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MULTIDISCIPLINARY AND MULTISECTORAL INTERVENTIONS TARGETING PATIENTS WITH BACK PAIN

– a health technology assessment

Summary

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Summary

The report aims to help develop and qualify the existing treatment for people with back disorders, to meet the needs of people with back disorders and professional actors in this field for integrated and coordinated initiatives and to increase the efficiency of existing services.

The report describes the background and the purpose of the project and the epidemiological situation and risk factors for developing long-term back disorders. The report further introduces a disease model that includes many of the factors that should be integrated into understanding and managing a long-term course of disease. A chapter on methods follows and then a chapter that develops the key concepts used in the report, mainly multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral. Chapters 4–7 include the analyses of the report, and Chapter 8 summarizes the results of the report and presents several conclusions and comments.

Background

Recent research indicates that the prevalence of back pain or other back disorders and the resulting effects has remained constant among the people with nonspecific back pain despite all previous interventions. People with nonspecific back pain experience varying degrees of physical, mental and social problems. Many health professions and institutions strongly focus on preventive interventions to tackle medium-term and recurrent back pain. People with such back disorders are assumed to benefit from extended multidisciplinary, interdisciplinary or transdisciplinary and multisectoral, intersectoral or trans-sectoral interventions in connection with investigating and treating back disorders as an alternative to a more traditional biomedical approach. Multidisciplinary, interdisciplinary and transdisciplinary interventions are often based on a disease model in which the ability to function is viewed in a broader and more integrated perspective than in a narrow biomedical perspective. The disease model thereby enables alternative initiatives in diagnosis, investigation and treatment that involve such factors as the workplace, social institutions and cognitive interventions.

In initiating multidisciplinary, interdisciplinary and transdisciplinary interventions, focusing on people with medium-term back disorders that have lasted 4–12 weeks seems relevant. People with short-term back disorders often improve rapidly, and the situation is often more chronic among people with long-term back disorders lasting more than 12 weeks. The people with back disorders who have had symptoms or sick leave 4–12 weeks therefore seem to have the greatest potential for improvement.

The group in focus is also limited to people of working age (18–65 years).

The report hereby aims to document the possible effects of early multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral interventions targeting people with back disorders. The main objective is to avoid long-term back pain and disorders, unnecessary surgery, sick leave and leaving the labour market. The effects are further assessed in relation to the people with the back disorders, organization and economics.

Methods

A systematic literature review is the overall basis for the report and the analysis of the perspectives of the report: technology, patients, organization and economics. The report is based on health technology assessments in this field within Denmark and elsewhere: reviews or recent primary studies that were not reviewed in connection with a systematic review. In addition to the literature review, primary data were collected on experience from all relevant institutions that have worked with the present technology: multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral interventions.

The concepts of multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral

The multidisciplinary, interdisciplinary and transdisciplinary collaboration in health care systems and in collaboration with other relevant sectors is described using many different expressions in the literature and in practice. Examples include interprofessional collaboration, teamwork and multidisciplinary, interdisciplinary and transdisciplinary collaboration. Documenting that the multidisciplinary, interdisciplinary and transdisciplinary forms of collaboration have an effect requires a somewhat uniform understanding and use of the expressions and language related to these forms of collaboration. There is reasonable agreement on the meaning of the basic concepts, but when they are used in health care systems, the differences become imprecise, which therefore results in the concepts being used haphazardly. The report presents several models for multidisciplinary, interdisciplinary and transdisciplinary collaboration: pooled or collective (multidisciplinary) collaboration (which this report divides into independent collaboration and parallel collaboration), sequential (interdisciplinary) collaboration and reciprocal (transdisciplinary) collaboration. These models are linked to how these concepts are used in English.

Technological aspect

The literature on early multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral interventions targeting people with lower-back pain and the circumstances under which the interventions are carried out are very diverse. The studies included use many different measures of effect. Further studies are thus needed that are more standardized. There is only one study from Denmark, and studies of subjects in Denmark are therefore especially needed.

