Scaling-up ESCAPE-pain: An evaluation of an AHSN Network national programme

Full report

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About

The sustained implementation of healthcare innovations can take many years and many initiatives fail. Despite the billions spent each year around the world on healthcare research there is still limited evidence to understand what factors determine the success or failure of an innovation to spread, be adopted and sustained within different healthcare settings.

The ESCAPE-pain programme is an intervention for knee and hip osteoarthritis that has been shown to be clinically and cost effective. In 2018, ESCAPE-pain was selected as a priority for national spread by the AHSN Network.

The purpose of the evaluation was to investigate the factors influencing the national spread of ESCAPE-pain, to build knowledge about the theory and practice of implementing interventions at scale within healthcare settings. It focuses on the two-year AHSN funded national programme for ESCAPE-pain. This builds on earlier work exploring the approaches taken by the Health Innovation Network to support the spread of ESCAPE-pain.

The evaluation took a mixed methods approach combining qualitative sources (i.e. participant observations, interviews and documentation) and quantitative data routinely collected by the Health Innovation Network. The evaluation was undertaken by the Health Innovation Network.

Acknowledgements

Versus Arthritis has been a key partner in providing funding and support for the ESCAPE-pain programme and the evaluation. We thank colleagues across the AHSN Network and the many local and national partner organisations whose efforts have led to the successful scale-up of ESCAPE-pain and who have contributed to producing this evaluation report. We want to acknowledge the many the people with hip and knee osteoarthritis across England who have chosen to participate in the ESCAPE-pain programme and contribute to its continued development.
Executive summary

Overview

There are approximately 8.75 million people in the UK living with osteoarthritis (OA) and this is projected to increase to 17 million by 2030 [1,2]. OA is a major cause of disability with large a socio-economic burden[3]. Despite NICE guidance [4] and proven interventions (such ESCAPE-pain), the management of OA remains sub-optimal because the evidence-base is not being implemented into practice [5,6]. ESCAPE-pain promotes self-management to improve quality of life and function[7–9]. The programme is delivered over six weeks via two weekly group sessions that last 45-60 minutes (with 15-20 minutes of structured education and 30-45 minutes of individualised exercise). ESCAPE-pain was shown to be clinical and cost-effective through a large cluster randomised controlled trial and economic evaluation [7,8,10].

In 2018, ESCAPE-pain was selected as a priority for national scale-up by all 15 Academic Health Science Networks (AHSNs). This is the evaluation of the two-year AHSN Network funded national scale-up programme, which was coordinated by the Health Innovation Network (south London’s AHSN). It was an internal mixed methods evaluation undertaken by the Health Innovation Network using an embedded evaluator model, which builds on earlier work exploring the spread of ESCAPE-pain [11] and an evaluation commissioned by Versus Arthritis [12]. The report outlines the factors influencing the national scale-up of ESCAPE-pain with the aim of building knowledge about implementing interventions at scale. Specifically, it discusses:

- The scale of spread (or outcomes) achieved for ESCAPE-pain through the AHSN national programme
- The AHSN Network’s approach to coordinating the national programme for ESCAPE-pain
- The key factors (i.e. barriers and facilitators) influencing the implementation and scale-up of ESCAPE-pain
- AHSNs’ strategies for implementing and scaling-up ESCAPE-pain
- Sustaining ESCAPE-pain beyond the AHSN national programme

Key findings

Scale of spread: outcomes

Following the AHSN Network national programme, ESCAPE-pain is now being delivered in 260 sites across the British Isles' with 16,876 people with hip and knee OA completing the programme across 256 sites (Figure 1). This is a 4-fold increase in the number of sites and 3-fold increase in the number of participants compared to start of the national programme in April 2018. The growth in sites during 2018-2020 has been accompanied by a substantial expansion in geographical spread beyond London and South East England (Figure 2). The number of sites in Scotland, Wales and Northern Ireland remains low, which were outside of the AHSN national programme.

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1 There are sites across the UK, Republic of Ireland and Channel Islands
This spread has been accompanied by an expansion in the models of delivery for ESCAPE-pain across an increasing range of settings (NHS and non-clinical community), providers (NHS, community leisure, local authority) and practitioners (physiotherapists, therapy assistants and fitness professionals) (Table 1). In year 1 on national programme, the most common model of commissioning and delivery continued to be a physiotherapist working within a physiotherapy outpatients service funded through a CCG musculoskeletal (MSK) contract (97/170 or 57% of sites). However, by December 2019 the balance had...
shifted towards ESCAPE-pain being delivered in more non-clinical, community settings (139/260 or 53.5% of sites) by clinical staff and fitness instructors. Of the 1123 trained ESCAPE-pain facilitators, 693 are clinical staff (mainly physiotherapists) and 430 are fitness instructors. Critically, monitoring of clinical outcomes demonstrates that ESCAPE-pain continues to be clinically effective in ‘real world’ settings (i.e. outside of a research study).

Table 1 Range of settings, providers and practitioners that have delivered ESCAPE-pain

<table>
<thead>
<tr>
<th>Setting</th>
<th>Provider</th>
<th>Practitioner</th>
</tr>
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<tbody>
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<td>Physiotherapy dept.</td>
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<td>NHS (public health provider)</td>
<td>Therapy assistant</td>
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<tr>
<td>Leisure / fitness centre</td>
<td>Leisure/ fitness provider</td>
<td>Physiotherapist and/or fitness instructor</td>
</tr>
<tr>
<td>Workplace</td>
<td>NHS Occupational Health</td>
<td>Physiotherapist</td>
</tr>
<tr>
<td>Community centre</td>
<td>Third Sector</td>
<td>Physiotherapist or fitness instructor</td>
</tr>
<tr>
<td>Community centre</td>
<td>Local authority / town council</td>
<td>Physiotherapist + fitness instructor</td>
</tr>
</tbody>
</table>

Coordinating the AHSN Network’s national programme for ESCAPE-pain

The approach to coordinating the AHSN national programme for ESCAPE-pain has been underpinned by developing a cohesive partnership between AHSNs via peer support and knowledge sharing. The ESCAPE-pain core team based at the HIN used a range of approaches (e.g. webinars, learning network meetings, FutureNHS online platform) to allow existing knowledge about spreading ESCAPE-pain to be shared, and to capture and exchange learning that emerged from the AHSN Network during the national programme (e.g. local contextual issues, strategies for local spread).

Monitoring implementation outcomes was developed and refined over the course of the first year of the national programme, co-ordinated predominantly by the core team liaising with local sites and the national metrics team in Kent Surrey Sussex (KSS) AHSN. Problems with processes were addressed and changes made to respond to the evolution of the national programme. This approach ensured rigor and reporting independence. However, it was perceived as being too target focused and did not take account of relationships and other softer intelligence. As the programme progressed, AHSNs developed greater ownership of ESCAPE-pain work locally, with greater knowledge of local sites and ESCAPE-pain related activity, and direct relationships with sites. Therefore, data became a useful mechanism to support engagement.

AHSNs’ approaches to implementing and scaling-up ESCAPE-pain

*Factors influencing implementation and scale-up*

Locally, AHSNs encountered a range of factors that influenced their ability to implement ESCAPE-pain. The key factors that facilitated the implementation of ESCAPE-pain were:

- The strength and quality of evidence about ESCAPE-pain – it was important that AHSN could demonstrate the programme was both clinically and cost effective.
- The quality and packaging of information about ESCAPE-pain and how to implement it – a suite of resources and materials about ESCAPE-pain were tailored to different audiences (e.g. providers, commissioners, leisure sector). This supported AHSNs to make a more compelling case to local
stakeholders by providing relevant key information (e.g. clinical benefits, financial costings/savings, models of delivery).

- Local champions – individuals with credibility and influence within organisations and the local system able to galvanise commitment and resources to implement ESCAPE-pain. Champions might be within provider or commissioning organisations and were often in roles that combined both strategic and operational responsibilities (e.g. a senior clinician in a service management role) and were motivated to drive improvement through evidence-based care.

- Easily trial-able and scalable – ESCAPE-pan can easily integrate into a range of settings and can be delivered by a range of professionals with little additional training. Its implementation has limited disruptive impact on local practices, services and pathways; thereby, it was low risk and required low resources to trial.

The factors most consistently encountered by AHSNs that impede the local implementation and scale-up of ESCAPE-pain were:

- Current (predominant) commissioning models that are activity-based and prioritise in-year cost savings within CCG budgets do not readily support the implementation of a new intervention (such as ESCAPE-pain), which require greater upfront investment compared to incumbent (typically non-evidenced) interventions and realise benefits in the long-term and across health and social care systems. This creates a challenging environment for providers to make ESCAPE-pain work within the constraints of the funding model. A particular concern is where CCGs have commissioned a commercial MSK provider whose service model did not make providing multi-session interventions cost-effective.

- Attitudes towards the evidence and evidence-based practice (particularly amongst managers and senior clinicians) directly impacts on the uptake of ESCAPE-pain. Existing group-based programmes are unlikely to have the same level of evidence or return on investment that ESCAPE-pain offers. However, where these are in place local clinicians’ appetite for change could be low resulting in an unwilling to replace their own programme with ESCAPE-pain.

- For non-NHS, community providers (e.g. leisure centres) a key challenge is lack of adequate referral pathways into their services. Whilst NHS MSK service are overwhelmed with referrals and typically have lengthy waiting time, non-NHS providers can struggle to recruit participants. This is compounded by poor links between NHS and non-NHS providers.

The majority of the AHSNs have encountered some of the barriers above and have been able to work around them by focusing on ‘working with the willing’. A small number of AHSNs have encountered a ‘perform storm’ of barriers (i.e. a culmination of too many barriers). As a result, there are very few routes left available to them, and are likely to continue to struggle to get traction in their regions despite their best efforts.

**Strategies for implementation and scale-up**

What we know from the literature on implementation is that there is no one “right way” to spread an intervention (one size does not fit all) [13]. Implementation strategies need to be chosen and tailored to accommodate the characteristics of the intervention, providers, the team resourced to support implementation, and the wider system (or environment) [14].

Key strategiesii used by AHSNs to implement ESCAPE-pain successfully were:

- Developing stakeholder inter-relationships – Identifying and supporting local champions and early adopters, building local partnerships and consensus for ESCAPE-pain (i.e. identifying and agreeing the need and fostering a commitment and urgency to implement), and working with partners from

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ii Based on ERIC categorisation of strategies [15,16]
across the system (e.g. providers and commissioners from the NHS, local authority, and leisure and community sector)

- Using financial measures – Funding and contracting for ESCAPE-pain, for example embedded within tenders, payment for delivering the programme by the Sport England programme, and providing free training.
- Training and education – Rolling out a mandatory 1-day training course for all facilitators on how to deliver and implement the programme, developing a suite of tailored and packaged resources about the evidence, delivery and implementation of ESCAPE-pain.
- Providing interactive assistance – Local AHSNs and the national team providing on-going technical assistance to partners to support implementation. This included providing information and support around decision-making to adopt (e.g. business case templates, attending key meetings), resources and advice on implementation and delivery (e.g. implementation toolkit, site visits), and helping to problem-solve any issues impeding implementation.
- Using evaluation and iterative strategies – a key approach used by AHSN has been to test and refine different ways of implementing ESCAPE-pain, to identify and share key barriers and facilitators and learn about what works across a variety of settings and delivery models (e.g. exercise on referrals schemes, NHS-leisure provider partnerships).

**Conclusion**

- Implementing ESCAPE-pain at scale through the national AHSN programme has been a collective effort
  - Achieved via strong, strategic leadership from the national network of AHSNs and supported by large public sector bodies (NHS England, PHE) and a large third sector organisation (Versus Arthritis)
  - It has been a planned and managed process (with centralised coordination by the ESCAPE-pain core team at the HIN), but has also been non-linear and iterative
  - The process has required dedicated, sustained resources

- Demand for the programme, and capacity have increased as a result of discussion and collaboration across organisations, and evidence-sharing
  - Published evidence on clinical and cost effectiveness has been combined with professional tacit knowledge and networks across the system (i.e. providers and commissioners) to build consensus that there is scope for significant improvement in how OA is managed, and ESCAPE-pain offers a viable solution
  - Local champions and early adopters provide critically important local networks and credibility, which demonstrate ESCAPE-pain local relevance and effectiveness
  - Engaging with commissioners has been challenging (but possible in some instances)

- Throughout implementation, care has been taken to ensure fidelity to the programme, while enabling local adaptation
  - A key role of AHSNs is to work with local system to articulate what ESCAPE-pain is (active ingredients) and how to implement it
  - This knowledge has been packaged through resources and training, which forms a key strategy supporting spread by building capacity within the system
  - Spread is underpinned by testing and refining models of delivery within different settings (NHS and non-NHS), with different practitioners (clinical and non-clinical), and by creating new partnerships
  - Monitoring and quality assurance processes have been developed, demonstrating the national programme for ESCAPE-pain is achieving reach and maintaining quality
Successfully

- Monitoring, evaluation and knowledge exchange have been fundamental, and have generated learning about how to implement ESCAPE-pain across different practice settings and commissioning arrangements.

- Overall, sustainability is high, with 77.8% of sites continuing to deliver ESCAPE-pain post-implementation. However, forecasts for the sustainability of sites in the first year beyond the national programme predict an annual reduction ranging from 24.5% to 83%, depending on the on-going level of support provided by the AHSN Network.

Recommendations

1. MSK commissioning arrangements are locally negotiated and, in some areas, can impede providers from implementing the programme. National MSK commissioning guidance that supports the adoption of NICE guidance and latest evidence would be optimal – giving a framework to commissioners to help them purchase evidence-based care. Providers need flexibility and support to introduce changes that improve care.

2. Local providers/commissioners should be encouraged to consider the evidence base for alternative group-based programmes and to explore whether adapting these to the ESCAPE-pain model would add value or a better return on investment (N.B. NICE guidance is not prescriptive and does not reflect latest evidence reviews).

3. ESCAPE-pain delivers personalised care that delivered long-term system-wide benefits, which fits well with the objectives of Integrated Care Systems. There are examples of CCGs commissioning leisure and community organisations to deliver ESCAPE-pain (as an alternative to NHS physiotherapy providers). This could be showcased as an example of effective outcome-focussed commissioning that also supports the spread and sustainability of interventions (like ESCAPE-pain) that deliver long-term, system-wide benefits.

4. Using ESCAPE-pain as an example, Integrated Care Systems could facilitate and encourage health professionals within the NHS to work more actively with leisure community providers through exercise-on-prescription or social prescribing or cross sector partnerships.

5. It is critical for national scale-up initiatives to be supported to develop strategies to sustain interventions post-implementation, in order to ensure patients and the systems continue to realise benefits and maximise return on investment. Consideration should be given to the role that existing system levers within NHS England (e.g. RightCare, Elective Care Transformation, incentive schemes etc.) can play in long term sustainability.
## Glossary of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AHSN</td>
<td>Academic Health Science Network</td>
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<tr>
<td>CIMSPA</td>
<td>Chartered Institute for the Management of Sport and Physical Activity</td>
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<tr>
<td>CPD</td>
<td>Continued Professional Development</td>
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<tr>
<td>DOG</td>
<td>Delivery Oversight Group</td>
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<tr>
<td>HIN</td>
<td>Health Innovation Network</td>
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<tr>
<td>ICS</td>
<td>Integrated Care System</td>
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<tr>
<td>OA</td>
<td>Osteoarthritis</td>
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<tr>
<td>PHE</td>
<td>Public Health England</td>
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<tr>
<td>REPS</td>
<td>Register of Exercise Professionals</td>
</tr>
<tr>
<td>RSPH</td>
<td>Royal Society for Public Health</td>
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<tr>
<td>STP</td>
<td>Sustainability and Transformation Partnership</td>
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Background

The sustained implementation of healthcare innovations can take many years and many initiatives fail\(^3\). Despite the billions spent each year around the world on healthcare research a consideration gap remains between evidence and practice\(^1\). There is still limited evidence to understand what factors determine the success or failure of an innovation to spread, be adopted and sustained within different settings. The largely slow and haphazard process of translating evidence into practice has serious implication for patient safety, quality of care, cost-effectiveness, and the ability of healthcare professionals to make informed decisions\(^4,8\). If we are to improve health outcomes at a population level we need to understand better how interventions with proven benefits transition from the design and trial phase to achieving more wide spread adoption within healthcare\(^5,10\).

As part of the response to the failure of evidence-based initiatives to be adopted into practice and spread across healthcare the UK Government established 15 Academic Health Science Networks (AHSNs) in 2011 to help accelerate the spread and adoption on innovation in healthcare. ESCAPE-pain is a intervention for knee and hip osteoarthritis (OA) that has been shown to be clinically and cost effective\(^4-6\). In 2014, ESCAPE-pain was selected by the Health Innovation Network (HIN) as a priority for local spread and in April 2018 it was chosen as 1 of 7 interventions for national scale-up by all 15 AHSNs within the AHSN Network through a 2-year funded programme.

Overview of ESCAPE-pain

There are approximately 8.75 million people in the UK living with OA and this is projected to increase to 17 million by 2030\(^11,12\). OA is a major cause of disability with large a socio-economic burden\(^13\). However, even with NICE guidance\(^14\) and proven interventions (such ESCAPE-pain) and the management of OA remains sub-optimal\(^15,16\).

ESCAPE-pain promotes self-management to improve quality of life and function\(^4,6,17\). The programme is delivered over six weeks via two weekly group sessions that last 45-60 minutes (with 15-20 minutes of structured education and 30-45 minutes of individualised exercise). It is based on the principle that muscle dysfunction can lead to joint damage (and OA) and that by conditioning the muscle through exercise damage to the joint is delayed, symptoms are improved, and disease progression is slowed. Developed within a bio-psychosocial model, the programme recognises the influence of social and psychological factors (such as health beliefs, experience, social networks, and emotions) on health outcomes. Cognitive behavioural restructuring approaches are used to address inappropriate health beliefs and maladaptive coping in combination with group exercise to promote better self-management.

