Clinical Evidence Review

Date of Review: June 2025
Reviewer: Dr T Gillam, Consultant in Public Health Medicine

Policy for Surgical Release of Trigger Finger in Lancashire and South Cumbria

(link to current Commissioning Statement)

Why is the policy needed?
To manage inappropriate referral and procedure activity in line with evidence-based best practice.

Summary of proposed policy/changes:
Addition of a requirement that there should be symptoms that interfere with activities or pain. Requirement for 'up to two' steroid injections has been changed to 'one or two' as per the EBI guidance. Removal of criterion around diabetes.

Existing Policy Statements/Criterion	Recommended Policy Statements/Criterion
1.1 The ICB will commission the surgical release of trigger finger when one or more of the following criteria are met: 1.2 1.2.1 The patient has failed to respond to up to two steroid injections **OR** 1.2.2 The patient has failed to respond to splinting of the affected finger for a period between 3-12 weeks **OR** 1.2.3 Triggering has recurred after splinting or injection treatment **OR** 1.2.4 Patient has fixed deformity that cannot be corrected **OR** 1.2.5 The patient has previously had 2 other trigger digits unsuccessfully treated with appropriate non-operative methods **OR** 1.2.6 The patient is diabetic.	The ICB will commission the surgical release of trigger finger when symptoms interfere with activities or cause pain and one or more of the following criteria are met: The patient has failed to respond to one or two steroid injections, or steroid injections are contraindicated. **OR** The patient has failed to respond to splinting of the affected finger for a period between 3-12 weeks. **OR** Triggering has recurred after splinting or injection treatment. **OR** The patient has fixed deformity. **OR** The patient has previously had 2 other trigger digits unsuccessfully treated with appropriate non-operative methods. **OR** The patient has multiple trigger digits.

Incidence (number of patients per 100,000 per year) and prevalence (number of patients per 100,000 population at any one time) findings:
The incidence of trigger finger is estimated to be 28 per 100,000 population annually, with a lifetime risk of 2.6% [1]

Summary of Findings:
Evidence Based Interventions (EBI) guidance on this subject was published in 2019. This was based on earlier guidance from the British Society for Surgery of the Hand Evidence for Surgical Treatment (BEST) published in 2016, a Cochrane review and other research evidence. The principle of both the EBI and BEST guidance was that conservative treatments should be tried before surgery for patients with mild or moderate symptoms.

For the present review, a search was conducted for evidence in relation to surgical release of trigger finger. A database search was conducted for evidence published since the EBI guidance was written (see below). A search engine and the NICE, Cochrane, Royal College of Surgeons, British Society for Surgery of the Hand, and American Society for Surgery of the Hand websites were also searched for guidance published since 2018.

Guidance
The EBI and BEST guidance remain the relevant UK guidance on this subject. They differ slightly in their recommendations. The BEST guidance recommends using steroid and local anaesthetic injection as first line treatment for trigger finger. The EBI guidance, however, only recommends steroid injections. The reason for the discrepancy is not explained, but may be due to the availability of evidence that anaesthetic in addition to steroid does not result in less pain [2]. The BEST guidance also does not make any specific recommendation regarding diabetes, unlike the EBI guidance which states that diabetes is an indication for immediate surgery. Finally, while the EBI guidance recommends the use of splints, the BEST guidance acknowledges that splints may provide short-term relief but does not make any explicit clinical practice recommendation. Both pieces of guidance support the use of steroid injections as first line therapy, and either percutaneous or open techniques for those requiring surgery. The EBI guidance is explicit that patients should receive only one or two steroid injections [1, 3].

The research evidence published since the EBI guidance was written supports its recommendations on using steroid injections as first-line therapy for trigger finger. In general, the efficacy of steroid injections continues to be reasonably high. A large, retrospective cohort study from the US published in 2023 found that overall, steroid injections were effective 66.3% of the time. Second and third injections continued to be effective even if the first injection failed [4]. A 2021 study of over 30,000 patients in a large US health insurance database found that 83.9% of patients only required a single injection. 10.7% progressed to surgery [5].

A 2020 meta-analysis of treatments for trigger finger found short term benefits of steroid compared to placebo, but there were limited data for long-term outcomes. Steroid injections performed better than physiotherapy at 3-months, but there were no data beyond this. Steroids had better outcomes than NSAIDs at 6 weeks, but this finding was not sustained at longer-term follow-up [6]. A 2021 Cochrane review reported the findings of two RCTs, which found that injected NSAIDs offered little to no benefit compared to steroids [7].

A 2025 RCT compared night splints, steroid injection and combined therapy for 104 patients with trigger finger. Overall, conservative management was successful in 68.9% of patients. Just over half the patients in the splint alone group had resolution of symptoms with no further management and no

recurrence at one year. The study also found that combined therapy did not add further benefit to steroids alone [8]. A 2023 RCT similarly compared splint; steroid injection and combined treatment in 120 adults and reported no clinically important differences between groups [9].

A 2023 systematic review of orthotics for trigger finger found that all included studies noted significant improvements in pain and function, however, there was a lack of high quality evidence comparing orthosis to other conservative management options [10].

Surgery
A meta-analysis published in 2020 found that surgery was more effective than steroid injections at all time points, with no significant differences in outcomes between open and percutaneous surgery [6].

Risk factors for treatment failure
A large cohort study, published in 2021, examined risk factors associated with progression to surgical release after injection for trigger digit. 45% of included patients had diabetes mellitus and there was no association between diabetes and increased risk of surgery. The authors suggest that the reason the study found no association between diabetes and risk of surgery was its ability to account for the confounding factor of multiple digit involvement [5].

