Physiotherapy Pain Association

Pain and Rehabilitation
Volume 53 Issue 1 2023

Development of a Referral Tool for a Musculoskeletal Pain Management Service: A Service Improvement Project

Samuel Browne[1,2], Cormac Ryan[3]

[1]Tyneside Integrated Musculoskeletal Service, Newcastle upon Tyne Hospitals NHS Foundation Trust. [2]NIHR Pre-Doctoral Clinical Academic Fellow. [3]Teesside University, Centre for Rehabilitation.

Abstract

Objectives: To develop an evidence-based patient referral guidance tool for clinicians referring to a complex pain management service.
Design: In this service development project, a three-phase, pragmatic qualitative approach was used: 1) a systematic scoping search of the literature was undertaken; 2) a focus group was completed with staff in a complex pain management service and a draft referral tool constructed informed by the focus groups and scoping review; 3) a round of expert feedback on the draft tool was obtained via email and used to refine the final tool.
Setting: The project took place in a complex pain management service in the North East of England.
Participants: Staff members from a complex pain management service and experts in the field of pain management were contacted to provide their input into this project.
Results: Phase One found that an aggregation of the following should prompt a referral to a specialist pain service: moderate-severe psychological distress; a diagnosis of fibromyalgia, chronic widespread pain, or complex regional pain syndrome; and that the individual has trialled a period of standard care before referral. Phase Two highlighted the difficulty in defining and identifying psychological distress and the absence of a universally accepted screening tool. Phase three provided feedback broadly supportive of the themes within the referral tool and clarified aspects of language and semantics.
Conclusions: This project succeeded in achieving its primary aim. The resultant tool suggests key referral criteria for a complex pain service. Future work should evaluate this new referral tool's impact on the performance of the complex pain service it was designed for and associated patient outcomes. Future work should also explore the generalisability of these findings to other pain services with a view to enhancing referral systems for pain services nationwide.

Contribution of the paper

- This project examined the existing literature around referral guidance to a pain management service and synthesised guideline recommendations and expert opinion to formulate guidance specific to a musculoskeletal complex pain management service.
- It identified key factors common across the literature which indicate when to make a referral; the presence of psychological distress, individuals having received appropriate medical investigations & care before referral, the individual's willingness to engage with self-management strategies, and specific conditions to refer like Complex Regional Pain Syndrome, widespread chronic pain, and fibromyalgia.

Keywords

Chronic pain; Musculoskeletal Pain; Fibromyalgia; Pain Clinics; Referral and Consultation; Pain Management

Introduction

In 2019, musculoskeletal disorders were described by the World Health Organisation as the leading cause of disability worldwide, and it was identified that between 20-33% of people live with a musculoskeletal pain condition [1], many of which will be persistent or chronic. In the UK, persistent pain affects 30-50% of the population, which is expected to rise with an ageing population [2]. The healthcare, social and economic burden of persistent pain is substantial. Furthermore, the personal cost of having persistent pain can be life-altering and is known to affect individuals across

Corresponding author:
Samuel Browne, Tyneside Integrated Musculoskeletal Service, Newcastle upon Tyne Hospitals NHS Foundation Trust. s.browne5@nhs.net @sbrownephysio

multiple health domains including mood, cognition, sleep, relationships, and the ability to work [3,4]. In addition, 61% of people with persistent pain have symptoms consistent with depression, and 34% of those meet the criteria for a diagnosis of severe depression [5].

Since the 1970s interdisciplinary pain clinics have existed to assist individuals for whom ordinary medical care has offered little improvement in their pain and pain intensity or quality of life [6]. This interdisciplinary approach offers greater improvements in pain intensity and disability when compared to usual care [7,8]. Despite this, the referral of individuals to these services is often convoluted. Individuals are frequently unaware of the existence of specialist pain clinics before referral, and waiting times to access such services are substantial – with more than a quarter of those referred waiting more than 22 weeks for an appointment, with the most extended wait being up to 90 weeks [9].

To better manage waiting times and healthcare resources, and to support those living with persistent pain, The Tyneside Integrated Musculoskeletal Service (TIMS) was established in 2018. It is a physiotherapy-led primary care service based in the North-East of England and provides care to the populations of Gateshead and Newcastle-Upon-Tyne. The service consists of four "pathways" which are upper limb, lower limb, spinal, and complex/pain management. These pathways treat individuals corresponding to the area of their musculoskeletal complaint and are predominantly concerned with acute or less complex chronic presentations. The complex/pain service treats those who exhibit persistent pain, or complex presentations including multi-site pain, concomitant low mood or anxiety, and those who have not improved with evidence-based physiotherapy treatment. This is the pathway for which the referral guidance was developed for the current project. It is a multidisciplinary pain management team consisting of physiotherapists, psychologists, low-intensity mental health workers, and therapy assistants. They provide non-medical support and the opportunity to learn pain self-management skills through one-to-one consultations, group sessions, and pain management programmes.

Before the establishment of TIMS, individuals were assessed and then referred to physiotherapy and psychology by a pain management consultant in secondary care. Now individuals can access the service via self-referral, GP referral or via secondary care, and the change in how individuals access the service presents new challenges to both referrers and physiotherapists alike. Physiotherapists are now responsible for the triage, appointment allocation, and initial assessment of these individuals. In addition, referrers need to update their understanding of the new service pathways and criteria for referral. Informal feedback from staff working in the complex pain management team has highlighted that many referrals to the pathway are inappropriate. Individuals referred frequently decline the opportunity to engage with the complex pain management pathway at the point of assessment, and many have not had their pain investigated sufficiently to exclude a significant or serious pathoanatomical cause before referral.