The clinical and cost-effectiveness of ESCAPE-pain were shown through a large cluster randomised controlled trial (RCT) and an economic evaluation\(^4-6\). The trial demonstrated significant improvements in both short- and long-term clinical outcomes and health beliefs\(^5-6\). Formal economic evaluation and a Quality, Innovation, Productivity and Prevention (QIPP) analysis showed that ESCAPE-pain is more cost-effective than usual care\(^5,18\).

Evaluation purpose and design

The purpose of the evaluation was to understand the AHSN Network’s approach to the national spread of ESCAPE-pain, to build knowledge about the theory and practice of implementing interventions at scale within healthcare settings. Specifically, the evaluation aimed to:
Understand how the AHSN Network coordinates the national approach to spreading ESCAPE-pain
Understand the approaches taken by AHSNs to drive local spread
Determine the factors (both internal and external to the AHSNs) influencing the selection of approaches
Investigate how the AHSNs implement approaches to facilitate the spread of ESCAPE-pain

The evaluation was undertaken by the Health Innovation Network and took an ethnographic approach, which comprised combining qualitative sources (i.e. participant observations, interviews and documentation) and quantitative data routinely collected by the ESCAPE-pain core team at the HIN (hereafter, the core team). Appendix 5 provides further details about the evaluation design.

This report focuses on a two-year AHSN funded national programme for ESCAPE-pain (2018-2020). However, the core team at the HIN has continued to undertake additional work on ESCAPE-pain outside of the AHSN Network national programme. At times, this wider work is discussed in the report where it has relevance to and/or provides context for the ESCAPE-pain national programme.

Findings

The findings explore three different aspects of the AHSN Network’s work (led by the Health Innovation Network) to scale-up the implementation of ESCAPE-pain across England:

1. Spreading ESCAPE-pain: Outcomes – provides a brief overview of the outcomes that have been delivered through the AHSN Network’s work in terms of the reach, adoption and effectiveness of ESCAPE-pain. This provides context to then explore how the AHSN network has achieved these outcomes.

2. AHSN Network’s approach to coordinating the national programme for ESCAPE-pain – discusses how the AHSN Network approached coordinating a national programme to support the spread of ESCAPE-pain across the 15 ASHNs.

3. AHSNs’ approaches to implementation and spread – explores the factors (or determinants) affecting the implementation of ESCAPE-pain and the strategies used by AHSNs to facilitate the implementation of ESCAPE-pain regionally based on local contextual factors.

4. Sustaining ESCAPE-pain – outlines planned future activity by the AHSN Network on ESCAPE-pain beyond the 2-year national programme

1 Scaling-up ESCAPE-pain: Outcomes

1.1 Extent of reach and adoption

Following the AHSN Network national programme, ESCAPE-pain is now being delivered in 260 sites across the British Isles with 16,876 people with hip and knee OA completing the programme (Figure 3). Since the adoption of ESCAPE-pain as a national priority for spread by the AHSN network (April 2018) there has been an acceleration in the growth of sites and number of participants completing the programme. In the 4 years from April 2014 to April 2018 growth had led to 60 sites delivering ESCAPE-pain; whereas, the number of sites increased to 260 sites by December 2019.
The growth in sites during 2018-2020 has been accompanied by an increase in geographical spread across the UK. Figure 4 shows that compared to April 2018, ESCAPE-pain is now being delivered across all regions of England, Wales and Northern Ireland. There has been a marked increase in sites across the West and South West of England and North of England.

![Graph showing number of sites delivering ESCAPE-pain and number of participants completing ESCAPE-pain](image)

**Figure 3** Number of sites delivering ESCAPE-pain and number of participants completing ESCAPE-pain

![Maps showing geographical distribution of ESCAPE-pain sites](image)

**Figure 4** Geographical distribution of ESCAPE-pain sites April 2018 (left) and December 2019 (right). The coloured regions (left) show individual AHSN boundaries.
This spread has been accompanied by an expanding the range of settings, providers and practitioners delivering ESCAPE-pain (Table 2 outlines a summary delivery models; Appendix 2 provides details of specific examples). There has also been growth in the range of commissioning models for ESCAPE-pain (Appendix 3). In year 1 on national programme, the most common model of commissioning and delivery continued to be a physiotherapist working within a physiotherapy outpatients service funded through a CCG musculoskeletal (MSK) contract (97/170 or 57% of sites). However, by December 2019 the balance had shifted towards ESCAPE-pain being delivered in more non-clinical, community settings (139/260 or 53.5% of sites) by clinical staff and fitness instructors. Of the 1123 trained ESCAPE-pain facilitators, 693 are clinical staff (mainly physiotherapists) and 430 are fitness instructors.

The growth in non-clinical, community sites and fitness instructors is due in part to funding from a Sport England-funded project, which is piloting ESCAPE-pain in community settings for inactive older adults (see section below on ‘Sport England-funded project’).

Table 2 Range of settings, providers and practitioners that have delivered ESCAPE-pain

<table>
<thead>
<tr>
<th>Setting</th>
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</tr>
</tbody>
</table>

1.2 Clinical effectiveness

As trial-based interventions transition from highly controlled and resourced contexts into messy, low resourced ‘real world’ settings there is a risk that there is a loss of clinical effectiveness (i.e. sometimes called a ‘voltage drop’). In the case of ESCAPE-pain, participants continue to benefit from the programme with improvements in pain by 7.6 (CI 7.2, 8.1) KOOS points and 5.2 (CI 3.4, 7) HOOS points, function 8.2 (7.7, 8.7) KOOS and 5.5 (3.5, 7.5) HOOS, and quality of life 8.1 (7.5, 8.6) KOOS and 5.6 (3.3, 7.9) HOOS (Table 3).
Table 3 Effectiveness of the ESCAPE-pain programme for knee and hip OA

<table>
<thead>
<tr>
<th>KOOS Domain</th>
<th>Sample size^</th>
<th>Pre- mean (SD)</th>
<th>Post- mean (SD)</th>
<th>Mean change (95% CI change)</th>
<th>Effect size (Cohen’s D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>3614</td>
<td>48.9 (17.3)</td>
<td>56.5 (18.5)</td>
<td>7.6 (7.2, 8.1)**</td>
<td>0.5</td>
</tr>
<tr>
<td>Function</td>
<td>3590</td>
<td>53.0 (19.2)</td>
<td>61.1 (20.0)</td>
<td>8.2 (7.7, 8.7)**</td>
<td>0.6</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>3571</td>
<td>34.0 (18.8)</td>
<td>42.1 (19.8)</td>
<td>8.1 (7.5, 8.6)**</td>
<td>0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HOOS Domain</th>
<th>Sample size^</th>
<th>Pre- mean (SD)</th>
<th>Post- mean (SD)</th>
<th>Mean change (95% CI change)</th>
<th>Effect size (Cohen’s D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>209</td>
<td>49.5 (18.4)</td>
<td>54.7 (20.5)</td>
<td>5.2 (3.4, 7.0)**</td>
<td>0.4</td>
</tr>
<tr>
<td>Function</td>
<td>205</td>
<td>53.7 (20.2)</td>
<td>59.2 (20.8)</td>
<td>5.5 (3.5, 7.5)**</td>
<td>0.4</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>203</td>
<td>39.7 (21.1)</td>
<td>45.2 (20.5)</td>
<td>5.6 (3.3, 7.9)**</td>
<td>0.3</td>
</tr>
</tbody>
</table>

KOOS/HOOS = Knee/Hip injury and osteoarthritis outcome score; ^Number of participants with complete datasets (i.e. all sections of KOOS completed pre/post ESCAPE-pain); SD = standard deviation; CI = confidence interval.
2 AHSN Network’s approach to coordinating the national programme for ESCAPE-pain

This section discusses how the AHSN Network has approached coordinating the national programme to support the spread of ESCAPE-pain across the 15 ASHNs.

2.1 Establishing the national programme

This section provides an overview of establishing the ESCAPE-pain national programme over its first year i.e. from its formation as a national programme to it becoming an established, performing programme of work. Tuckman’s phases of group development are used to characterise each quarter of the first year of the national programme.

2.1.1 Q1: ‘Forming the national programme’

The initial focus taken by the core team was to develop a cohesive national programme across the AHSNs. The priority was to develop mechanisms that increased peer support and allowed learning to be shared between AHSNs about scaling-up ESCAPE-pain. This was to share existing knowledge from the core team (and AHSN for the North East and North Cumbria and Innovation Agency) based on previous experiences of spreading ESCAPE-pain and knowledge that would emerge from other AHSNs during the national programme.

The aim was to ensure that AHSNs understood the national programme’s ‘mission’ (i.e. what it was and why it was important). This included developing an understanding of:

- The nature and scale of the challenge of OA
- The intervention – describing the core components of ESCAPE-pain and emphasising the importance of fidelity to these components during implementation
- The nature and scale of the challenge of the national programme to spread ESCAPE-pain. This was to clarify the national context around ESCAPE-pain (e.g. NHS England as a national commissioner) and emphasising the importance of understanding local contexts (i.e. each AHSN’s patch) to facilitate spread effectively.

This first quarter saw the development of the processes that would underpin the formal governance of the national programme (e.g. national metrics reporting, lines of reporting and accountability) and informal structures that would support the core team and leads in each AHSN to achieve spread. There was also the development and dissemination of resources by the core team to support AHSNs activities on ESCAPE-pain (e.g. activity reports)

The ESCAPE-pain national programme saw some early enthusiasts/early adopters across the AHSN network (i.e. AHSN for the North East and North Cumbria and the Innovation Agency building on their pre-national programme work, and ‘new comers’ to ESCAPE-pain, such as Yorkshire & Humber AHSN, West of England AHSN, South West AHSN). These AHSNs contacted the core team very early in the national programme and started activities to initiate local efforts on ESCAPE-pain.

2.1.2 Q2: ‘Storming about the national programme’

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In the year prior to the national programme Versus Arthritis provided programme funding to support AHSN for North East and North Cumbria and Innovation Agency to scale-up ESCAPE-pain within their local regions. There is a separate evaluation of this work.
By Q2, there was a clearer understanding across most AHSNs about the scale and nature of the challenge of spreading ESCAPE-pain. Many AHSNs had started to engage with local stakeholders, had developed a clearer understanding of local contextual factors, and different approaches to implementing ESCAPE-pain were emerging (e.g. identifying local champions and finding suitable commissioning models). However, the period moving into Q2 was accompanied by a number of tensions, which were compounded by a growing recognition amongst AHSNs that the scale-up of ESCAPE-pain required a long lead in time and expectations to achieve nationally set quarterly targets for local spread. There was a discussion within the AHSN Network about how best to use training as a strategy to support the implementation of ESCAPE-pain to optimise the use of resources to achieve local scale-up (i.e. how best to ensure trained facilitators went on to implement ESCAPE-pain post-training) and the need to use training as part of a suite of strategies to support implementation. The AHSN Network also debated what was the most appropriate model of training to support implementation and sustainability i.e. whether a train-the-trainer model would be preferable to the existing paid for model that used a pool of trained trainers. Both issues relating to ESCAPE-pain training are discussed in more detail in the section on ‘Training as a strategy for spread’.

Within this period there was ongoing work to refine the processes supporting the national programme (e.g. national metrics reporting).

2.1.3  Q3: ‘Norming the national programme’

By Q3 the tensions that arose in the first part of the year had been largely resolved and the AHSNs were working more with a common interest as a network of networks supported from the centre by the core team at HIN. There were examples of neighbouring AHSNs collaborating to support the spread of ESCAPE-pain across their regions. AHSNs had much greater clarity about their local barriers and facilitators and had identified and were pursuing the most viable approaches to spreading ESCAPE-pain within their areas. This appears to be reflected in AHSN’s local partnerships, where the work to develop and build relationships with local stakeholders was coming to fruition with an increasing number of sites adopting ESCAPE-pain.

2.1.4  Q4: ‘Performing on the national programme’

In the final quarter of the first year, for most AHSNs the long lead in time and effort had paid off with a spike in the number of sites coming online and 99% of the national annual target for people completing ESCAPE-pain being achieved. At a national level, the core team was facilitating discussions with AHSNs to explore the potential for other new/novel settings for spread (e.g. primary care, third sector, Occupational Health) to maintain momentum moving into the second year of the programme. However, for some AHSNs there appeared to be a ‘perfect storm’ of barriers that had led to significant challenges to spread ESCAPE-pain locally (e.g. local resistance to adoption, unfavourable commissioning/funding models, a lack of interest from providers).

2.2  Overview of governance arrangements for the national programme

This section provides a brief overview of the governance for the national programme. Figure 5 outlines the formal governance structures for the national programme. All AHSN national programmes are commissioning by NHS England and overseen by a Delivery Oversight Group (DOG)\[1\]. The DOG comprises senior representation from the AHSNs and meets on a quarterly basis to provide strategic oversight and assurance for the national programmes on behalf of the AHSN Network. It receives an AHSN Network National Metrics Report (updating on progress against the national targets) and a narrative report highlighting areas of progress, barriers to delivery, and requests for support from the DOG, AHSN Network.

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\[1\] N.B. From Q4 Y1 of the national programme the Delivery Oversight Group was renamed the Operations Group.
and national programme commissioners (i.e. NHS England).

The ESCAPE-pain national programme is coordinated by the core team at the HIN, which reports into the DOG and works with each AHSN to support local scale-up. Kent Surry and Sussex (KSS) AHSN hosts the team that coordinates the monitoring and reporting of the metrics for the national programme in liaison with NHS England, the DOG, core team at the HIN (as national coordinator), and ESCAPE-pain leads within each AHSN.

These formal governance structures for the national programme have been supported by local programme management processes via the HIN’s MSK team. Day-to-day management of the national programme has been embedded within:

- **MSK team meetings** – A fortnightly 90min meeting with ESCAPE-pain as a standing item on the agenda. Attended by the Programme, Clinical, Deputy Clinical Directors for the MSK theme AHSN National Programme Manager for ESCAPE-pain, all project managers and project support.
- **MSK team stand-up meetings** – A 30-45min weekly meeting used to record progress on key metrics (e.g. number of sites, trained facilitators) and to highlight and discuss key issues arising relating to ESCAPE-pain attended by all MSK team staff.
- **MSK Performance Boards** – A quarterly meeting attended by all MSK team staff and the HIN Executive Directors (i.e. CEO, Medical Directors, and Commercial Director) that reviews performance and provides strategic oversight to the team’s work.
- **Regular one-to-ones between the HIN’s Acting CEO and the ESCAPE-pain national programme manager**

It is unclear to what extent the DOG, as an oversight/assurance body, has influenced (positively or negatively) the national programme. The quarterly reporting template for the DOG requests national programmes to provide information on any ‘support required (from the DOG, AHSN Network, Commissioners, etc)’; however, there does not seem to be a formal reporting process from the DOG to national programmes.

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**Figure 5** Governance model for ESCAPE-pain national programme
2.3 Strategies for supporting the coordination of national programme

As highlighted above, the core team’s initial focus was to develop a cohesive national programme for ESCAPE-pain across the AHSNs. Apart from AHSN for North East and North Cumbria and Innovation Agency, the other AHSNs had limited understanding of ESCAPE-pain. Therefore, a key priority for the core team was to support AHSN colleagues to develop a clearer understand of:

- Purpose of the national programme for ESCAPE-pain
- Wider context of OA and its management (e.g. scale and nature of the challenge, evidence on current management, national clinical guidelines for OA)
- ESCAPE-pain as an intervention (e.g. its core components and evidence underpinning its clinical and cost effectiveness)
- Knowledge about approaches to scaling-up ESCAPE-pain by the core team at HIN (and more recently NENC and Innovation Agency), such as key barriers/facilitators, models of delivery, resources and tools

Whilst the HIN, AHSN for North East and North Cumbria and Innovation Agency had knowledge to share with other AHSNs on existing experiences of spreading ESCAPE-pain; the core team also wanted to capture and share the emerging knowledge from other AHSNs through the national programme (e.g. local contextual issues, strategies for local spread, new models of delivery). This resulted in a range of approaches being used to increase peer support and allow learning to be shared between AHSNs about scaling-up ESCAPE-pain. These approaches comprised:

- Webinars
- Face-to-face learning network meetings
- Online collaborative platform (FutureNHS by Kahootz) – for storing and sharing resources and facilitating online discussion
- Developing and sharing resources (from the core team and other AHSNs)
- Inductions – face-to-face or via phone with AHSN colleagues leading on ESCAPE-pain within their region
- End of Y1 review and planning sessions
- Ad hoc advice and support (via phone, email or face-to-face) – throughout the national programme there has been on-going and regular ad hoc advice and support provided by the HIN to AHSN colleagues working on ESCAPE-pain.

2.3.1 Webinars and learning network meetings: Knowledge exchange forums

A key approach used by the core team to support the national programme was to convene virtual and face-to-face meetings with AHSN colleagues working on the spread of ESCAPE-pain via a series of webinars and learning network meetings. In the two years of the national programme, there were 9 webinars, 6 face-to-face learning network meetings, and a national ESCAPE-pain conference (Table 4). Ten of the 16 knowledge exchange forums were during the first year of the national programme.

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*North East North Coast AHSN and Innovation Agency have been part of a pilot receiving programme funding from Versus Arthritis to scale-up ESCAPE-pain in their local regions in the year leading up to the start of the national programme.*
2.3.2 AHSN webinars

The purpose of the webinars was to provide a forum for regular discussion (approx. every two months) amongst those working on ESCAPE-pain across the AHSN Network, in order to:

- Support them to make sense of the national programme, ESCAPE-pain, and its implementation
- Learn from each other about meeting the challenge of spreading ESCAPE-pain (i.e. shared barriers/facilitators, and strategies)
- Allow the core team to provide updates relevant to all AHSNs relating to the national programme (e.g. new resources, governance issues)

Webinars allowed the group to come together regularly by removing the difficulty of convening a face-to-face meeting that required people travelling from across England (and use face-to-face meeting more judiciously in quarterly learning network meetings). The webinars were hosted by the core team (using Skype for business) and attendance was high (e.g. typically between 16-18 non-HIN attendees per webinar). A key aim was that a different AHSN present at each webinar about their experiences on spreading ESCAPE-pain.

