

# A meta-ethnography of healthcare professionals' experience of treating adults with chronic musculoskeletal pain to improve the experience and quality of healthcare

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## Summary

### Background

Each year over five million people develop chronic pain [1]. Musculoskeletal (MSK) pain (notably back and joint pain) is one of the most predominant kinds of chronic pain [2] and it is becoming more prevalent [2-4]. Patients with chronic pain do not always feel valued or believed by health professionals, and can experience an adversarial struggle in healthcare [5]. In order to improve patient care, we need to understand why it is that working with people with chronic MSK can result in an adversarial relationship. There is a large body of qualitative research exploring health care professionals' experience of chronic pain but no attempt to systematically search for and integrate this knowledge in order to improve patient care. Our scoping search has identified 82 potential studies. Existing research highlights mismatches in patient-clinician experience [6]. It also shows that health professionals find it upsetting not to be able to offer a solution [7] and difficult to refuse patients' requests [8, 9]. We want to use this existing knowledge to help us to improve our understanding of this complex process of healthcare for patients with chronic pain. Findings will allow us to understand the challenges of providing care for this group, and inform how to improve the experience and quality of care.

### Aim

1. To undertake a qualitative systematic review (metaethnography) [10, 11] to increase our understanding of what it is like for healthcare professionals to treat patients with chronic non-malignant musculoskeletal pain and thus inform improvements in the experience and quality of care.
2. To make our findings easily available and accessible through a 6-10 minute film.
3. Contribute to the development of methods for qualitative research synthesis that aim to bring together qualitative research findings so that patient care can be improved.

### Data collection

We will search Medline, Embase, Cinahl, Psycinfo and Amed to identify qualitative research that explores healthcare professionals' experience of treating adults with chronic non-malignant MSK pain. We will include a combination of MESH and free text terms adapted from the InterTASC Information Specialists' Sub-Group (ISSG) Search Filter Resources [12-15]. We will screen the titles, abstracts and full text of potential studies for relevance and use two methods of quality appraisal to frame our discussions [16, 17]. We will independently 'quality check' 1 in 10 of the studies appraised. We will maintain an excel database to record the search details (studies rejected and included) and use qualitative analysis software (NVivo 10) to upload and organise the data.

### Analysis

We will use the methods of metaethnography developed by Noblit and Hare [18] and recently refined for larger studies [11]. This involves identifying ideas from the studies included and progressively abstracting these ideas into a line of argument, or conceptual model. We will use NVivo 10 to assist in the organisation of analysis.

### PPI

The study has been developed in collaboration with existing service users. We have budgeted for:

1. Two patient service users to be part of our steering group (four meetings over 18 months) so that we can incorporate their ideas into project planning, analysis and the dissemination plan.
2. Two service users to comment on the film script prior to film production and to watch the film rushes so that we can incorporate their ideas into the final film production.

3. One service user to comment on the analysis from month 4 to month 17. This will allow time to comment on monthly summary reports as we move through the project (four hours each month).

### Dissemination

We will produce a short film (6-10 minutes), to present the findings. The film will be posted on YouTube and links sent to relevant stakeholders. We have previous experience of successfully producing a film to disseminate the findings of a meta-ethnography<sup>1</sup>

## Background and Rationale

### How will an understanding of Health Care Professionals experience improve the quality of healthcare in the NHS?

The proposed study will address a gap in research knowledge by providing a synthesis of qualitative research exploring health care professionals' experience of treating chronic pain. A growing number of people with chronic musculoskeletal pain (usually back or joint pain) go to see their healthcare professionals for help. We know that living with chronic musculoskeletal pain can be very challenging. Our existing qualitative systematic review showed that patients with chronic pain do not always feel valued or believed by the health professionals that care for them, and they can experience a constant struggle in the healthcare system [5]. In order to improve these patients' experiences of care, we need to understand what is going on from the perspective of the health professional. In particular, we need to understand why it is that working with people with chronic musculoskeletal pain can result in patients perceiving this as an adversarial relationship. If we can understand what it is like to be a healthcare professional (HCP) treating people with chronic pain, in particular, its challenges and rewards, this understanding can facilitate improvements in the experience and quality of care for this large group of people.