In part, this could be explained by an absence of referral guidance for those referring to the pain management pathway. Defined referral criteria and evidence-based guidelines are strategies recommended to improve referral management [10]. While pain management guidelines do exist that can offer direction about who and when to refer into a pain management service [11–13], they are unable to account for the individual needs, structure, funding of specific services, and their local population requirements. Furthermore, it is often unclear how services develop their referral guidance in accordance with the guidelines.

This service improvement project aimed to develop a tool to provide clear evidence-based referral guidance for clinicians referring to the complex pain management team.

Methods

This service improvement project followed a pragmatic qualitative methodology, which encompassed a co-creation philosophy, of which the process is outlined in *Figure 1*. There were three distinct phases. In phase one, the literature was searched systematically for relevant papers which were reviewed by the lead author and referral recommendations were compiled (Table 1). In phase two, that table was presented to five individuals selected from the TIMS complex pain management service in a focus group and based on feedback, a prototype tool was created. Finally, in phase three, the prototype tool was emailed to experts in the field of persistent pain management. Namely, 29 physiotherapists, one occupational therapist, two clinical psychologists, three Pain Medics, one GP, and one person with lived experience of pain. For the purposes of this project experts were individuals considered to be very knowledgeable in the field of pain management in that they worked/were involved primarily in the field of pain management and/or were involved in national organisations with a pain management focus, and/or they were involved in developing pain management guidelines for national organisations. Lastly, the tool was modified according to the expert feedback to create the final version of the tool ready for implementation.