The first 3 webinars were predominately a process of sense-making by AHSNs about the national programme, ESCAPE-pain (as an intervention) and its implementation (Table 5). Much of the formal planned content and points of the discussion in these first webinars focused on understanding key facts about ESCAPE-pain (e.g. core components, underpinning evidence-based), its implementation (what works, where and why?), and processes linked with the national programme (e.g. additional funding, collecting and reporting on national metrics). Into the second half of the first year and second year, the webinars adopted a standard format of 1-2 AHSNs being invited to present on their experiences and lessons learnt of implementing ESCAPE-pain and the core team providing updates relevant to the national programme.
### Table 5 AHSN webinars for ESCAPE-pain national programme

<table>
<thead>
<tr>
<th>Date</th>
<th>Formal/planned content</th>
<th>Issues raised / points of discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Webinar 1 – April (Y1)</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Background to the OA ‘problem’ and ESCAPE-pain as a viable solution</td>
<td>• Clarifying additional funding available for national programme and how it was used was a local decision for each ANSH.</td>
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<tr>
<td></td>
<td>• ESCAPE-pain (as intervention) and underpinning evidence-base (clinical and cost-effectiveness)</td>
<td>• Questions about ESCAPE-pain format, the evidence and its limitations (e.g. impact on pathway efficiencies, waiting times for ortho/physio), how it fits into wider context (e.g. relationship to aging/frailty).</td>
</tr>
<tr>
<td></td>
<td>• Story of spread (to date): scale of spread, models of delivery</td>
<td>• How can learning be shared and requesting a space to share resources and information.</td>
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<tr>
<td></td>
<td>• The role of the HIN as a central hub and each AHSNs regionally</td>
<td>• Clarifying how Sport England funded programme integrates with AHSN national programme</td>
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<tr>
<td><strong>Webinar 2 – June (Y1)</strong>                                                                 1</td>
<td></td>
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<tr>
<td></td>
<td>• Economic data for ESCAPE-pain</td>
<td>ESCAPE-pain data – whether trial data considered up-to-date, role of national programme to feed in additional ‘real world’ data</td>
</tr>
<tr>
<td></td>
<td>• Training model for ESCAPE-pain^</td>
<td>Community leisure and fitness instructors as viable model of delivery versus NHS physiotherapy</td>
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<td></td>
<td>• Presentation by IA and NENC AHSNs</td>
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<tr>
<td><strong>Webinar 3 – July (Y1)</strong>                                                                 2</td>
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<tr>
<td></td>
<td>• National metrics and reporting processes</td>
<td>Detailed discussion clarifying the process around national metrics e.g. what data will be collected and how the process will work?</td>
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<tr>
<td><strong>Webinar 4 – Sept (Y1)</strong>                                                                 3</td>
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<td></td>
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<tr>
<td></td>
<td>• Presentation by West of England AHSN</td>
<td>Questions on the specifics of West of England model in Cheltenham e.g. participant retention</td>
</tr>
<tr>
<td></td>
<td>• ESCAPE-pain app and web app</td>
<td>• Clarification on why ESCAPE-pain app cannot be used as standalone</td>
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<tr>
<td><strong>Webinar 5 – Nov (Y2)</strong>                                                                 4</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Presentation by Wessex and YH AHSNs</td>
<td>Questions on specific aspects of AHSN presentation e.g. details on peer support group for facilitators in Wessex</td>
</tr>
<tr>
<td><strong>Webinar 6 – June (Y2)</strong>                                                                 5</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Update by HIN on national comms and marketing activity</td>
<td>Questions about the costs associated with the different delivery models outlined</td>
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<td></td>
<td>• Presentation by NENC and Innovation Agency</td>
<td></td>
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<tr>
<td><strong>Webinar 7 – Oct (Y2)</strong>                                                                 6</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Presentation by Health Innovation Manchester and East Midlands AHSN</td>
<td>Discussion about the experiences (and challenges) of engaging commissioners. Reflection of ‘striking lucky’ when finding commissioned willing to engage</td>
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<tr>
<td></td>
<td>• Update by HIN on national comms and marketing activity</td>
<td>Discussion about ways to increase referrals – colleagues were sign-posted to resources on FutureNHS</td>
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<tr>
<td><em><em>Webinar 8</em> – Feb (Y2)</em>*                                                                7</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Presentation on national evaluation findings</td>
<td>N/A</td>
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</tbody>
</table>

^See section ‘Training as a strategy for spread’ below for details; *Webinar 8 is planned for Feb 2020.
2.3.3 Learning network meetings (face-to-face)

The webinars were supported by a series of face-to-face meetings (typically 4 hours), called learning network meetings. Six learning network meetings were held during the 2-year national programme (3 each year) (Table 4). The articulation of these meetings as ‘learning networks’ highlights they were designed with the specific purpose to provide:

- More time to discuss issues in more depth (compared to a 60min webinar)
- Those working on ESCAPE-pain across each AHSN to meet colleagues, have (in)formal discussions about their work on ESCAPE-pain, and strengthen professional relationships
- Different (non-AHSN) perspectives on scaling up ESCAPE-pain by inviting external speakers (e.g. strategic stakeholders in NHS RightCare, Versus Arthritis, Public Health England and service managers/senior clinicians from providers)
- An opportunity for AHSNs to share experiences (successes and challenges) with each other
- Updates on changes to processes, additional support and new resources from the core team and others (e.g. Versus Arthritis)
- A forum to explore different/novel approaches to spreading ESCAPE-pain (via all of the ways listed in the points above and by holding discussions specifically focused on ‘new’ routes to market/models of delivery (e.g. primary care, third sector)

The emphasis of the meeting was on supporting knowledge exchange between AHSNs about the spread of ESCAPE-pain is borne out in the meeting agendas. Of the 4 hours planned for each learning network meetings, between 60-90min was consistently allocated to sessions specifically focused on AHSNs sharing local experiences of implementing ESCAPE-pain and 60-90min was allocated to informal networking opportunities. In addition, 15-40min of each meeting was allocated to discussions specifically focused on models of delivering ESCAPE-pain (e.g. promoting band 4 therapy assistants as facilitators, working with public health departments, independent practitioners, primary care and GPs, charities and sheltered housing). The detail of the knowledge and learning exchanged in these meetings is not discussed here but informs subsequent sections on the contextual factors influencing implementation and the approaches (or strategies) used by AHSNs to support the scale-up of ESCAPE-pain.

2.3.4 Materials and resources to support spread of ESCAPE-pain

At the outset of the national programme, AHSN colleagues recognised that the core team at the HIN had a wealth of knowledge and materials/resources that could be used to support them in implementing (i.e. there was no need to start with a blank piece of paper). AHSN colleagues were also conscious that they did not necessarily know what information they needed to make the case locally to level support to implement ESCAPE-pain:

"We don't know what we don't know.“ An AHSN ESCAPE-pain lead, ESCAPE-pain Webinar, April 2018

Discussions about knowledge and resources about ESCAPE-pain led AHSN colleagues to explore the best mechanism for sharing materials/resources and the idea of an online collaborative space was raised. This was considered preferable to emailing out resources and the associated issues of version control and storing and managing these resources effectively. This led the national programme to use FutureNHS, an online collaborative platform (supported by Kahootz), to store, manage and share resources between AHSN colleagues.
The home page of the platform provides an overview of ESCAPE-pain (including the format of the programme and location of sites) with all of resources curated under key categories:

- ESCAPE-pain Resources for AHSNs – key information for AHSNs supporting the spread of the ESCAPE-pain programme
- ESCAPE-pain Resources for Commissioners - resources specifically targeting commissioners, which focus on the financial aspect of the programme
- ESCAPE-pain Resources for Providers – containing implementation and marketing resources for providers interested in setting up or currently running the ESCAPE-pain programme
- Participant Engagement - information on participant perspectives and experiences of ESCAPE-pain
- Marketing Resources - contains template leaflets, posters, and other marketing materials for ESCAPE-pain
- Filming / Case study Resources – a range of films and case studies and guidance/template to support the development of films and case studies.
- Endorsements – a list of endorsements by key stakeholder organisations, partners and collaborators

Appendix 1 provides a full list of the materials and resources developed to support the implementation of ESCAPE-pain. The majority of resources were developed by the core team and have been subsequently refined following feedback from AHSN colleagues (e.g. cost saving calculator). Some resources were developed by the core team at the request of AHSN colleagues to address a specific unmet need (e.g. local activity reports summarising ESCAPE-pain activity within each AHSN region including active/inactive sites, active and past enquiries) and in a small number of cases resources were developed by other AHSNs or partner organisations (e.g. local case studies).

2.3.5 End of year-1 review and planning sessions

Towards the end of the first year of the national programme the core team offered each AHSN a review and planning session (via the phone or face-to-face), if it was considered helpful. The majority of AHSNs opted to take up the offer. Typically, the sessions were attended by key senior members of the national ESCAPE-pain team (e.g. national programme manager, programme and clinical directors) and 1-3 people
working on ESCAPE-pain within the local AHSN (e.g. project and programme managers).

The sessions served a number of purposes. Objectively, it offered an opportunity to:

- Map different delivery models
- Identify gaps in provision
- Identify key challenges and how to mitigate them
- Understand how to prioritise effort i.e. which approaches were likely to lead to more sites and participants
- Explore the potential for working in partnership with neighbouring AHSNs
- Determine the scope for securing support from stakeholders (e.g. PHE, Versus Arthritis)

Whilst not all these areas were discussed with each AHSNs (i.e. each session followed its own course), it did provide AHSNs with a sounding board for planning for the second year of the national programme. It also allowed AHSNs to discuss and develop potential approaches and the core team to feed in ideas and insights from its own and other AHSNs’ plans for the coming year.

However, it provided more subjective benefits too. By looking back over the previous year, it afforded an opportunity to acknowledge the efforts made by each AHSN and celebrate progress made in implementing ESCAPE-pain locally. It allowed the core team to offer reassurance to AHSNs about the difficulty of the challenge in spreading ESCAPE-pain and normalise the non-linear, resource intensive, long-term nature of spread.

The core team also used the session as an opportunity to explore what support AHSNs might need over the second year of the national programme. This allowed AHSNs to discuss specific issues of concern that had arisen during the first year of the national programme e.g. more joined-up communication between the core team, local sites and local AHSNs, and agreeing local data collection process for national metric reporting. What also came out strongly from these meeting was feedback from AHSNs on the importance of the core team’s role in supporting collaborative work between the AHSN Network (via the webinars and learning networks), providing ad hoc advice and support, and developing and sharing the wealth of resources to support AHSNs’ efforts to implement ESCAPE-pain locally.

2.4 Monitoring scale-up

Work to monitor the scale-up of ESCAPE-pain predates the AHSN Network national programme and has continued to evolve alongside and as part of the national programme. Being able to demonstrate the effectiveness of ESCAPE-pain in real world settings via ongoing data collection from sites has been perceived as a critically important mechanism influencing senior decision-makers (such as NHS England) to support scale-up. Namely, through the data the AHSN Network has been able to demonstrate ESCAPE-pain’s continued clinical effectiveness in ‘real world’ settings and the scale of impact (e.g. through the number of sites delivering and participants per site completing ESCAPE-pain).

However, the monitoring of scale-up has resource implications for the core team, other AHSNs and providers, and there has been a long history of discussions about how to reduce the burden of data collection, analysis, and reporting. This has been based partly on ongoing feedback from sites that collecting and reporting on data to the core team adds burden to existing workloads. This is because most providers do not systematically collect outcome data for service performance monitoring. Thereby, they do not have the necessary data collection systems or allocate sufficient time to support it. Also, because data collection is not a core activity within their practice, staff do not have the necessary capabilities to do it. In addition, Versus Arthritis\(^\text{v}\) (as a funding partner) raised data monitoring as an issue that needed to be

\(^{v}\) In addition to the additional funding from the AHSN national programme, Versus Arthritis has been proving
thought through and resolved, to ensure these processes were fit for purpose as the national programme expanded (N.B. it was formally raised by Versus Arthritis in Sept-Oct 2018 as an area the core team needed to progress).

2.4.1 **Adapting patient reported outcome measures (PROMs)**

Stemming from a desire to find a way to reduce the burden around data collection for participants and providers the core team has explored different solutions. One of these was whether the newly developed MSK HQ (a 13 item PROM) would be suitable as a replacement to the HOOS/KOOS (a 42 item PROM). The core team was cautious about replacing the KOOS/HOOS with the MSK HQ without determining whether it was sufficiently sensitive to detect changes for ESCAPE-pain participants (i.e. to the same extent as the HOOS/KOOS).

The core team worked with 6 sites (across four providers: Lewisham and Greenwich, King’s College Hospital, St George’s Hospital, and Croydon) to collect data for the MSK HQ alongside the KOOS/HOOS. The HIN provided additional support to these sites around data collection. A sample of 300 participants was analysed; however, a significant change in the MSK HQ was not detected compared to the KOOS. In addition, as a new PROM the MSK HQ does not have data to show the minimal clinically meaningful change. Therefore, the MSK HQ was deemed unsuitable (at that time) to replace the KOOS/HOOS for monitoring.

As an alternative strategy, the core team chose to continue to use the KOOS/HOOS but to reduce the number of sub-domains that sites were required to collect (from 6 to 3 sub-domains). The core team recognised that not all sub-domains of the KOOS/HOOS were relevant to ESCAPE-pain participants (e.g. sport and recreation). The remaining sub-domains now focus on pain, QoL, and function, with two additional questions on stiffness. As a result of these changes the number of questions has been reduced from 42 to 32 items. The transition to the modified outcomes measures has required changes to the data collection templates, guidance and the training course, and the core team to provide tailored communications and support to existing ESCAPE-pain sites to understand and comply with the changes.

2.4.2 **Automating data collection processes**

Prior to the national programme there were discussions about the feasibility of automating processes around data collection and analysis. A piece of scoping work was undertaken by the core team to identify and explore possible solutions, which ranged from the simple to the more complex. This was followed by a market engagement process to explore in more depth with companies the possible solutions. However, this was put on hold because:

- It highlighted technical issues around integrating with NHS IT systems
- Questions around the cost of licensing users/sites and how this would be funded were raised
- Awareness of GDPR was growing, but it was unclear what practical implications it might have on data collection processes
- There was no clear funding available to pay for a data collection solution
- The pilot of MSK HQ was on-going and its possibility as a (shorter, quicker) replacement to the KOOS/HOOS had not been ruled out (as discussed above)

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vii However, the HIN has shared its data with the research team working on the MSK HQ (at Keele University), which is looking to build a dataset to understand meaningful changes.

viii The questions from these remaining domains allow an aggregated score to be created for the WOMAC (a licenced PROM from the original trial) for the purposes of comparison.
Subsequently, the core team looked to how GLA:D® (a model for OA management developed in Denmark) was managing data collection and discovered that it had taken the route of a patient-led registry i.e. the onus of completing outcomes measures was placed on patients/participants via an online form. There was recognition that this approach may have some negative implications for the data collection in terms of:

- Less data being collected
- A reduction in the quality of data
- Increased bias i.e. in who returned the data (e.g. those digitally excluded)
- Cost of developing, implementing and running a portal

However, these might be balanced against the benefits of:

- Reduced burden on sites
- Make data collection processes more sustainable (allowing for the collection of much large volumes of data)
- Increased geographic distribution
- The model was working elsewhere i.e. data published on GLA:D showed that data collected via this method was of sufficient quality

In mid-2018 the HIN Executive identified data collection as an on-going unresolved issue and suggested a roundtable with the Executive Directors, ESCAPE-pain team and Technology team. An options paper was discussed at the roundtable (in August 2018), which explored the suitability of three different participant-led models for data collection using:

- Survey monkey - this was deemed as having insufficient/unsuitable functionality to meet the needs for pre- and post-follow up data
- Companies of the Digital Health Accelerator - none of the companies had solutions that offered the right functionality
- A bespoke web-based portal - this was considered the best option

Following the development of the technical requirements, securing internal and external funding, and a procurement exercise, the core team is currently working with a company to develop a participant-led web portal. It will be piloted and rolled out in 2020.

2.4.3 Data quality and quality assurance

In Q3 2018, the core team made the decision to improve data reporting back to sites via summarised benchmarking reports. Each site received a report that provided their cumulative data (based on quarterly returns) against the national mean for each domain of the KOOS. This came about through a culmination of factors, namely that:

- Some sites made requests for a form of summary report evaluating ESCAPE-pain’s performance
- It was a way to making the data more useful to sites to act as an incentive i.e. a demonstrable return on investment/benefit for sites around data collection
- It could provide a quality assurance mechanism for the core team to identify sites that were not achieving outcomes that might expected and then lead to a discussion about what support might be needed to improve outcomes

An unintended outcome of the report process was that it flagged quality issues within the national dataset e.g. missing data, incorrectly entered data (reversed scales). This triggered a process of cleansing the existing dataset, which both increased quality of the existing dataset and led to the introduction of additional processes to safeguard quality including:

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GLA:D® Good Life with osteoArthritis in Denmark

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• Clearer guidance on data entry and tighter checks by the HIN’s Informatics team on data
• For sites where there seems to be data input errors (e.g. reserved scales) this leads to discussions to resolve the issues
• An increased emphasis within the ESCAPE-pain facilitator’s training on the importance of data quality
• ‘Tightening up’ of the data collection template used by sites to collect data (i.e. lock cells and giving more explanations within the template)

As described above, data from sites has been used informally as a proxy for quality. However, in late 2018 Versus Arthritis challenged the core team to articulate formally how the quality of ESCAPE-pain was to be maintained during scale-up. This prompted to core team to set about developing a quality assurance (QA) framework that balanced rigor (i.e. was a valid means of assessing and improving quality), proportionality (i.e. possible within the resources available to the core team and providers) and sustainability (i.e. could be scaled as the number of sites increased but within the level of resourcing available to the core team going forward). The key elements to the QA framework included:

• The requirement for facilitators to attend ESCAPE-pain training course
• The accreditation of the ESCAPE-pain training course by external agencies (i.e. RCPH, CIMSPA and REPS)
• A commitment by providers to abide by the ‘core 4’ elements of ESCAPE-pain i.e. i) two sessions per week over 5-6 weeks (10-12 sessions); ii) each session includes an exercise and education component; iii) participants start and end the programme together as a cohort, rather than a rolling programme iv) outcome data is collected and shared with core team³
• Providers be requested to complete a Quality Assurance Checklist during Q4 (Appendix 4).
• An annual data report for each site outlining the mean clinical outcomes, number of cohorts, attendance/attrition numbers.
• Assurance Review Panel comprising representation from the core team and stakeholders (e.g. Versus Arthritis), which reviewed annual data reports, the Assurance Checklist return and track record of providing complete data

The core team determined that where concerns existed regarding quality for any given site or organisation, the follow-up action would comprise a combination of conversations, requests for further data, and (potentially) site visits. For example, in the case of missing or poor data (clinical outcome data or attendance data) sites are asked in the first instance to provide other means of rating the quality of their service e.g. patient satisfaction feedback. It was decided that the extent of the follow-up actions would depend on the level of concern raised by the Assurance Review Panel. Where there was serious concern regarding quality or adherence to the ‘Core Four’ and follow-up action did not lead to an improvement in quality, the site may be asked to stop using the ESCAPE-pain brand for the programme they deliver. It was envisioned that once the participant-led web portal was operational sites would only be required to provide attendance data.

