"What is meant by Case Management for the Return-to-work of Workers with Musculoskeletal Disorders? A Scoping Review."

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Study protocol (internal document)

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Content

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Foreword

The first time that the term “Scoping review” appeared was by Mays, Roberts and Popay (2001), they defined it as “the objective of quickly framing the key concepts in an area of research, and the majority of sources and types of evidence available, and that can be understood as independent projects in their own right, especially where an area is complex or has not been comprehensively reviewed previously (Dijkers M, 2015). However, most authors have cited the methodology derived from an article by Arksey and O'Malley (2005), who developed a framework for conducting a scoping review based on five key points plus an optional point: (I) Identify the question, (II) Identify relevant studies, (III) Selection of studies, (IV) Data collection, (V) Results, conclusions and recommendations, (VI) Optional consultation. Colquhoun L et al. in 2014 they published an article proposing recommendations for a methodological advance in scoping reviews, creating the following definition, which is the one that will be used: a scoping review is a way of synthesizing knowledge based on an exploratory research question in order to conceptualize key concepts, types of evidence and gaps in research in reference to a field or area, through a systematic search, selecting and synthesizing existing knowledge. Colquhoun L. et al, propose to combine the key points of Arksey and O’Malley with the improvements proposed by Levac et al.

This document tries to detail the scoping review methodology for the research “What is meant by Case Management for the Return-to-work of Workers with Musculoskeletal Disorders? A Scoping Review.”

Justification

Musculoskeletal disorders (MSDs) are the second highest contributor to disability worldwide, with low back pain being the single leading cause of disability globally (WHO, 2018; GBD, 2016). Furthermore, musculoskeletal conditions account for the highest proportion of lost productivity in the workplace (WHO, 2018). Its impact is significant in terms of health, wellbeing and economic costs in the European workforce, and it is a crucial determinant for a healthy aging (Okunribido, 2010). In fact, MSDs are the most common work-related health problem in Europe, representing half of the total sickness absence of at least three days of duration, 60% of permanent disabilities and generating an estimated cost of 0.5 to 2% of GDP (Okunribido, 2010; OSHA, 2007). Consequently, one of the greatest health challenges is to reduce sickness absence due to MSDs and to support the return to work (RTW) (Bevan, 2009).

Occupational health services can offer good opportunities for research and testing new approaches to improve workers' health. Although occupational health services usually had a major focus on sickness absence management there is a recent trend to address the needs of the working-age population, to maximize the functional capacity and to incorporate a biopsychosocial approach (Macdonald, 2010). To reduce MSDs and related sickness absence, such a biopsychosocial approach is necessary due its multi-causal origin (Coggon, 2013). This model recognizes that the level of pain and disability are a result of these interactions between physical, psychological, social and environmental factors that determine how the person will manage ill health (Engel, 1077).

Multidisciplinary rehabilitation and case management interventions have been shown to be effective to reduce MSDs symptoms (as pain) and disability, the duration of sickness absence due to common diseases, and to improve work continuity and RTW (Van Eerd, 2017; Kamper, 2014; Brown, 2000).

Case management activities trace back to the 1800s and have been widely implemented in a great diversity of domains, including occupational health. In the last two decades, different organizations and authors have proposed their own updated and extended definitions (BSRM, 2000; Harrison, 2017). However, a single definition of case management for RTW in workers with MSDs is lacking. Moreover, case management programmes for RTW require the key figure of a case manager whose role also needs to be well established (Van Eerd, 2017).