Chronic pain can be particularly challenging for healthcare professionals (HCPs) to treat because it persists beyond the expected healing time, and is not amenable to routine methods of pain control [19]. This is complicated by the finding that pain is not always explained by a specific pathology [2]. Already, we know the challenges of chronic MSK pain from the patients' perspective. Our existing qualitative systematic review has synthesised the research evidence about patients' experience of chronic MSK pain [5]. We therefore know that health care experiences are far from ideal for patients with chronic MSK, but the literature on what it is like for a healthcare professional (HCP) to look after someone with chronic pain has not been synthesised. Although we now have a good understanding of the patients' perspective, we do not have an equal understanding of what it is like for HCPs. In particular, we need to extend our understanding and tease out why it is that working with people with chronic MSK can result in an adversarial relationship. Research we have undertaken exploring the impact on HCPs of seeing a short film presenting our findings of patients' experience [7], suggests that HCPs find working with patients with chronic pain very complex. For example, HCPs described feeling 'bombarded by despair' under the pressure of not being able to 'fix' the person in pain. They also found it a challenge to balance the right level of empathy with 'not getting too involved' [7], Allegretti describes the challenges for GPs and highlights mismatches in patient-clinician experience of treatment [6]. Others report feelings of frustration and discord in the patient-clinician relationship [9].

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<sup>1</sup> (<https://www.youtube.com/watch?v=FPpu7dXJFRI>)

Understanding the experience of treating chronic pain from the perspective of the healthcare professionals (HCPs) can have important implications for delivery of care, decision making and the healthcare quality. Firstly, findings will allow HCPs and their managers to understand in detail the challenges of providing care to this complex group of patients, and thus facilitate improvements in the experience and quality of care. Secondly, a mutual understanding of what it is like to treat, and be treated with, chronic pain can facilitate a therapeutic partnership. Thirdly, this synthesis would be used in clinical education and in practice to highlight the complexity of treating this patient group, and inform discussions of this from the perspective of both patients and health care professionals. Findings will be of value to NHS managers and policy makers, specifically in relation to the organisation of provision of high quality services for chronic pain and other chronic conditions. In particular they will allow HCPs and their managers to understand in detail the challenges of providing care to this complex group of patients, and thus facilitate improvements in the provision of care.

### **Why is the research needed and how does it meet the HS&DR remit**

The rationale for the study is underpinned by the aim to facilitate the organisation and delivery of best quality healthcare. The proposed study meets the remit of the HS& DR as its aims are embedded in optimising collaborative patient-clinician partnerships for high quality care. Findings are likely to lead to changes in practice that could have a significant impact on the quality of healthcare for the large number of patients with chronic musculoskeletal (MSK) pain. The synthesis will explore current experiences of working and suggest ways of enhancing the quality and acceptability of care. It is also likely that findings will inform other chronic or unexplained conditions and help NHS professionals to meet the challenges of providing high quality care to patients with chronic conditions.

Chronic MSK makes a large contribution to the clinical workload in the NHS. Each year over five million people develop chronic pain [1]. Population estimates suggest that around 25% of adults around the world suffer with moderate or severe pain [2, 20-23] and for between 6–14 % of these adults the pain is severe and disabling [2, 24]. Musculoskeletal (MSK) pain (notably back and joint pain) is one of the most predominant kinds of chronic pain [2] and it appears to be increasing [3]. Expected increases in population age are likely to increase the need for appropriate care [20, 22]. Findings from the proposed synthesis are thus likely to remain highly relevant and inform future healthcare needs of people with long term conditions

There is a large body of qualitative research exploring health care professionals' experience of chronic pain but there has been no attempt to systematically search for, and integrate this knowledge. Our scoping search, using the search terms described below has identified 82 potential studies [6, 25-105] exploring the experience of: family practitioners/physicians (n= 31), nurses (n= 8) , physiotherapists (n = 22), occupational therapists (n = 1), complementary practitioners (n = 5) and other mixed groups of healthcare professionals (n = 23). The study will utilise this existing research knowledge to improve understanding and best practice in healthcare.