2.4.4 Monitoring and the national programme

The national programme has implications for how the core team collects and reports data to monitor the spread of ESCAPE-pain. Prior to the national programme the core team collected data on number of sites, location of sites, type of provider and site, number of cohorts and participants, and pre/post clinical outcomes for participants. The core team considers the on-going monitoring of ESCAPE-pain as a critical contributing factor underpinning the scale-up of the programme i.e. by providing evidence to key decision-makers of ESCAPE-pain effectiveness in real world settings to secure support (e.g. funding and

³ All sites are requested to submit clinical outcome and attendance data to the HIN on a quarterly basis. The importance of this has been emphasised with providers and they received regular reminders about submitting data.
endorsement). Therefore, the core team has always invested significant effort into monitoring and evaluation activities and infrastructure.

For the national programme, commissioners were primarily interested in monitoring the number of participants completing ESCAPE-pain as means to determine return on investment i.e. the cost saving per participants is known based on the economic evaluation of the clinical trial). The commissioners of the national programme were also interesting in capturing the progression on spread and requested AHSNs to report on the stage of each site in relation ESCAPE-pain. These stages were shared across all AHSN Network national programmes:

- Interest - if site is engaged
- Decision - if a decision has been made to implement (if no, give reason e.g. resources, cost)
- Implementation - if in training and set-up phase
- Adoption - if site has reached delivery phase

In addition, the national metric reporting for all 8 of the AHSN national programmes is coordinated by KSS AHSN informatics team on behalf of the AHSN Network and the national commissioners in NHS England. As the lead AHSN for ESCAPE-pain, the HIN was responsible for coordinating the collection and return of metrics for national reporting with each AHSNs and the national metrics team in KSS for the purposes of the national programme (i.e. the number of people complete ESCAPE-pain each quarter). However, the core team also continued to coordinate the collection, return and analysis of a wider battery of monitoring data (Figure 7). This was further complicated by data collection and reporting processes required for monitoring and evaluation of the Sport England project (which is discussed separately in the section on the Sport England project). Figure 7 provides an overview of the different monitoring activities across the Sport England project, national programme and HIN-specific work on ESCAPE-pain.

![Figure 7 Monitoring activities across different ESCAPE-pain projects](image)
Consequently, the core team had to coordinate different data collection and reporting processes, whilst simultaneously integrating these processes into a coherent overarching reporting system to monitor performance across the entire programme of work on ESCAPE-pain. Monitoring was developed and refined over the course of the first year of the national programme following each period of reporting to address problems with processes and to respond to the evolution of the national programme. Initially, the national metrics reporting was largely coordinated by the core team liaising with local sites and the national metrics team in KSS AHSN. The rationale for this approach was to ensure rigor and independence on the reporting process.

As the programme progressed, AHSNs developed greater ownership of ESCAPE-pain work locally, had greater knowledge of local sites and ESCAPE-pain related activity, and direct relationships with sites. Also, the national metrics reporting was perceived as a score card on their performance on the national programme (i.e. whether AHSNs were hit ‘targets’ for ESCAPE-pain within their regions). By Q2, AHSNs started to request greater involvement in the national metrics reporting process. In part this was to ensure that data were accurately reported (i.e. cross-referencing local information on the number of sites and participants). It was also because they wanted to be closely involved in managing the relationship with their local stakeholders.

At the end of the first year and into the second year of the programme, AHSNs were more closely involved in the national reporting of metrics. Colleagues across the AHSNs and local sites understand the process (e.g. templates, timelines and reporting lines), which has improved the efficiency and accuracy of monitoring. The national programme also appears to have led to an increased emphasis on data collection (due to the requirement for performance monitoring for NHS England) and the core team receives data from most sites. During the national programme, the proportion of sites returning data each quarter were:

- Year 1 - Q1=77%, Q2=83%, Q3=94% and Q4=92%
- Year 2\(^{xii}\) - Q1=89%, Q2=96%, Q3=92%

2.5 Training as a strategy for spread

The importance of training as a mechanism to equip the workforce with the skills and sense of commitment required to deliver an intervention is widely reported\(^{24-27}\). This section outlines how training has been used as a strategy to support the spread of ESCAPE-pain.

The core team has developed a 1-day facilitators’ training course for physiotherapists and fitness instructors about how to implement and deliver ESCAPE-pain. In 2017, the core team made the course a mandatory requirement for anyone delivering ESCAPE-pain as a way to ensure fidelity to the ESCAPE-pain programme and maintain quality. Participants learn about the evidence-based underpinning ESCAPE-pain, develop a detailed understanding of the programme’s format, and gain the skills and knowledge to support the implementation and delivery of the programme. This is a paid for training model (i.e. a per person fee of £200 for London courses and £300 elsewhere in England due to the cost of delivering outside of London\(^{xii}\)), which is coordinated by the core team and delivered by a pool of trained trainers.

To date, 1123 people (facilitators) have been trained to deliver ESCAPE-pain: 693 clinical staff (mainly physiotherapists) and 430 fitness instructors. There has been national coverage with trained facilitators in all UK nations (England, Scotland, Wales and Northern Ireland) and all 9 regions of England. Satisfaction with the course is high, 99% of participants (n=662) rated the course as good (19%) or excellent (80%). Respondents valued the inter-professional aspect of the course. Facilitators (n=665) agreed (13%) or

\(^{xii}\) Data for the whole of Y2 of the national programme were not available at the time of producing the report

\(^{xii}\) Delivering outside of London incurs high costs e.g. due to travel and accommodation for trainers, and venue hire (which is free in London).
strongly agreed (87%) they understood what ESCAPE-pain was and how to implement it, 29% agreed and 71% strongly agreed they felt able to deliver ESCAPE-pain.

The training course has been used as a key strategy to support the national scale-up of ESCAPE-pain. It has packaged knowledge about ESCAPE-pain (as an evidence-based intervention) and how to implement it into practice. The ESCAPE-pain model has also demonstrated inter-professional training between physiotherapists and fitness instructors can be successfully delivered. However, different knowledge-bases, learning needs and practice settings have needed to be considered. Initially, there were challenges around determining prerequisite qualifications and experience for fitness instructors i.e. a recognition that level 2 training for fitness instructors was insufficient and level 3 was a minimum requirement. It also led the core team to develop an application process and framework for determining eligibility of exercise professionals and clinicians; whereby, applicants needed to complete a short application and provide evidence of prerequisite qualifications and experience.

The course has been accredited by 3 national training bodies (i.e. REPS, CIMSPA, RSPH). The purpose of accreditation was predominately to quality assure the training course by having a rigorous external assessment. As there is no ‘market leader’ for training accreditation, the core team sought accreditation from a range of organisations that were perceived as important for demonstrating the course’s quality to a broad range of stakeholders (e.g. fitness professionals and clinicians). Accreditation has meant that the course provides official continual professional development (CPD) points. This is important to exercise professionals who are required to obtain a certain number of CPD points per year and means accreditation offers an added incentive for exercise professionals to attend and value the training. This is less important for clinicians (e.g. physiotherapists), who are only required to undertake CPD activities (i.e. there is no requirement to accrue CPD points). Formal accreditation processes combined with on-going formal evaluation by course participants, and informal feedback by trainers has resulted in the course being refined and developed over time to ensure that the structure, format, and content continue to be fit for purpose.

The development of the ESCAPE-pain national programme was part of the drive to expand the network of course trainers. The national targets for each AHSN to deliver a certain number of sites led to an increase in demand for training, because training was a mandatory requirement for delivering ESCAPE-pain; if AHSNs were to bring sites online they had to get people trained. During the early stages of the national programme, AHSN colleagues raised access to training (both in terms of frequency and location) as a potential barrier to spread (e.g. it was issue discussed in both webinars in Q1 of the national programme that AHSNs wanted training course within their regions). Some AHSN colleagues also raised concerns about the training model as a potential barrier to spread and suggested a train-the-trainer model as an alternative. As part of the national programme, most AHSNs were subsidising training to incentivise providers to adopt ESCAPE-pain.

Conversely, the core team was concerned that training was not being used optimally to support spread and there was a risk that training was being used as a mechanism for spread by itself rather than as a package of strategies to support spread. There was a perception that the rush to train facilitators may have been driven by the need for AHSNs to demonstrate ESCAPE-pain related activities. The core team expressed concerns that a lot of training activity might be an ineffective use of resource if there was no guarantee that those trained would go on to deliver ESCAPE-pain. Also, if facilitators did not implement ESCAPE-pain soon after the training course any ensuing delay may result in poorer implementation, delivery and outcomes. The literature warns of the potential risk of failed implementation due to financial incentives attracting organisations that are not truly committed the intervention.  

Consequently, there were a series of frank discussions between the AHSN Network leaders about the training model for ESCAPE-pain. The outcome was the maintain the original training model, and the
rationale for this decision was communicated to AHSN in a webinar at the beginning of Q2. The core team’s concerns about moving to ‘train-the-trainer’ centred on the impact on the quality of training and subsequent effectiveness of the programme:

- Inadequacy of the model for a complex intervention underpinned by behaviour change techniques
- Trainers having insufficient skills and knowledge to deliver the training well
- Dissipation and inconsistency about the core elements of the programme
- Inability to monitor trained facilitators
- Inadequate quality assurance of the training

Initial concerns about training capacity did not come to fruition because as the national programme developed different AHSNs’ work on ESCAPE-pain came online in phases. For example, the Innovation Agency and NENC had been pilot areas for ESCAPE-pain during 2017-18 and had already undertaken a series of training courses prior to the national programme, other areas were quick to initiate work on ESCAPE-pain within the national programme (e.g. YH AHSN), whereas other areas were only ready to request training for local providers in mid-Q3. However, the core team did acknowledge that training demand was a risk to scale-up if this was not managed well and it worked with the other AHSNs to map and plan training demand. The core team also used discussions about managing training demand to highlight the importance of using training as part of a wider approach to supporting local implementation. This led to the development of a flow chart to support AHSNs to consider what was the best point in the implementation process to train local facilitators.

The national programme has required the core team to develop and sustain a pool of trainers able to meet the demand to deliver courses across England at a rate of 2-3 per month. The approach taken by the core team has been to have waves of recruitment to expand capacity, whilst ensuring new trainers receive adequate support to develop the necessary skills and knowledge to deliver high quality training. This required the core team to develop a clear profile of who would be suitable trainers, in terms of:

- Professional skills and expertise (including a balance of clinical and non-clinical professionals)
- Experience of delivering ESCAPE-pain (i.e. a trained facilitator)
- Geographical location (i.e. national spread of trainers)
- Availability to deliver training (i.e. weekdays during standard working hours)

The core team has used several strategies to bring more trainers onboard. It has drawn on staff within the MSK team who have a detailed working knowledge of the ESCAPE-pain programme. It has engaged with clinical champions (i.e. senior physiotherapists) working across a number of AHSNs to support to spread of ESCAPE-pain (e.g. NENC, SW AHSN, and Innovation Agency). In addition, the core team put a call out to ESCAPE-pain facilitators across England to enter a competitive selection process (via application and interview) to become trainers. To date, 14 course trainers have been trained to deliver the ESCAPE-pain course and 9 new course trainers are in training.

2.5.1 Training and sustainability

Training has a multifaceted connection with the sustainability of ESCAPE-pain in providers and with the national programme.

Training provides an income stream to the core team at the HIN, to cover the cost of delivery. Therefore, it has the potential to generate income to sustain the core functions of the core team to (1) provide support to existing sites to encourage sustainability; (2) continue to undertake activities to support the further spread of ESCAPE-pain. The current financial model for ESCAPE-pain training is geared for cost recovery (i.e. staff time in coordinating and delivering the training, staff travel and subsidence, venue hire, course materials). Whilst the training course ‘pays for itself’ it does not (currently) generate surplus funding to
support the wider functions/activities of the central ESCAPE-pain team.

Training aims to improve understanding of ESCAPE-pain’s value; thereby, encouraging providers to continue to deliver it within their services. However, it is not clear what impact the ongoing requirement to pay for staff to attend training will have on the sustainability of ESCAPE-pain within providers (i.e. the trade-off between paying for training and the benefits of delivering ESCAPE-pain). The viability of a paid for training model for ESCAPE-pain has not been fully tested, because during the national programme AHSNs have largely used local ESCAPE-pain programme funding to offer free training to providers to incentivise uptake of ESCAPE-pain. A key concern is that in the absence of an imperative (financial incentive or policy/commissioning mandate) to deliver ESCAPE-pain and given the current funding climate within healthcare the willingness/ability of providers (or commissioners) to pay for training is likely to be low.

2.6 Sport England-funded project

Before the inception of the national programme, the HIN had already been commissioned by Sport England to test whether ESCAPE-pain was a successful intervention for increasing physical activity in older adults (i.e. ≥55 years old) with chronic hip and/or knee pain within community settings. The Sport England project aims to move 2000 inactive older adults into activity within a two-year time period. To deliver the project, the HIN has partnered with 17 providers delivering ESCAPE-pain in over 50 sites across England. Delivery partners were incentivised by receiving a payment for each eligible participation that completes an ESCAPE-pain programme within a site. A separate evaluation is being undertaken about the Sport England project. However, there are points of interaction between the Sport England project and the national programme that have supported and complicated both strands of work.

The Sport England project started approximately 6 months prior to the national programme with ESCAPE-pain sites coming online leading up to and during the national programme. For AHSNs, this meant participant numbers from ‘Sport England sites’ in their region would count towards the national metrics. Sport England sites also provided AHSNs with local contacts within the community leisure sector who were engaged and provided an opportunity upon which to build their work on ESCAPE-pain.

However, the Sport England project also presented challenges in managing relationship and processes between local ‘Sport England sites’ and AHSNs. For Sport England sites, the partnership was with the HIN (as the organisation leading the project) and initially some sites did not see a need to engage with their local AHSN. Also, as the grant holder the HIN was responsible to the funder (Sport England) for managing the governance, payment, and reporting processes associated with the project (rather than being able to devolve this to the local AHSNs). This was further complicated by Sport England sites having different eligibility criteria for participants (i.e. inactive and ≥55 years old compared to anyone ≥45 years old chronic hip/knee pain) and what constituted ‘completing’ the programme (i.e. 50% of sessions compared with 75% for the national programme).

The initial challenges presented by the intersection between national programme and Sport England project have largely resolved. Focused engagement and communication between the core team at the HIN, local AHSNs and sites has demonstrated the benefits of working collaboratively to deliver ESCAPE-pain. Similarly, working with colleagues in AHSNs and sites the core team developed processes to ensure activity within Sport England sites contributes to national metrics reporting. Some AHSNs report they have found the partnership with Sport England sites mutually beneficial and has helped to establish better links with provider partners and referral sources.

On balance, the Sport England project appears to have been a factor contributing to the successful spread of ESCAPE-pain to date (although the evaluation of the Sport England project will provide a full analysis of this).
3 AHSNs’ approaches to implementing and scaling-up ESCAPE-pain

This section explores the key factors (or determinants) affecting the implementation of ESCAPE-pain and the strategies used by AHSNs to facilitate the implementation of ESCAPE-pain regionally.

3.1 Understanding determinants for the implementation and scale-up of ESCAPE-pain

The Consolidated Framework for Implementation Research (CFIR) draws together the key determinants known to be important in implementation. It has five domains (and subsequent sub-domains) that relate to:

1. Intervention characteristics
2. Outer setting (external factors relating to the wider system)
3. Inner setting (factors internal to the implementing organisation)
4. Characteristics of the individuals involved (in the implementation)
5. Process (factors that are important to implementation)

The CFIR has been used to map the key factors relating to the implementation of ESCAPE-pain and provides a summary of the key barriers and facilitators relating to each domain. This analysis of determinants builds upon a synthesis undertaken prior to the national programme and draws in factors relating to NHS and non-NHS community settings. However, a more in-depth analysis of the implementation of ESCAPE-pain in community settings is being undertaken as separate piece of work. It is also important to note that some sub-domains of the CFIR may be more relevant or not relevant to the implementation of ESCAPE-pain. For instance, issues relating to process are discussed in the section 3 AHSNs’ approaches to implementation and spread.

3.1.1 Intervention characteristics

Intervention source

The source or origin of ESCAPE-pain as coming from outside of a provider can work for and against its implementation. There is perception that some clinicians prefer ‘home grown’ solutions i.e. programmes that have been developed through an ongoing process of service development (versus implementing evidence from clinical research). However, this may be more an issue when there is an incumbent intervention that is ‘owned’ by a specific senior clinician.

Evidence strength and quality

The quality and strength of evidence supporting ESCAPE-pain is a key supporting factor. Clinicians are aware of the need for evidence-based practice (EBP) and need for quality improvement (from an individual and commissioning perspective), but there is a feeling that the evidence within MSK can be weak; therefore, ESCAPE-pain is addressing this. However, some clinicians raise the issue of whether the benefits described in the trial will be realised when ESCAPE-pain is implemented into their local context and are keen to see ‘their own’ clinical outcome data.