- Evidence that is generally moderate indicates that early multidisciplinary, interdisciplinary and transdisciplinary interventions are more effective at a clinically relevant level than monodisciplinary interventions or no initiatives in primary health care.
- The effects of early multidisciplinary, interdisciplinary and transdisciplinary interventions mainly include reduced sick leave at 12-month follow-up and, although there is considerable uncertainty, reduced pain and functional limitations.
- Evidence that is generally moderate indicates that involving the workplace reinforces the effect of the multidisciplinary, interdisciplinary and transdisciplinary interventions.
- Moderate evidence indicates that the intensity of the multidisciplinary, interdisciplinary and transdisciplinary interventions does not influence the effects.

Patient factors

The chapter on patients describes the potential effects for the people with back disorders of participating in multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral interventions, tests and treatments for back disorders compared with usual practice. The evidence base for the situation of patients is sparse, and investigating how the interventions affect patients' quality of life, other psychosocial parameters and satisfaction is often not the main focus of the studies.

Multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral interventions did not have any clear effects on the quality of life and other psychosocial parameters or the evidence base was too little to produce definitive conclusions. In contrast, low- or high-intensity interventions with or without involving the workplace seem to improve patient satisfaction in the long term.

Organizational factors

The first part of the chapter on organization assesses the literature from the chapter on technology in relation to how multidisciplinary, interdisciplinary or transdisciplinary collaboration is described and assesses whether the use of organizational models is associated with the effects of a study. The review showed the following.

- Of 23 studies (based on 17 trials), 14 (based on nine trials) describe well the multidisciplinary, interdisciplinary or transdisciplinary collaboration; nine (based on eight trials) have a limited description. Of the 14 studies with good descriptions, only four fulfilled all criteria for good description. This could therefore theoretically create problems in determining whether these studies can assess the evidence related to multidisciplinary, interdisciplinary or transdisciplinary collaboration when most of the descriptions of the interventions do not fulfil all the criteria for good description.
- 11 studies (based on seven trials) investigated sequential (interdisciplinary) collaboration, and eight studies (based on seven trials) investigated combined sequential (interdisciplinary) and parallel (multidisciplinary) collaboration. Four studies (based on three trials) investigated parallel (multidisciplinary) collaboration or some variant of this.
- The studies investigating sequential (interdisciplinary) collaboration combined with parallel (multidisciplinary) collaboration or exclusively parallel (multidisciplinary) collaboration tended to fulfil the objectives set for the investigation better than did the studies investigating sequential (interdisciplinary) collaboration. Regardless of this tendency, concluding based on this that the model of multidisciplinary, interdisciplinary or transdisciplinary collaboration used caused the results is difficult. The interventions on which the studies are based are very diverse, for example. Other aspects may therefore influence this context.

The second part of the chapter on organization reviews the multidisciplinary, interdisciplinary and transdisciplinary and multisectoral, intersectoral and trans-sectoral interventions at back care centres in Denmark. The most important conclusions are as follows.

- Denmark's back care centres mainly use sequential (interdisciplinary) collaboration combined with parallel (multidisciplinary) collaboration or use solely parallel (multidisciplinary) collaboration. One centre uses reciprocal (transdisciplinary) collaboration.
- The regional and municipal back care centres and one private back care centre treat most patients conservatively. Between 70 % and 100 % of the patients at these back care centres are treated conservatively. The two private back care centres treat 30 % and 50 % (respectively) of patients conservatively and thus differ from the other back care centres by performing surgery on 70 % and 50 % (respectively) of their patients.

Economic factors

The chapter on economics includes four studies that have carried out health economics analysis of the interventions. The health economics analyses used include cost–effectiveness analysis, cost–utility analysis and cost–benefit analysis, and all studies used 'return to work' as the main effect of the interventions and the loss of production as one of the types of costs. Similar to previous chapters, the chapter on economics notes that the interventions may differ in several ways in structure and implementation, which creates difficulty in directly comparing studies.

The results of these studies indicate that intervention with the involvement of the workplace is more cost–effective than usual practice regarding return to work.

The results of all studies provide the same picture, including cost comparisons. Patients in the intervention groups, including interventions with and without workplace involvement, return more rapidly to work than patients treated with usual practice. This saves money.

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