Cohere Medical Policy -
Shoulder Manipulation Under Anesthesia (MUA)

Clinical Policy for Medical Necessity Review

Version: 2
Cohere Health UMC Approval Date: July 24, 2025
Last Annual Review: July 24, 2025
Revision: Not applicable
Next Annual Review: July 24, 2026

Important Notices

Notices & Disclaimers:

GUIDELINES ARE SOLELY FOR COHERE'S USE IN PERFORMING MEDICAL NECESSITY REVIEWS AND ARE NOT INTENDED TO INFORM OR ALTER CLINICAL DECISION-MAKING OF END USERS.

Cohere Health, Inc. ("**Cohere**") has published these clinical guidelines to determine the medical necessity of services (the "**Guidelines**") for informational purposes only, and solely for use by Cohere's authorized "**End Users**". These Guidelines (and any attachments or linked third-party content) are not intended to be a substitute for medical advice, diagnosis, or treatment directed by an appropriately licensed healthcare professional. These Guidelines are not in any way intended to support clinical decision-making of any kind; their sole purpose and intended use is to summarize certain criteria Cohere may use when reviewing the medical necessity of any service requests submitted to Cohere by End Users. Always seek the advice of a qualified healthcare professional regarding any medical questions, treatment decisions, or other clinical guidance. The Guidelines, including any attachments or linked content, are subject to change at any time without notice.

Other Notices:

Policy Information:

Specialty Area: Musculoskeletal Care
Policy Name: Cohere Medical Policy - Shoulder Manipulation Under Anesthesia (MUA)
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Shoulder Manipulation Under Anesthesia (MUA)

Cohere Health takes an evidence-based approach to reviewing imaging and procedure requests, meaning that sufficient clinical information must be provided at the time of submission to determine medical necessity. Documentation must include a recent and detailed history, physical examination related to the onset or change in symptoms, relevant lab results, prior imaging, and details of previous treatments. Advanced imaging or procedures should be requested after a clinical evaluation by the treating provider, which may include referral to a specialist.

- When a specific clinical indication is not explicitly addressed in the Cohere Health medical policy, medical necessity will be determined based on established clinical best practices, as supported by evidence-based literature, peer-reviewed sources, professional society guidelines, and state or national recommendations, unless otherwise directed by the health plan.
- Requests submitted without clinical documentation, or those that do not align with the provided clinical information—such as mismatched procedure, laterality, body part, or CPT code—may be denied for lack of medical necessity due to insufficient or inconsistent clinical information.
- When there are multiple diagnostic or therapeutic procedures requested simultaneously or within the past three months, each will be reviewed independently. Clinical documentation must clearly justify all of the following:
    - The medical necessity of each individual request
    - Why prior imaging or procedures were inconclusive, or why additional/follow-up studies are needed
    - How the results will impact patient management or treatment decisions
- Requests involving adjacent or contiguous body parts may be considered not medically necessary if the documentation demonstrates that the

patient's primary symptoms can be adequately assessed with a single study or procedure.

Description

Shoulder manipulation under anesthesia (MUA) is a non-invasive procedure used to improve mobility in patients with frozen shoulder contracture syndrome–an inflammation of the subacromial bursa resulting in pain and restrictions in movement.[1-4] During the procedure, performed under anesthesia, the shoulder of the patient is stretched and manipulated through the joint's full range of motion. The procedure is immediately followed by physiotherapy.[5-7]

Medical Necessity Criteria

Indications

Shoulder manipulation under anesthesia (MUA) is considered appropriate if **ALL** of the following are **TRUE**[1,2,7-9]:

- The patient has had clinical signs and symptoms of adhesive capsulitis (frozen shoulder) for at least 3 months; **AND**
- Failure of conservative management for greater than 3 months, including **ALL** of the following:
  - Anti-inflammatory medications, non-opioid analgesics, or prescription medications (e.g., oral steroids, neuropathic pain medications) if not contraindicated; **AND**
  - Physical therapy or a physician-directed home exercise program; **AND**
  - **ANY** of the following:
    - Corticosteroid injection if medically appropriate; **OR**
    - Documentation that corticosteroid injection is contraindicated; **AND**
- Significant and documented loss of motion compared to the contralateral shoulder (forward flexion less than 110°, external rotation less than 50°)[3,10]; **AND**
- Imaging findings do not identify other shoulder pathology as the primary source of the symptoms (e.g., severe arthritis).