Despite the strength and quality of evidence, clinicians can fail to act on the need to use EBI (evidence-based interventions) in their practice and feel that existing (non-evidenced) practice is ‘good enough’.

Some providers and commissioners have high requirements and thresholds for evidence before ESCAPE-
pain can be considered a viable alternative (even when the incumbent intervention typically has little, if any, underpinning evidence-base from local service evaluation or generalised, published evidence).

Requests include:
- Full information about the existing evidence for ESCAPE-pain (including clinical and cost effectiveness)
- Evidence on areas that were outside the scope of the published trial and for which there is no robust existing data (for ESCAPE-pain or comparable interventions) e.g. impact on orthopaedics outcomes, referrals, pathway efficiencies.

Therefore, whilst the strength and quality of the ESCAPE-pain evidence-base is important, it is not sufficient by itself.

AHSN colleagues (outside of the core team at the HIN) have invested time (with support from the core team) to understand the evidence-base for ESCAPE-pain, to be sufficiently informed to explain the case to local commissioners and providers.

**Relative advantage**

Overall, ESCAPE-pain is not competing with other interventions for a market share\textsuperscript{14}. Typically, it is competing with an incumbent ‘group OA class’. Therefore, providers ask “how is it better than what we’re doing already?”.

Despite the limitations highlighted above, ESCAPE-pain is seen as having a relative advantage:
- It is evidence-based (whereas the incumbent is not) so internally it reassures providers that they are delivering improved quality of care and externally it can be used as an indication of performance to commissioners (e.g. improved quality and patient choice)
- It brings reputational benefits (i.e. associated with the ESCAPE-pain ‘movement’ and/or clinical-academic network)

However, any relative advantage from a clinical, quality improvement perspective can diminish when the practicality of implementing ESCAPE-pain within existing commissioning models come into play. Providers can struggle where funding models focus on activity (i.e. number of patient contacts per episode of care) and delivering short-term cost savings.

**Adaptability**

ESCAPE-pain is seen as being fairly adaptable (or rather that there are not many aspects that providers want/need to adapt). The articulation of the ‘four core’ components of ESCAPE-pain make clear to providers what can (not) be changed about the programme. The requirement to deliver two sessions per week over 6 weeks and the on-going collection of data can be the key limiting factors impeding implementation (and sustainability).

Within conventional clinical settings, ESCAPE-pain is seen as being easily ‘plugged in’ to existing systems and processes (e.g. individual practice and pathways). Whilst ESCAPE-pain appears to integrate well into the practice (skills and expertise) of fitness professional (i.e. trained to level 3), there are more challenges embedding it into non-NHS systems (especially referral pathways) within community settings.

**Trialability**

\textsuperscript{14} Typically, providers are either unaware of other evidence-based interventions for OA and are not using any formally evidence-based interventions.
The ESCAPE-pain model can be delivered on a small scale with the view to test the programme before scaling across sites. Most providers initially implemented the programme at a single site and then scaled up over subsequent months once it was shown to be ‘workable’.

However, at the early stages of roll out some providers required external financial support to mitigate potential risk to service disruption (e.g. temporary increases in waiting list, buying out staff time, equipment).

**Complexity**

The complexity of delivering ESCAPE-pain and its implementation is perceived to be low. Largely, it is seen as doing the same things clinicians would do to manage OA but done in a slightly different way i.e. an evolution rather than a revolution in practice. Similarly, with training fitness professionals incorporate the programme within their existing skills and expertise with relative ease.

As discussed above, ESCAPE-pain is considered to be easy to ‘plug in’ to existing practice settings. In addition, the number of professions and levels/parts of the system affected by the change is quite narrow (e.g. it is largely contained within and managed by MSK physiotherapy outpatient departments).

**Design quality and packaging**

Overall, the quality of the packaging of the programme (and supporting resources) is an important and positive feature. Providers perceive that they have a complete package to help set-up and deliver the programme. This includes both the physical materials (e.g. manuals, presentations) and access to ongoing expert advice and support from the ESCAPE-pain team. The packaged nature of ESCAPE-pain is seen as making it easier to implement and providing a quality intervention for OA over the long-term. It was seen as being particularly useful for supporting junior/less experienced staff to be able to deliver the programme (and OA care) more effectively.

**Cost**

Typically, ESCAPE-pain requires more sessions than most generic group OA ‘programmes’ (e.g. often 4-6 sessions over 4-6 weeks); therefore, it might require 2-3 times more contacts per treatment episode. Even though most providers recognise that ESCAPE-pain delivers cost-effective treatment with long-term patient outcomes, many providers feel under pressure to reduce (and/or ration) patient contacts to deliver greater in-year cost-saving due to current commissioning arrangements.

The impact of the number of sessions is largely determined by the commissioning model and contract requirements (e.g. block, tariff, capped activity/contacts, restrictions on group exercise, focus on outcomes versus activity, etc.). Overall, most providers absorb and average out the additional number of sessions (or contacts) across the whole service or by rationing access (e.g. by limiting ESCAPE-pain to fewer sites). However, there is a tension within many providers around reducing the number of sessions. The pressure to maintain 10-12 sessions partly comes from influential champions from within providers (e.g. emphasising the importance of EBP and fidelity) and the core team in its quality assurance role.

Implementation does require diverting some staff resource away from frontline delivery time over the short-term. In addition, the data collection component of ESCAPE-pain is seen as requiring additional time (and so cost), because providers do not necessarily systematically collect clinical outcome data. Therefore, it is not built into the normal time allocated for activities.
As discussed above, the costs associated with attending a mandatory training course to deliver ESCAPE-pain may disincentivise implementation and sustainability if providers (and/or local commissioners) are required to pay for training. Currently, this is not a significant issue because training is being subsidised by funding from the national programme.

Summary of barriers:
- Contracts that cap/ration patient contacts per episode of care
- Commissioning arrangements that focus on clinical activity versus outcomes
- Preference of a locally developed ‘OA class’ compared to something from outside the organisation
- Scepticism about whether ESCAPE-pain will deliver the same outcomes in their own local clinical context
- Scepticism about whether 12 sessions are significantly better than the current ‘group OA class’ (typically 4-6)
- Perception that current (non-evidenced) ‘group OA class’ delivers adequate quality care
- ESCAPE-pain seen as restricting individual practice and/or how the service is managed (i.e. must deliver defined ESCAPE-pain model)
- Requirement to attend (and pay for) training to deliver ESCAPE-pain
- Requirements to collect data (time implications)
- Requirement to deliver 10-12 sessions
- Concerns about the short-term impact/disruption to service (e.g. patient flow)

Summary of facilitators:
- The strength and quality of evidence about ESCAPE-pain
- Information making the financial case for ESCAPE-pain
- Influential internal champions pushing back on argument of cost savings versus quality care
- Recognition that activity associated with ESCAPE-pain does not to breach KPIs for initial to follow-up appointment ratios when measured across the MSK service as a whole i.e. typically, providers implementing ESCAPE-pain achieve KPIs for appointments ratios when averaged across all activity.
- Getting early buy-in, careful and skilful messaging and management of managers around improving the quality of care for OA
- Reputational gains to providers from delivering an evidence-based programme
- The quality and professionally packaged suite of information about ESCAPE-pain and how to implement it
- ESCAPE-pain supports and integrates with existing individual practice and practice settings
- Implementation has limited disruptive impact on wider pathways
- Easily trial-able and scalable
- Easily ‘plugs in’ to a range of settings and can be delivered by a range of professionals/facilitators

3.1.2 Outer setting

Patient needs and resources

Overall, the implementation of ESCAPE-pain is not directly driven by patient needs (i.e. an imperative from patients for better care around OA). It is mainly driven by those in provider organisations (and sometimes commissioners) recognising that the care their service delivers could be better (i.e. in line with clinical evidence and in line with their own commitment to service/quality improvement). However, a small number of providers report that ESCAPE-pain has been unsuccessful at certain sites due to factors relating to patients e.g. preference or attitudes towards group exercise, ability to access/travel or commit to sessions. In general, providers report very high levels of patient satisfaction. There are examples where providers use the positive patient feedback about ESCAPE-pain support ongoing funding and prevent
decommissioning.

**Cosmopolitanism**

Adopting providers typically have key members of staff who are hooked into networks and have experience of working across traditional institutional boundaries, and adept at drawing EBI/innovation into their organisations. In some cases, providers and/or commissioners may be looking to ‘fix a problem’ in their local system, pathway or service that ESCAPE-pain can help solve.

A key challenge associated with the implementation of ESCAPE-pain is the time it takes to develop and build relationships. However, the ‘churn’ of staff (especially within commissioners) can mean a viable opportunity is paused or evaporates. AHSNs can often encounter a response of ‘now’s not the right time’ because of:

- Staff turnover and/or staff capacity issues to effect change (within providers and commissioners)
- A perceived need to ‘sort out’ other parts of the system/pathway/service first (e.g. pathway reconfiguration, organisational mergers)

However, this is symptomatic of a failure to recognise that healthcare systems are dynamic and complex, and there is rarely a ‘right time’.

**Peer pressure**

To a degree there is a sense amongst providers that they are part of an ESCAPE-pain ‘club’ (i.e. that is delivering EBP/quality care for OA, connected with nationally supported programme) which has associated positive reputational benefits internally and externally to their organisation. However, if peer pressure were a key factor in the implementation of ESCAPE-pain, there scale of existing sites might suggest a more rapid spread to neighbouring providers, which does not seem to be the case. This may be compounded by the mosaic of commissioning regimes neighbouring providers are operating under i.e. a neighbouring provider could be under different types of contracts (AQP, block or tariff) which may or may not support the implementation of ESCAPE-pain.

**External policies and incentives**

ESCAPE-pain a NICE QIPP case study and is in line with NICE clinical guidelines for OA, which adds credibility/strengthens the weight behind ESCAPE-pain. However, NICE and QIPP are not effectively mechanisms themselves to incentive or mandate implementation.

The two key external factors influencing the spread of ESCAPE-pain are:

- The AHSN Network through the national programme has been a key external factor supporting the scale-up of ESCAPE-pain
- Existing commissioning arrangements for MSK services in England

The AHSN Network national programme has provided significant momentum and resources to support spread of ESCAPE-pain. The role of the AHSN Network through the national programme is described in detail throughout this report; therefore, does not require further discussion here.

The role of commissioning arrangement touches on many factors influencing the implementation of ESCAPE-pain (as outlined above). NHS providers report that they are under increasing pressure to deliver in-year cost and efficiency savings, which within MSK outpatients means increasing patient flow and reducing the number of individual patient contacts per episode of care. So whilst providers recognise that ESCAPE-pain would probably reduce demand (and costs) in the long-term (because it is a more effective
intervention for long-term self-management) the immediate pressures for in-year savings win out. In addition, some commissioners place restrictions within contracts on patient contact caps (e.g. typically 4 contacts per episode of care). Therefore, the 12 sessions for ESCAPE-pain raises concerns about breaching these limits. Although, in practice it appears that providers delivering ESCAPE-pain remain within this cap when they average patient contacts across the service as a whole.

Some providers see ESCAPE-pain as a unique selling point (USP), kite mark of quality, or a marketable product within the increasingly competitive world of MSK commissioning. In contrast, even though providers say that Clinical Commissioning Groups (CCGs) reiterate that contracts are awarded based on quality (rather than cost alone) some providers have concerns that contracts will be awarded to private providers that heavily ration patient contacts (and so reduce costs).

In general, commissioners do not stipulate what specific interventions provider should deliver within a contract (and providers suggest that commissioners are not typically interested in this level of detail). However, in a small number of cases some commissioners have agreed with providers that ESCAPE-pain should be part of the MSK offer. In these cases, the perception from providers is that commissioners have taken a focus on clinical outcomes compared to clinical activity.

Summary of barriers:
- Pressure from commissioning models (e.g. AQP, contract rationing activity) to focus on in year cost-saving versus long term quality of care
- Patients’ ability and willingness to access ESCAPE-pain and/or clinicians’ perceptions about what will/won’t be acceptable to patients.
- The challenge of identifying and reaching outward looking organisations and individuals (outside of HIN’s networks)
- Scaling up sufficiently to access the ‘early majority’
- Local available resources, such as staff and suitable facilities
- ESCAPE-pain may not be suitable in areas with large non-English speaking populations

Summary of facilitators:
- ESCAPE-pain as a USP, quality kite mark, marketable production; NICE endorsement of ESCAPE-pain; STPs
- Power of patient satisfaction/experience/stories
- AHSNs’ reputation (locally)
- Feeling part of a ‘movement’
- Identifying and engaging local leadership (e.g. senior clinicians and managers in providers)

3.1.3 Inner setting

Structural characteristics

To date, the implementation and delivery of ESCAPE-pain is largely uni-professional\(^x\) i.e. within physiotherapy/by physiotherapists or within the leisure sector by fitness professionals. Physiotherapy remains quite traditionally hierarchical and this is reflected in the social architecture of physiotherapy departments and implementation of ESCAPE-pain. With ESCAPE-pain, we see senior clinicians (B8s) lead/co-ordinate the implementation and subsequent delivery, a need for buy-in from senior managers and junior clinicians undertaking the ‘work’ to implement and deliver. The role of structural characteristics

\(^x\) However, models of delivery for ESCAPE-pain are broadening and there are a growing number of mixed models developing. For example, the ‘Cheltenham’ model, where fitness professionals and physiotherapists co-deliver ESCAP-pain within a community leisure centre
within non-NHS community providers will be outlined in the evaluation of the Sport England funded programme, which is currently underway.

Within large providers with multiple sites across sometimes large geographies there is a large degree of semi-autonomy between sites. Therefore, implementation at one site within a provider does not automatically mean that there will be internal spread. There is a perception that it is important that service managers/clinical leads at individual sites choose to implement and that this decision will be based on local contextual factors (e.g. staffing numbers, staff turnover, professional attitudes towards group exercise and/or service improvement, availability of resources and/or facilities).

**Networks and communication**

Effective internal networks and communication is seen as important particularly around being able to fully integrate ESCAPE-pain into systems and processes and optimising referral pathways. Within the service, all staff need to understand what ESCAPE-pain is, buy-in to it, and know how to refer in to it. This is done via team meetings, in-service training, email, inviting colleagues to observe sessions. It is also important for services to have effective engagement with key referral sources e.g. MCATS, orthopaedics, rheumatology, occupational health, and GPs (via leaflets, trust/CCG newsletter). This is a particular issue with non-NHS community providers that have weak links with NHS referral pathways, which results in an unsustainable low flow of participants.

**Culture**

Aspects of culture and its influence in the implementation has been discussed above. There is a strong discourse in physiotherapy about EBP; however, whilst many clinicians perceive that there has been shift towards more EBP the overarching imperative for cost-reduction and increasing clinical pressures override this.

Senior managers recognise the inherent tensions in the system and see their senior clinicians as taking on the role (as ‘experts’ who provide the link between the frontline and evidence). On one hand, senior managers feel that they do try to enable their senior clinicians to lead the implementation of innovation (such as ESCAPE-pain) but must also balance that against competing pressures (e.g. meeting contract targets, budget targets, etc).

Senior clinicians and managers are the drivers behind building a culture of EBP and quality improvement and see ESCAPE-pain as part of this effort. However, many believe that EBP and quality will be ‘dropped like a stone’ when financial pressures build. Junior clinicians feel that they do not have the time and/or power to influence the debate on EBP.

**Implementation climate**

It is important to remember the organisations are not static but dynamic entities; therefore, the climate for implementation (like the organisation) can change over time.

**Compatibility** – some changes in commissioning models and contracts can make it difficult to continue to operate ESCAPE-pain. Some providers have had to decommission ESCAPE-pain because of caps on patient contacts and restrictions on group exercise within contracts.

**Relative priority** – the implementation and sustainability of ESCAPE-pain can be placed at risk in organisations undergoing mergers or large-scale service reconfigurations. Similarly, financial pressures to reduce costs can de-prioritise ESCAPE-pain which may be perceived as too resource intensive.
Leadership engagement – senior managers that are passive/disengaged can be as much a barrier as those who are actively blocking the process. Senior leaders set the tone to the rest of the organisation/departments around the importance of ESCAPE-pain and can be key in unlocking barriers to successful implementation. Similarly, there needs to be active engagement by system leaders (e.g. those in CCGs, STPs, ICSs). There is a more favourable implementation climate for ESCAPE-pain where commissioners and providers are engaged.

Availability of resources – for ESCAPE-pain to be successfully implemented, providers need to ensure they have an adequate amount of physical space and equipment, suitability trained staff to implement and/or deliver it, staff with the availability/time to implement and/or deliver it. The impact of resource availability can become an increasingly significant feature in locations that deliver ESCAPE-pain outside of traditional clinical settings (e.g. community and leisure centres) due to the additional time required to travel to/from, set up each session, maintain relationships with the venue, develop systems/processes for working outside of a clinical setting. Obviously, the availability of resources can change (e.g. staff turnover, loss of a contract) which can impact of whether ESCAPE-pain can be sustained.

Access to information and knowledge – Providers see the range of resources developed around ESCAPE-pain (e.g. website, app, manuals, and knowledge-sharing events) as supporting greater ease of access and translation of knowledge about both the programme and its implementation. The development and roll out of the mandatory ESCAPE-pain training course ensures that providers (or at least those directly involved in delivering ESCAPE-pain) have the necessary knowledge, skills and ethos to implement and deliver ESCAPE-pain.

Summary of barriers:
- Capacity to focus on and deliver EBP and quality improvement activities
- Disengaged leadership in provider and commissioning organisations and the deference of decision-making about implementation between providers and commissioners (i.e. ‘you need to speak to commissioners to see if they will pay for it’ versus ‘you need to speak to providers as they decide what specific interventions they deliver’)
- Implementers have weak local networks and communication channels – especially along referral pathways.

Summary of facilitators:
- Building on the existing EBP and quality improvement culture
- Implementers have effective local networks and communication channels
- Targeted, accessible information about ESCAPE-pain and its implementation

3.1.4 Characteristics of individuals

There is typically a key individual (or champion) pivotal in leading the implementation of ESCAPE-pain within provider organisations. Within their organisations, they acted as brokers to drive the work to implement and sustain ESCAPE-pain. Their position and personal attributes allowed them to build support at a strategic and operational level. Their ability to link different parts of the social network means that they can garner the collective action from both senior managers and operational staff required for implementing ESCAPE-pain.

