



# Influence of commissioning arrangements on implementing and sustaining a complex healthcare intervention (ESCAPE-pain) for osteoarthritis: a qualitative case study

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## Abstract

**Objectives** Funding in health care has a critical impact on the implementation and sustainability of evidence-based interventions. This study explored the perspectives of physiotherapists on the influence of commissioning arrangements on the implementation and sustainability of a group rehabilitation programme for osteoarthritis (ESCAPE-pain).

**Design** A qualitative case study approach using in-depth interviews.

**Setting** National Health Service (NHS) musculoskeletal (MSK) outpatient departments in England.

**Participants** Thirty physiotherapists in clinical and senior management roles from 11 NHS MSK providers.

**Results** Five themes were identified: (1) clinical perspectives of ESCAPE-pain – MSK services wanted to implement and sustain ESCAPE-pain because it provided evidence-based, quality care; (2) focusing on clinical activity over outcomes – commissioners were perceived as prioritising activity-based performance over delivering clinical outcomes; (3) rationing availability – patient access to ESCAPE-pain could be limited due to rationing resources; (4) absorbing costs – contracts did not always cover the activities associated with delivering ESCAPE-pain meaning that providers bore the costs; and (5) relationship between commissioners and providers – physiotherapists perceived a disconnect with commissioners and had little power to influence decisions.

**Conclusions** Commissioning arrangements for MSK physiotherapy services can impede providers from implementing and sustaining a clinically and cost-effective intervention. To be implemented and sustained, an intervention needs to integrate into clinical practice and the wider healthcare system. Commissioning arrangements for MSK physiotherapy need to allow providers the flexibility to deliver interventions that best meet the needs of their patients. The move to more strategic, integrated, outcome-based commissioning has the potential to facilitate the spread and sustainability of interventions.

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**Keywords:** Osteoarthritis; Evidence-based intervention; Implementation; Sustainability; Commissioning; ESCAPE-pain

## Introduction

ESCAPE-pain is an evidence-based programme that integrates group education and exercise for people with knee and/or hip osteoarthritis. It promotes self-management to reduce pain, increase function and improve quality of life, and is more cost-effective than usual care [1–4]. Groups

of 10–12 people attend twice per week for 6 weeks (12 sessions), with each session comprising 30–45 minutes of exercise and 20–25 minutes of structured education about osteoarthritis and self-management strategies (details available at <http://www.escape-pain.org/>).

Since 2014, ESCAPE-pain has been transitioning from a trial-based intervention into clinical practice across England within everyday, low-resourced ‘real-world’ settings. ESCAPE-pain provides a ‘typical’ example of an evidence-based group rehabilitation intervention combining exercise and education for people with chronic physical conditions

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[5–8]. Therefore, it provides a useful case to explore the factors influencing the implementation and sustainability of evidence-based interventions in physiotherapy services.

Implementing and sustaining evidence-based interventions is essential to achieve widespread improvements in the quality and efficiency of care [9,10]. Whilst allied health professionals understand the need to implement evidence-based interventions, the reality is more challenging when integrating complex interventions in complex contexts [11–13]. The claim that this is due to inadequate description of interventions [14] is an oversimplification. Other barriers to implementation include: problems accessing and understanding literature; confusion about the relevance of evidence to the local context or population; misapplication of evidence; insufficient time, facilities and resources; low organisational priority; cultural resistance (within teams, organisations or professions); and lack of autonomy to implement changes [11–13]. Once implemented, there is the further challenge of sustaining effective interventions [15–18].

Empirical literature highlights barriers at the individual and service levels [11–13]. However, there are also many factors that impede implementing and sustaining evidence-based interventions at the system level [19–23]. Fewer studies have examined the influence of system (or external) factors on implementation (e.g. sociopolitical climate, policy and regulation, incentives and mandates) [22,23]. Integrating interventions into system-level funding models is critically important [24,25], and commissioning arrangements in health care play a crucial role in determining if an intervention can be implemented and sustained successfully [20].