A second large cohort study, published in 2023, reported that obesity, tobacco use, carpal tunnel and hypothyroidism were significantly associated with failure of a first steroid injection. Carpal tunnel syndrome was associated with second injection failure and obesity and carpal tunnel were associated with third injection failure. There was no significant association between diabetes and injection failure [4]. Both studies took data from large US insurance databases and included around 30,000 individuals.

A 2023 observational study of 723 patients reported that recurrence following surgery was 2.39% overall, but significantly higher for patients who had received more than three steroid injections prior to surgery. This effect remained after adjustment for measures of disease severity [11]. A cohort study performed in 2022 also noted a similar finding, reporting that three or more steroid injections were associated with an increased risk of complications, including recurrence. The same study reported that 16% of subjects experienced a complication, most of which were mild. Longer duration of symptoms; a steroid injection within 3 months prior to surgery; three or more pre-operative steroid injections; and treatment of the dominant hand, index finger or middle finger were associated with significantly higher odds of complications. There was no association between diabetes diagnosis and complications. The authors speculate that the reason for the lack of association was that patients with multiple trigger digits were excluded [12].

Conclusions
The evidence continues to support steroid injections as first line therapy for trigger finger. It also supports the requirement to give no more than two injections, to avoid the risk of complications. The research evidence suggests that splints are a reasonable alternative to steroid injections.

Recent large cohort studies have found that diabetes mellitus is not significantly associated with steroid injection failure. The BEST guidance makes no recommendation regarding diabetes, but the EBI guidance recommends that diabetes should be an indication for surgery without prior conservative

therapy. The relevant reference in the EBI guidance is a 2018 systematic review, which found much higher treatment failure rates in diabetics, particularly insulin-dependent diabetics, though only for those receiving three steroid injections. For subjects receiving only one injection, there was no significant difference in failure rates between diabetics and non-diabetics. The review was based on five studies including 830 digits; included studies were small and all were observational except one RCT including 48 digits. [13]. The EBI guidance also cites a 2015 cohort study including 795 digits, which, like the cohort studies in the present review, found no association between diabetes and complications, including recurrence [14]. Some authors have concluded that the reason for the variation in findings may relate to the confounding factor of multiple digit involvement, which is more common in diabetes and makes treatment failure more likely. It is worth considering removing diabetes as a criterion. It is also worth considering replacing it with phrasing relating to multiple digit involvement or disease severity.

References:

1. *Evidence based management of adult trigger digits*. British Society for Surgery of the Hand Evidence for Surgical Treatment (BEST); 2016; Available from: https://www.bssh.ac.uk/_userfiles/pages/files/professionals/BEST%20Guidelines/BEST%20trigger%20finger%20PUBLISHED(1).pdf. [Accessed 10th June 2025]
2. Patrinely, J.R., Jr., S.P. Johnson, and B.C. Drolet, *Trigger Finger Corticosteroid Injection With and Without Local Anesthetic: A Randomized, Double-Blind Controlled Trial.* Hand (N Y), 2021. **16**(5): p. 619-623.
3. *Trigger finger release in adults*. Academy of Medical Royal Colleges Evidence Based Interventions Programme; 2019; Available from: https://ebi.aomrc.org.uk/interventions/trigger-finger-release-in-adults/. [Accessed 10th June 2025]
4. Lewis, J., et al., *National Benchmarks for the Efficacy of Trigger Finger and the Risk Factors Associated With Failure.* J Am Acad Orthop Surg Glob Res Rev, 2023. **7**(2).
5. Kang, H.P., et al., *Risk Factors Associated With Progression to Surgical Release After Injection of Trigger Digits.* JAAOS Global Research & Reviews, 2021. **5**(7): p. e20.00159.
6. Shen, P.C., et al., *Comparative effectiveness of various treatment strategies for trigger finger by pairwise meta-analysis.* Clin Rehabil, 2020. **34**(9): p. 1217-1229.
7. Leow, M.Q., et al., *Non-steroidal anti-inflammatory drugs (NSAIDs) for trigger finger.* Cochrane Database of Systematic Reviews, 2021(4).
8. Minkhorst, K., et al., *Does orthosis improve outcomes of conservative treatment in trigger fingers? A three-arm prospective randomized controlled trial.* Archives of Physical Medicine and Rehabilitation.
9. Atthakomol, P., et al., *Are There Differences in Pain Reduction and Functional Improvement Among Splint Alone, Steroid Alone, and Combination for the Treatment of Adults With Trigger Finger?* Clin Orthop Relat Res, 2023. **481**(11): p. 2281-2294.
10. Leong, L., et al., *Orthotic intervention options to non-surgically manage adult and pediatric trigger finger: A systematic review.* Journal of Hand Therapy, 2023. **36**(2): p. 302-315.
11. Atthakomol, P., et al., *Prognostic factors related to recurrence of trigger finger after open surgical release in adults.* J Plast Reconstr Aesthet Surg, 2023. **83**: p. 352-357.

12. Koopman, J.E., et al., *Complications and Functional Outcomes following Trigger Finger Release: A Cohort Study of 1879 Patients.* Plast Reconstr Surg, 2022. **150**(5): p. 1015-1024.
13. Chao-Jui, C., et al., *A Meta-analysis of Corticosteroid Injection for Trigger Digits Among Patients With Diabetes.* Orthopedics (Online), 2018. **41**(1): p. 8-14.
14. Everding, N.G., et al., *Risk factors for complications of open trigger finger release.* Hand (N Y), 2015. **10**(2): p. 297-300.
15. Zhuang, T., et al., *A Cost-Effectiveness Analysis of Corticosteroid Injections and Open Surgical Release for Trigger Finger.* J Hand Surg Am, 2020. **45**(7): p. 597-609.e7.