Champions influence senior leaders to secure continued commitment to ESCAPE-pain, to resolve any critical issues, and advocate the value of ESCAPE-pain to staff. At an operational level, champions enrolled support from senior clinicians (or peers) who shared a commitment to evidence-based practice to take ownership for overseeing ESCAPE-pain and from more junior colleagues. Champions enabled more junior
colleagues (or ‘supporters’) to be dispersed leaders to undertake operational functions and influence peers to support ESCAPE-pain. Table 6 summarises the different forms of work (or actions) the various leadership roles (i.e. champions, supporters, and senior managers) use to successfully implement and sustain ESCAPE-pain.

Table 6 Leadership roles and action in implementing and delivering ESCAPE-pain

<table>
<thead>
<tr>
<th>Leadership role</th>
<th>Examples of actions supporting the implementation and delivery of ESCAPE-pain</th>
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</thead>
<tbody>
<tr>
<td>Champions</td>
<td>• Engendering a sense of enthusiasm about ESCAPE-pain</td>
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<td></td>
<td>• Providing operational oversight for day-to-day delivery of ESCAPE-pain</td>
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<td></td>
<td>• Sharing knowledge about ESCAPE-pain (e.g. evidence-based, performance, characteristics)</td>
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<td></td>
<td>• A resource or ‘go-to’ person to resolve issues relating to ESCAPE-pain</td>
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<td></td>
<td>• Role model to frontline staff (e.g. demonstrating clinical expertise, credibility)</td>
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<td></td>
<td>• Facilitating relationships and integrating leadership roles (i.e. connecting strategic and operational activities)</td>
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<td></td>
<td>• Promoting and demonstrating the value of ESCAPE-pain to senior managers</td>
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<td></td>
<td>• Quality assuring fidelity to core components</td>
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<td></td>
<td>• Guiding the adaptation / enhanced performance of ESCAPE-pain</td>
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<tr>
<td>Supporters</td>
<td>• Influencing front line peers to engender grass roots buy-in and ownership of ESCAPE-pain</td>
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<td></td>
<td>• Supporting knowledge sharing about ESCAPE-pain amongst peers</td>
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<tr>
<td></td>
<td>• Assisting with the identification of poor operational integration and potential solutions</td>
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<td></td>
<td>• Monitoring the performance of ESCAPE-pain</td>
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<td></td>
<td>• Monitoring (unsanctioned) adaptations to ESCAPE-pain</td>
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<tr>
<td>Senior managers</td>
<td>• Communicating a unified message to staff about value of and commitment to ESCAPE-pain</td>
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<tr>
<td></td>
<td>• Reviewing the performance of ESCAPE-pain within the context of the wider service (e.g. service KPIs, resource availability)</td>
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<tr>
<td></td>
<td>• Releasing / re-structuring resources to support deliver and integration of ESCAPE-pain</td>
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<tr>
<td></td>
<td>• Brokering relationships and expediting decisions at senior levels to ensure operational delivery</td>
</tr>
<tr>
<td></td>
<td>• Shielding ESCAPE-pain from wider service/organisational/system pressures</td>
</tr>
</tbody>
</table>

Knowledge and beliefs about the intervention

Those involved in the set-up and delivery of ESCAPE-pain have a good understanding of the evidence (i.e. RCT) and ethos (i.e. driven by social cognitive theory) behind the programme and commitment to the programme. As staff rotate and/or leave the delivery of the programme is passed onto others and there is
a perception that there is a risk that over time the understanding and commitment to the programme wanes. This applies to both staff involved in the delivery of the programme and to the lead clinician championing the programme within the department (who can maintain enthusiasm and understanding about the programme). There have been examples of enthusiastic and motivated individuals spreading ESCAPE-pain as they move to new provider organisations.

Again, the requirement to undertake training is a mechanism to build knowledge and positive beliefs about the intervention.

**Individual identification with organisation**

Those leading the implementation of ESCAPE-pain may experience emotional depletion or burnout due to internal and external forces that want to adapt and/or decommission ESCAPE-pain. These individuals can feel isolated within their organisations and can lead to despondency towards their organisations. The AHSNs offer an important source of practical support and motivation for those implementing ESCAPE-pain.

**Summary of barriers:**
- Identifying, mobilising and supporting local champions
- Ongoing knowledge and commitment to ESCAPE-pain to ensure sustainability (e.g. due to staff turnover)
- Burnout by those leading the local implementation and delivery of ESCAPE-pain

**Summary of facilitators:**
- Local champions ability to foster and sustain local knowledge and commitment (within their organisation and/or taking ESCAPE-pain as the move to new providers)
- External support to maintain motivation and efforts to sustain ESCAPE-pain
- Providing opportunities (time and space) to support and cultivate local champions
- Using local networks effectively

**3.2 Summary of key factors impeding implementation and scale-up**

The factors most consistently encountered by AHSNs that impede the local implementation and scale-up of ESCAPE-pain are:

- Current (predominant) commissioning models that are activity-based and prioritise in-year cost savings within CCG budgets do not readily support the implementation of a new intervention (such as ESCAPE-pain), which require greater upfront investment compared to incumbent (typically non-evidenced) interventions and realise benefits in the long-term and across health and social care systems. This creates a challenging environment for providers to make ESCAPE-pain work within the constraints of the funding model. A particular concern is where CCGs have commissioned a commercial MSK provider who may feel that offering multi-session interventions is not a cost-effective business model.

- Attitudes towards the evidence and evidence-based practice (particularly amongst managers and senior clinicians) directly impacts on the uptake of ESCAPE-pain. Existing group-based programmes are unlikely to have the same level of evidence or return on investment that ESCAPE-pain offers. However, where these are in place local clinicians can be unwilling to replace their own programme with ESCAPE-pain.

- For non-NHS, community providers (e.g. leisure centres) a key challenge is lack of adequate referral pathways into their services. Whilst NHS MSK service are overwhelmed with referrals and typically have lengthy waiting time, non-NHS providers can struggle to recruit participants. This is
3.3 Strategies to implementing ESCAPE-pain

This section explores the strategies that have been used to implement ESCAPE-pain given the key determinants outlined above. The analysis uses the ERIC framework for implementation strategies to categorise the various approaches used by AHSNs to spread ESCAPE-pain\textsuperscript{30,31}. ERIC defines and organises 73 strategies into 9 categories and ranks each strategy by its importance and feasibility (which is given in brackets next to each strategy). Only the strategies in the ERIC framework used by AHSNs to support the implementation of ESCAPE-pain are discussed. For a detailed definition of each strategies refer to the ERIC project\textsuperscript{30}.

3.3.1 Use evaluation and iterative strategies

Assessing readiness and barriers/facilitators (High Importance / High Feasibility)

- AHSN Network collectively undertook work to continuously identify and share key barriers and facilitators (e.g. via webinars and learning networks)
- This was based on direct experiences of engaging with local stakeholders about challenges, opportunities and readiness for implementing ESCAPE-pain
- Many AHSNs undertook mapping exercises to understand local challenges, which provided useful insights into the complexity of the MSK landscape and possibility of multiple local models

Audit and feedback (High Importance / High Feasibility)

- Providers have been asked to collect outcome data for incumbent interventions and ESCAPE-pain to compare effectiveness. However, providers appear to be resistant to this and AHSNs have struggled to use this as an effective strategy
- However, reporting back analysed clinical outcome and activity level data to providers is useful in demonstrating the impact and return on investment for ESCAPE-pain

Develop quality monitoring (High Importance / High Feasibility)

- Centrally, the national programme has developed a number of quality monitoring systems:
  - Continuously collecting clinical outcome data and activity data (e.g. number of completers)
  - Annual quality assurance process
  - Mandatory training to delivery ESCAPE-pain
- These approaches to quality monitoring may dis-incentivise some providers from adopting ESCAPE-pain; thereby impeding the rate of spread
- However, these strategies ensure that ESCAPE-pain (rather than a variation of the programme) is being scaled-up. The absence of these approaches might see accelerated reach but a decline in quality, which has implications on the clinical and cost effectiveness of ESCAPE-pain

Develop a formal implementation blueprint/plan (High Importance / High Feasibility)

- The national programme has a formal plan that sets out the aim, scope and timeframes, and performance measures for the scale-up of ESCAPE-pain. Performance against this plan is quality
assured by the DOG and commissioning partners (as discussed above)

- The spread of ESCAPE-pain is embedded within local AHSN business and project plans

**Conduct local needs assessment (High Importance / High Feasibility)**
- AHSNs have undertaken various approaches to determining local need
  - Mapping local MSK landscape, relevant sectors and key partners
  - Using the MSK calculator to determine the prevalence of OA within locally to determine need.
  - Analysing local MSK pathways and services, including supply-demand and flow

**Stage implementation scale up (High Importance / High Feasibility)**
- A commonly used strategy has been to implement or pilot ESCAPE-pain on a small scale within a provider (e.g. initially at one site). This demonstrates clinical effectiveness and feasibility and practicalities of integrating ESCAPE-pain into practice settings and local pathways

**Obtain and use patient and family feedback (High Importance / High Feasibility)**
- Both within the national team and local AHSNs, feedback from participants (e.g. case studies, summary report on participant perspectives, short films) has been used to make the case to providers, commissioners and wider stakeholders

**Conducting cyclical small test of change (High Importance / High Feasibility)**
- The core team’s work leading up to the national programme has used an approach to testing, learning and refining its strategies over time. AHSNs have continued to use the approach locally to learn about what works in specific settings (e.g. by working with early adopters or in pilot sites). This learning is then shared through the on-going knowledge exchange forums across the AHSN Network

### 3.3.2 Provide interactive assistance

**Facilitation (High Importance / High Feasibility)**
- Using facilitation to foster interactive problems solving and support professional relationships has been a key approach between the AHSNs within the national programme
- AHSNs have worked hard to develop and build effective relationships with local stakeholders. AHSNs have played a key role in convening stakeholders to develop viable approaches to implementing ESCAPE-pain (e.g. piloting new models of delivery, creating new partnerships and collaborations)

**Provide local technical assistance (High Importance / Low Feasibility)**
- AHSNs have provided on-going local support to providers to implement ESCAPE-pain and helped problem-solve any issues that might impede implementation (and sustainability)
- AHSNs have also offered technical assistance to commissioners in providing information to make the cases for ESCAPE-pain (e.g. AHSNs have produced business case templates and populated/completed business cases)

**Centralise technical assistance (Low Importance / Low Feasibility)**
- The centralised technical assistance provided by the core team has predominantly been to assist local AHSNs where requested i.e. this centralised resource has been for colleagues in AHSNs rather than local sites per se. However, the core team has supported local providers in partnership with local AHSNs
3.3.3 Adapt and tailor to context

Tailor strategies (High Importance / High Feasibility)
- Overall AHSNs have had scope to determine their own strategies for implementing ESCAPE-pain locally
- However, in some instances the extent to which AHSNs can tailor strategies has been curtailed by the national programme. For example, a mandatory, fee charging training course that is coordinated centrally by the core team. The intersection of the Sport England programme with the national programme and the elements of the Sport England programme differing from the national programme (e.g. eligibility criteria, need to coordinate local sites centrally by the core team).

Promote adaptability (High Importance / High Feasibility)
- Prior to the national programme the core team did a lot of work to articulate the core components of ESCAPE-pain i.e. the ‘Core 4’
- ESCAPE-pain can be adapted as long as the ‘core 4’ are maintained e.g. the training specifically covered how providers might adapt ESCAPE-pain to integrate it within local settings
- The adaptability and ease of implementation of the ESCAPE-pain programme have been promoted by AHSNs as a means to encourage adoption
- The national programme has been used as a way to continue to explore the extent of adaptation (whilst preserving the Core 4) as AHSNs have developed new models of delivery

3.3.4 Develop stakeholder inter-relationships

Identify and prepare champions (High Importance / High Feasibility)
- Within AHSNs – As described above, a key part of the national programme’s approach was to prepare colleagues within AHSNs to be able to implement ESCAPE-pain locally (e.g. AHSN webinars, staff inductions). Some AHSNs have identified champions (typically a local senior physiotherapist) to support local efforts to drive implementation. AHSNs have established different models. In some cases, AHSNs have formal arrangement where a proportion of the clinical champions’ time is paid for by the AHSN (e.g. x days per month) and they have a specific role to liaise with adopter sites to drive implementation (e.g. NENC, IA). For other AHSNs, the arrangement is more informal and may be an enthusiast of ESCAPE-pain within a provider who the AHSN can use on an ad hoc basis to host sites visits or have phone calls with potential adopters. Champions provide credibility to provider organisations and can utilise their existing professional networks
- Within local systems (e.g. providers) – As described above, there are typically 1-2 individuals within an organisation who act as champions around the decision-making to adopt and the process of implementing ESCAPE-pain. AHSNs describe the challenge of identifying these individuals and the ongoing work by AHSNs to develop and build local relationships to understand the local MSK context and make local contacts. Once identified, AHSNs focus their efforts on these individuals to support them to persuade and drive implementation within their organisations.

Inform local opinion leaders (High Importance / High Feasibility)
- AHSNs have specifically identified forums where strategically important local stakeholders convene (e.g. STP partnership boards) to inform them about ESCAPE-pain and to use them to promote ESCAPE-pain across the system (with providers and commissioners)
- Some AHSNs identified key local opinion leaders within the MSK ‘sector’ and have formed formal partnerships with these individuals or organisations
Build a coalition (High Importance / High Feasibility)

- A key strategy of AHSNs has been to cultivate relationships with key partners locally as a way to build momentum around implementing ESCAPE-pain.
- Some AHSNs have focused on developing strong relationships at a strategic level to create a system wide approach to ESCAPE-pain (e.g. YH AHSN has formally aligned ESCAPE-pain with local STP and ICS plans)
- Using endorsement by key national stakeholder organisations was considered important in helping to build this coalition for ESCAPE-pain (e.g. NHS RightCare, NICE, and Versus Arthritis)
- AHSNs’ ability to build new collaborations across sectors has led to new partnerships between NHS and community leisure providers (e.g. ESCAPE-pain partnership between Humber Teaching NHS Foundation Trust, Scarborough and Ryedale CCG and North Yorkshire Sport Ltd)
- By working closely with existing ESCAPE-pain sites, AHSNs can support them to expand provision and convince others to follow
- Some AHSNs are developing cross-regional collaborations to combine resources and effort (e.g. Easter and UCLP, Wessex, South West and West of England AHSNs)
- West Midland AHSN developed a strategic partnership with the Impact Unit at Keele University to draw in additional expertise and capacity.

Obtain formal commitments (High Importance / Low Feasibility)

- A number of AHSNs have used strategies to obtain formal commitment to implement ESCAPE-pain (e.g. via Memorandum of Understanding or Service Level Agreements). These agreements have been a quid pro quo for access to funding (e.g. free training).

Identify early adopters (High Importance / High Feasibility)

- Some areas of England already have sites delivering ESCAPE-pain prior to the national programme. Therefore, some AHSNs (e.g. KSS) did not need to identify early adopter sites because they had a comparatively large number of sites. For those AHSNs with no site, many prioritised identifying early adopters. Some AHSNs initially focused efforts on engaging at a strategic level (e.g. with CCGs) assuming this would lead to the providers implementing the programme. The core team at the HIN highlighted the importance of engaging directly with providers to get early adopter sites, as well as engaging at a system level.

Conduct local consensus discussions (High Importance / High Feasibility)

- As discussed above, AHSNs used national and local data (e.g. evidence on the sub-optimal management of OA, local OA prevalence and demand) to build consensus amongst stakeholders about the importance of OA and evidence about ESCAPE-pain (e.g. research papers and tailored resources) to demonstrate the programme as a viable solution. The economic evidence (i.e. potential savings and return on investment) were considered as important as the clinical effectiveness.
- Linked with relationship building, local consensus discussions often took place over an extended period with stakeholders requesting clarification and additional information. AHSNs would often work closely with the core team when the evidence-based for ESCAPE-pain was contested to understand what information needs were not being met and if it was possible to address these. Consensus was not always reached for a number of reasons:
  - Stakeholders did not agree their incumbent interventions were not delivering quality care
  - The evidence-based underpinning ESCAPE-pain was disputed
  - ESCAPE-pain was a good fit with local services and/or commissioning arrangements
  - MSK/OA was a priority area for investment

Capture and share local knowledge (High Importance / High Feasibility)
• As described above, the national programme emphasised the sharing of local knowledge about the implementation of ESCAPE-pain regionally by AHSNs. This evaluation forms part of that process of capturing and sharing local knowledge.

• At a local level, a number of AHSNs⁽¹⁶⁾ held local learning events about ESCAPE-pain with stakeholders. The events were largely in the second year of the national programme and brought together stakeholders to share knowledge about how to improve and sustain ESCAPE-pain (e.g. increase volume and retention, grow the number of sites within existing providers).

**Use an implementation advisor (Low Importance / High Feasibility)**

• Initially, the core team provided this advisory role to colleagues in the AHSNs in the early stages of the national programme. Subsequently, staff leading on ESCAPE-pain in local AHSNs have developed the skills and knowledge to adopt this role for local providers.

• AHSNs identifying a dedicated resource for ESCAPE-pain, usually a project manager, has been key to supporting local spread within a given region.

• AHSN project managers (and in some cases AHSN clinical champions) play a key role in promoting potential models of delivery, building the case for implementation, support the process of implementation.

• AHSNs are most effective at supporting local implementation when there is clarity about their ‘offer’ (e.g. expertise, advice, support, training, human and financial resource).

**Visit other sites (Low Importance / High Feasibility)**

• AHSNs have used early adopters as a way to persuade potential adopters to implement ESCAPE-pain.

3.3.5  **Train and education stakeholders**

The role of training and resources as key mechanisms to support the spread of ESCAPE-pain has been discussed in detail above. The AHSNs reiterate the development and use of these materials (see Appendix 1) were important in support all key stages of spread, from building local consensus and influencing decision-making to adopt (e.g. cost saving calculator) to the practicalities of implementing (e.g. implementation toolkit). The tailoring of resources and quality of production were considered important in increasing their credibility.