The National Health Service (NHS) is a publicly funded healthcare system that operates independently across the four countries comprising the UK. NHS commissioning in England is complex and fragmented [26]. The number of organisations involved in providing and commissioning care in England, and the variety of ways that different providers are reimbursed and given incentives to deliver health care, reinforces this fragmentation and complexity [26]. In England, NHS musculoskeletal (MSK) physiotherapy services are commissioned by clinical commissioning groups (CCGs) [27–29]. These clinically-led, statutory NHS bodies are responsible for planning and commissioning local healthcare services [30]. The MSK landscape is further complicated by different types of commissioning models (e.g. Any Qualified Provider regime, tariff or block contracts), and providers deliver services through a range of prime and subcontractual arrangements [26,28,29]. For example, Addicott found one CCG ‘managed between 25 and 30 individual provider contracts for musculoskeletal services – each commissioned in an isolated fashion, to deliver an isolated part of the pathway’ [26].

Whilst commissioning arrangements have a key impact on shaping the provision of care, there is limited evidence about the influence these have on physiotherapy services and the ability of physiotherapists to implement and sus-

tain evidence-based interventions successfully to improve the quality of care [5,28,31]. The aim of this study was to explore the perspectives of physiotherapists on the influence of commissioning arrangements on the implementation and sustainability of ESCAPE-pain within NHS MSK physiotherapy services in England.

## Methods

### *Study design*

This study took a qualitative approach using in-depth interviews with physiotherapists involved in implementing and sustaining an evidence-based intervention across 11 NHS organisations. This included four organisational case studies. The use of case studies allows in-depth description and analysis of a specific situation or context [32,33], which is important in understanding the processes of implementing and sustaining interventions [18,34].

### *Study setting and participants*

A purposive sampling strategy was used to identify physiotherapists and managers involved in implementing and delivering the ESCAPE-pain programme. The study comprised 30 physiotherapists (in clinical and senior management roles) from 11 NHS MSK providers. At the time of data collection, 12 NHS organisations were known to be delivering ESCAPE-pain. All were approached about participating in the study via e-mail. One provider did not respond, and 11 providers agreed to participate. A key informant from each provider who was involved in overseeing the implementation and delivery of ESCAPE-pain was interviewed. Participants were approached via e-mail through the service lead or head of physiotherapy (therefore, it was not possible to determine who declined to participate and why). Key informants were identified based on information from the service lead or head of physiotherapy as being the person with the most relevant knowledge relating to the study. To provide deeper understanding of the implementation and sustainability of ESCAPE-pain, four of the 11 providers were approached to be organisational case studies [32–35]. Cases were selected based on:

- fidelity to ESCAPE-pain (i.e. delivering the programme as described in the original trial) [1,36];
- at least 2 years post implementation – this period is an important threshold for understanding sustainability [16,24,37]; and
- convenience (i.e. located in southern England to allow ease of access for multiple site visits)

All four organisations agreed to participate. [Table 1](#) provides an overview of each provider and participant.

Table 1  
Description of study sites and participants.

Organisation	Number and description of sites Participants – pseudonym <sup>a</sup> , gender and job role
Newstead (case study)	One site – a large NHS acute and community trust. ESCAPE-pain delivered in a community health centre. – Ed <sup>b</sup> , male, Consultant MSK Physiotherapist – Jasmine, female, Team Lead and Specialist MSK Physiotherapist – Nadia, female, Head of Physiotherapy – Anita, female, Consultant MSK Physiotherapist – Mia, female, Director of Therapy Services – Nora, female, Deputy Clinical Lead and Specialist MSK Physiotherapist
Riverhills (case study)	Six sites – a large NHS community trust operating from multiple sites (including district and community hospitals, health centres and general practices). – Dee <sup>b</sup> , female, Clinical Lead for MSK and Extended Scope Physiotherapist – Joan, female, Specialist MSK Physiotherapist – Harry, male, Specialist MSK Physiotherapist – Irene, female, Specialist MSK Physiotherapist – Bilal, male, Specialist MSK Physiotherapist – Diana, female, Specialist MSK Physiotherapist – Rose, female, Specialist MSK Physiotherapist
Burbank (case study)	Four sites – a large NHS acute trust. ESCAPE-pain delivered in MSK outpatients of large acute hospital site and a community hospital. – Amy <sup>b</sup> , female, Consultant MSK Physiotherapist – Anna, female, Specialist MSK Physiotherapist – Maya, female, Specialist MSK Physiotherapist – Dennis, male, Extended Scope Physiotherapist and Clinical Lead MSK – Kay, female, Head of Therapy Services
Richlands (case study)	Two sites – a large NHS acute trust with two large acute hospital sites. – Alex <sup>b</sup> , male, Head of MSK Services and Extended Scope Physiotherapy Practitioner – Sue, female, Specialist MSK Physiotherapist – Karen, female, Head of Therapy Services – Damian, male, Specialist MSK Physiotherapist – Adam, male, Extended Scope Physiotherapy Practitioner (MSK)
Burleigh	One site – NHS MSK outpatients within an acute NHS trust. – Rick, male, Specialist MSK Physiotherapist
Springbrook	One site – NHS MSK outpatients within an acute NHS trust. – Eve, female, Service lead and Specialist MSK Physiotherapist
Coomera	Two sites – NHS MSK outpatients within a community NHS trust – Ruth, female, Specialist MSK Physiotherapist
Merrimac	Two sites – NHS MSK outpatients within an acute NHS trust – Sangita, female, Specialist MSK Physiotherapist
Helensvale	Two sites – NHS MSK outpatients within an acute NHS trust – Dan, male, Specialist MSK Physiotherapist
Ashmore	Two sites – NHS MSK outpatients within a community NHS trust. – Elena, female, Specialist MSK Physiotherapist
Stradbroke	One site – NHS MSK outpatients within an acute and community NHS trust – Kay, female, Head of Therapy Services and Specialist Physiotherapist

