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## Implementation strategies to reduce the burden of low back pain

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2018

### **document version**

Publisher's PDF, also known as Version of record

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### **citation for published version (APA)**

Suman, A. (2018). *Implementation strategies to reduce the burden of low back pain*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

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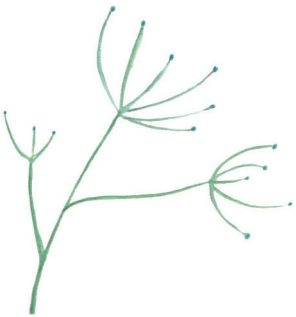
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# *Chapter 11*

Summary





## SUMMARY

Low back pain (LBP) is among the most prevalent and costly disorders, and the leading cause of disability worldwide. Although over 80% of the population will experience LBP at some point in their lives, in up to 95% of these people no specific underlying pathology or neurological damage can be found. This type of LBP is referred to as non-specific, and does not require intensive medical treatment outside primary care. On the contrary, diagnostic imaging and specialist consultations can even be harmful to patients through patient labeling, irradiation exposure, and unnecessary surgery. Still, LBP is one of the most common conditions for which people seek medical care in industrialised countries, and healthcare and societal costs related to this condition are considerable. A large variety of health care professionals offer treatments for LBP, which poses a challenge for the reduction of variations in care and health care costs for LBP.

Guidelines for the treatment of non-specific LBP are similar across countries, and usually agree that 'less is more'. Treatment recommendations for acute LBP include reassuring the patient, advising to continue activities of daily living including work, discouraging bed rest, discussing psychosocial risk factors, and encouraging self-management. Chronic LBP is advised to be treated with supervised physiotherapy, cognitive behavioral therapy, or multidisciplinary therapy aimed at restoring functional capacity. Despite good intentions, clinicians' guideline adherence leaves room for improvement. This can be due to passive guideline dissemination, patient-related factors (e.g. negative beliefs about the onset and prognosis of their LBP), and poor communication and collaboration between the various health care professionals involved with a patient with LBP. To improve care for people with LBP in the Netherlands, and to reduce its' economic burden, a multidisciplinary guideline for LBP was developed in 2010. This guideline recommends multidisciplinary collaboration and communication between health care professionals in primary care and between health care professionals and patients, and emphasizes the importance of physical activity and (return to) work participation of patients with LBP. Another important aspect of the guideline is the focus on psychosocial risk factors in patients and appropriate treatment regimens.

The main objective of this thesis was to evaluate the effectiveness and cost-effectiveness of a multifaceted strategy to implement the Dutch guideline for LBP in primary care, and thereby improving back beliefs of patients with LBP, and reducing the amount of referrals to secondary care and diagnostic imaging for these patients.

### *Implementation strategies to reduce the burden of LBP*

Guidelines and recommendations from guidelines can be disseminated to health care professionals, patients, and the public through various strategies. One possible strategy is the use of population based (mass) media campaigns. “Back pain: don’t take it lying down” is one example of such a strategy. This targeted mass media campaign aimed to improve beliefs about LBP of the general public in the province of Alberta, Canada. This study is described in Chapter 2. In the first three years of the campaign, the percentage of people agreeing with the statement “If you have back pain, you should stay active” increased from 56% to 63%. Given this positive impact on public back beliefs, the campaign continued to be administered to the entire Alberta population. Seven years after the initial evaluation, the campaign had continued impact on public beliefs about LBP, resulting in 72% of people agreeing with the statement. People who remembered being exposed to this campaign were statistically significantly more likely to agree with the statement.

Another possibility is the use of multifaceted implementation strategies. A systematic review of the effectiveness of these strategies for the implementation of back and neck pain guidelines in health care was performed (Chapter 4). This review of 9 original studies showed that these strategies are not more effective in improving patient outcomes and health care professionals’ behaviour compared to minimal, single, or no implementation strategies. It is unclear whether the lack of effectiveness in these studies was due to theory or implementation failure, as most did not report any process evaluation measures. More research is needed to investigate effectiveness of multifaceted implementation strategies.

