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THE COSTS AND BENEFITS OF ACTIVE CASE MANAGEMENT AND REHABILITATION FOR MUSCULOSKELETAL DISORDERS

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Abstract

The cost of musculoskeletal disorders (MSDs) to employers is significant, with the most substantial cost component being lost time from work. This study sought to identify the evidence on cost-effective case management and rehabilitation principles for MSDs that could be applied by employers and healthcare providers to help those with MSDs stay in work or return to work.

An extensive literature review was undertaken which focused on high quality international scientific studies. There is good evidence that case management methods are cost-effective and stronger evidence that best practice rehabilitation approaches have potential to significantly reduce long term sickness absence. The review identified that programmes using case management and rehabilitation principles can be an effective intervention, and have been widely adopted in various industrialised countries. The key components for successful programmes were identified from the literature. Consultation (questionnaire and focus groups) with UK healthcare professionals and organisations indicated that a wide range of programmes were being implemented, although the structure and scope varied. Over a third of respondents had started their programmes in the last three years. The programmes were perceived to be effective, although few organisations had cost benefit information to support this. Where organisations did have information on the costs and benefits of their programmes this suggested that they are cost effective. Through discussion with organisations, the practicality of implementing these programmes, and obstacles to doing so, were identified.

An evidence-base model for managing workers with MSDs was developed based on this information. Consultation on the model with potential users suggested that it would be useful, and minor modifications were made to it based on feedback. The model is generally applicable to all types of organisation in the UK, and is relevant for all types of MSDs. It describes the principles to apply in order to integrate case management and rehabilitation with the workplace. This report includes the model and details the research that led to its development.

EXECUTIVE SUMMARY

Overview

The burden of musculoskeletal disorders (MSDs) to employers and workplaces is significant; and the most important cost to employers and society is lost time from work.

‘Case management’ is a goal-oriented approach to keeping employees at work and facilitating an early return to work. There is good scientific evidence that case management methods are cost-effective through reducing time off work and lost productivity, and reducing healthcare costs. There is even stronger evidence that best-practice rehabilitation approaches have the very important potential to significantly reduce the burden of long-term sickness absence due to MSDs. The combination of case management with suitable rehabilitation principles is currently being used effectively in multiple settings throughout the UK, and there is growth within the case management sector. Current providers vary widely in quality and experience. There is limited professional regulation, although localised standards of practice have recently become available.

Many of the factors influencing the adoption of cost-effective case management and rehabilitation approaches rest with employers, and funders/commissioners of healthcare. It may be easier to integrate these practices into large and medium-sized workplaces, but there is no reason why the same principles cannot be applied to small businesses and the self-employed. It appears to be very timely for the distribution of information to employers and other key players about how effective case management and suitable rehabilitation approaches can be, and how applicable they are to UK settings. To this end, an integrated model specific to the UK has been developed.

An evidence-based model for managing those with MSDs was developed that is widely applicable to all types of industry and business in the UK. It describes the principles to apply in order to integrate case management and rehabilitation with the workplace. It was derived from high quality scientific studies, and research conducted into views on the applicability and effectiveness within the UK.

It is recommended that HSE distribute guidance based on this model.

Introduction

The cost of musculoskeletal disorders (MSDs) to UK business and society is substantial. HSE estimate that 1.01 million people are currently affected each year, resulting in 11.6 million lost working days (SWI 04/05). On average, each affected person took an estimated 20.5 days off work in that 12 month period. This equates to an annual loss of 0.50 days due to MSDs per worker in the UK.

It is recognised that while physical adaptations to the workplace may be helpful, they do not, of themselves, ensure successful rehabilitation for those with MSDs; additional approaches are needed. Active case management and rehabilitation are increasingly being adopted by UK organisations, but there is little systematically reviewed evidence of their efficacy.