NHS, National Health Service; MSK, musculoskeletal.

<sup>a</sup> Pseudonyms are used for all organisations and participants.

<sup>b</sup> Key informant interviewed twice (follow-up interview at approximately 12 months).

### Data collection

Data were collected in 2016–2017. A key informant ( $n = 11$ ) from each of the 11 MSK providers participated in an interview. For each case study organisation, an additional four to six managers and clinicians involved in implementing and/or delivering ESCAPE-pain were interviewed ( $n = 19$ ). All participants ( $n = 30$ ) were interviewed using an interview

schedule. A summary of the interview schedule topics is provided in [Table 2](#). One-to-one interviews were conducted by AW in a private meeting room at the participant's workplace or by telephone (on request). The key informant ( $n = 4$ ) from each case study organisation was interviewed a second time (approximately 12 months later) to explore issues around sustainability [38]. Follow-up interviews explored any changes that had taken place during the intervening time (i.e. what had

Table 2  
Summary of interview schedule topics.

Implementing ESCAPE-pain
• Extent of involvement in implementation
• Reasons for service change
• Role of funding/resources for implementation (internal/external)
• Implementation process (who, how, what, when?)
• Factors influencing implementation (internal/external)
• Roles and responsibilities in implementation
• Decision-making about implementation (internal/external)
• Programme fidelity and adaptation
Sustaining ESCAPE-pain
• Monitoring and evaluation of the programme
• Role of funding/resources for sustainability (including changes to funding and resource allocation) (internal/external)
• Decision-making about sustaining the programme (internal/external)
• Factors influencing sustainability (internal/external)
• Programme fidelity and adaptation

changed, when it changed, and the context for the change) [39]. Interviews ( $n = 34$ ) lasted an average of 56 minutes, and were audio-recorded and transcribed verbatim.

Prior to interviews, participants received information about the study which outlined its purpose, the researchers' interest in the topic, and gave assurances about their confidentiality and anonymity. All participants gave written informed consent for interview data to be used in the study.

### Data analysis

Data were managed using NVivo 11, coded inductively and analysed using thematic analysis [40]. AW led the analysis, which was an iterative process occurring when fieldnotes were written, interviews were transcribed, and during coding and interpretation. Fieldnotes were used to aid reflexivity and analysis of the interview data [41].

AB and HM read samples of interview transcripts and met regularly to reflect on and discuss the themes that were being identified from the data. Although there were some specific contextual differences between providers (as described in Table 1), overall common themes were repeated across the interviews and no new themes were identified, suggesting that data saturation had been reached [42]. To strengthen the analysis, the preliminary findings were shared with 187 people involved in delivering ESCAPE-pain at two stakeholder events. Whilst this prompted questions for discussion, no one contested the findings.

The study team consisted of a professor of social science with expertise in knowledge mobilisation in health (AB: female, PhD), a professor of rehabilitation and physiotherapist (MH: male, PhD), and an early career clinical academic physiotherapist (AW: male, PhD). The study team had existing knowledge of the research area, and training and experience in qualitative research. The interviewer (AW) had no prior relationship with the participants.