3.3.6  **Support practitioners**

**Facilitate relay of clinical data to providers (High Importance / High Feasibility)**

• Via the national programme, providers are sent an annual report summarising the clinical outcome and activity metrics (e.g. number of completers). This is an important part of the quality monitoring for the AHSNs. It also serves as a strategy to encourage providers to sustain and invest in ESCAPE-pain by demonstrating its impact and the return on investment.

**Revise professional roles and creating new teams (Low Importance / Low Feasibility)**

• The core team has done work prior to the work of the national programme to explore the different professional roles that can deliver ESCAPE-pain i.e. broadening this beyond physiotherapists to therapy assistants (B3-4), fitness instructors, and other clinicians (e.g. osteopaths). The expansion into these professions has continued through the national programme with AHSNs supporting providing to implement ESCAPE-pain across a range of different models of delivery.

⁽¹⁶⁾ For example, Health Innovation Manchester, Wessex AHSN, Easter AHSN
3.3.7 Engage consumers

Involves patients/consumers and family members (High Important / High Feasibility)

- Participants have been involved nationally (e.g. ESCAPE-pain conference) and locally to influence providers and commissioners to implementation ESCAPE-pain. The national programme and local AHSNs have used personal patient stories (in person, written case studies or short films) to make the case for implementation.
- Locally, AHSNs have undertaken a range of approaches to engage directly with participants and the public about ESCAPE-pain. For example, the West Midlands AHSN has embedded PPI throughout their work on ESCAPE-pain with patient presentation on the ESCAPE-pain project steering group committee, patient representatives were involved in a local ESCAPE-pain pilot, and patient involvement has been pivotal in developing follow-on activities/exercise opportunities for participants after completing the programme.

Use mass media (Low Important / Low Feasibility)

- Nationally and locally, the AHSNs have used the media to promote ESCAPE-pain with stakeholders and potential participants (especially as a way to increase demand for local sites). For example, coverage by the BBC breakfast TV and the Daily Mail generated an increased volume of direct enquiries from members of the public about how and where to access the programme.

3.3.8 Utilise financial strategies

Fund and contract for the clinical innovation (High Important / Low Feasibility)

- Some AHSNs have been successful in engaging with commissioners
- ESCAPE-pain has been embedded within tender specifications for MSK services. However, typically commissioners are reluctant to mandate ESCAPE-pain per se and will refer to interventions ‘like’ ESCAPE-pain. This can lead to providers claiming that they are delivering interventions that are equivalent to ESCAPE-pain. In addition, the ability to influence commissioning models dependents on whether an MSK contract is coming up for renewal/retender (which is typically in 2-3 year cycles)
- AHSNs have persuaded commissioners to pilot ESCAPE-pain to tackle system issues (e.g. reduce demand pressure on MSK providers by using community leisure providers)

Access new funding (High Important / Low Feasibility)

- Through the national programme each AHSN has additional dedicated budget (e.g. £30K) for local activities to support spread. This has predominately been used to offer subsidised training for providers.
- Funding was used to pay for local clinical champions where formal contractual arrangements were in place
- An AHSN seed funded a provider to implement and pilot ESCAPE-pain to allow it to test and demonstrate its effectiveness (N.B. the programme continued once the funded pilot ended). The core team used the same strategy to onboard one early adopter site when starting its work on spreading ESCAPE-pain within south London.

3.4 Summary of key learning about strategies to implement ESCAPE-pain

AHSNs have used a range of strategies to support the implementation and spread of ESCAPE-pain within their regions.

Getting the offer and resource right for supporting the local implementation of ESCAPE has been key to
enabling AHSNs to determine and deploy appropriate strategies. The extent and type of resource dedicated to ESCAPE-pain varies across AHSNs. For some, ESCAPE-pain is one element within a project manager's wider portfolio; whereas, other AHSNs have more than 1 FTE project manager dedicated to ESCAPE-pain. AHSNs have also chosen to use local clinical expertise (e.g. typically a local senior physiotherapist) in different ways:

- West of England has seconded a local senior physiotherapist who had implemented and was delivering ESCAPE-pain to project manage the AHSN’s work on ESCAPE-pain (thereby combining clinical and project management resource together).
- Buying-in expertise from local senior physiotherapists on a part-time basis via formal contractual arrangements, to support project managers (e.g. IA, NENC, SW).
- Other AHSNs have chosen to utilise local clinical expertise informally (i.e. people in sites that are currently delivering or overseeing ESCAPE-pain) (e.g. Eastern AHSN, YH AHSN). If there is a need for clinical input the AHSN either draws on this informal local resource or contacts the core team at the HIN.

Over the first year of the national programme AHSNs became clearer and more confident about their ‘offer’ to the system on ESCAPE-pain and the key role they play in promoting potential models of delivery, building the case for implementation, supporting the process of implementation (e.g. through AHSN expertise, advice, support, training, financial resource).

The breadth of potential settings and delivery models for ESCAPE-pain presented AHSNs with opportunities and challenges. ESCAPE-pain’s flexibility offers a wider range of opportunities to explore (e.g. NHS, community leisure, workplace, primary care); however, it could make it difficult to know where to focus efforts for the greatest impact (or return on investment from AHSNs efforts).

AHSNs have had to determine the scope of focus to their work on ESCAPE-pain, which has influenced the subsequent strategies that have been used. Some AHSNs have chosen to focus their effort on targeting specific ‘parts’ of the system:

- Geographies/localities - focusing on certain areas of their region
- Sectors - focusing on only NHS or only non-clinical community sites
- Providers - focusing on providers (cross sector) rather than CCGs/STPs/local authorities.

Other AHSNs taken a broader approach, casing their net widely by engaging with multiple sectors, across a wide geography, at both a strategic and practice setting level.

Some AHSNs focused efforts on engaging at a strategic level (e.g. STPs CCGs) to create a system wide approach to ESCAPE-pain i.e. identifying strategic forums with influential stakeholders and key decision-makers to take a ‘top down’ approach:

‘Time wasted going around knocking on doors doesn’t maximise reach and dissemination’ AHSN manager, webinar, July 2018

Some AHSNs have been successful in developing strong relationships at a strategic level with STPs and CCGs, which have been fruitful. Whereas others have found that engagement with CCGs have not led to anything tangible and all implementation activity has been provider driven. The varying success of commissioners as a mechanism to deliver new sites is echoed in the core team’s experience prior to the national programme and highlights the need to engage directly with providers, as well as at a system level.

What we know from the literature on implementation is that there is no one “right way” to spread an intervention (one size does not fit all). Implementation strategies need to be chosen and tailored to
accommodate the characteristics of the intervention, providers, the team resourced to support implementation, and the wider system (or environment).³³

For ESCAPE-pain, AHSNs’ reasons for determining their focus have varied due to:

- Limited staff resource within the AHSN to focus on ESCAPE-pain, which necessitates focusing on one sector and few localities because of the time it takes to develop contacts and build relationships (e.g. East Midlands AHSN has focus on NHS settings due to capacity).
- Viable opportunities within a specific location or region ready to build on or exploit (e.g. presence of Sport England sites leading to a focus non-NHS providers)
- (Un)willingness within a certain locality, provider or commissioner to engage with ESCAPE-pain e.g.
  - A large, single provider with a contract across an entire county that is disengaged
  - Local commissioning arrangement mean providers cannot make ESCAPE-pain work within the constraints of the contract
  - Commissioners are inaccessible, disengaged or dispute the value of ESCAPE-pain

A focus of AHSN strategies (e.g. assessing barriers and needs, sharing knowledge, convening partners) has been the continued testing and refining new models of delivery for ESCAPE-pain. The AHSN Network has built on and expanded models developed by the core team at the HIN to de-medicalise the management of OA and take ESCAPE-pain outside of traditional secondary care clinical setting and create new partnerships (Appendix 2 and 3). However, AHSNs can experience significant challenges in developing pathways and partnerships that integrate NHS and non-NHS organisations within the same local systems.
Sustaining ESCAPE-pain beyond the national programme

An aim of scaling-up an evidence-based intervention is that it is sustained post-implementation, in order to continue to deliver benefits in the long-term. What constitutes an acceptable period post-implementation for an intervention to be deemed as having been sustained varies\textsuperscript{xvi}, but a review of the empirical literature proposes a minimum period of two years post-initial\textsuperscript{[16]}. Given this evaluation only covers the 2-year period of the national programme, it is not possible to provide an analysis of the impacts of the national programme on the sustainability of ESCAPE-pain. Therefore, this section provides an overview of current planned activities by the AHSN Network beyond the 2-year funded national programme for the purpose of sustaining ESCAPE-pain.

However, as a crude measure of sustainability, 77.8% of sites continue to deliver ESCAPE-pain post-implementation (i.e. 260 deliver ESCAPE-pain out of a total of 334 sites known to have implemented the programme since the HIN began data monitoring in 2014).

4.1 The AHSN Network ESCAPE-pain national programme legacy planning

Formal planning for ‘closing down’ the national programme began around the end of Q2 of year 2 with each AHSN being asked about any plans for continuing work on ESCAPE-pain (and other national programmes) into 2020-2021. This was an internal discussion within each AHSN between senior managers and those leading on national programmes locally.

As of December 2019, 10-11 AHSNs are planning to continue to support ESCAPE-pain locally; albeit with a reduce level of resource (e.g. 0.2-0.4 WTE) and for most AHSN the focus will be on supporting existing sites. The reasons for AHSNs choosing to continue supporting ESCAPE-pain vary:

- A long lead-in time to build interest and momentum for ESCAPE-pain locally meant sites are only now starting to come online. Therefore, further on-going investment would realise a better return on investment to their work on ESCAPE-pain locally.
- Linked to the point above, some AHSNs want to achieve more even coverage across their region, building on existing strong local provision
- AHSNs want to manage the transition from national programme support to increase the likelihood of long-term sustainability. This is particularly the case for sites that received financial support/incentives to deliver the programme e.g. working with Sport England sites to develop sustainable financial model once programme funding is withdrawn

A small number of AHSN have decided to cease work on ESCAPE-pain in April 2020. Some AHSN report good geographical coverage across the region and well-established sites where ESCAPE-pain is embedded in local pathways and service and require no on-going support. Whereas, other AHSNs never got traction with ESCAPE-pain within their region (e.g. they experienced a ‘perfect storm’ of barriers), hence further investment of resources would be unlikely to yield further sites.

The current plan for resourcing ESCAPE-pain core team based in the HIN is continued funding from the AHSN Network up to June 2020 and HIN funding for a short period thereafter. The main purpose of the continued funding for the core team is to provide on-going support to AHSNs to help achieve 85% of the target number of completers for year 2 of the national programme.

As part of the AHSN national programme legacy, an offer of e-learning or online modules linked to the

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\textsuperscript{xvi} Some authors considered sustainability to be between 3-5 years after initial implementation\textsuperscript{[13]}. Whereas, others argued that an intervention can only be considered as sustained if implementation is complete and once the initial funding has been withdrawn\textsuperscript{[14,15]}. 

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national programmes has been made available via Health Education England. The ESCAPE-pain core team is still discussing how best to use the e-learning to fill the gap left by the regional AHSN support. Current ideas include, an e-module on how to implement ESCAPE-pain and an online module as a prerequisite to the face-to-face training, to help ensure people signing up to the training clearly understand the requirements of implementing and delivering the programme.

4.2 Forecasting the sustainability of ESCAPE-pain sites

The ESCAPE-pain core team has forecast the change in the number of sites (and participants) for the first year beyond the national programme (2020-2021), based on three different scenarios of on-going support:

- **Scenario 1** - The ESCAPE-pain core team at the HIN is resourced in Q1 only with no other AHSN supporting ESCAPE-pain locally. From Q2, no core team support for ESCAPE-pain sites. **Assumptions:** With no implementation, comms and data support to ESCAPE-pain sites and no training provision, the numbers will expect to drop steadily as ESCAPE-pain sites revert to deliver a general knee/hip class, or no group class at all. After Q1, the average participant number per site is likely to be much lower than in 2018/20 as there will be no support with referrals. No new sites will be expected to start as there will be no capacity to follow-up new interest and no training.

- **Scenario 2** - ESCAPE-pain core team resourced throughout 2020/21 with no other AHSN supporting ESCAPE-pain locally. **Assumptions:** There will still be a drop in the number of sites in Q1 and Q2 due to some Sport England-funded sites and other sites that had been pump-primed by AHSNs likely to stop delivering ESCAPE-pain. However, with continued support from the HIN core team the drop in the number of sites will be lessened. After Q2, the numbers are expected stabilise (based on 15% attrition rate and 15% growth). The average participant number per site is expected to be only slightly lower than in 2019/20.

- **Scenario 3** - In Q1 and Q2, local support from some AHSNs and the core team at the HIN. From Q2, support to HIN core team only. **Assumptions:** We can expect a smaller drop in the number of sites in Q1 and Q2 due to support from the HIN core team and local AHSNs more sites at risk will be able to continue. After Q2, the number of sites is expected to stabilise (based on 15% attrition rate and 15% growth). The average participant number per site is expected to be similar to the average in 2019/20.

Table 7 and Figure 8 outline the forecasted numbers for each scenario. All scenarios show a projected reduction in the number of sites (and participants) with best- and worst-case scenarios resulting in an annual reduction in sites from 24.5% (scenario 3) to 83% (scenario 1) by April 2021 (compared to April 2020).
Table 7 Forecasting the number of sites and participants in the first year beyond the national programme.

<table>
<thead>
<tr>
<th></th>
<th>Numbers for 2019-2020</th>
<th>Scenario 1: Core team Q1 only</th>
<th>Scenario 2: Core team 2020-2021 only</th>
<th>Scenario 3: Core &amp; local teams Q1&amp;2. Q3&amp;4 Core team only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. sites</td>
<td>No. participants</td>
<td>No. sites</td>
<td>No. participants</td>
</tr>
<tr>
<td>Q1</td>
<td>176</td>
<td>1574</td>
<td>210</td>
<td>1890</td>
</tr>
<tr>
<td>Q2</td>
<td>199</td>
<td>1926</td>
<td>155</td>
<td>1240</td>
</tr>
<tr>
<td>Q3</td>
<td>253</td>
<td>2352.9</td>
<td>100</td>
<td>800</td>
</tr>
<tr>
<td>Q4</td>
<td>265</td>
<td>2464.5</td>
<td>45</td>
<td>360</td>
</tr>
<tr>
<td>Total</td>
<td>8317.4</td>
<td>4290</td>
<td>6570</td>
<td>7812</td>
</tr>
</tbody>
</table>

Figure 8 Scenario forecasting for ESCAPE-pain sites and participants in 2020-2021
Conclusions

The approach to coordinating the AHSN national programme for ESCAPE-pain has been underpinned by developing a cohesive partnership between AHSNs via peer support and knowledge sharing. The core team at the HIN used a range of approaches that allowed it to share existing knowledge about spreading ESCAPE-pain and capture and share what emerged from the AHSN Network during the national programme (e.g. local contextual issues, strategies for local spread). These approaches comprised:

- Webinars
- Face-to-face learning network meetings
- Online collaborative platform (FutureNHS by Kahootz) – for storing and sharing resources and facilitating online discussion
- Developing and sharing resources (from the core team and other AHSNs)
- Inductions – face-to-face or via phone with AHSN colleagues leading on ESCAPE-pain within their region
- End of Y1 review and planning sessions
- Ad hoc advice and support (via phone, email or face-to-face) – throughout the national programme there has been on-going and regular ad hoc advice and support provided by the core team to AHSN colleagues working on ESCAPE-pain.

Locally, AHSNs encountered a range of factors that influenced their ability to implement ESCAPE-pain. Those factors that appear to be particularly critical relate to:

- Current commissioning arrangements that disincentivise providers from implementing evidence-based interventions like ESCAPE-pain because they do not deliver in-year reductions in activity levels or in-year cost-savings.
- Attitudes towards evidence and evidence-based practice (particularly amongst managers and senior clinicians) directly impacts on the uptake of ESCAPE-pain. Existing group-based programmes are unlikely to have the same level of evidence or return on investment that ESCAPE-pain offers. However, where these are in place local clinicians can be unwilling to replace their own programme with ESCAPE-pain.
- For non-NHS, community providers (e.g. leisure centres) a key challenge is lack of adequate referral pathways into their services. Whilst NHS MSK services are overwhelmed with referrals and typically have lengthy waiting time, non-NHS providers can struggle to recruit participants. This is compounded by poor links between NHS and non-NHS providers.

There is no one “right way” to spread ESCAPE-pain (one size does not fit all) and AHSNs have used a range of strategies in conjunction to support the implementation and spread of ESCAPE-pain within their regions. These approaches included:

- Developing stakeholder inter-relationships
- Using financial measures
- Training and education
- Providing interactive assistance
- Using evaluation and iterative strategies

AHSNs’ choice of strategies has been determined by a range of factors, such as the characteristics of providers (e.g. NHS, non-NHS community), the resources allocated within the AHSN to support work on ESCAPE-pain, and the wider system (e.g. (dis)engagement by commissioner and key strategic decision-makers). Determining and deploying appropriate strategies has required AHSNs to:

- Clarify their offer and level of resource available to support the local implementation of ESCAPE
• Determine the scope of focus to their work on ESCAPE-pain (i.e. targeting specific part of the system versus casing the net widely)
• Recognise the need for multifaceted approach that engages directly with providers, as well as at operating at a system level

The majority of the AHSNs have encountered some of the barriers above and have been able to develop strategies to work around them. A small number of AHSNs have encountered a ‘perfect storm’ of barriers (i.e. a culmination of too many barriers). As a result, there appears to be no viable strategies available to them and have struggled to get traction in their regions despite best efforts.

