objectives
To assess the effectiveness of organisational and educational interventions in the management of depression in primary care.

Searching
MEDLINE, PsycLIT, EMBASE, CINAHL, the Cochrane Controlled Trials Register, NHS EED, the Cochrane Depression, Anxiety and Neurosis Group's Specialised Register, and the Cochrane EPOC Register of trials were searched from inception to March 2003 without any language restrictions; the search terms were reported as being available from the authors. The reference lists in identified studies were screened, and experts in the field and key authors were contacted.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs), controlled clinical trials, controlled before-and-after studies, and interrupted time-series were eligible for inclusion.

Specific interventions included in the review
Studies of organisational or educational interventions, or original modes of providing health care, were eligible for inclusion. The interventions had to be targeted at health care professionals and patients. Studies of only patient-level interventions or screening strategies were excluded. The review broadly classified intervention strategies as explicit plans and protocols including guidelines; changes in the design of the delivery system; attention to the information needs of the patients; ready access to necessary expertise; and information support systems. Most studies used more than one of these strategies, while many studies used complex and multifaceted interventions. The majority of studies were conducted in primary care practice in the USA. Further details of many of the interventions used in the primary studies were reported elsewhere (see Other Publications of Related Interest).

Participants included in the review
Studies that targeted health professionals working in primary care (medical and nonmedical) and patients were eligible for inclusion. Some included studies reported patients as the participants, while others reported clinicians, general practitioners and health care workers; some reported both.

Outcomes assessed in the review
The outcomes of interest were the management and outcome of depression and health-related quality of life. The included studies assessed prescriptions for antidepressants, knowledge about depression, depression assessed using various scales, compliance with antidepressants, adherence to guidelines, recognition of depression and suicide rates.

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
The studies were assessed according to the criteria described by Jadad, in particular the method of randomisation. The reviewers also assessed the appropriateness of the unit of analysis for the unit of randomisation. Two reviewers independently assessed validity and cross-checked the results.

Data extraction
Two reviewers independently extracted the data and cross-checked the results.

Where possible, relative risks were calculated from original data. The reviewers attempted to recalculate results taking account of the clustering effect. Where this was not possible, the point estimate and general direction of treatment effect were reported and a potential unit of analysis error was noted.

Methods of synthesis
How were the studies combined?
The studies were grouped according to the result for the primary outcome of the intervention (positive or negative) and combined in a narrative. Case by case examples of successful and unsuccessful interventions were described.

How were differences between studies investigated?
Some differences between the intervention characteristics of studies with positive and negative outcomes were discussed. However, the review did not investigate between-study differences thoroughly.

Results of the review
Thirty-six studies were included: 29 RCTs, 5 controlled before-and-after studies and 2 interrupted time-series. Numbers for clusters and individuals in 34 of the studies were reported elsewhere (see Other Publications of Related Interest).

Methodological problems with the studies included an inappropriate level of analysis for the level of randomisation.

Effective strategies.
Twenty-one studies showed positive results for the intervention. Strategies that were successful in improving patient outcomes were generally more complex interventions that included elements of clinician education, an enhanced role for the nurse, and more integration between primary and secondary care. Interventions of medication counselling delivered over the telephone by practice nurses or trained counsellors were also successful.

Unsuccessful strategies.
Simple guideline implementation and educational strategies were generally not successful.

Cost information
The review also assessed costs (direct and indirect), but these were only relevant to two specific interventions used in 3 studies that reported costs.

Authors' conclusions
The management of depression in primary care can be substantially improved. Guidelines and educational strategies are unlikely to be effective on their own, and implementing the effective complex strategies will require considerable investment in primary care services. Effective interventions combined education with other multifaceted organisational approaches.

CRD commentary
The review question was clear in terms of the study design, intervention, participants and outcomes, although no criteria
were specified for a diagnosis of depression. Several relevant sources were searched and attempts were made to minimise language and publication bias. The methods used to select the studies were not described, so it is not known whether any efforts were made to reduce errors and bias. Two reviewers independently assessed validity and extracted the data, which reduces the potential for bias and errors. Validity was assessed using criteria validated for RCTs; this would not have been appropriate for studies of other designs, so its use in this review was not really appropriate.

Given the heterogeneity among studies, a narrative review was appropriate. The studies were grouped by results (intervention shown to be effective or not) and the elements associated with effective interventions were examined. This might have been appropriate in view of the complex and multifaceted nature of most of the interventions. However, not all of the included studies were discussed in the text and, overall, the findings were very unclear: e.g. were interventions classified as effective found to be not effective in other studies? Overall, from the information presented in the review, it is unclear whether or not the authors' conclusions are likely to be reliable.

**Implications of the review for practice and research**

Practice: The authors did not state any implications for practice or further research.

**Funding**

UK Medical Research Council and Wellcome Health Services Research Fellowship programmes; NHS Centre for Reviews and Dissemination; Health Technology Assessment Programme, project number 94/08/29.

**Bibliographic details**


**PubMedID**

12813120

**DOI**

10.1001/jama.289.23.3145

**Original Paper URL**

http://jama.ama-assn.org/

**Other publications of related interest**


**Indexing Status**

Subject indexing assigned by NLM

**MeSH**

Clinical Trials as Topic; Cost-Benefit Analysis; Depression /therapy; Depressive Disorder /therapy; Humans; Mental Health Services /organization & administration; Outcome and Process Assessment (Health Care); Patient Education as Topic; Primary Health Care /organization & administration
AccessionNumber
12003008457

Date bibliographic record published
31/01/2006

Date abstract record published
31/01/2006

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.