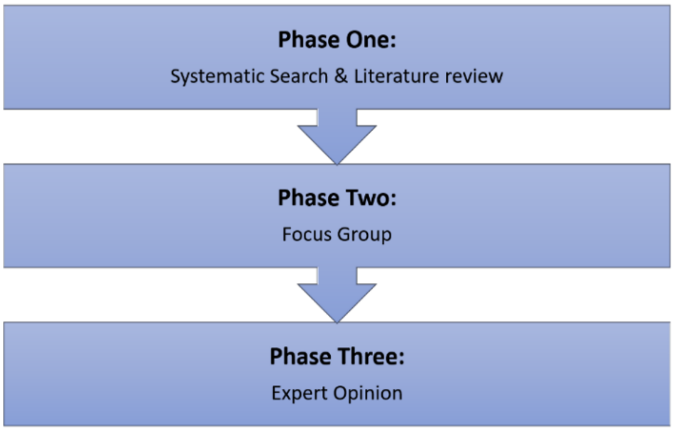


Figure 1: The Delphi Approach Used in this Project

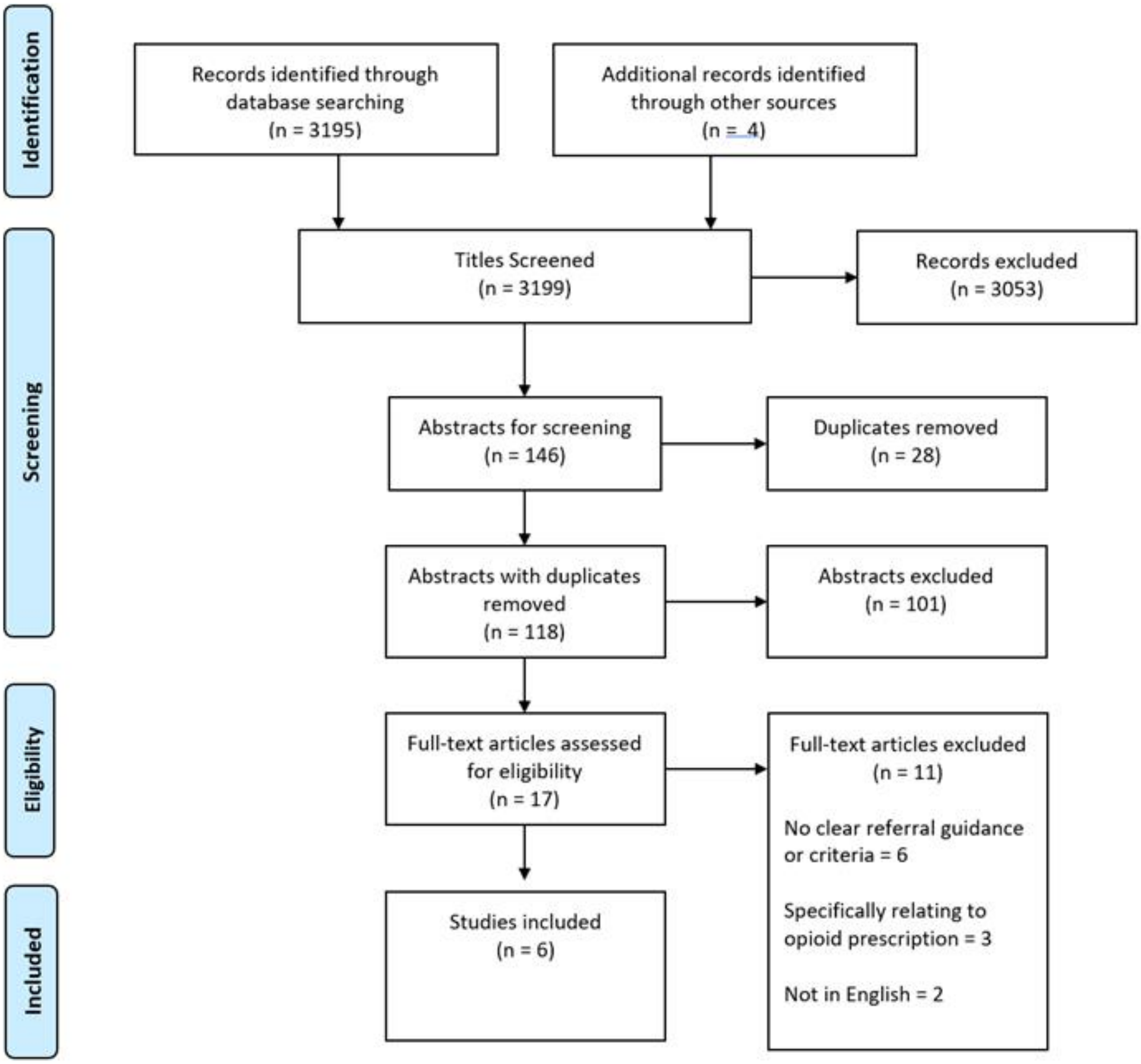


Figure 2: PRISMA Flowchart

Phase One:

A systematic search of the literature was completed between 01/09/2019 - 01/12/2019 using the NICE Health Care Databases Advanced Search (HDAS) & the Cochrane Library. It included the following databases: AMED, PsychInfo, CINAHL complete, Medline and Pubmed. Search results were limited to results published within the last 10 years. The following search terms were used: chronic musculoskeletal pain; chronic pain; chronic pain management; pain management; service; primary health; primary care; referral criteria; referral; criteria; guideline; clinical practice guideline. Further information about Boolean phrasing and how these terms were combined can be found in appendix 1.

Initial search results were screened by SB, and where necessary full-text articles were identified and then assessed for eligibility against the key question: "Does the paper offer guidance on the referral of individuals into pain management services?" Papers unable to provide clear guidance, those relating specifically to opioid prescription/opioid reduction services, and those not in English were excluded. The papers were not assessed for methodological quality, as that was not the focus of this work and is not usually undertaken as part of scoping reviews.

When clear recommendations were identified, they were compiled into a table (*Table 1*), and some quotes from the papers were inserted verbatim. In contrast, others were summarised to enhance clarity, primarily when recommendations were found within diagrams or flowcharts in the articles and not in the main text (see *appendix 2*). Following this, the table was presented to a focus group as part of phase two of this study, with the aim of developing a prototype of the referral tool.

Phase Two:
A purposive sampling method was used, and participants were staff working in the TIMS complex pain management service and were selected based on their profession, grade, and availability.

Before the session, participants were emailed an information sheet explaining the aims of the project, the purpose of the focus group, a timetable, and a table of compiled recommendations (*Table 1)*. Also provided were the PDF copies of the full-text papers used in the table of recommendations. This allowed participants an opportunity to formulate their individual opinions without external influence before the group. The session took place in December 2019, it lasted approximately one hour and consisted of both group and individual exercises.

Participants were provided with post-it notes, highlighters, pencils, pens, and large felt-tip pens. Following 10 minutes for introductions and scene-setting, participants reviewed the recommendations in the table, prioritised these recommendations, and then wrote the prioritised recommendations onto post-it notes. The post-it notes were displayed clearly on a single wall in the room where the session took place, and they were arranged into in and out columns representing inclusion and exclusion criteria for the complex pain management team (images can be found in *appendix 3)* forming a rough prototype of the tool. This approach was based upon one of a co-creation session [14], which allows for participants' active involvement in the creation process and can provide a wide array of perspectives [15]. The session was moderated throughout to allow all participants the opportunity to speak and offer their opinion.

Afterwards, the results of the session were converted into a word document which was emailed to the participants to ensure it accurately reflected the session, constituting a member check. Member checking is considered to enhance the rigour of qualitative study and ensures that participants feel that their experiences, and intentions are correctly represented by the researcher [16]. There were no replies to the email, which was taken to indicate that no further amendments were required based upon the views of the group.

Phase Three:
In the third and final stage of development, the draft referral tool was sent for feedback to 37 individuals involved in various organisations and projects in the field of pain management. These included individuals from national pain groups/societies, many of whom are/were involved in drafting national guidelines on pain management. In total, there were 10 respondents: five Physiotherapists, two Academics, one Occupational Therapist, one Consultant in Pain Management, and one Patient Expert. Following this, the responses were analysed for common themes or suggestions by SB. Themes or suggestions that were more frequently repeated were used to amend the referral tool, alongside those judged to improve the tool's clarity or quality.

Results:
Phase One:
Phase one resulted in the compilation of a table of key recommendations from the literature, as shown in Table 1. The most consistent recommendation across

the literature was the presence of psychological distress which can be in either the acute or persistent stages of pain [12,13,17–19], and secondly, that individuals had trialled a period of usual care, and that they had not responded favourably to this before referral [11–13,19]. Guidelines also recommended the completion of appropriate medical investigations and identification of specific pathologies before referral [13,17,19]. A referral was recommended for chronic widespread pain, fibromyalgia, and complex regional pain; provided that the individual is not already managing these conditions well [18,19]. Finally, it was recommended that those referred are open to or are actively seeking to learn pain self-management skills [11,12,17].