### **Why qualitative synthesis?**

The aim of qualitative research synthesis in healthcare is to systematically review and integrate findings in order to increase our understanding of the complex processes of care, and thus improve the experience and quality of that care. The proliferation of qualitative studies can make it difficult to access and utilise qualitative knowledge to inform practice and policy [106]. The Cochrane Qualitative Research Methods Group acknowledges the importance of including qualitative findings within Evidence Based Healthcare [107]; insights from several meta-ethnographies have contributed to a greater understanding of complex processes in healthcare. For example, medicine taking [108], diabetes [109] antidepressants [110], chronic MSK pain [5] and chronic pelvic pain [111]. We will use the methods of meta-ethnography developed, refined and reported in a previous meta-ethnography of patients' experience of chronic musculoskeletal pain [5]. There are various methods for synthesising qualitative research [106, 112-115]. An important distinction made between synthesis approaches is

between (a) those that aim to describe or 'aggregate' findings and (b) those that aim to interpret these findings and develop conceptual understandings or 'theory' [18]. Our aim is to develop *conceptual* understanding. Our previous NIHR funded qualitative synthesis has demonstrated that conceptual syntheses of 70-80 studies are possible and can make a useful contribution to evidence based practise. The proposed study aims to further contribute to the development of methods for larger metaethnographies [10, 11, 17], in particular the process of quality appraisal for this type of synthesis.

### Film output of findings

To make our findings accessible to a diverse group, we will produce a short film (6-10 minutes) to present the findings, in collaboration with a visual media agency. Our recent qualitative film presenting the findings of a meta-ethnography of patients' experience of chronic MSK pain has received over 8500 hits on YouTube, and many positive comments from patients and health care professionals. Such performative methods can be an effective way of disseminating findings [116-121]. Performative approaches can be powerful because they facilitate emotional engagement and empathy [122]. These methods have been used in medical education to facilitate learning through dialogue [122-125], and to develop empathetic understanding [116, 117, 126] for judgement based care [127]. Film can also be a succinct and technologically practical means of dissemination to a diverse audience [128]. Through film, viewers can access different perspectives in a 'safe environment' where they can explore and challenge their clinical practice. Our recent qualitative study supports the usefulness film to mobilise qualitative research knowledge [7].

## Aims and objectives

Our aims are to:

### Aim

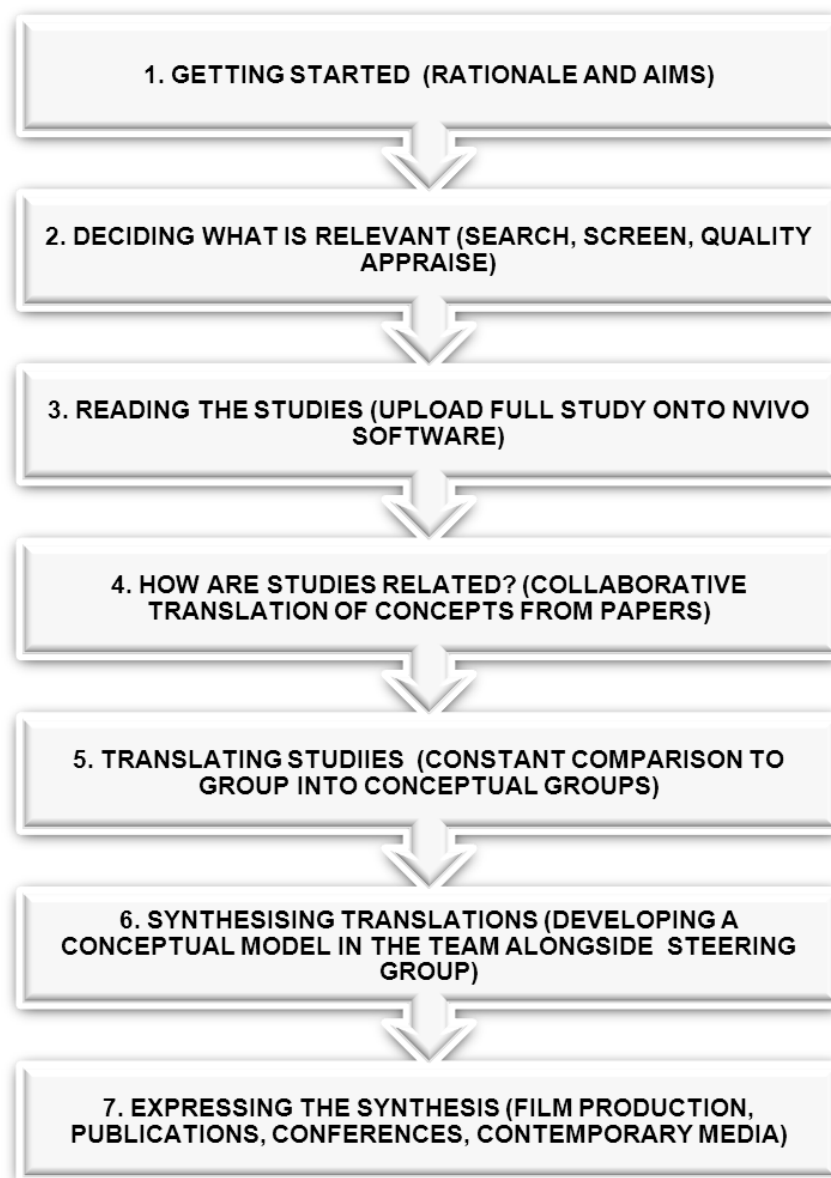
1. To undertake a qualitative systematic review (metaethnography) [10, 11] to increase our understanding of what it is like for healthcare professionals to treat patients with chronic non-malignant musculoskeletal pain and thus to inform improvements in the experience and quality of care.
2. To make our findings easily available and accessible through a 6-10 minute film.
3. Contribute to the development of methods for qualitative research synthesis that aim to bring together qualitative research findings so that patient care can be improved.