This study therefore aimed to collate the evidence on the costs and benefits associated with active case management and rehabilitation programmes for those with MSDs; to identify potential motivators for, and obstacles to, the adoption of these programmes; and from this to develop a model programme based on the evidence and assess its acceptability to stakeholders.

‘Active case management’ describes the goal-oriented approach to achieving specific work retention and return to work outcomes. It is a strategy for supporting individuals (with MSDs) stay in work or return to work. In practice, case managers integrate clinical and occupational management with the needs of the individual to facilitate early return to work (or work retention).

‘Rehabilitation’ refers to restoration of productive activity. It should be closely linked to the workplace and may involve multi-dimensional methods to achieve work retention or return to work outcomes for employees with MSDs that have led to time off.

Methods

The research was conducted in two phases. In Phase 1, information was collected on different approaches to MSD rehabilitation and active case management. This was undertaken through:

- a literature review covering the international published literature and grey literature;
- consultation with those involved in providing or managing MSD rehabilitation or active case management programmes, concerning their views of the effectiveness of these programmes and the obstacles to their success; this was undertaken through an on-line questionnaire (126 respondents) and six focus group discussions (over 140 delegates);
- discussions with 26 organisations that had gathered information on the costs and benefits of the programmes they were running, with collection of this cost benefit information where possible;
- a questionnaire for those of working age with MSDs, concerning the obstacles to their returning to or remaining in work (75 respondents).

In Phase 2 a model for effective case management was developed, based on the findings of Phase 1, and potential users of the model were consulted concerning its scope, content, presentation and usability. This was done through:

- Electronic and paper circulation of the model, with invitation to respond; over 95 people received the model in this way, and 34 written responses were received.
- Three focus group discussions, attended by 26 delegates.

A final model was prepared following the outcome of the consultation.

Findings

Literature Review

An extensive and thorough review of the international and grey literature was undertaken, and the level of evidence demonstrated in published papers was assessed using the guidance published by the Oxford Centre for Evidence Based Medicine. The literature review showed that the case management and rehabilitation approach for MSDs can be an effective intervention, and has been widely adopted in other industrialised countries such as Australia, New Zealand, the US and Canada.

Active Case Management

From the literature it appears that for work/vocational rehabilitation the usual practice is to deploy a single case manager for an individual worker. The case manager can function as (a) “broker”

who passes on information and arranges referrals without direct contact; (b) “generalist” who provides both coordination and direct services such as advocacy, casework and support systems; or (c) “primary therapist” who supplements the therapeutic relationship with case management functions. It seems that the skill of individual case managers is more important than their professional training or background.

It may be concluded there is moderate evidence that case management approaches are effective and can yield a variety of benefits which are cost effective. This evidence pertains to using case managers as ‘brokers’ or ‘generalists’, but not as ‘primary therapists’; the potential for a conflict of interest when using the ‘primary therapist’ approach to case management has been widely recognised in various rehabilitation programmes. The benefits observed include reduced healthcare costs, reduced treatment duration, reduced sick-leave and time off work, improved worker productivity, reduced compensation claims and litigation, reduced claim duration and more rapid claim closure.

In summary, the key components of successful and cost-effective case management appear to be:

- Individual worker has their own case manager
- Case manager facilitates safe and sustainable return to work by recognising and addressing personal and occupational obstacles to secure safe and sustainable return to work
- Case manager interfaces with healthcare services, but is not also the provider of healthcare
- Best clinical practice guidelines are available and followed
- Case manager monitors all aspects of treatment – appropriateness, timeliness, adherence, outcome, and cost
- Case manager makes treatment funding decisions
- Duration management techniques are available (using normative data on likely absence durations for conditions, the case manager can identify when a case has exceeded a typical absence period, and this triggers a review of the case)
- Case manager liaises directly with employer about return to work
- Case manager negotiates transitional work arrangements
- Early intervention focus

Effective case managers:

- Help to define a health or injury problem
- Arrange specific healthcare
- Develop a clear plan for safe sustainable return to work
- Manage resources efficiently
- Proactively use resources to purchase interventions with known effectiveness, at the most beneficial time
- Interact with other stakeholders and adopt appropriate roles:
 - When communicating with an employer – emphasise the worker’s needs
 - When communicating with a healthcare provider – emphasise the employer’s needs
 - When communicating with the worker – emphasise early and sustainable return to work

MSD Rehabilitation

There is strong evidence that rehabilitation programmes using a cognitive-behavioural orientation and an activity focus are effective, and cost-effective at reducing pain and increasing productive activity in both the sub-acute and the chronic groups. There is also strong evidence that the use of these interventions at the sub-acute stage can prevent the development of long-term problems and reduce time off work. Furthermore, there is good evidence that this is highly cost-effective, especially when the intervention is selectively delivered to individuals screened as having a high risk for a poor outcome.

The key components of good quality rehabilitation service delivery have been shown to include:

- An effective method to identify suitable cases is used with a standardised screening process
- Consideration given to the timing of the intervention; not too early and not too late
- Interventions are individualised by targeting specific obstacles to recovery/return to work
- The role of the case manager is integrated with the intervention through an agreed individualised rehabilitation plan
- The content of the intervention is:
 - Focused on return to work
 - Cognitive-behavioural in orientation (with a problem-solving approach)
 - Activity-based
 - Integrated with the workplace
 - Based on evidence-based protocols

The literature provided strong evidence on the cost-effectiveness of the approach. The study then sought to consider the applicability of these principles in the UK.

Consultation with professionals and those with MSDs

Consultation with professionals supporting those with MSDs, and with people who were experiencing MSDs, identified views of the scope and effectiveness of programmes for active case management and rehabilitation, and any benefits and obstacles that may be encountered with them. The consultation was undertaken through questionnaires and focus groups discussions.

Responses to the professionals' questionnaire were received from a wide range of different professions, although most were healthcare providers. A similar pattern was seen with the focus group discussions. The majority of programmes represented had been running for over 3 years, although more than a third had been running for less than 3 years.

There was a strong perception among professionals that programmes to actively case manage those with MSDs were likely to be cost effective, although only a minority of organisations had information to support this. However, there was anecdotal support for the view that they were likely to be cost effective.

Obstacles for individuals to stay in work or return to work were perceived to include:

- Nature of the injury or of the task meant that the individual may not be able to undertake their job.

- Individual psychological obstacles (e.g. fear of re-injury through work activities, loss of confidence, believing they shouldn't work if they experience discomfort, negative attitude to work or specific job, lack of motivation).
- Work pressures (likelihood of the individual not being able to only undertake 'light duties' or work at a reduced pace).
- Lack of suitable adjustments for the individual (both physical adjustments and adjustments to hours / duties).
- Lack of appropriate, timely advice / treatment / rehabilitation programmes (e.g. unable to access treatment if back at work, long referral or waiting times), meaning individuals did not get the treatment they required for their condition, or were (inappropriately) signed off work.
- Lack of support from management and colleagues, and lack of awareness of appropriate measures for those with MSDs.
- Management belief that individuals should be 100% fit before returning to work.
- Individuals not following best practice or implementing information that has been provided (e.g. poor posture, poor manual handling technique).
- Financial and legal concerns (e.g. individual potentially receiving reduced pay during a graduated return to work programme or being better off on Statutory Sick Pay than during a graduated return to work; organisation's legal standing if individual is back at work and is re-injured).

These concerns were echoed in the comments from those with MSDs. Respondents felt some pressure to return to work, but were concerned that this may increase their discomfort. Individuals also expressed the desire to be completely free of discomfort before returning to work. Some felt that disclosing the extent of their discomfort may suggest that they are no longer able to do their job as well as they used to. Some reported a loss of confidence in undertaking their job.

Organisation obstacles to return to work were also highlighted by those with MSDs, such as not being prepared to return to work with reduced paid hours or a lower paid role if they were unable to perform their normal job.