Many of these papers also made recommendations about referral practices specific to the optimisation of pain relief medications. However, as the focus of the TIMS complex pain management service is a non-medical intervention, these were not included in *Table 1.*

Phase Two:
Phase two resulted in the recruitment of five participants for a focus group: two clinical psychologists, one senior physiotherapist, and one clinical specialist physiotherapist all working in pain management, and one clinical specialist physiotherapist in spinal physiotherapy.

The term psychological distress, which is ubiquitous throughout pain management literature was discussed in the session; and participants identified the absence of a clear definition for this. They highlighted that psychological distress is a broad term and might include many psychological factors like depression, anxiety, or cognition and memory issues. They suggested that more specific recommendations regarding pain-related anxiety, depression, or screening tools with cut-off points could help individuals make more appropriate referrals to the TIMS complex pain management service. However, they were unable to locate a recommendation for a specific screening tool within the literature.

Lastly, it was discussed that awaiting pain management procedures such as lidocaine infusions, or facet joint injections within a secondary care pain service might act as a barrier to engagement with self-management strategies. This sentiment was based upon the personal, and professional experiences of those in the focus group.

Phase Three:
In this phase feedback from experts ranged across various themes, some of which were semantic, and resulted in the rewording of sentences. For example, the substitution of the word “Criteria” to “Guidance” in the title of the referral tool, the reason for which is covered later in this section.

There were two statements in the draft referral tool which covered similar content and were found within separate sections in the draft referral tool leading to duplication. To resolve this, the final tool's statements were changed to exclusion statements with one covering medical investigations and the other covering procedures. Three respondents commented on the statement that encouraged the referral of *“Those who have had appropriate medical investigations completed and are not awaiting further medical investigation”*. Likewise, three respondents offered comments on the statement excluding "*Those who are awaiting investigations or further procedures for their pain*". Comments across both statements were similar in theme. They expressed concern that excluding those awaiting investigations or procedures would delay the referral and treatment of those who might benefit from non-medical pain management intervention.

Conflictingly, recommendations from The Royal College of Anaesthetists Core Standards for Pain Management (2015) expect appropriate investigations to be completed before referral with relevant pathoanatomical causes excluded, or if identified where the patient lacks specific treatment options, or that those treatments have failed [10]. As expert opinion on investigations and the existing guidelines are in direct opposition, a resolution between these viewpoints was not possible. Hence, the author (SB) chose to follow the recommendations within the pain management guidelines. The reason being the Core Standards for Pain Management were developed through a more robust, wider consultation process across the whole of the UK with a greater number of experts than in this project. So, the statement regarding appropriate investigations was slightly amended to: *“Those requiring or awaiting relevant medical investigations for their pain – these should be completed before referral”*.

Table 1: Table of Findings Presented to the Focus Group

Author	Paper	Year	Key Recommendations
Lee J; Ellis B; Price C; Baranowski A [19]	Chronic widespread pain, including fibromyalgia: A pathway for care developed by the British Pain Society	2014	Defines widespread pain as: Pain lasting more than 3 months, affecting both sides of the body, and sites above and below the waist, plus pain in the axial skeleton Screening and investigation of red flags prior to accepting a diagnosis of chronic widespread pain/ FMS. Recommends early referral into a pain service when predictors of poor treatment outcome are present. Or after reviews when the patient isn't responding to usual care or is worsening – then to referral for specialist assessment and support. Also recommends the use of clinical judgement vs outcome measure or screening tool implementation.
Royal College of Physicians [18]	Complex regional pain syndrome in adults 2nd edition	2018	Referral of confirmed CRPS "Other than in mild cases of CRPS (see Referral earlier in this section), patients should be referred to a pain specialist for further management. It may also be appropriate instead to refer cases of confirmed CRPS to specialist rehabilitation or vocational rehabilitation services if: • CRPS presents in the context of another existing disabling condition (eg stroke or severe multiple trauma) • specialist facilities, equipment or adaptations are required or need review • the patient needs specialist vocational rehabilitation or support to return to work (this service is sometimes also provided by pain management services) • litigation is ongoing, requiring support to facilitate an early conclusion." Mild CRPS signs and symptoms: "To categorise CRPS as 'mild', a patient would have few signs of significant pain-related disability or distress, and either conventional or neuropathic drugs would manage pain intensity adequately. Patients who exhibit high levels of pain, disability or distress should be referred to a multidisciplinary pain clinic (ie two or more disciplines) or a rehabilitation CRPS unit."