## Research Plan / Methods

We will use the methods of metaethnography developed by Noblit and Hare [18] and recently refined for larger studies [11] This involves identifying the ideas in each primary study included and progressively abstracting these ideas into a line of argument, or conceptual model, that helps us to understand the complex processes of healthcare

There are 7 stages to meta-ethnography outlined in figure 1. The first stage incorporates the rationale, aims and objects of the study. The next stages involve the systematic search, quality appraisal, analysis and dissemination of findings.

**Figure 1 Stages of Metaethnography**



### **Search strategy**

Metaethnography does not aim to perform statistical analyses but to draw on available knowledge for conceptual development. In their original text on meta-ethnography, Noblit and Hare do not advocate an exhaustive literature search [18] and the number of studies included in meta-ethnographies ranges widely [10, 112, 114]. Some argue that including too many studies make the analysis ‘unwieldy’ [10, 129]. However, we want to produce a conceptual analysis with a weight of evidence that has resonance with the health research community and will undertake a systematic search of the published literature. Our previous meta-ethnography has demonstrated the value of a systematic search and of including a larger number of studies into a qualitative synthesis [11].

### **Searching and screening**

Inclusions – We will include studies that explore health care professionals’ experience of treating adults with chronic non-malignant musculoskeletal pain.

Exclusions - we will exclude: acute pain, head pain; complementary therapies/therapists; arthritis (including osteoarthritis and rheumatoid arthritis); patient experience; studies where HCP experience cannot be disentangled from other people's experience (e.g. patients).

We will search five electronic bibliographic databases (Medline, Embase, Cinahl, Psycinfo, Amed) using terms adapted from the InterTASC Information Specialists' Sub-Group (ISSG) Search Filter Resources [12-15]. The ISSG is a group of information professionals supporting research groups producing technology assessments for NICE ([www.york.ac.uk/inst/crd/intertasc/](http://www.york.ac.uk/inst/crd/intertasc/)).

