# Patient educational material in the management of low back pain in primary care

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### Abstract

*Distributing educational material about low back pain to patients is increasingly seen as a possible adjunct to clinical management and a potential means of reducing the risk of the progression of the disorder toward chronic disability. Most back pain is managed in the primary care setting, where such material could save time and support the efforts of these practitioners. Recent evidence-based clinical guidelines for acute low back pain in U.S. and U.K. have advocated the use of educational material, but most of the available booklets are based on traditional biomedical theory about back pain and are neither evidence-based nor in line with recent guidelines. The few of these booklets that have been tested have had inconsistent effects. A new booklet has been developed which is evidence-based, in line with recent guidelines, and states its messages in a firm, uncluttered, and unambiguous manner. Preliminary studies show that it is readily accepted by patients, that they understand the messages, and that it creates a positive shift in beliefs about low back pain. Further studies regarding the use of this booklet are required to determine its effect on clinical outcomes.*

The spectre of rising disability rates associated with low back pain (LBP) in most industrialized nations has prompted re-examination of traditional medical management. Our understanding of the factors associated with chronicity has shifted from purely biomedical considerations. In the fear-avoidance model[1] and the biopsychosocial model,[2] we now recognize that psychosocial factors may be even more important. It was previously thought that these psychosocial factors were only important in established chronic pain and disability,[3] but recently it has become clear that they may develop early in the course of the disorder and play an important role in the development of chronicity.[4,5]

This has stimulated interest in patient educational material focusing on the prevention of chronicity.[6] Recent clinical guidelines for the management of acute LBP include strong recommendations that such educational material should be available[7-9]; indeed the U.S. Agency for Health Care Policy and Research (AHCPR) guideline included such a booklet.[10] Dissatisfaction with medical care for LBP is most frequently due to inadequate explanation of the problem,[11] and educational material may help to satisfy this need. Most LBP is and should be managed mainly in the primary care setting, where such material could support non-specialist practitioners and also save time. Patients and health professionals have responded positively, indicating a clear desire that such material be made available.[12,13]

Thus it is, perhaps, an appropriate time to review the current state of patient educational material for LBP. However, before doing so it should be mentioned that printed educational material is only one of a number of possible approaches to patient education. Booklets are relatively weak interventions when taken in isolation and are most effective when they are part of an integrated package of advice and management by the physician and therapist.[14] While a study of patient compliance with an exercise program found that a booklet was more effective than a physical therapist, the effect of combining them was somewhat stronger than either alone.[15] It is essential that all the information and advice given to the patient is complementary and mutually reinforcing, and therefore a patient booklet should be in line with current guidelines on clinical management. Patient education is unlikely to be effective if the patient receives inconsistent messages, or if the physician and therapist provide conflicting advice.[6] It may also be argued that clinician education and patient education run in parallel, particularly if we are trying to change the routine clinical management of LBP. The impact of a physician education program has been investigated, both for its

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effects on physicians and their patients. That investigation demonstrated that physicians benefited through their gaining confidence in their management of LBP, however no significant improvement in patient outcomes could be shown.[16,17] Other educational approaches to patients such as manual handling advice[18] and back schools[6] generally focus on primary prevention or the return to work, respectively. This paper will concentrate on educational material suitable for patients with LBP who are being treated in the primary care setting, with the focus on preventing the disorder's progression to chronicity. Arguably, this may be easier to achieve than primary prevention, and could reduce the need for rehabilitation.

Over the last two decades there have been literally hundreds of leaflets and booklets produced for patients with LBP. Almost all try to provide different or better presentations of a traditional biomedical approach to management. They concentrate on issues such as knowledge of spinal anatomy, biomechanics and pathology, avoidance of activities that aggravate pain, advice on "good posture," ergonomic advice, and back-specific exercises. Most are based on theory rather than evidence, and very few have been tested for efficacy.