Hooten WM, Timming R, Belgrade M, Gaul J, Goertz M, Haake B, Myers C, Noonan MP, Owens J, Saeger L, Schweim K, Shteyman G W [11]	ICSI Assessment and Management of Chronic Pain Health Care Guideline : Assessment and Management of Chronic Pain	2013	Based on 2 Tier system of care – referred to as level 1 and level 2 management. “Failing to achieve improvement in chronic pain management using Level I management strategies, the primary care physician should consider a consultation and/or referral to a pain medicine specialist or pain medicine speciality clinic. Reasons for consultation may include: •diagnostic assistance • advice on availability of current care plan and treatment strategies, • advice on optimal pharmacotherapy, and • help with treatment planning for long-term pain management. Referral to a comprehensive pain management program may be considered as early as four to eight (4-8) weeks after the onset of acute pain and should be strongly considered when a patient needs an intensive comprehensive evaluation by a pain management team (physician, psychologist, physical therapist, pharma- cist, etc.). If comorbidity is found between chronic pain and mild to moderate major depression, treat both conditions for optimal outcomes (Bair, 2003 [Systematic Review]). If comorbid severe major depressive disorder is diagnosed concurrently with chronic pain, depressive symptoms should be the primary focus of treatment.” Level 1 management: Recommend a written plan of care using the biopsychosocial model for ensuring a comprehensive approach to treatment of a patient with chronic pain. “• All patients with chronic pain should participate in an exercise fitness program to improve function and fitness (Malmivaara, 2006 [Systematic Review]) . • Clinicians may consider a cognitive behavioral approach with functional restoration to improve function and help reduce pain. The members of the interdisciplinary team will vary depending on the resources in the community . • The presence of psychological difficulties should in no way invalidate a patient’s complaint of pain, nor should it eliminate the possibility that a general medical condition may also be present that is causing the pain. • Shared decision-making for treatment of chronic pain needs an understanding of the patient’s ethnic and cultural background, age, gender and spirituality in order to work with the patient’s chronic pain symptomatology. • A clinician should choose positive language and imagery. • Self-management insures active patient participation in the care plan is essential.”

Price C; Lee J; Taylo A; Baranowski A [17]	Initial assessment and management of pain: A pathway for care developed by the British Pain Society	2014	This guideline also encompasses cancer related pain**** Recommendations for biopsychosocial assessment for all those who have pain. Assessment of “risk” of chronicity – stratified care and quicker assessment within specialist services for those at higher risk. Referral appears to be recommended for these patients within 8-12/52. Screening for and investigation of red flags prior to referral into a specialist service. Support self-management of patients from the outset.
Scottish Intercolegiate Guidelines Network [12]	Chronic Pain Management Guidelines SIGN	2013	“Referral should be considered when non-specialist management is failing, chronic pain is poorly controlled, there is significant distress, and/or where specific specialist intervention or assessment is considered”. “Healthcare professionals referring patients for psychological assessment should attempt to assess and address any concerns the patient may have about such a referral. It may be helpful to explicitly state that the aims of psychological interventions are to increase coping skills and improve quality of life when faced with the challenges of living with pain” <u>Referral to a specialist service:</u> “To specialist pain service if: • there is treatment failure after trial of four drugs for neuropathic pain { the opioid dose is greater than 180 mg morphine per day or equivalent { there is an inadequate response to non-specialist management. • To a multidisciplinary pain management programme (see section 6.1) when the patient has: ○ poor functional capacity ○ moderate to high levels of distress ○ social and occupational problems related to pain ○ failed to benefit from other, less comprehensive therapies ○ a preference for a self-management rather than a medical approach.” Neuropathic pain: “Patients with refractory pain (pain unresponsive after four or more conventional drug therapies) or patients failing on opioids should be referred for specialist advice. Tertiary options include the use of capsaicin 8% patch (see section 5.2.5), interventional procedures, drugs such as ketamine and a robust multidisciplinary approach which includes appropriate psychological therapies.”

Royal College of Anaesthetists [13]	Core Standards for Pain Management Services in the UK CSPMS	2015	Referral guidance: “It is anticipated that on referral, the patients’ pain will have been investigated and that either: i. no cause will have been found, or ii. that the cause will have been identified but no specific treatment can be offered/is acceptable, or iii. treatments have failed to relieve the pain People who should be referred: 1. Patients with persistent or recurrent pain not adequately managed in primary care. 2. Patients where referral is recommended by national guidelines such as the British Pain Society/Map of Medicine patient pathways. 3. Patients whose pain is causing significant distress or functional impairment. 4. Patients with analgesic misuse problems or who are taking recreational drugs/alcohol for pain relief - possibly in collaboration with addiction services. 5. Patients with pain-related psychological and psychosocial problems (e.g. pain related fear, anxiety, reactive depression, functional impairment) that complicate their pain symptoms or rehabilitation. These patients require an interdisciplinary pain management approach delivered by a specialist or specialised pain management service. 6. Patients requiring specific procedures as part of a pain management plan aimed at improving function and quality of life. 7. Young people (under 18yrs) with significant pain require referral to nationally recognised specialised services. 8. Patients with cancer who may benefit from joint management with palliative care. 9. ‘Cancer survivors’ i.e. patients with cancer who have undergone treatment (e.g. surgery, chemotherapy or radiotherapy) but who have persistent pain. 10. Patients not responding to specialist pain service input should be considered for onward referral to a specialised pain management centre”

A single contrasting comment recognised that awaiting procedures could act as a barrier to effective engagement in non-medical treatment, which echoed the results from Phase Two of this project. This statement was subsequently revised to "*Those awaiting further procedures for their pain which are expected to be curative, or when awaiting the procedure might reduce engagement in pain self-management strategies".* This was to be less exclusive and recognise how these procedures may act as a barrier to engagement. This is very much a grey area, and it would need to be applied on a case-by-case basis, and through individual clinician judgement rather than any more formalised screening process.