We will use a combination of specific MESH terms (MUSCULOSKELETAL PAIN/or BACK PAIN/ or CHRONIC PAIN/ or FIBROMYALGIA/ combined with methodological MESH terms: QUALITATIVE RESEARCH/ or NURSING METHODOLOGY RESEARCH/ or ATTITUDE/ or FOCUS GROUPS/) and free text terms (discourse AND analysis.mp content AND analysis.mp; ethnological AND research.mp; ethnonursing AND research.mp; constant AND comparative AND method.mp; qualitative AND validity.mp; purposive AND sample.mp; observational AND method\$.mp; theoretical AND sampl\$.mp; phenomenology.mp; phenomenological AND research.mp; life AND experience\$.mp; (lived AND experience).ti,ab; phenomenol\$.af; grounded AND theory.mp; ethnograph\$.mp; (life AND stor\$).ti,ab; emic OR etic OR hermeneutic\$ OR heuristic\$ OR semiotic\$.af. OR data adj1 saturat\$.tw. OR participant AND observ\$.tw).

We will not use the 'clinical query limits' option for qualitative research in our searches, as we have found that this can filter out relevant qualitative studies. In order to ensure value for money, we will not include citation checks, hand searching, grey literature or PhD searches. Previous experience has shown us that these strategies does not necessarily add significant conceptual value to large metaethnographies and therefore may have an impact on value for money [11]. To ensure the best balance of quality and value for money, the PI and a research fellow (RF) with experience in social science research will work alongside each other to develop and carry out the systematic search. They will screen the titles, abstracts and full text of potential studies for relevance. If they do not agree that the study meets the inclusion criteria, they will send the study to a third team member to consider and resolve through discussion.

We do not plan to include an Information Specialist in the team for the following reasons:

- a. The PI has experience of conducting searches for qualitative systematic reviews [5, 111] and has worked closely alongside Information Specialists in previous studies to develop the skills to perform qualitative searches for systematic review. We are therefore confident that the research team has the skills to successfully complete an effective search. The PI will enable the RF to develop like skills during the life of this project.
- b. In our own experience, title screening is performed more efficiently by an experienced qualitative researcher who can often identify qualitative studies by title or abstract screening. This will ensure adequate time is spent on developing the line of argument during the analysis.

## Quality appraisal

A growing number of researchers are appraising studies for the purpose of qualitative systematic review [114]. Although there are many frameworks suggested for appraising the quality of qualitative research, there is no consensus on what makes a study 'good' [10, 130].

We will use two methods of quality appraisal to frame our discussions regarding inclusion:

1. The questions developed by the Critical Appraisal Skills Programme for appraising qualitative research (CASP) [16]. We will assign a numerical score to each question to indicate whether we felt that the CASP question had (1) not been addressed, (2) been addressed partially or (3) had been extensively addressed, thus giving a possible score range of 10-30 [5]. We used the CASP in this way in our previous metaethnography.



2. A brief checklist will be drawn from a qualitative study embedded in a previous meta-ethnography funded by the HS&DR programme [17] (figure 2), Unlike CASP, these constructs were developed specifically for metaethnography. For example, CASP does not focus specifically on conceptual clarity as a facet of quality, whereas this is a distinguishing feature of metaethnography. As in our previous study, we will use qualitative methods to explore the relative usefulness of these checklists. In that study, we digitally recorded all team meetings focusing on quality appraisal, transcribed and uploaded these recordings onto Nvivo software for qualitative analysis and developed a conceptual model through constant comparison [131] that described our interpretation of quality [17]. We will use this same qualitative approach to explore the usefulness of our conceptual model for quality appraisal thus adding value to our previous HS&DR funded study.

Two team members of the team will appraise each paper, and if they are unable to reach an agreement, the paper will be sent to another team member for the final decision. A third member of the team will 'quality check' 1 in 10 of the studies being appraised and discuss any issues arising

**Figure 2 – Questions drawn from themes for Quality Appraisal in Meta-ethnography[17]**

#### **INTERPRETIVE RIGOUR**

1. Is there a clear rationale?
2. Is there a clear aim?
3. Does the study describe who the researcher is?
4. If so, is the relationship between researcher and participant likely to affect the data collected? (e.g. what is the balance of power?)
5. Has the researcher challenged their own interpretation? (e.g. constant comparison, theoretical sampling, co-coding, member checking.)
6. Does the researcher's interpretation come from the original data? (i.e. does the narrative used clearly illustrate the researcher's interpretation?)
7. Are any voices missing? (e.g. does the researcher describe any contradictory cases)

#### **CONCEPTUAL CLARITY**

8. Can you translate the researcher's concept into a simple statement?
9. Are you recoding the original data because it does not make sense, or because you would interpret it differently?