In summary:
• Implementing ESCAPE-pain at scale through the national AHSN programme has been a collective effort
  o Achieved via strong, strategic leadership from the national network of AHSNs and supported by large public sector bodies (NHS England, PHE) and a large third sector organisation (Versus Arthritis)
  o It has been a planned and managed process (with centralised coordination by the ESCAPE-pain core team at the HIN), but has also been non-linear and iterative
  o The process has required dedicated, sustained resources
• Demand for the programme, and capacity have increased as a result of discussion and collaboration across organisations, and evidence-sharing
  o Published evidence on clinical and cost effectiveness has been combined with professional tacit knowledge and networks across the system (i.e. providers and commissioners) to build consensus that there is a ‘problem’ with the management of OA and ESCAPE-pain offers a viable solution
  o Local champions and early adopters provide critically important local networks and credibility, which demonstrate ESCAPE-pain local relevance and effectiveness
  o Engaging with commissioners has been challenging (but possible in some instances)
• Throughout implementation, care has been taken to ensure fidelity to the programme, while enabling local adaptation
  o A key role of AHSNs is to work with local system to articulate what ESCAPE-pain is (active ingredients) and how to implement it
  o This knowledge has been packaged through resources and training, which forms a key strategy supporting spread by building capacity within the system
  o Spread is underpinned by testing and refining models of delivery within different settings (NHS and non-NHS), with different practitioners (clinical and non-clinical), and by creating new partnerships
  o Monitoring and quality assurance processes have been developed, demonstrating the national programme for ESCAPE-pain is achieving reach and maintaining quality successfully
• Monitoring, evaluation and knowledge exchange have been fundamental, and have generated learning about how to implement ESCAPE-pain across different practice settings and commissioning arrangements.
• Overall, sustainability is high, with 77.8% of sites continuing to deliver ESCAPE-pain post-implementation. However, forecasts for the sustainability of sites in the first year beyond the national programme predict an annual reduction ranging from 24.5% to 83%, depending on the on-going level of support provided by the AHSN Network.
Recommendaions

1. MSK commissioning arrangements are locally negotiated and, in some areas, can impede providers from implementing the programme. National MSK commissioning guidance that supports the adoption of NICE guidance and latest evidence would be optimal – giving a framework to commissioners to help them purchase evidence-based care. Providers need flexibility and support to introduce changes that improve care.

2. Local providers/commissioners should be encouraged to consider the evidence base for alternative group-based programmes and to explore whether adapting these to the ESCAPE-pain model would add value or a better return on investment (N.B. NICE guidance is not prescriptive and does not reflect latest evidence reviews).

3. ESCAPE-pain delivers personalised care that delivered long-term system-wide benefits, which fits well with the objectives of Integrated Care Systems. There are examples of CCGs commissioning leisure and community organisations to deliver ESCAPE-pain (as an alternative to NHS physiotherapy providers). This could be showcased as an example of effective outcome-focussed commissioning that also supports the spread and sustainability of interventions (like ESCAPE-pain) that deliver long-term, system-wide benefits.

4. Using ESCAPE-pain as an example, Integrated Care Systems could facilitate and encourage health professionals within the NHS to work more actively with leisure community providers through exercise-on-prescription or social prescribing or cross sector partnerships.

5. It is critical for national scale-up initiatives to be supported to develop strategies to sustain interventions post-implementation, in order to ensure patients and the systems continue to realise benefits and maximise return on investment. Consideration should be given to the role that existing system levers within NHS England (e.g. RightCare, Elective Care Transformation, incentive schemes etc.) can play in long term sustainability.
References


7. Walker, A. *Understanding the spread and sustainability of a complex intervention: an in-depth qualitative analysis.* (St George’s, University of London, 2018).


32. Simmons, R., Fajans, P. & Ghiron, L. Scaling up health service delivery: from pilot innovations to policies and programmes. (2007).


Appendices

Appendix 1: Resources developed to support AHSNs for the ESCAPE-pain national programme

Appendix 2: Models of delivery for ESCAPE-pain

Appendix 3: Commissioning models for ESCAPE-pain

Appendix 4: Quality Assurance Checklist

Appendix 5: Overview of evaluation methods
Appendix 1: Resources developed to support AHSNs for the ESCAPE-pain national programme

The following resources are stored and curated on the online collaborative platform (Kahootz) and available to all AHSN colleagues to support local efforts to implement ESCAPE-pain within their region.

ESCAPE-pain Resources for AHSNs (includes ESCAPE-pain resources for AHSNs supporting the spread of the ESCAPE-pain programme)
- ESCAPE-pain National Programme trajectory template - an example of the trajectory tool
- NICE OA recommendations and how ESCAPE-pain fulfils NICE guidelines - explains how ESCAPE-pain fulfils the NICE guidelines for the management of osteoarthritis. ESCAPE-pain Implementation guidance for AHSNs
- ESCAPE-pain Benefits Statement
- Spreading Evidence-based Interventions: What's the Evidence? - presentation about the evidence based for spreading evidence-based interventions

ESCAPE-pain Resources for Commissioners (includes ESCAPE-pain resources for Commissioners supporting the spread of the ESCAPE-pain programme)
- ESCAPE-pain Commissioners: FAQs – breaks down the economic analysis from the ESCAPE-pain trials into language suitable for commissioners
- ESCAPE-pain Cheaper by the dozen – outlines the reason for adhering to the 12 session format of ESCAPE-pain
- ESCAPE-pain Cost Saving Calculator – calculator that allow local OA prevalence data to be added to calculate potential savings and return on investment achieved by ESCAPE-pain
- Commissioning Case Study: Bexley CCG – provides a case studies by a commissioner about the value of implementing ESCAPE-pain
- ESCAPE-pain Infographic for Commissioners – providing key information about ESCAPE-pain for a commissioner audience

ESCAPE-pain Resources for Providers (contains implementation and marketing resources for providers interested in setting up or currently running the ESCAPE-pain programme)
- Implementation Toolkit – provides the key information required by organisations that want to implement and deliver ESCAPE-pain
- Cheltenham case study – a case study for a partnership between NHS physiotherapy and leisure sector to deliver ESCAPE-pain
- Leisure Sector Model: FAQs and case-studies – summarises findings coming from the ESCAPE-pain in community settings evaluation funded by Sport England

Participant Engagement (contains information on participant perspectives and experiences of ESCAPE-pain)
- ESCAPE-pain Participant Feedback Report – an analysis of participant perspectives and experiences of ESCAPE-pain
- Participant Feedback: quotes – direct quotes from participants about their experiences

Marketing Resources (contains template leaflets, posters, and other marketing materials for
ESCAPE-pain sites

- ESCAPE-pain Patient Infographic
- ESCAPE-pain A4 poster Word template
- ESCAPE-pain A3 poster Word template
- ESCAPE-pain A4 tri-fold leaflet Word template
- ESCAPE-pain Participant Welcome email
- ESCAPE-pain Participant feedback template
- ESCAPE-pain Recruitment and retention
- ESCAPE-pain Promotion Checklist
- ESCAPE-pain Participant Certificate
- Information for Referrers
- The Telegraph_12 October 2017_The Pathway Approach_Mary's Knees
- Segmenting your market/communication plans - Sport England and NHS London worked with the Henley Centre to develop insight into how to market to 19 market segments identified by Sport England.
- ESCAPE-pain logo
- Health Innovation Network logo
- Versus Arthritis logo
- Versus Arthritis Logo Guidelines - Please refer to these guidelines when using the Versus Arthritis logo.

Filming / Case study Resources

For those of you considering producing your own promotional videos/case studies we wanted to share with you resources we created in order to produce some short videos. These are currently being edited and will be available for you to use in the coming weeks. In this folder we’ve also included links to a selection of videos that have been produced by various ESCAPE-pain sites and the HIN so that you can see how others have done it!

- ESCAPE-pain Participant Case Study: Regina - Regina attended the ESCAPE-pain programme run by Mytime Active. Hear how the programme helped her gain her independence back and enabled her to become physically active again - going from relying on a wheelchair to joining a Zumba class.
- ESCAPE-pain Participant Case Study: Gillian - Gillian attended the ESCAPE-pain programme run by Mytime Active. Hear how the programme helped her realise she could help herself and how she took control of her condition using the self-management tips and tools she learnt whilst on the six-week programme.
- Better Care For Osteoarthritis: The ESCAPE-pain programme - Hear from Everybody Sport & Recreation Limited participants and facilitators about their experiences of the ESCAPE-pain programme.
- NHS Trust first in the country to translate ‘ESCAPE-pain’ chronic joint pain programme into Gujarati - Physiotherapists at London North West University Healthcare NHS Trust have successfully translated a rehabilitation programme for patients with chronic knee and hip pain into Gujarati for the first time.
- What is osteoarthritis? – video by Versus Arthritis about OA
• Barnsley Community Musculoskeletal ESCAPE-pain programme - Hear from Barnsley patients and physiotherapists about their experiences of the ESCAPE-pain programme
• ESCAPE-pain classes have changed our customers life - Participants at Everybody Leisure in Crewe feedback on their experience of attending the ESCAPE-pain programme
• Participants discuss benefits of ESCAPE-pain - Thousands of people have completed the ESCAPE-pain programme. Hear from past participants about how the programme has helped their pain.
• Physiotherapists discuss ESCAPE-pain
• Professor Michael Hurley discusses ESCAPE-pain
• Introduction to ESCAPE-pain
• ESCAPE-pain examples of case study questions
• ESCAPE-pain filming plan
• ESCAPE-pain Crew Call sheet

Endorsements
• ESCAPE-pain Endorsements & Awards – document listing all endorsements and awards for ESCAPE-pain
## Appendix 2: Models of delivery for ESCAPE-pain

<table>
<thead>
<tr>
<th>Name</th>
<th>Provider type</th>
<th>Delivery location</th>
<th>Facilitator (profession)</th>
<th>Referral / recruitment route</th>
<th>Funding mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lewisham and Greenwich NHS Trust</td>
<td>NHS acute trust</td>
<td>Acute hospital – MSK outpatients department</td>
<td>Physiotherapist and therapy assistant</td>
<td>NHS MSK pathway</td>
<td>CCG group tariff; sub-contracted by MSK prime provider</td>
</tr>
<tr>
<td>Gloucestershire Hospitals NHS FT &amp; The Cheltenham Trust</td>
<td>NHS acute trust + Community leisure trust</td>
<td>Leisure centre</td>
<td>Physiotherapist (B6/B5) + Exercise instructor</td>
<td>NHS MSK pathway</td>
<td>CCG MSK service; leisure provider contributes venue + staff</td>
</tr>
<tr>
<td>North West Boroughs FT &amp; St Helens Borough Council</td>
<td>NHS mental health / community trust + Public Health Dept. (LA)</td>
<td>(1) Community hall; (2) hospital MSK outpatients department</td>
<td>(1) Exercise instructor + physiotherapist; (2) physiotherapist (B5 or B6)</td>
<td>NHS MSK pathway (includes self-referral)</td>
<td>(1) Public Health Dept. (2) CCG MSK service</td>
</tr>
<tr>
<td>GP practice, Winchester City Council &amp; Places Leisure</td>
<td>Community leisure operator + Public Health Dept.</td>
<td>Leisure centre</td>
<td>Exercise instructor</td>
<td>GP exercise on referral scheme ‘Active Lifestyles’</td>
<td>Fee for service (£36 in total)</td>
</tr>
</tbody>
</table>
## Appendix 3: Commissioning models for ESCAPE-pain

<table>
<thead>
<tr>
<th>Site(s)</th>
<th>Provider organisation</th>
<th>Funding model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnet Hospital</td>
<td>Royal Free NHS Trust</td>
<td>No specific commissioning agreements – incorporated within existing CCG contract. Provider decision to implement as an evidence-based, quality intervention</td>
</tr>
<tr>
<td>Caterham Dene Hospital</td>
<td>First Community Health and Care (employee-owned social enterprise)</td>
<td>Block contract with CCG. No specific commissioning agreements. Provider decision to implement as an evidence-based, quality intervention</td>
</tr>
<tr>
<td>Croydon University Hospital</td>
<td>Croydon Health</td>
<td>Block contract with CCG. No specific commissioning agreements. Provider decision to implement as an evidence-based, quality intervention</td>
</tr>
<tr>
<td>Erith &amp; District Hospital, Queen Mary’s Sidcup</td>
<td>Oxleas NHS Foundation Trust</td>
<td>ESCAPE-pain a KPI in the MSK contract. King's Hospital held the main Bexley MSK contract and sub-contract the therapies service to Oxleas.</td>
</tr>
<tr>
<td>Queen Victoria Hospital</td>
<td>Queen Victoria NHS Trust</td>
<td>Charged to GPs. Charge the same for ESCAPE-pain class as we do for a follow-up.</td>
</tr>
<tr>
<td>St George's Hospital / St John's Therapy centre</td>
<td>St George's Hospitals NHS FT</td>
<td>Tariff contract – high tariff for new patient appointments than follow up.</td>
</tr>
<tr>
<td>University Hospital Lewisim and Queen Elizabeth Hospital</td>
<td>Lewisham &amp; Greenwich NHS Trust</td>
<td>Tariff contract with a specific group rate. This rate differs between UHL and QEH. QEH service is sub-contracted by Circle MSK (who hold the commissioning budget for MSK in Greenwich).</td>
</tr>
<tr>
<td>Brent CCG</td>
<td>Commissioner</td>
<td>Business Care submitted to the board and approved for 610 patients to be put through ESCAPE-pain to trigger significant savings.</td>
</tr>
<tr>
<td>Canterbury and Coastal CCG</td>
<td>Commissioner</td>
<td>ESCAPE-pain was included in MSK specifications and paid at £260 per group</td>
</tr>
<tr>
<td>South Lincolnshire CCG</td>
<td>Commissioner</td>
<td>ESCAPE-pain pilot in MSK specification. Providers were paid a fix tariff for entire episode of care (rather than a per contact or group tariff)</td>
</tr>
<tr>
<td>Cheltenham Hospital (in partnership with Cheltenham Trust)</td>
<td>Gloucestershire Hospitals NHS Trust</td>
<td>Classes co-facilitated by physiotherapists and fitness instructors in leisure centre. NHS provider is paid via CCG contract (on a tariff). Leisure centre provide staff and venue free of charge based on cost recovery model of 2-3 participants becoming members post-programme</td>
</tr>
</tbody>
</table>
| Walnuts Leisure Centre                   | MyTime Active                                              | Fee for service (charge £40) but giving a refund if the participant completes the programme. The £40 can be used to sign up for a membership or cash refunded.
| Everybody Sport and Recreation (East Cheshire) | Everybody Sport and Recreation                            | Business case to CCG approved for a 1-year pilot with the possibility to extend for a further three years |
| New Street Health Centre (Barnsley CCG)  | South West Yorkshire Partnership NHS foundation trust      | CCG put ESCAPE-pain in the tender specification as a required intervention to deliver within the contract. |
Appendix 4: Quality Assurance Checklist

The QA checklist is self-reported and asks sites to provide:

1. Confirmation of adherence to 'Core Four' tenets of ESCAPE-pain
   a. Two sessions per week over five or six weeks (sites will be required to declare the number of sessions being delivered)
   b. Each session includes an exercise and education component
   c. Each group of participants begins and ends the programme together
   d. Collection and sharing of clinical outcome data
2. Name of facilitator(s) delivering the programme
3. Date of last cohort delivered
4. Free text for the site to identify any areas of concern or request for additional support
Appendix 5: Overview of evaluation methods

The evaluation was undertaken by the Health Innovation Network and took an ethnographic approach, which comprised combining qualitative sources (i.e. participant observations, interviews and documentation) and quantitative data routinely collected by the Health Innovation Network (HIN).

Routinely collected quantitative data by the HIN included:
- Number, location and description/type of sites and provider organisations
- Number and profession of trained facilitators
- Number of participants and cohorts of ESCAPE-pain
- Patient reported outcome measures (i.e. KOOS, HOOS, shorten Warwick-Edinburgh Wellbeing Scale)

The south London’s Academic Health Science Network (also known as the Health Innovation Network, or HIN) is leading on the coordination of the national spread of ESCAPE-pain. It is working with 14 other AHSNs to support the spread of ESCAPE-pain within each AHSN’s locally area. Each of the 14 other AHSNs has some dedicated project management resource to support the local spread of ESCAPE-pain. There are no defined rules for sample size in qualitative research or minimum periods of observation in ethnographic methods\(^\text{37-39}\). However, ethnographic approaches typically require fieldwork over a period of months with a small number of participants\(^\text{37,40}\). The evaluator was embedded within the HIN and participated in AHSN Network’s work related to ESCAPE-pain. Most interaction between the HIN and other AHSNs is via webinars/teleconference, email, and phone. There were occasional face-to-face meetings, which were typically hosted by the HIN.

The evaluation utilised a range of qualitative data collection methods to provide richer evidence and allow triangulation of the data:
- Observations - the evaluator adopted a participant observer role and used field-notes to record, reflect and expand upon what occurred during observations. The evaluator observed meetings and ad hoc discussions relating to the AHSNs’ work on ESCAPE-pain (e.g. team meetings, planning meetings, webinars).
- Documentation - documentation relating to the AHSNs work on ESCAPE-pain were collected (e.g. presentations, strategy and planning documents). The evaluator had direct access to much of the relevant documentation.
- Interviews - the evaluator interviewed key staff from the HIN involved in the development and delivery of work relating to ESCAPE-pain periodically during the evaluation\(^\text{10}\). These interviews with HIN staff were face-to-face and a mix of one-to-one or paired interviews (where appropriate). The interviews were used to augment the observation and documentation (e.g. clarify and explore issues identified or maps/identify key documentation. The spacing of a series of interviews over the period of the study is to help examine the temporal and dynamic nature of the AHSNs’ work in spreading ESCAPE-pain. The evaluation obtained AHSN colleagues’ perspectives from the numerous meetings/interactions relating to ESCAPE-pain (e.g. webinars, learning networks, end of year 1 review meetings/calls).

Quantitative data were analysed using descriptive and inferential statistical methods. The analysis of qualitative data draws out key themes relating to the national programme. To provide structure to the analysis key frameworks from the field of implementation science are used to explore:
- Key factors (or determinants) influencing the implementation of ESCAPE-pain i.e. the Consolidated Framework for Implementation Research\(^\text{29}\)
- Strategies to support the implementation of ESCAPE-pain i.e. ERIC strategies\(^\text{30}\)