Three respondents also highlighted that it was not clear from the referral tool that the TIMS complex pain management service was an MSK service. So, the title at the head of the referral tool was amended to clarify this. The title was further modified in response to three respondents' comments who indicated that widespread pain or fibromyalgia was not a requirement for referral to a pain service. Consequently, the title of the referral tool was amended from *"TIMS pain team referral criteria"* to *"Tyneside Integrated Musculoskeletal Service (TIMS): Pain Team Referral Guidance"*. This was to reflect that individuals did not need to meet every inclusion statement to be appropriate to refer and to show that it is primarily an MSK service. Two comments were aimed at the phrase *"NHS physiotherapy"* in the inclusion statement requiring individuals to have trialled a period of usual care before referral. Their comments identified that *"NHS physiotherapy"* should be "evidence-informed management" to reflect that this can occur outside of NHS service provision and does not strictly need to be physiotherapy. So, the phrase *"evidence-informed management"* was adopted.

Three respondents suggested clarifying the statement regarding red flags, specifically to recognise how many patients within pain services have multiple red flags that are not relating to specific or worrying pathology and how red flags were defined. The statement was modified to encourage the investigation of new red flags, and any existing red flags that warrant investigation before referral. The author (SB) did not feel further clarification or definition of red flags was required as the term is ubiquitous throughout the research and in clinical practice.

A single comment identified that Complex Regional Pain Syndrome (CRPS) diagnosis often happens within specialist pain services. So, the statement relating to the confirmed diagnosis of CRPS was also amended to encourage the referral of suspected CRPS.

In addition, a single comment was provided that having "*those at risk of addiction or substance misuse*" on the referral guidance as consideration for referring may lead to the referral of inappropriate patients, who would be more suited to a drug or alcohol misuse service. Consequently, this statement was removed.

Finally, following the above modifications, the author (SB) designed the final version of the tool. The tool consists of four sections: "*do refer"* (inclusion criteria), *"don't refer"* (exclusion criteria), *"additional considerations*" and "*medication – consider referring"*, and it concludes with references *(see Figure 3).*

Discussion:

This project met its primary aim of designing a tool offering clear, evidence-based referral guidance for those looking to refer to the TIMS complex pain management service. Results from the literature, focus group, and expert opinion broadly corroborated each other, which was encouraging.

Consistent recommendations emerged throughout this project: that individuals being referred to a pain management service have moderate-severe psychological distress, that they receive appropriate medical investigations and treatments before referral, and that they are willing to learn pain self-management skills. Furthermore, specific diagnoses were identified, which should be referred, such as CRPS, fibromyalgia, and widespread chronic pain if not already well managed by the individual. The aggregation of inclusion statements that an individual meets in the "do refer" section should prompt referral. Individuals who meet one or more of these statements are likely to be appropriate to refer to the service. However, meeting a single exclusion statement in the "don't refer" section would mean that the individual is not appropriate to refer at that time, regardless of how many inclusion statements apply to them.

In phase one, there was widespread agreement on the co-existence of psychological distress being an indication to initiate a referral to a specialist pain management service. However, it appears judgements of psychological distress are assumed to be somewhat intuitive; it is not clear how it was identified in the papers reviewed, what tools or questionnaires were recommended, or a clinical threshold recommended for a referral.