## **Analysis**

The analysis in meta-ethnography involves overlapping research activities: (a) reading the studies, (b) determining how the studies are related and (c) translating the studies into each other and (d) synthesising the translations.

### **Reading the studies**

This stage of meta-ethnography involves thoroughly reading and re-reading the studies in order to identify and describe the concepts [18]. The raw data of meta-ethnography are ideas or concepts, which can appear in both the results and discussion sections of reported studies. To allow us to refer to the original studies, we will upload a link to the published studies onto NVivo 10 software [132]. The PI will maintain the NVivo database. NVivo is particularly useful for collaborative analysis as it allows the team to keep a record and compare the research team's individual interpretations. NVivo 10 also allows the researchers to write and link memos to specific data in order to keep track of developing ideas. We will also maintain an excel database of study demographics, appraisal and decisions on inclusion or exclusion. This system for organisation of the data worked very effectively in our previous meta-ethnography [5].



### *Determining how studies are related to each other*

The purpose of careful reading in meta-ethnography is to identify and describe the 'metaphors' or concepts in studies and 'translate' or compare them to those in other studies. This is fundamental to meta-ethnography because concepts are the raw data of the synthesis. Determining how studies are related to each other involves creating 'a list of key metaphors, phrases, ideas and/or concepts' [18] (page 28). However, although Meta-ethnography requires clearly articulated concepts, it can be difficult to decipher these concepts. For example, the reader may find themselves recoding or condensing findings into higher conceptual categories in order to make sense of them.

We will base our synthesis entirely on clearly articulated concepts from the originating papers. However, the challenge of deciphering these concepts is that readers interpret each concept in light of their own experience; what makes a *concept* for one researcher may look like description to another reader. The reader makes a personal judgment. We will therefore use a collaborative approach to interpreting concepts and challenge our individual interpretations in order to remain confident that our interpretations are grounded in the original studies [11]. To do this, two team members will read each paper to identify, describe and discuss their interpretations in order to compile a list of collaborative interpretations of each concept from the original papers. This interpretation will combine clarity and precision in as few words as possible. Our collaborative interpretations form the raw data of our synthesis, in the same way that interview narrative forms the 'data' of qualitative analysis. If team members agree that there is no clear concept then it will not be included in the analysis.

### *Translating studies into each other*

The next stage in meta-ethnography involves exploring how the concepts are related to each other and sorting concepts into conceptual categories or 'piles', thus 'translating qualitative studies into one another' [18]. 'Translation' is achieved through the constant comparative method [131]. Through constantly comparing constructs we begin to see similarities and differences between concepts and metaphors and organise them into further abstracted conceptual categories. To translate studies into each other, team members will organise the concepts, through constant comparison, into categories or 'piles' which shared meaning. Each team member will write a description for each category or 'pile'. This process of categorisation using constant comparison is integral to qualitative research. The team will discuss their categories and definitions to collaboratively develop our interpretations. We will combine the benefits of face-to-face team discussions with the benefits of using NVivo 10. [11].

### *Synthesising translations*

The next stage of meta-ethnography is to synthesise or make sense of the conceptual categories. This is part of an on-going process where findings are further abstracted to form a conceptual framework. We will develop a line of argument synthesis, which involves 'making a whole into something more than the parts alone imply' [18] (page 28). This is achieved by constantly comparing concepts and developing 'a grounded theory that puts the similarities and differences between studies into interpretive order' [18] (page 64).

## **Data management**

The PI will be responsible for maintaining the quality of the following data, alongside the RF:

- an excel spread sheet containing a log of the searches for each database searched (hits, reject and reasons),
- an excel spread sheet containing the articles that were considered at full text, reasons for rejecting, results of quality appraisal and all relevant study details (data, journal, author, method, type of HCP/location of study, number of participants, geographic location, any other details),
- an Nvivo 10 data base linked to all studies included, the coding structure and developing conceptual analysis and team memos.

## Dissemination and projected outputs

The final phase of meta-ethnography concerns the dissemination of the research findings. Our monthly team meetings will include an 'Impact Plan' as a regular agenda item.

