

Cheaper (and more effective) by the dozen: The rationale for 12 sessions

What is ESCAPE-pain?

Enabling Self-management and Coping of Arthritic Pain through Exercise (ESCAPE-pain) is a rehabilitation programme for people with chronic joint knee and hip pain. It has a robust evidence-base showing it produces [sustained improvements in clinical outcome, reduces costs and is easy to implement](#). ESCAPE-pain comprises 12 sessions of structured education and exercise over a 6-week period. Participants typically attend in groups of 8-10 people, so it is an efficient way to treat the many sufferers of this condition, and manage pressure on waiting lists for physiotherapy.

ESCAPE-pain was featured as a [NICE QIPP](#) case study as a proven intervention that improves quality and productivity across the NHS and social care, and is supported by NHS [RightCare](#). However, some commissioners and providers question the length of ESCAPE-pain and how this effects cost, recruitment, and retention. This resource explains why it is important to deliver 12 sessions.

Can I reduce the number of sessions and still be effective?

No. ESCAPE-pain was designed to deliver care in line with evidence-based recommendations for both exercise and patient education. Moreover, rigorous systematic reviews show that exercise programmes comprised of [at least 12 exercise sessions produce much larger improvements in pain and physical function than programmes with fewer than 12 sessions](#) (1).

Wouldn't a shorter programme be much cheaper and save time and money?

Cutting down the number of sessions may give marginal, short-term cost savings, but it [will not](#) give you the programme's [sustained clinical benefits](#) or [health and social care savings](#).

The ESCAPE-pain programme

- costs only [£125/person](#) (2)
- [reduces NHS costs almost half](#) (3)
- is [less than half the cost of out-patient physiotherapy](#) (3)
- has high probability of being [more cost-effective](#) than usual care (2)
- has [sustained benefits](#) (4)
- [substantial cost savings](#) in total health and social care, community care and medication (4)
- may [reduce the need for or delay joint surgery](#) (5)

Will people come on to and stay on the programme?

Programme participants' feedback is that [attending 12 sessions is an overwhelmingly positive experience](#) (6). They tell us that the programme facilitates:

- [Deeper understanding](#) of the programme and its aims
- [Patient engagement](#) - which is reflected in [low attrition rates](#)
- Better [quality discussion and shared learning](#)
- Acquiring an "exercise habit"
- [Improves self-management](#)

Note: Programmes that do not follow the format of ESCAPE-pain (e.g. 12 sessions over 6 weeks with exercise and education) cannot be justified by using the ESCAPE-pain evidence-base.

Detailed information and evidence

Note: The financial values stated below are as quoted in the published research papers to allow the reader to cross-reference more easily to these original sources. For updated financial figures, please refer to the [ESCAPE-pain cost saving and return on investment calculator](#).

- 1) When delivering exercise rehabilitation programmes for osteoarthritis (OA)/chronic joint pain, it is crucial to provide sufficient exercise to stimulate improvement in pain and function. A systematic review with meta-analyses highlighted a positive dose-response between the number of supervised exercise sessions and improvements in pain and disability - for every additional 10 exercise sessions the pain relief effect size increased by more than 0.2 (Juhl et al 2014). In addition, a Cochrane Review showed that interventions comprised of at least 12 exercise sessions produce much larger improvements in pain ($p=0.03$) and physical function ($p=0.02$) than interventions that have fewer than 12 sessions (Fransen et al 2015).
- 2) Although ESCAPE-pain has small cost implications, there is a high probability it is more cost-effective than usual primary care (Hurley et al 2007a) and out-patient physiotherapy (Jessep et al 2009). Robust economic evaluation estimates the cost (2004 prices) of delivering the ESCAPE-pain programme to groups of eight people is about £125/person, which can be reduced to £95/person if delivered by a junior therapist (Hurley 2007b).
- 3) Compared to outpatient physiotherapy ESCAPE-pain has similar clinical outcomes. However, the cost of ESCAPE-pain is less than half that of physiotherapy (£64 versus £160 respectively), and the total NHS costs of people who had undertaken the ESCAPE-pain programme (£320) were almost half the NHS costs incurred by people who had had physiotherapy (£583), largely due to reduction in secondary care services in the year following completion of the programme (Jessep et al 2009).
- 4) Thirty months after completing ESCAPE-pain, participants had sustained improvements in physical function (Hurley et al 2012), lower community-based health care costs, medication costs, and total health and social care costs compared to usual primary care, as well as a very high probability (80–100%) of being more cost effective (Hurley et al 2012).

As community-based services and medications are the resources most frequently used by people with chronic joint pain, extrapolating these figures to the large number of people with joint pain could result in substantial healthcare savings.

5) Although avoidance of knee/hip surgery has not been an outcome we have measured, programmes similar to ESCAPE-pain have been shown to reduce the need for joint replacement. A study people with hip OA who underwent a 12-week programme of exercise and patient education, very similar to ESCAPE-pain showed the programme maintained better physical function ($p=0.004$), reduced the need for surgical hip replacement by 44% ($p=0.034$) and delayed hip replacement by 2 years, compared with those who had education only (Svege et al 2015). In addition, Pisters et al found the probability for hip replacement was 2.87 times higher in the usual care group compared to people who had undertaken individually tailored exercise. Therefore exercise-based intervention may reduce the need for joint replacement.

6) We have shown how people's understanding of their condition, health beliefs and attitudes about exercise and its role in the management of joint pain change during their participation on ESCAPE-pain (Hurley et al 2010). Attendance and retention is not a major issue. In clinical departments the completion rate is 85% with 80% attendance of the sessions. This is reflected in the positive participant feedback:

"...I am much more mobile and it has been most beneficial to have 2 sessions per week for 6 weeks."

"...the twice weekly sessions and the length of the course helped build up the HABIT of exercise..."

"...it allowed me to exercise and diet independently..."

"...it has given me confidence - I feel less pain and I can look after my knee..."

The ESCAPE-pain programme is an intervention for people with knee osteoarthritis developed by Professor Mike Hurley. The programme is hosted by the Health Innovation Network and supported by NHS England and Versus Arthritis. July 2018

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