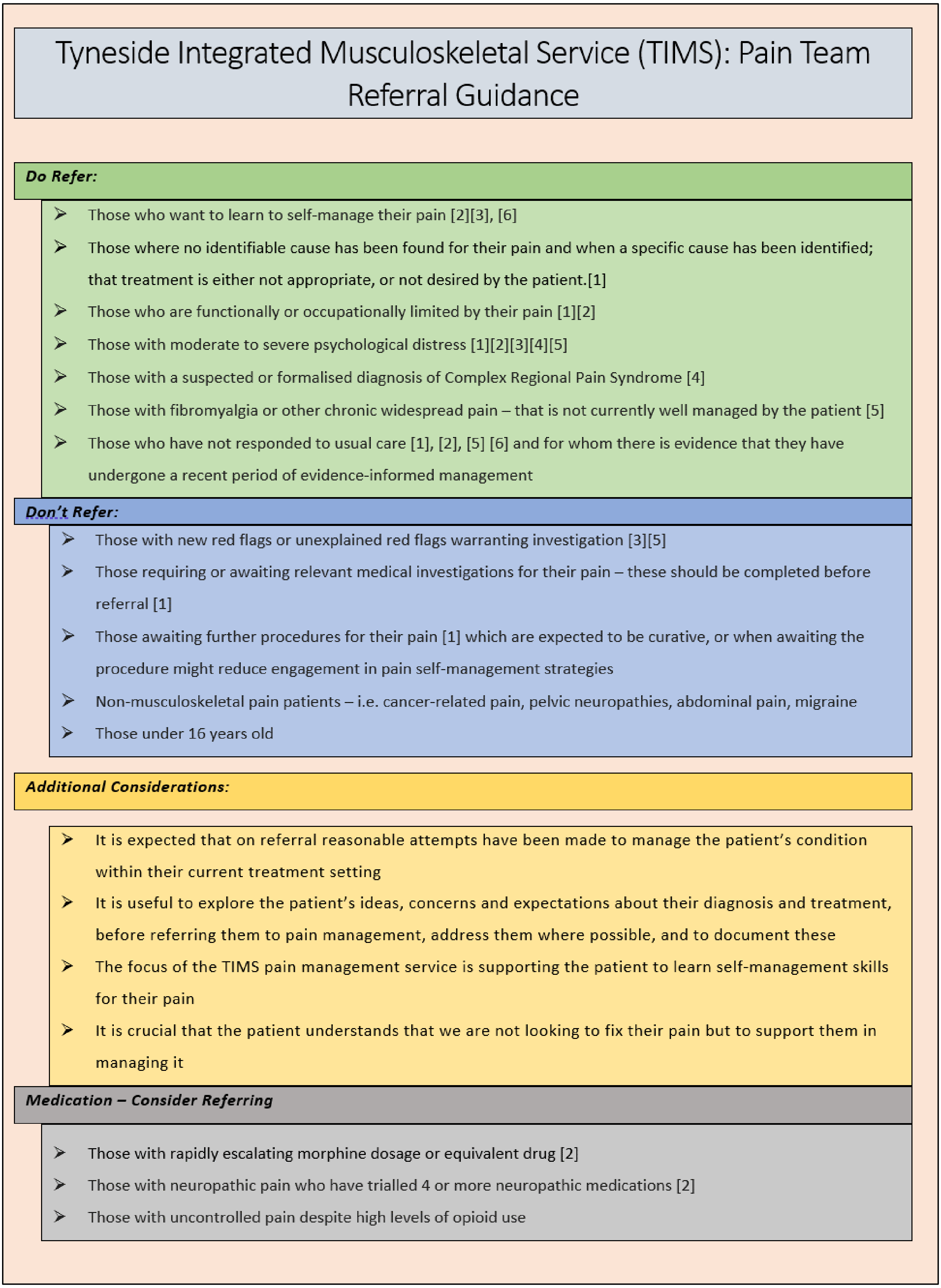
Arvidsdotter et al. (2016) describe psychological distress as a state of emotional suffering typically characterised by symptoms of depression and anxiety [20]. Numerous tools exist that are designed to screen for symptoms of anxiety and depression. Many such tools, amongst others useful to those in the field of pain management are recommended in the guideline "Outcome Measures" by the British Pain Society and the Faculty of Pain Medicine [21]. One such tool is the Hospital Anxiety and Depression Scale (HADS), which has thresholds for mild, moderate, and severe scores for both anxiety and depression [22].

The Keele STarT Back Tool is commonly used throughout MSK practice which screens for psychological distress[23]. Robust research has demonstrated the STarT Back Tool's ability to improve the value of healthcare services involved in assisting individuals with spinal pain [23,24]. A generic version of this tool that stratifies individuals with more generalised aches and pains is currently under evaluation [25]. It might more be valuable to a persistent pain service than one that is only validated in spinal pain. Although perhaps not to identify the risk of chronicity, as many of those referred will already have chronic pain, but instead to act as a proxy measure of psychological distress or likelihood of a poor outcome.

Another issue highlighted through this project was the completion of appropriate medical investigations before referral. Specifically, which investigations are considered appropriate, and which clinician has responsibility in deciding what an appropriate investigation is - the referrer or the pain service? Arguably, both the referrer and recipient pain service should ensure that patients are appropriately investigated. In the Core Standards of Pain Management Guidelines (2015) it is recommended that investigations are concluded prior to referral [13]. Ostensibly, this is a sensible recommendation as appropriate investigations may identify specific structural pathologies, for which there may be appropriate curative treatment options.

Furthermore, in the case of the TIMS complex pain management service it is a primary care service led by physiotherapists, and whilst a number of physiotherapists within the service are able to request investigations within a limited scope of practice like MRI, X-Ray or ultrasound scans for suspected MSK pathology. In TIMS the preference is to investigate patients in their existing care pathways rather than to generate extra referrals, which reduces the risk of individuals bouncing between multiple clinicians or services. However, when outside their scope of practice, physiotherapists should refer to the GP or forward the referral to a more appropriate service. In the case of a self-referral, the initial responsibility for triage & appropriate action or investigations rests with the TIMS complex pain management service, rather than the self-referrer.

Throughout Phases Two and Three of this project debate occurred around the referral of individuals who are awaiting pain management procedures. It was highlighted that awaiting procedures, could act as a barrier to an individual's acceptance of their persistent pain and reduce engagement with pain self-management strategies. The premise of the argument appears to be that the enticement of a procedure which is expected to be curative might significantly change the individual's mindset, and negatively influence their willingness to commit to strategies which are seen as secondary to the individual's primary objective of pain abolition or reduction. Contrastingly, it was argued that excluding those awaiting procedures would potentially disadvantage those who are earlier on in their pain management journey. It may also exclude those caught in a biomedical treatment paradigm, trapped in the loop of a search-and-fix approach. These individuals may not have been exposed to a biopsychosocial treatment paradigm yet. They might move towards acceptance, and self-management of pain when presented with the opportunity to do so. Previous research examining the effect of ongoing litigation on patient outcomes for pain management programmes yielded evidence which ran contrary to the popular belief that ongoing litigation negatively influences pain management programme outcomes [26]. The same may be true of awaiting pain management procedures. Future research might investigate whether awaiting pain management procedures impacts patient activation and participation in their pain management treatment.