### *A short YouTube film*

We will produce a short film (6-10 minutes) in collaboration with a visual media agency to present the findings. We have worked with a visual media agency for our previous metaethnography and found this to be a very successful, good value and accessible dissemination strategy for meta-ethnography. We will utilise film as a contemporary method of dissemination, alongside traditional methods. The film will be posted on YouTube and links sent to relevant stakeholders. Our previous film on our meta-ethnography was taken up by PainConcern UK<sup>2</sup> and used by Cardiff University Medical School in a Masters Module on pain for health professionals.

### The stages of film production include:

1. The research team will draft a script based on the conceptual model output, using the words of healthcare professionals from the original studies. The team has experience in writing this kind of qualitative script. Nvivo will allow us to track words that illustrate the conceptual themes.
2. Script reviewed by steering group and PPI.
3. A script writer from the visual media agency will refine the script for film.
4. Auditions for actors alongside Red Balloon.
5. Filming and film production. One of the research team will be on set during film production.
6. View film rushes with steering group.
7. Film editing and production.
8. Completed film posted on YouTube.

### Conference presentations

We intend to submit a workshop proposal to a relevant national conference (e.g. British Pain Society) and to attend a relevant international conference with our findings (e.g. European Federation of International Association for the Study of Pain chapters).

### Open access publications

We will produce a full report to the NIHR (Health Services and Delivery Research) and submit an open access publication to a relevant journal (e.g. BMC MSK research).

### Targeting clinical education and management

We will work alongside our varied contacts in medical, allied, nursing and management to introduce the film to a diverse audience for clinical education and use in practice. Our dissemination strategy developed in collaboration with our steering group will identify relevant stakeholders for the film.

### Contemporary technology

Will we use contemporary technologies (e.g. Twitter, Youtube) to engage a wide and diverse audience. For example, we will post a summary of the research and link to the short YouTube film on Twitter, YouTube and relevant websites such as PainConcern UK. Our recent qualitative film presenting the findings of a meta-ethnography of patients' experience of chronic MSK pain has received over 8500 hits on YouTube. We will ask our own varied contacts to share the link with relevant stakeholders. We have successfully used this strategy in a previous study (e. g. (for example, it was shared on: [blogs.bath.ac.uk/](http://blogs.bath.ac.uk/), Twitter, Rehabilitation research in Oxford, Health unlocked). Our

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<sup>2</sup> <https://healthunlocked.com/painconcern/posts/130661236/we-would-appreciate-feedback-on-struggling-to-be-me-film-based-on-a-research-aiming-to-understand-what-its-like-to-live-with-pain>

dissemination strategy, developed alongside our steering group, will be used to identify various relevant links.

### **Plan of investigation and timetable**

We have attached a Gantt chart with details of the project timetable and plan.

## **Project management**

This research will fall under the auspices of the clinical governance structure of the OUH NHS Trust. The project is sponsored by the OUH NHS Trust and the Research and Development Office will have responsibility for oversight, including audit of adherence to protocol and trusts research governance Standard Operating Procedures.

The PI will take responsible for the overall management and completion of the project to timescales. We are proposing a very experienced team of co-researchers, with specific skills in meta-ethnography. This will provide a good balance of value for money and quality of output. We will recruit a post-doctoral Research Fellow at 0.5FTE with social science experience. The RF will be involved in all phases of the meta-ethnography and learn the principles and process of qualitative systematic review within a team of experts.

### **Steering Group**

We will utilise the strengths of a Steering Group of diverse experts, including NHS services users. This will help ensure that the research is relevant and accessible to a diverse audience.

- 2 patient representatives
- A representative from PainConcern UK
- 4 NHS clinicians working in chronic MSK pain (the professional will be chosen in line with the studies included in the synthesis). Our scoping search indicates that we are likely to include a GP, a physiotherapist, a nurse and an orthopaedic specialist.
- An expert from Medical Education
- An NHS management/commissioning representative

The steering group will meet 4 times throughout the 18 months of the study and aims to provide advice from a broad perspective.