## Results

Five themes were identified: (1) clinical perspectives of ESCAPE-pain; (2) focusing on clinical activity over outcomes; (3) rationing availability; (4) absorbing costs; and (5) relationship between commissioners and providers.

### *Clinician perspectives on ESCAPE-pain*

From the perspective of providers, ESCAPE-pain was seen as an intervention that they wanted to implement within their services. Providers saw ESCAPE-pain as a way to provide evidence-based, quality, cost-effective care aligned with NHS priorities. They were also conscious of the competition for securing contracts for MSK physiotherapy services, and saw ESCAPE-pain as a way to demonstrate their added value to CCGs:

‘ESCAPE-pain is something that would sell a service. It shows you're evidence based, you're taking notice of what's cost effective and what's best for patients and so kind of feeds into like everything really that the NHS and the Government is working towards, like get people to manage their symptoms’ (Adam, Clinical Lead MSK and Extended Scope Physiotherapist).

ESCAPE-pain was perceived as being a good fit at a service level. It integrated relatively easily into conventional MSK physiotherapy outpatient departments because the individual components of ESCAPE-pain were similar to current physiotherapeutic practice. It was also seen as ‘plugging’ into existing pathways and processes at an organisational level:

‘it's a group exercise programme for OA [osteoarthritis of the] knee, which works really well. . . [it] fitted into the current models of how we operate’ (Alex, Head of MSK Services and Extended Scope Physiotherapist).

### *Focusing on clinical activity over outcomes*

Participants perceived that commissioners were more focused on providers prioritising operational issues rather than on clinical outcomes or whether interventions were evidence-based. This meant providers primarily focused their efforts on performing well at service-level activities (e.g. staff productivity, length of waiting lists and attendance), and discussions with commissioners centred on issues such as increasing patient flow, managing referral volumes/demand, streamlining referral and triage pathways, and increasing productivity. Participants thought that the activity-based commissioning models used by many CCGs resulted in a drive to deliver in-year savings rather than improve quality of care:

‘It's that short-sightedness, it's looking at the bottom of your balance sheet and your monthly figures as opposed to your

yearly or even your 5-year plan of outcomes and planning the service delivery’ (Ed, Consultant MSK Physiotherapist).

They felt that pressure to deliver short-term savings overrode their ability to deliver evidence-based interventions that benefited patients or the system:

‘Unfortunately, we’re moving away from the inevitable gold standard, can’t afford it, to what’s good enough’ (Nadia, Head of Physiotherapy).

The 12 sessions (60 minutes each) required to deliver ESCAPE-pain presented many providers with a challenge due to constraints in CCG contracts that limited the number of patient contacts to a maximum of four per care episode. Many providers adapted ESCAPE-pain to get the programme to fit within the contract by reducing the number of sessions or by using fewer or more junior staff. However, the knock-on effect of this was to compromise fidelity to the evidence-based programme and reduce the quality of care:

‘We did 12 sessions over 6 weeks. . . then we were squeezed and cut down to eight’ (Dee, Clinical Lead for MSK and Specialist MSK Physiotherapist).

#### *Rationing availability*

Some providers reported that the commissioning environment meant they had to ration the availability of ESCAPE-pain to patients. Providers described limiting ESCAPE-pain to certain sites across their service, or not allowing patients to access care across sites in order to limit access to patients even though they might be suitable. They justified limiting access as a strategy to control the level of clinical activity across the service as a whole. They feared delivering a 12-session intervention across multiple sites would result in CCG targets on appointment numbers being exceeded:

‘There’s another reason we might not give everybody ESCAPE-pain, because our KPI [key performance indicator] is one to three follow-ups’ (Nadia, Head of Physiotherapy).

When asked about the possibility of delivering ESCAPE-pain to all eligible patients, Nadia responded:

‘We’d have to do some serious work with commissioners. . . their first question would be, “Well, isn’t there something that would give the same outcomes for less?”’ (Nadia, Head of Physiotherapy).