Tyneside Integrated Musculoskeletal Service (TIMS): Pain Team Referral Guidance

Do Refer:

- Those who want to learn to self-manage their pain [2][3], [6]
- Those where no identifiable cause has been found for their pain and when a specific cause has been identified; that treatment is either not appropriate, or not desired by the patient.[1]
- Those who are functionally or occupationally limited by their pain [1][2]
- Those with moderate to severe psychological distress [1][2][3][4][5]
- Those with a suspected or formalised diagnosis of Complex Regional Pain Syndrome [4]
- Those with fibromyalgia or other chronic widespread pain – that is not currently well managed by the patient [5]
- Those who have not responded to usual care [1], [2], [5] [6] and for whom there is evidence that they have undergone a recent period of evidence-informed management

Don't Refer:

- Those with new red flags or unexplained red flags warranting investigation [3][5]
- Those requiring or awaiting relevant medical investigations for their pain – these should be completed before referral [1]
- Those awaiting further procedures for their pain [1] which are expected to be curative, or when awaiting the procedure might reduce engagement in pain self-management strategies
- Non-musculoskeletal pain patients – i.e. cancer-related pain, pelvic neuropathies, abdominal pain, migraine
- Those under 16 years old

Additional Considerations:

- It is expected that on referral reasonable attempts have been made to manage the patient's condition within their current treatment setting
- It is useful to explore the patient's ideas, concerns and expectations about their diagnosis and treatment, before referring them to pain management, address them where possible, and to document these
- The focus of the TIMS pain management service is supporting the patient to learn self-management skills for their pain
- It is crucial that the patient understands that we are not looking to fix their pain but to support them in managing it

Medication – Consider Referring

- Those with rapidly escalating morphine dosage or equivalent drug [2]
- Those with neuropathic pain who have trialled 4 or more neuropathic medications [2]
- Those with uncontrolled pain despite high levels of opioid use

Figure 3: Final Referral Guidance Tool Minus Reference List

Throughout this project, there was widespread agreement on the importance of the individual wanting to engage with pain self-management strategies. As these strategies are the focus of what the TIMS complex pain management service can offer it is unsurprising that team members value engagement with them. However, it is unclear whether patient attitude towards learning pain self-management skills is a determinant of success. So, whilst common sense might dictate that those wanting to learn these skills would have better treatment outcomes than those that do not, there appears to be a paucity of research to substantiate this belief. Further research might investigate the relationship between the attitude of those learning pain management skills and the impact that this has on the success of their outcome.

Limitations

Due to the service development nature of this study, this tool is not generalisable/transferable to other services; however, it may be valuable to those looking to construct referral criteria or tools for a similar service. An individual author (SB) carried out the systematic search, literature review and subsequent analysis of feedback from both the focus group and emails from experts; therefore, the author's own biases may have influenced the results. The author (SB) completed a reflexivity statement to offset this, reflecting on sources of personal bias like social demographic, upbringing, political leaning, class, and race. In the co-creation session, the biases of the staff involved will have influenced the output of the session. However, to an extent, this was unavoidable as they were selected to offer their opinion on existing referral criteria in relation to the TIMS complex pain management service. Furthermore, a positive response to agree with the member check wasn't sought following the co-creation session, which would have further enhanced the rigour of this project. In addition to this, it wasn't checked whether participants had read or engaged with the materials provided prior to the session, however, they were offered the opportunity, and it was assumed that they would have read the material if they thought it was useful to do so.

While a patient expert was included in phase three of this project, the patient and public involvement (PPI) in this project could have been greater. In addition, conflicts of interest were not screened for prior to asking for expert opinion on the referral guidance, and so experts may have undisclosed biases which could have affected the results of the feedback. Although this project demonstrates the development of a new referral guidance system, the impact of this system has yet to be evaluated and this is being planned. It will look to survey staff and referrers about their experiences of referrals since the tool's implementation. As well as comparing key performance indicators like referral rates pre and post-implementation as any differences in patient-reported outcomes like the EQ-5D-5L and MSK-HQ questionnaires[27,28].

This project synthesised recommendations from international pain management guidelines, reviewed these statements and refined them. However, many of these guidelines were not aimed specifically at integrated services like the TIMS service, but more to guide clinicians in primary or secondary care in managing chronic pain. Meaning that caution should be used when extrapolating these recommendations to an integrated care service. Ultimately, as this project is built upon existing pain management literature, any weaknesses present in this existing literature will be shared by the recommendations generated in this project.

Conclusion

This project succeeded in its primary aim of developing clear evidence-based referral guidance for the TIMS complex pain management service. It identified consistent themes for recommending referral: psychological distress, having received appropriate medical investigations & care before referral, the individual's willingness to engage with self-management strategies, and specific conditions to refer like CRPS, widespread chronic pain, and fibromyalgia. Future work should investigate the impact that awaiting pain management procedures may have on referral processes and on the outcome of pain management rehabilitation.

Ethics:

This project was discussed with the NHS research and development team at the Newcastle Upon Tyne Hospitals NHS Foundation Trust; it was deemed a service evaluation project. The Health Research Authority provides a flow chart to establish whether a project is classified as research; this project was not deemed research. A copy of the flowchart can be found in *appendix 5.*

Conflicts of Interest

None

Funding:

The National Institute of Health Research supported this work as part of an Integrated Clinical Academic Internship Programme taking place across 2019/2020.

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Appendices:
https://ppa.csp.org.uk/content/pain-rehabilitation