Printed patient education interventions to facilitate shared management of chronic disease: a literature review

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CRD summary
This review concluded that currently designed printed patient materials appear to have limited benefits, and that further rigorous research is required. It is difficult to assess the appropriateness of this conclusion given the poor reporting of review methods and results and an inadequate quality assessment of the included studies.

Authors' objectives
To evaluate the effectiveness of print-only interventions in increasing patient participation in chronic disease management and to identify disease or intervention characteristics associated with success.

Searching
MEDLINE, the Cochrane CENTRAL Register, EMBASE and CINAHL were searched for relevant studies published from 1992 to January 2005; the search terms were reported. The reference lists of included reports were screened for further relevant studies.

Study selection

Controlled studies that presented baseline measures were eligible for inclusion in the review. The duration of the included studies ranged from 2 to 52 weeks.

Specific interventions included in the review
Studies that compared printed patient materials (hard copy or electronic) with usual care were eligible for inclusion. Multi-component interventions were excluded. The included studies evaluated materials ranging from an existing leaflet to a specially designed manual.

Participants included in the review
Studies of patients with the eight top non-psychological chronic disease causes of disability-adjusted life-years in Australia, or inflammatory bowel disease or prostatic hyperplasia, were eligible for inclusion. The studies in the review included patient groups with inflammatory bowel disease, arthritis, asthma and diabetes.

Outcomes assessed in the review
Studies reporting health outcomes, quality of life and/or patient disease management behaviours were eligible for inclusion. The specific outcomes in the primary studies included measures of anxiety, self-efficacy, knowledge, quality of life and medication adherence.

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 rated on three criteria: full description of the intervention, at least 26-week study duration, and the inclusion of process measures. Intervention quality was assessed according to four criteria: patient identified topics, user understanding pre-checked, progressive behaviour-based design and design-based on behavioural theories. The authors did not state how the validity assessment was performed.
Data extraction
The authors did not state how data were extracted for the review, or how many reviewers performed the extraction. For each study, measures reported as showing statistically significant change were presented with change effect size (reported as proportion changed for dichotomous data and difference in mean change for continuous data).

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative.

How were differences between studies investigated?
Heterogeneity was not formally assessed, but some differences between the included studies were briefly mentioned in the narrative synthesis.

Results of the review
Seven studies (n=1,017) were included in the review.

In terms of study quality, two of the seven studies continued beyond 6 months, two contained process measures, and only one gave a full description of the intervention. In relation to intervention quality criteria, two were checked for user understanding, and one included patient-identified topics and had some behavioural theory underlying the design.

Quality of life was measured in six studies, knowledge in five, anxiety in three, self-efficacy in two, and medication adherence in two.

Statistically significant change was found for few of the measures. Knowledge improved in three studies and adherence in two. Quality of life declined in one study but a confounding cause was reported.

Cost information
No

Authors’ conclusions
Currently designed printed materials appear to produce limited effects on outcomes. There was insufficient evidence to assess effectiveness and factors associated with success. Further research is required.

CRD commentary
This review attempted to answer a broad review question, and this was reflected in its inclusion criteria. Multiple electronic databases and reference lists were searched for relevant studies, but it was unclear whether attempts were made to minimise publication and language bias. The methods used to select studies, assess validity and extract the data were not described, so it is not known whether any efforts were made to reduce reviewer errors and bias. The quality assessment of the primary studies was limited and did not include criteria more commonly used to assess the quality of controlled studies. In particular, information about study design or the baseline comparability of the treatment groups was not consistently reported.

Details of the included studies were very sparse and the synthesis of these studies consisted primarily of listing statistically significant changes followed by a brief discussion. Given the lack of reporting of review methods, limited reporting of the included studies, and an inadequate quality assessment of the included studies, it is difficult to determine the reliability of the authors’ conclusions.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.
Research: The authors stated the need for rigorous studies of print materials that have been designed using the same kind of systematic process which is used for other behaviour change interventions.

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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.