Non-Indications

Shoulder manipulation under anesthesia (MUA) is not considered appropriate if **ANY** of the following is **TRUE**[11]:

- Severe osteoporosis.

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
23700	Manipulation under anesthesia, shoulder joint, including application of fixation apparatus (dislocation excluded)

Medical Evidence

Kraal et al. (2023) conducted a randomized control trial (RCT) to assess the effectiveness of Manipulation Under Anesthesia (MUA) followed by physiotherapy (PT) compared to PT alone in treating stage 2 Frozen Shoulder (FS). The trial involved 82 patients - both groups showed significant improvement in outcomes at the one-year follow-up, including Shoulder Pain and Disability Index (SPADI) scores, Oxford Shoulder Score, pain, range of motion (ROM), and quality of life. However, MUA improved SPADI scores faster at three months and showed significantly better increases in anteflexion and abduction ROM throughout the follow-up period. No significant complications were reported in either group. The authors concluded that MUA can be considered safe and leads to a quicker recovery of ROM and improved functional outcomes compared to PT alone in the short term, but after one year, the results of MUA are comparable to PT, with slightly better ROM scores for MUA.[2]

Fairclough et al. (2023) performed a retrospective analysis to examine the long-term outcomes of MUA as a treatment for frozen shoulder (FS). The study included 398 shoulders treated between 1999 and 2010, with complete data available for 240 shoulders. The findings indicate that at a mean follow-up of 13.2 years, the majority (71.3%) had no symptoms, 16.6% had minor, and 12.1% had significant symptoms. Only a small percentage experienced a recurrence of FS or required repeat MUA. Additionally, the development of other shoulder problems, such as rotator cuff pathology or shoulder osteoarthritis, was relatively low and comparable to that of the general population. Overall, research shows that MUA for FS yields favorable long-term outcomes, with few instances of recurrence and no significant increase in the development of other shoulder issues.[8]

A clinical study, performed by Takahashi et al. (2020), compared the results of shoulder manipulation under ultrasound-guided cervical nerve root block among patients with diabetes mellitus (DM) and patients without the metabolic condition. While both groups saw significant improvements in several measures, including forward flexion, internal rotation, and Constant Shoulder Score, when compared to the non-DM group, the DM cohort saw significantly smaller improvements in external rotation.[12]

Brealey et al. (2020) conducted a multicenter, open-label, three-arm, randomized trial to compare the effectiveness and cost-effectiveness of three treatments for frozen shoulder. Treatments included early structured physiotherapy with a steroid injection, MUA with a steroid injection, and arthroscopic capsular release followed by manipulation. The primary outcome measured was the Oxford Shoulder Score at 12 months post-randomization. The study found that arthroscopic capsular release resulted in a statistically significant improvement in shoulder function compared to MUA or early structured physiotherapy. However, these differences were not deemed clinically significant. Serious adverse events were rare but more common in participants who underwent surgery. Qualitative data suggested that patients preferred quicker resolution of their shoulder problems. However, none of the interventions emerged as superior, with early structured physiotherapy being accessible and low-cost, MUA being the most cost-effective, and arthroscopic capsular release carrying higher risks and costs.[13]

References

1. Song W, Guo X, Wang X, Yu J, Jiang W, Wei C, Zhao Y. A multi-center, single-blinded, randomized, parallel-group, superiority study to compare the efficacy of manipulation under anesthesia versus intra-articular steroid injection in the treatment of patients with frozen shoulder and a diagnosis of rotator cuff injury or tear by MRI: study protocol for a randomized controlled trial. *Trials*. 2023 Nov 27;24(1):765. doi: 10.1186/s13063-023-07810-2