The subject of clinical education is complex. Education of the clinician alone seems not to be sufficient, and there are many barriers to changing clinical practice.[14] Patients want and will seek explanations about back trouble,[19] but the information must be presented in a form they can understand and the information and advice they receive from different sources must be consistent. Patients will judge this information and advice against their prior knowledge. Only if the new information meets all these criteria is it likely to be accepted and have any chance of influencing patients' beliefs and behavior.[20]

## Previous Trials

Cherkin and colleagues reported one of the most meticulous trials of an educational intervention in primary care.[23] Their 17-page booklet was essentially evidence-based, stressing the benign nature of back pain and advocating the benefit of early activity; it was very similar to the AHCPR booklet[10] and its format was quite traditional with sections on anatomy, ergonomics, exercise, and care-seeking. Primary care patients were randomly allocated to receive the usual care, the booklet, or a 15-minute educational session with a specially trained nurse in addition to the booklet. The nurse intervention gave higher patient satisfaction, perceived knowledge, and exercise participation in the short term than resulted from those that received the usual care. The booklet intervention showed similar trends, but they were not statistically significant. There were no differences between the groups for worry, symptoms, or functional status.

Roland and Dixon reported the only randomized controlled trial of a traditional booklet which has shown any significant impact on patients.[21] Patients with LBP in primary care received usual care with or without the booklet. This 21-page booklet followed the traditional format of information on anatomy and biomechanics, advice on self-management, which included a strong message to rest initially, and information on back-specific exercises and ergonomics. The majority of patients said they found the booklet helpful. Over one year, patients who received the booklet consulted significantly less with LBP and required fewer referrals to the hospital. There was no significant effect on work loss.

Symonds and associates reported a somewhat different approach to early intervention. They produced a simple pamphlet for workers in an industrial setting, with or without a history of LBP.[22] The specific aim of the pamphlet was to reduce absence from work. The booklet was based on the fear-avoidance model[1] and attempted to shift beliefs and attitudes about LBP in a positive direction. It used the model of "avoider" and "coper" to encourage early activity and return to work as being beneficial, while stressing the benign nature of back trouble. In a controlled trial, workers receiving the pamphlet showed a positive shift in beliefs about pain locus of control and the inevitable consequences of back trouble. The pamphlet significantly reduced the need for extended absence due to LBP in the following year.

The limited available evidence is inconclusive. On the one hand educational booklets about LBP may shift beliefs, alter consulting patterns, and reduce work loss. On the other hand there is little evidence that they affect clinical outcomes. We would hypothesize that these inconsistent results may be because the booklets that have been tested so far were mostly based on an ineffective approach to the management of LBP, were not adequately focused, and were providing the patients with mixed messages.

## Preliminary Evaluation of a New Booklet

A new patient educational booklet (*The Back Book*) has been prepared which attempts to address these problems. The multidisciplinary team of authors included a general practitioner, an osteopath, a physiotherapist, a rehabilitation specialist, a clinical psychologist, and a member of the CSAG committee which produced the U.K. clinical guidelines for acute LBP. The views of patient representatives and a wide range of clinicians was sought throughout development.

The aim was to produce a booklet that was evidence-based and in line with modern guidelines for the clinical management of acute or recurrent LBP in primary care.[7,8] It incorporated certain features of the Roland and Dixon booklet[21] and combined them with the direct approach of the Symonds and associates' industrial pamphlet.[22] The message was sharply focused and deliberately given in an uncompromising manner: e.g., the spine is strong; not a disease; benign natural history; rest is bad, activity is good; self-coping is the answer, doctors are not. It greatly reduced the traditional information on anatomy, ergonomics, and back-specific exercises; particular care was taken to concentrate the information in order to reinforce the main mes-

**Table 1** Results of the Checklist Questionnaire Completed byPatients After the Booklet

| Response | % |
|---|---|
| Very easy to read | 88 |
| Information clear and interesting | 100 |
| Gives new and helpful information* | 90 |
| Believe most of what it says | 90 |
| Would tell a friend or family to read it | 100 |
| Length is about right | 86 |
| Think it will help people | 100 |

* Only 4 patients said they "knew most of the information anyway"

**Table 2** Results of an Open-Ended Questionnaire Completed by Patients After Reading the Booklet

| Response | % |
|---|---|
| Most important messages | |
| exercise is good | 63 |
| normal activity is good | 41 |
| too much rest is bad | 31 |
| positive attitudes are helpful | 22 |
| Overall rating | |
| very useful | 61 |
| useful | 41 |
| not useful/relevant | 0 |

sages. The language was simple, readable and intended to be easily understood by most English-speaking patients. The final draft of this material was piloted, in raw manuscript form, on several unselected groups of primary care patients complaining of LBP in Huddersfield, Glasgow, and Manchester in the United Kingdom.