Rationing availability was also a way to manage the complexity of delivering a service to patients who were coming from different CCG areas and paid for under a range of contracts. This led to some providers delivering ESCAPE-pain only at sites where the majority of patients would be covered by a contract that paid for ESCAPE-pain. Otherwise, they had to deliver interventions that ‘fitted’ within the terms of all contracts (e.g. six sessions). For example, at Newstead, ESCAPE-pain was only delivered in a single

community health centre because all patients accessing care at that site came under the same CCG contract with terms that allowed the provider to deliver ESCAPE-pain. Their two other sites delivered MSK services under multiple CCGs, each with different contractual conditions that made delivering ESCAPE-pain impractical.

#### *Absorbing costs*

Many MSK providers decided to absorb the costs of delivering ESCAPE-pain, even if contracts did not cover all of the associated clinical activity. Providers recognised that this was not an ideal financial situation, and raised concerns that this potentially threatened their ability to sustain ESCAPE-pain in the long term:

‘. . . there’s a risk if we do this activity, we don’t get paid for it and we can’t sustain that for very long’ (Alex, Head of MSK Services and Extended Scope Physiotherapist).

Providers carefully monitored and managed activity levels across the wider service to mitigate the impact of the number of ESCAPE-pain sessions. Providers talked about needing to be more effective at managing and discharging patients with conditions that required fewer appointments, or getting more experienced senior clinicians to treat more complex patients to expedite discharge. However, many providers described high levels of demand for their services, which meant they were already ‘losing money’ on contracts irrespective of the additional activity caused by ESCAPE-pain:

‘we probably treat patients over and above what we were contracted to and we lose money on the service’ (Dennis, Clinical Lead for MSK and Extended Scope Physiotherapist).

In some cases, providers had to stop delivering ESCAPE-pain because they were no longer able to make it work within the constraints of local funding arrangements:

‘the commissioners said ‘no, we won’t commission that’ . . . so I got a three-line whip from my manager to say we have to stop’ (Amy, Consultant MSK Physiotherapist).

Some providers reported that once they had implemented ESCAPE-pain and shown it was successful, they hoped CCGs would be convinced of its clinical and financial benefits and then fund the programme’s on-going delivery and scale-up across sites. However, this was not the case, and providers had to continue to meet the costs of delivering ESCAPE-pain from their own budgets:

‘We were hoping to secure money from commissioners. . . we didn’t manage to secure that money. But then we decided that well, this is a quality initiative and we value it, so we’ll keep going with it’ (Alex, Head of MSK Services and Extended Scope Physiotherapist).

Providers expressed frustration about the lack of engagement by CCGs to support the local scale-up of ESCAPE-pain,

as they believed it would be a more effective approach than it being led at a provider level.

#### *Relationship between commissioners and providers*

MSK providers described a relationship with commissioners that was disconnected and framed as ‘them and us’. Service managers and clinicians thought they had little power to influence commissioning decisions despite the fact that these decisions had a direct impact on how they ran their services and the care they offered patients:

‘[Director of therapy services] has contact with commissioners for MSK, so I have to influence her to give the right message’ (Nadia, Head of Physiotherapy).

Commissioners were perceived to be lacking an interest in, and understanding of, clinical issues, and were more interested in ensuring that providers delivered against their activity-based key performance indicators, whereas providers wanted to discuss which would be the most appropriate evidence-based interventions to improve care and how these might be accommodated within their contract. They also felt commissioners did not appreciate that delivering evidence-based care often required greater investment:

‘[commissioners] start glazing over because they’re thinking. . . “okay, how is it going to save me three million by year end?” type of thing. And most things won’t, will they, because you’ve got to make extra provision first to start seeing a return later’ (Alex, Head of MSK Services and Extended Scope Physiotherapist).

## **Discussion**

To date, few studies have provided an in-depth examination of the impact of funding arrangements on implementing and sustaining evidence-based interventions in physiotherapy. This study aimed to understand the influence of commissioning models on the ability of physiotherapy providers to implement and sustain high-quality, effective health care.