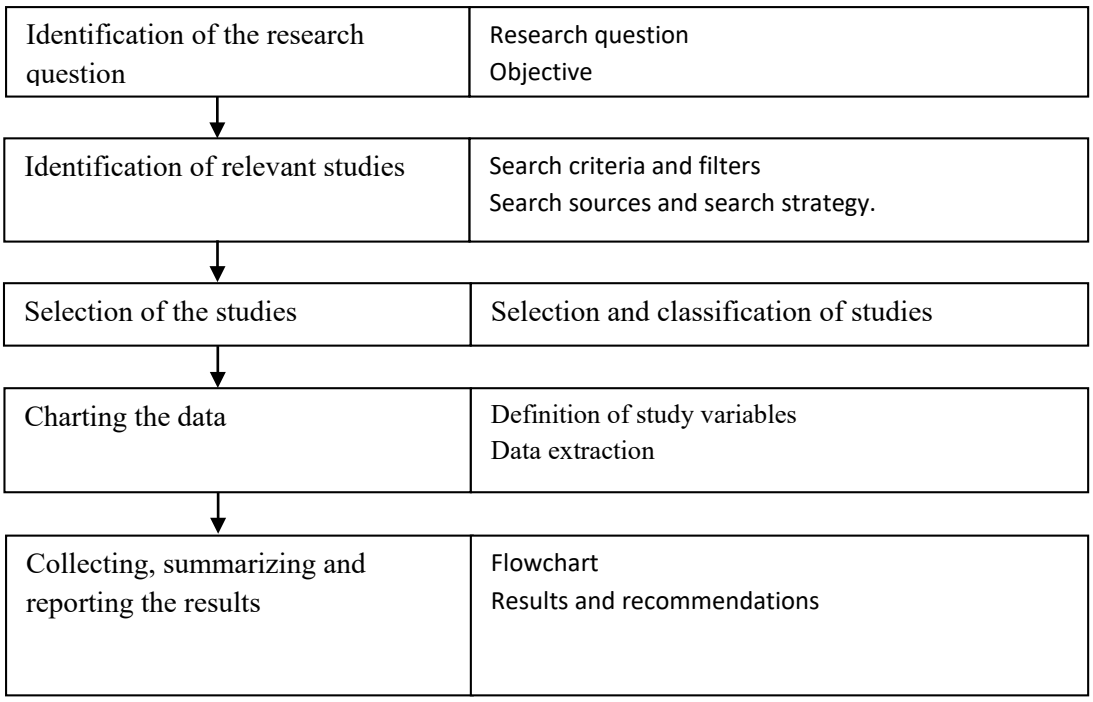
Therefore, in countries where case management is barely or very recently used, doubts may arise with these definitions thus hindering the development of case management programmes and reproducing related research.

In this scenario, this study pretends to identify and describe the elements that define case management and the tasks of the case management role for return-to-work of workers with MSD through a literature review.

Methods

This scoping review is based on the methodology described by Arksey and O'Malley (2005) and the recommendations of Levac et al. (2010) and Colquhoun et al. (2014). The steps to develop a scoping review can be grouped into five stages encompassing the whole process: (I) identification of the research question, (II) identification of relevant studies, (III) selection of the studies for the analysis, (IV) charting the data and (V) collecting, summarizing and reporting the results (Fig 1).

Figure 1. Scoping review steps



Identification of the Research Question

Research question

The main research question is defined as "How is case management described in the literature in the return-to-work for workers with MSD?"

The sub-questions are:

1) what are the elements that describe case management in the literature in the return-to-work for workers with MSD?

2) what are the tasks of the case managers?
3) what are referral services offered within these case management programmes?

Objective

Consequently, the objective of this study can be defined as "to describe the elements that define case management and the tasks of the case management role for return-to-work of workers with MSD through a literature review ".

Identification of Relevant Studies

Search criteria and filters

The search will be carried out until January 1, 2019.

- Filters: English. No limits on publication dates, nor type of documents/ study design will be applied.
- Scientific and grey literature will be considered
- Search must include the key words:
    - Case management
    - Return to work
    - Musculoskeletal disorders
- Specific selection criteria are developed in the following step "study selection"

Search sources and search strategy

Several data sources will be used, both scientific and grey literature (Table 1). Grey literature can be defined as "literature produced at all levels of government, academics, business, industry in print, and electronic formats, but which is not controlled by commercial publishers" (New York Academy of Medicine, 2016).