2. Kraal T, de Wit Y, The B, et al. Improved range of motion after manipulation under anesthesia versus physiotherapy for stage two frozen shoulder: A randomized controlled trial. *JSES Int*. 2023 Dec 6;8(2):293-298. doi: 10.1016/j.jseint.2023.11.004

3. Kraal T, Beimers L, The B, Sierevelt I, van den Bekerom M, Eygendaal D. Manipulation under anaesthesia for frozen shoulders: outdated technique or well-established quick fix? *EFORT Open Rev*. 2019 Mar 19;4(3):98-109. doi: 10.1302/2058-5241.4.180044

4. Lewis J. Frozen shoulder contracture syndrome - Aetiology, diagnosis and management. *Man Ther*. 2015;20(1):2-9. doi:10.1016/j.math.2014.07.006

5. Bidwai AS, Mayne AI, Nielsen M, Brownson P. Limited capsular release and controlled manipulation under anaesthesia for the treatment of frozen shoulder. *Shoulder Elbow*. 2015;8(1):9-13. doi:10.1177/1758573215578590

6. Ko YW, Park JH, Youn SM, Rhee YG, Rhee SM. Effects of comorbidities on the outcomes of manipulation under anesthesia for primary stiff shoulder. *J Shoulder Elbow Surg*. 2021;30(8):e482-e492. doi:10.1016/j.jse.2020.11.007

7. Redler LH, Dennis ER. Treatment of adhesive capsulitis of the shoulder. *J Am Acad Orthop Surg*. 2019 Jun 15;27(12):e544-e554. doi: 10.5435/JAAOS-D-17-00606

8. Fairclough A, Waters C, Davies T, et al. Long-term outcomes following manipulation under anaesthetic for patients with primary and secondary frozen shoulder. *Shoulder Elbow*. 2023 Apr;15(2):173-180. doi: 10.1177/17585732211070007

9. Lee SJ, Jang JH, Hyun YS. Can manipulation under anesthesia alone provide clinical outcomes similar to arthroscopic circumferential capsular release in primary frozen shoulder (FS)?: the necessity of arthroscopic capsular release in primary FS. *Clin Shoulder Elb.* 2020;23(4):169-177. doi:https://doi.org/10.5397/cise.2020.00283

10. Saito T, Hamada J, Sasanuma H, et al. Clinical outcomes and cost-effectiveness of manipulation under brachial plexus block versus physiotherapy for refractory frozen shoulder: a prospective observational study. *JSES Int*. 2023;7(6):2410-2419. doi:10.1016/j.jseint.2023.07.017

11. Lancaster ST, Grove TN, Woods DA. Management of post-traumatic stiffness of the shoulder following upper limb trauma with manipulation under anaesthetic. *Shoulder Elbow*. 2017;9(4):258-265. doi:10.1177/1758573217693974

12. Takahashi R, Kajita Y, Harada Y, Iwahori Y, Deie M. Clinical results of shoulder manipulation under ultrasound-guided cervical nerve root block for frozen shoulder in patients with diabetes. *J Orthop*. 2020;21:297-301. Published 2020 May 29. doi:10.1016/j.jor.2020.03.019

13. Brealey S, Northgraves M, Kottam L, et al. Surgical treatments compared with early structured physiotherapy in secondary care for adults with primary frozen shoulder: The UK FROST three-arm RCT. *Health Technol Assess*. 2020 Dec;24(71):1-162. doi: 10.3310/hta24710

Policy Revision History/Information

Original Date: May 10, 2024		
Review History		
Version 2	07/24/2025	Annual Review Added procedure description (page 4). Updated conservative care requirements. Added values to the indication: Significant and documented loss of motion compared to the contralateral shoulder (forward flexion less than 110°, external rotation less than 50°) The medical evidence section has been updated to include Takahashi et al. (2020). Citations and references added (Song et al.; Lewis et al.; Ko et al.; Lancaster at al.; Takahashi et al.; Brealey et al.)