## **Patient and Public Involvement**

The study has been developed in collaboration with existing service users. A group of patients attending pain management have participated in discussions about the proposed study. The group has explored with us the potential impact of a qualitative research film and contributed to developing the ideas underpinning this study. We have discussed the research idea with a representative from PainConcern UK who will be involved throughout the project, and have incorporated ideas from these discussions into the development of this application. We have received advice from NIHR INVOLVE regarding effective methods for facilitating effective Patient and Public involvement (PPI), and have calculated costs using their cost calculator.

We will include 2 local service users on our research steering group, recruited from the Oxford University Hospitals NHS Trust and from the Nuffield Orthopaedic Centre Network (a dedicated group of lay members who advise the hospital on research). Experience has shown that it can be difficult to involve people with pain if they need to travel long distances. We will conduct a carefully planned orientation for PPI members. We will give service users the choice to be involved on an individual

basis or within the steering group meetings. We have used this combined strategy in previous research and this approach is supported by our communication with NIHR INVOLVE.

We have budgeted for:

1. Two patient service users to be part of our steering group (four meetings over 18 months) so that we can incorporate their ideas into project planning, analysis and the dissemination plan.
2. Two service users to comment on the film script prior to film production and to watch the film rushes so that we can incorporate their ideas into the final film production.
3. One service user to comment on the analysis from month 4 to month 17. This will allow them to comment on monthly summary reports as we move through the project (four hours per month).

## Expertise and justification of support required

The main costs for this proposal will be to support the research team. Full details of costing are given in the application form. We have chosen a team who are very experience in meta-ethnography in order to maximise quality and value for money. We are confident that this team will produce a high quality metaethnography that is highly relevant to improvements in healthcare.

### Research Team

**Dr Francine Toye (FT).** FT will be the principal investigator and be responsible for successful completing of the project in line with agreed protocol. She is a social scientist and has completed meta-ethnographies of patients' experience of chronic MSK pain [5], and chronic pelvic pain [111] and has published methodological papers on metaethnography [11, 17]. She has extensive qualitative research experience. FT has a master's degree in Anthropology from Cambridge University and is also a qualified NHS physiotherapist with experience in chronic pain management. FT has expertise in producing film to disseminate findings from qualitative systematic review and has exploring its usefulness in clinical education [7] .

**Professor Kate Seers (KS)** – KS will be responsible for contributing to the development of the meta-ethnography, and working with the team to extract themes and translate concepts across studies. KS collaborated with FT and KB on two previous meta-ethnographies [5, 111] and methodological papers [11, 17] and has extensive qualitative research experience. KS's topic expertise is within pain management where she has a detailed knowledge and has published widely. She has also published two quantitative systematic reviews in pain management, and is feedback editor of the Cochrane Pain, Palliative and Supportive Care Group. KS also has extensive experience in leading large research grants and working collaboratively.

**Dr Karen Barker (KB)** KS will also play a key analytical role in this study. KS collaborated with FT and KB on two previous published meta-ethnographies [5, 111]. She is the Clinical Director and research lead for the rehabilitation arm of the NIHR supported Musculoskeletal Biomedical Research Unit collaboration between the Nuffield Orthopaedic Centre NHS Trust and Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Science at University of Oxford. She has experience in conducting research trials with patients with chronic back pain and has participated in a number of systematic reviews

**Research Fellow (RF).** We will recruit a post-doctoral Research Fellow at 0.5fte with social science experience. The RF will be involved in all phases of the meta-ethnography and learn the principles

and process of qualitative systematic review within a team of experts, thereby contributing to research capacity in this area.

#### **Information scientist**

We will recruit an information scientist with experience in qualitative reviews to oversee and give advice related to the search strategy and search (4 months). This person will work alongside the PI and research fellow.

#### **Film costs**

Film costs are based on costing provided by Red Balloon visual media agency who specialise in producing qualitative research outputs. We have worked with this agency before to produce a good quality film output that is suitable for YouTube broadcast. The budget for this film is broken down in detail in the finance section of the application form. This includes crew and kit for four days filming, two actors for five days each, scripting, travel, subsistence, location and 6 days editing.

#### *Other direct project costs*

Detailed on the financial report and include, journey cost and subsistence for steering group and PPI activity; disseminations costs (conference, open access publication), qualitative analysis software and digital recorder, printing and library costs.

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