ELSEVIER

Physiotherapy

Physiotherapy 101 (2015) 13–24

Systematic review

Intermediate Care pathways for musculoskeletal conditions – Are they working? A systematic review

A. Hussenbux [a], D. Morrissey [a,b,*], C. Joseph [a], C.M. McClellan [c]

[a] *Centre for Sports and Exercise Medicine, Bart's and The London School of Medicine and Dentistry, Queen Mary University of London, Mile End Hospital, Bancroft Road, London E1 4DG, UK*

[b] *Physiotherapy Department, Bart's Health NHS Trust, London, UK*

[c] *Academic Department of Emergency Care, Adult Emergency Department, Bristol Royal Infirmary, University Hospitals NHS Foundation Trust, Bristol BS28HW, UK*

Abstract

Background Musculoskeletal condition assessment and management is increasingly delivered at the primary to secondary care interface, by inter-disciplinary triage and treat services.

Objectives This review aimed to describe Intermediate Care pathways, evaluate effectiveness, describe outcomes and identify gaps in the evidence.

Data sources PubMed, ISI Web of Science, EMBASE, Ovid Medline, PEDro, Google Scholar to October 2013.

Study selection/eligibility criteria Studies in English that evaluated relevant services were considered for inclusion. Studies evaluating paediatric or emergency medicine and self-referral were excluded.

Results Twenty-three studies were identified. Between 72% and 97% of patients could be managed entirely within Intermediate Care with a 20% to 60% resultant reduction in orthopaedic referral rate. Patient reported outcome measures typically showed significant symptom improvements. Knee conditions were most commonly referred on to secondary care (35% to 56%), with plain films (5% to 23%) and MRI (10% to 18%) the commonest investigations. Physiotherapists' clinical decision making and referral accuracy were comparable to medical doctors in 68% to 96% of cases. Intermediate Care consistently leads to significantly reduced orthopaedic waiting times and high patient satisfaction.

Limitations These findings are not based on strong evidence and there is an urgent need for high-quality, prospective, comprehensive evaluation of Intermediate Care provision, including cost-effectiveness and impact on other services.

Funding Part funded by EPSRC and AXA-PPP.

Conclusion Intermediate Care consistently improves patient outcome, typically results in appropriate referral and management, reduces waiting times and increases patient satisfaction. There is a case for wider provision of Intermediate Care services to effectively manage non-surgical musculoskeletal patients.

Keywords: Musculoskeletal clinical assessment and treatment service; Physiotherapy triage; Appropriate referral; Effectiveness; Waiting times; Patient outcome

Introduction

It is estimated that a quarter of the global adult population are affected by chronic musculoskeletal pain, musculoskeletal disorders being the commonest cause of pain and physical disability [1]. Further, there is an increasing burden on primary and secondary care as musculoskeletal disorders account for over a quarter of all general practitioner (GP) consultations [2]. Primary care physicians have expressed low confidence in their abilities to diagnose and manage musculoskeletal skeletal conditions appropriately [3]. This results in early and misdirected referral to hospital based secondary care, primarily orthopaedics and rheumatology [4]. This ultimately affects the patient's quality of care and leads to long waiting times within secondary care [5].

* Corresponding author. Tel.: +44 07941710273.
E-mail addresses: d.morrissey@qmul.ac.uk, dylan.morrissey@me.com (D. Morrissey).

http://dx.doi.org/10.1016/j.physio.2014.08.004
0031-9406/

The Musculoskeletal Services Framework [6] and the UK Government White Paper entitled "Our Health, Our Care, Our Say" [7] outlined a change in current management of musculoskeletal conditions in the UK away from secondary care and towards a Musculoskeletal Clinical Assessment Treatment Service (MSK CATS) model, typically situated in Intermediate Care. These services typically aim to provide triage, rapid assessment, facilitate access to treatment, improve efficiency, and reduce inappropriate referrals to secondary musculoskeletal care [8].

Triage is the process of determining the package of care for a patient based on the nature and severity of their condition in order to optimise care and make best use of resources. Increasingly, triage settings are being used to manage patients with musculoskeletal conditions at the interface between primary and secondary care. The effectiveness of such services has been the subject of increasing interest and investigated in terms of service delivery, referral appropriateness and patient satisfaction, but there has been limited synthesis of the available evidence thus limiting generalisation of findings to guide commissioning of innovative services and outcome evaluation.

The aim of our work was to provide an evidence summary to guide commissioners, service managers and clinicians by systematically reviewing the evidence pertaining to MSK CATS pathways. We particularly sought to summarise the evidence relating to the effectiveness and referral outcome of MSK CATS, physiotherapy-led triage as well as the effect on waiting times and patient satisfaction.

Methods

Inclusion and exclusion criteria for the systematic review

This systematic review included studies that were original, scientific journal publications evaluating MSK CATS, or similar services assessing musculoskeletal conditions. Any study that described primary care based triage that was led by: allied health practitioners (such as physiotherapists and occupational therapists), general practitioners with a special interest in MSK medicine, and musculoskeletal physicians were included as were studies evaluating referral pathways in a more general sense. Outcome measures of particular interest were: effectiveness and referral outcome of MSK CATS, physiotherapy-led triage and physiotherapy services, as well as the overall effect on waiting times and patient satisfaction. Studies from all countries were included. Reports needed to have been written in English, while editorials, conference reports, commentaries and abstracts were excluded. Further, studies assessing patients with non-musculoskeletal pathology, referrals to secondary care dealt with by the GP only, paediatric and emergency medicine, self-referral, and studies concerning referral from MSK secondary care were excluded.

Search and evaluation strategy

The electronic databases; PubMed, Web of Science, EMBASE, Ovid Medline, PEDro and Google scholar were searched for all articles published from inception to October 2013. The Medical Subject Headings are detailed in Supplementary Table S1. Titles and abstracts were imported into Endnote (Version X6, Thompson Reuters, Philadelphia, PA), and duplicates removed. Study titles and abstracts were reviewed by two authors (AH and DM). If the title was identified as potentially meeting the inclusion criteria, the abstract was read, and if the paper met the inclusion criteria, the full paper was obtained for further analysis. If insufficient information was available from a title or abstract, the full paper was obtained to make a decision on inclusion. Reference lists and citing articles of retained studies were also scrutinised to identify any additional papers. The search yielded a total of 23 articles (Fig. 1).

Supplementary Table S1 related to this article can be found, in the online version, at http://dx.doi.org/10.1016/j.physio.2014.08.004.

Quality assessment

The 23 papers were analysed using a modified Downs and Black Checklist [9]. The modified checklist consisted of 15 questions giving a maximum score of 16. A modified checklist was used as questions regarding adverse effects, blinding, compliance, randomisation and power calculations were omitted as they were deemed not relevant to all observational studies in this review. This quality assessment scale is feasible and can be used to assess the methodological quality of randomised controlled trials and non-randomised studies [9].

Review process

All studies were independently assessed for quality by two reviewers (AH and CJ). Any differences in quality scores were discussed among the reviewers until a consensus was reached. To determine inter-rater agreement, percentage agreements were calculated for each quality score item.

Summary tables were created, detailing study characteristics, participant characteristics, outcome measures, key results, statistics and level of evidence from each study (Tables 1a to 1c). These tables have been grouped into three areas of interest; MSK CATS, physiotherapy led triage and physiotherapy services.

Results

A total of 23 articles met the inclusion criteria and were included in this review (Fig. 1).