Chapter 5 provides a detailed description of the design of a longitudinal stepped-wedge cluster randomized trial. In this trial, the effectiveness and cost-effectiveness of a multifaceted implementation strategy, targeted at both health care professionals and patients with LBP, will be evaluated. The strategy for health care professionals consisted of several components, including: 1) a multidisciplinary continuing medical education training session, 2) take-home educational material, 3) rules of conduct for communication and collaboration, 4) contact details of other participating health care professionals, 5) quarterly reminders, 6) monthly newsletters, and 7) an interactive website and social media (a forum, Twitter, and Facebook). The strategy for patients included: 1) an interactive website with extensive information about etiology, prognosis, treatment, work participation, and self-management, 2) video-messages from health care professionals and other patients about treatment, experiences, and tips and tricks, 3) physical exercise information and videos, 4) social media (a forum, Twitter, and Facebook), 5) monthly newsletters, and 6) translated information and video-messages.

### *Effectiveness and cost-effectiveness of a multifaceted implementation strategy*

To evaluate the effectiveness of the multifaceted strategy on health care professionals, the adherence of general practitioners to the Dutch guideline was studied using performance indicators based on the guideline. Data from electronic medical records of 5130 patient contacts were used for analysis, of which 2453 patient contacts took place in the usual care group, and 2677 patient contacts took place in the implementation group. Chapter 8 shows that this strategy did not result in improved guideline adherence among general practitioners. The only statistically significant difference found was a reduction in the number of referrals to neurologists in the implementation group (from 100 (7%) to 50 (4%)) compared to the usual care group (from 48 (4%) to 50 (4%), ( $p < 0.01$ )). There were no other between-group differences in any of the performance indicators.

Chapter 9 shows that the multifaceted strategy was also not able to improve beliefs about LBP, functional status, absenteeism or quality of life of patients with LBP. Nonetheless, it might be worthwhile considering the strategy from a cost-effectiveness perspective. The strategy costs were low (€ 70,- per patient), and the societal costs per patient were lower in the group that received the strategy than in the control group ( $\Delta C$  € 748,-), mainly due to lower indirect costs (i.e. absenteeism, presenteeism, and unpaid productivity losses).

### *The implementation process*

Changing professional or patient outcomes by implementing guidelines or disseminating guideline recommendations can be influenced by many factors related to the targeted health care professionals, patients, the strategy used, or the implementation process. For example, Chapter 3 shows that residents of the province of Alberta, Canada with higher annual income are statistically significantly more likely to agree with the statement "If you have back pain, you should stay active" than residents with lower income.

To gain insight into the implementation process of the multifaceted implementation strategy for the Dutch guideline for LBP, process evaluations among health care professionals and patients were conducted. Chapter 6 shows that health care professionals were positive about the professional targeted implementation strategy, but still experienced many barriers to guideline adherence. These barriers included personal and practical factors (e.g. lack of time or solutions to practical barriers), confidentiality and privacy of patients, dependence and distrust issues among the various health care professionals, as well as policy factors (e.g. reimbursement systems do not allow for 'thinking outside the box').

The process evaluation among patients alongside the trial (Chapter 7) shows that exposure to the patient targeted strategy was low. One third of the patients had not used the website or the other elements of the strategy at all, and 43% had only used it once. Patients were positive about the website components, and satisfaction with the website increased statistically significantly with an increase in its use. Still many reasons for not using the website were mentioned. Patients did not use the website because the information was already known to them, or their healthcare provider had not recommended usage of the website (95%), or had not discussed the content of the website with them (98%).

### *Discussion and conclusion*

In Chapter 10, the results of this thesis are summarized and discussed, and recommendations for research and practice are provided. The overall conclusion of this thesis is that the multifaceted implementation strategy is not effective or cost-effective for improving back beliefs, disability, quality of life, or absenteeism in patients with LBP. The strategy is also not effective or cost-effective for improving guideline adherence of GPs, multidisciplinary communication and collaboration or decreasing referral rates to secondary care and diagnostic imaging for LBP. Therefore, the multifaceted implementation strategy evaluated in this thesis is not recommended for widespread use in its current form.