The main obstacles to effective delivery of these programmes were reported by organisations as a lack of awareness of the benefits of such a service and lack of commitment to it, lack of resources and lack of appropriately skilled service providers.

Perceived benefits of these programmes included:

- Quicker return to work for the individual
- Reduced sickness absence costs
- Improvement of the individual's functional ability
- Retention of skilled staff
- Improved morale
- Improved productivity

Information from organisations on the costs and benefits of their programmes

Twenty six organisations provided information on the way that they implemented a programme within their organisation. Where available, costs and benefit information was provided. It is

difficult to compare the cost effectiveness of the different models due to the small sample size and differences in ways in which data are collected. Limited information was available, but indicated that with most programmes for every £1 spent there was a saving of £2-3. Specific figures ranged from no measurable saving (for a large company's programme which consolidated existing case management and rehabilitation practices across all sites) to £8 (for a rehabilitation programme for those on long term absence).

The different approaches can be summarised as:

1. Internal case management by Occupational Health department. Treatment or therapy provided on-site from a health care provider employed directly by the organisation
2. Internal case management by Occupational Health department. Treatment or therapy provided on-site from a health care provider contracted in to the organisation
3. Internal case management by Occupational Health / Human Resources. Treatment provided off-site by external supplier
4. Contracted therapist / treatment provider acts as the case manager. Treatment provided on-site
5. External case management, providing advice to the individual and referring for treatment, often with a third party.
6. Exercise and functional restoration programmes
7. Programme to create consistent message on MSD rehabilitation

There was no clear indication from the organisations that any approach offered a more beneficial return on investment, and it is thought that the most appropriate approach for an organisation will depend on the size and culture of the organisation and the nature of MSDs within the organisation.

Development of model

An evidence-based model for managing those with MSDs was developed that is widely applicable to the UK. This describes the principles of integrating case management and rehabilitation with the workplace. It applies equally to all industry and business types, all sizes of organisation, and all types of MSDs. It is based on the evidence obtained in the literature review, taking account of the response from UK professions concerning applicability and effectiveness within a range of settings.

The introduction to the model outlines who it is suitable for, and dispels myths commonly held in relation to MSD absence. These myths include:

- the employee must be 100% fit before they return to work;
- concern about a risk of re-injury through work activities;
- it's not the employer's problem;
- workers *must* be given light duties on return to work;
- a GP sick note means the worker cannot work;
- people with pain want to stay off as long as possible;
- the employer shouldn't contact people who are off sick.

There is a clear message in the model for all those involved on what they should do and why. The stages in case management come under the headings of:

- create the right culture;
- manage workers with MSDs;
- manage the return to work process;
- monitor and review the programme effectiveness.

Guidance is provided for all those involved in the management of MSDs (the individual, colleagues, employer, healthcare provider, and case manager). Guidance is also provided on helping people return to work.

The model contains two appendices: one gives guidance on writing policies and procedures in relation to an MSD management plan; the second outlines points to consider when setting up a programme.

Consultation on the model

Comments were provided from potential users of the model through a consultation process. In general it was well received, although there was concern about how easy it would be for Small and Medium-sized Enterprises to use. Minor clarifications were made to the model based on the comments received. The final version of the model is included as Appendix 3.

Conclusions

The international literature shows clearly that the costs of applying active case management for those with MSDs, and running rehabilitation programmes are outweighed by the benefits; there is good economic evidence that these programmes are cost effective. Evidence within the UK also suggests that these programmes are cost effective, and different ways of implementing these principles have been identified; the most appropriate type of programme for an organisation will depend on its size and structure. The key components of successful programmes have been identified, and include providing early access to appropriate advice, remaining at work or returning early, and the organisation staying in touch with the individual during absence. This guidance has been incorporated into a model of best practice for use by UK organisations; potential users have reported the model to be useful.