The first group of 49 patients attending general practitioners and osteopaths completed an 8-item categorical questionnaire one week after reading the booklet. The questions included readability, clarity of message, believability, and helpfulness. A second group of 49 patients attending a community physical therapy department in a large health center completed an open ended questionnaire about the perceived messages, any difficulties in understanding or negative reactions to the messages or the booklet. A third group of 31 patients attending an osteopath was used to estimate the effect of the booklet on beliefs about the inevitable consequences of back trouble. These patients completed the Back Beliefs Questionnaire (BBQ)[24] before and one week after attending and reading the booklet. A non-randomized comparison group of 26 patients completed the BBQ before and after seeing the osteopath, without receiving the booklet. The mean age for all groups was approximately 40 years, and the sex distribution was virtually equal.

**Table 3** Shift in Scores on Back Beliefs Questionnaire (BBQ): Comparing With and Without the Booklet

| | Mean BBQ Score (SD) | | |
|---|---|---|---|
| | Before | After | *P* |
| Booklet & Osteopath (n=31) | 29.0 (7.4) | 33.8 (6.6) | < 0.001 |
| Osteopath Only (n=26) | 30.0 (6.4) | 31.9 (6.2) | NS |

The checklist results (Table 1) showed that virtually all patients found the booklet very easy to read, interesting, clear, helpful, believable, and would recommend it to others. The results from the open ended questionnaire are provided in Table 2, and show that the most important messages perceived were: exercise, normal activity, not too much rest, and positive attitudes. An overall rating of "useful" or "very useful" was given by all patients, with the only two negative comments (from the whole pilot study) being limited to "I don't know if I would be able to do normal things without a week's bed rest" and "It's just biased propaganda to get people back to work." The BBQ scores showed a highly significant positive shift in beliefs about the inevitable consequences of LBP in patients who received the booklet, but not for those who did not receive it (Table 3).

These pilot studies indicate that a focused, evidence-based booklet that strongly challenges the traditional concept of rest and being careful was readily understood, well received, imparted the intended messages, and promoted a positive shift in beliefs.

## Discussion

There can be little doubt that patient-oriented information about back pain is desirable and needed in the primary care practice setting. Most important from the clinical perspective is the possibility of reducing the risk of chronicity by changing beliefs with concomitant behavioral modification leading to adoption of an early active management strategy. There are potentially large economic benefits from reducing chronicity, care-seeking, and social costs. It is now clear that suitably presented information can alter beliefs and attitudes toward back pain, but the transition to behavioral change has yet to be demonstrated in a clinical population. There is some evidence that clinical outcomes are most likely to be changed if the entire clinical team provides a strong and consistent message, which is supported by the printed material.[23] The clinician's message may be important, but a booklet can be a useful adjunct. Provided the message in the booklet is strong and acceptable, a booklet alone may even be able to provide a partial substitute when clinical advice is inadequate.

It is planned that the new booklet we describe will be adopted as a component of the second edition of the U.K. clinical guidelines for primary care management of LBP[9] and will be distributed by the Royal College of General Practitioners to family doctors and health authorities along with the guideline package. The booklet is integrated into the evidence-base and the clinical guidelines, and its message is entirely consistent with the recommended care strategy. It is also our hope the booklet will also be adopted by U.K. organizations representing physiotherapy, osteopathy, and chiropractic. In the future it has been proposed to formally study the efficacy of the booklet in conjunction with the clinical guidelines in general practice, and also in other clinical environments such as osteopathy and physical therapy.

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