MSK physiotherapy providers wanted to implement and sustain ESCAPE-pain because it was an evidence-based intervention for improving quality of care that was cost-effective and integrated relatively easily into conventional physiotherapeutic processes and pathways. The number and intensity of sessions in ESCAPE-pain for the effective management of osteoarthritis is supported by a number of reviews on exercise interventions for hip and/or knee osteoarthritis [5,43–46]. However, despite a willingness by clinical services to implement and sustain ESCAPE-pain, it was not necessarily straightforward. Providers do not exist in a vacuum and are influenced by wider sociopolitical issues, policy, market forces and funding regimes [19,22–24]. Performance management regimes, payment systems and commissioning

structures can have a critical impact on the uptake and sustainability of innovations within the NHS, including MSK physiotherapy [20,21,28,47]. NHS MSK providers deliver services through a variety of commissioning models [27], and their ability to implement and sustain interventions is influenced and constrained by the funding models under which they operate. For ESCAPE-pain, features at a system level relating to current commissioning models can impede its long-term integration.

There was a mismatch between the design of the ESCAPE-pain programme (i.e. 12 sessions over 6 weeks) and current predominant models of commissioning that were not designed to fund group interventions requiring this number of patient contacts. This led providers to respond in different ways, such as rationing availability and adapting the intervention, which could affect the effectiveness and quality of care of the programme. Sometimes, providers were unable to integrate ESCAPE-pain into local funding regimes, which made it unsustainable. This was often exacerbated by a disconnect between commissioners and providers, and providers’ perceptions that commissioners did not recognise and take responsibility for the challenges of integrating evidence-based interventions into clinical services and pathways [21,48]. In reality, the ability of providers to implement and sustain ESCAPE-pain was largely contingent on their local commissioning model [49]. This is driven, in part, by the pressures that CCGs are under to save money within their own budgets despite ever-growing demand. This commissioning environment leaves little scope to focus on discussions about interventions that require upfront investment, but where the benefits may take time to be realised across the health and social systems [21,50,51].

The disconnect between providers and commissioners and the impact of different commissioning models on ESCAPE-pain has been observed with other interventions. There have been concerns that the Any Qualified Provider model may potentially erode quality in the Improving Access to Psychological Therapies programme and MSK services due to shorter treatment and fragmentation of care between providers [20,28]. With the WISE programme, a self-management intervention for long-term conditions, the activity-based funding model in primary care impeded its integration [47]. This was because funding models gave incentives to clinicians to prioritise activities that were paid for under the contract. As a result, the activities associated with WISE were deprioritised because they were not funded directly [47].

There are alternative approaches that could make commissioning models more supportive of evidence-based interventions. Commissioners could develop contracts that are flexible and allow providers to deliver interventions, such as ESCAPE-pain [21]. In addition, commissioning bodies need to take a broader, more strategic, integrated and outcome-focused approach [51]. This requires commissioners and providers to work more collaboratively to reconfigure funding that supports interventions which might require

greater up-front investment in order to deliver better long-term, system-wide outcomes [51–53].

### *Strengths and limitation*

Whilst the study draws on a range of perspectives from multiple organisations, the focus was on a single intervention and perspective (i.e. NHS MSK providers). Therefore, the findings relating to ESCAPE-pain may not apply to other interventions, conditions or practice settings. Interviews were the sole data source, which limited the ability to triangulate between different types of data (e.g. observations or documents). However, the case study approach allowed the research topic to be explored in-depth to construct and contextualise the findings [32]. The use of member checking (via two stakeholder events) within the analysis helped to increase rigour.

This study focused solely on physiotherapists and ESCAPE-pain. However, future studies might usefully explore the perspectives of commissioners and patients across a wider range of evidence-based interventions within different physiotherapeutic settings.

### **Conclusion**

Current NHS commissioning arrangements for MSK physiotherapy services in England can impede providers from implementing and sustaining a clinically and cost-effective evidence-based programme, ESCAPE-pain. For an intervention to be implemented and sustained, it needs to be easily integrated at a practice and system level. Commissioners and providers need to work collectively to create funding regimes that support the implementation and sustainability of evidence-based interventions. In particular, commissioning arrangements for MSK physiotherapy services need to allow providers the flexibility to deliver interventions that best meet the needs of their patients, rather than delivering interventions that fit within the constraints of existing funding regimes, which largely have an activity-based focus. The emergence of integrated care systems in England and the move to a more strategic, integrated and outcome-focused approach to commissioning have potential to support the spread and sustainability of interventions such as ESCAPE-pain.

#### **Key messages**

- Activity-based commissioning models in MSK physiotherapy can impede providers' ability to embed an evidence-based programme.
- Implementing and sustaining evidence-based interventions in physiotherapy services requires integration into practice settings and funding models.

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