Table 1. Data sources considered for the scoping review

Type of source	Platform
Scientific databases	PubMed, Web of Science, Scopus, Cochrane Library, IBECS (now MEDES), EMBASE and LILACS
Grey literature	World Health Organization; Occupational Health and Safety Agency European Union (OSHA-EU); United Kingdom (UK) – Case Management Society of the United Kingdom (CMSUK) and British Society of Rehabilitation Medicine; United States of America (USA) – Occupational Safety and Health Administration (OSHA), Case Management Society of America, Agency for Healthcare Research and Quality, and American Case Management Association; and Australia: Rehabilitation Counselling Association of Australasia, Heads of Workers' Compensation Authorities, Australian Society of Rehabilitation Counsellors (ASORC), Case Management Society of Australia and New Zealand, and Sira NSW

The search strategy will be formulated for PubMed and will be adapted for its use in the other databases. The descriptors and qualifiers of the specific thesaurus of PubMed database will be used for greater precision.

Study selection

All obtained titles and abstracts will be analysed independently by three researchers (MS, JMG, and FP) using the Covidence systematic review software (Covidence systematic review software, Veritas Health Innovation, Melbourne, Australia).

The inclusion criteria will be developed according to the PPC format for scoping reviews: participants (P), concept (C) and context (C) (Apply PCC, 2018). Based on this classification, the inclusion criteria are:

- (P) workers (active workers/unemployed workers) with MSDs (or mixed populations i.e. MSDs and another pathology);
- (C) studies that described a case management intervention or the tasks of the case manager role; and

- (C) case management interventions focused on return-to-work, whether it was analysed in isolation or in conjunction with another result (e.g. return-to-work and keeping the employees at work).

Exclusion criteria are MSDs referred to acute trauma pathologies, surgical interventions in its acute phase, rheumatic pathologies; and military personnel since they are a sample with unique features that differ from most occupations.

Articles that met the inclusion criteria will be read in full text by three independent researchers (MS, JMG and FP) to make the final decision of inclusion in the full review.

At full-text screening, articles will be excluded when both reviewers considered they did not fulfil the inclusion criteria. A senior researcher (CS) will resolve any discrepancies.

We will identify the articles that are part of the same study. Of these, we will select only the article that included the description of case management or the tasks of the case manager role more broadly (i.e. the methodological paper).

Finally, we will have three possible scenarios:

1) articles describing case management;
2) articles describing the tasks of the case manager role; and
3) articles that include the two descriptions above.

Charting the Data

Study variables

Table 2 lists the study variables, which may be classified into two categories: (I) bibliometric variables, (II) outcome variables.

Table 2. Study variables

Type of variables	Variables
Outcome variables	Case management description Description of case managers tasks Referral services
Bibliometric variables	Author Year of publication Journal (or website) Institution Country Type of document Study design Targeted population (workers with sickness absence/ active workers and sickness absence workers)

Data extraction

The relevant data from each selected article will be extracted by three independent researchers (MS, JMG and FP), and will be summarized using a data extraction form (Annex 1). Subsequently, a cross examination of the retrieved information to guarantee its accuracy and completeness will be carried out.

Collating, Summarizing and Reporting the Results

Flowchart

A flow chart will be presented showing the study selection process, which will detail the number of articles included, or excluded, and the causes. (Annex 2)

Results, conclusions and recommendations

Three steps will be analysing, presenting the results and discuss the findings. Results will describe the common elements in the case management descriptions, the tasks of case managers and the referral services. Finally results will be discussed, including limitations and a conclusion.

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Annex 1. Example of a data extraction sheet in Excel.

Ref	Author	Year	Journal	Type of document	Study design	Country	Definition of case management	Tasks of case manager	Targeted group	Referral services
1	Beaumont	2002	Occup. Med	Editorial/ letter (specify)	Qualitative	UK	(…)	(…)	Only workers (specify if unemployed)	*One column for each service: specifying "yes / NR!*
2	…	…	…	…	…	…	…	…	…	…

*NR: Not reported

Annex 2. Flow chart of search strategy and study selection example