Cohere Medicare Advantage Policy - Open Shoulder Surgical Procedures

Clinical Guidelines for Medical Necessity Review

Version: 2
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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.

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Other Notices:

Guideline Information:

Specialty Area: Disorders of the Musculoskeletal System
Guideline Name: Cohere Medical Policy - Open Shoulder Surgical Procedures

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Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Open Shoulder Surgical Procedures

Related CMS Documents

Please refer to the CMS Medicare Coverage Database for the most current applicable CMS National Coverage.

- There are no applicable NCDs and/or LCDs for open-shoulder surgical procedures.

Description

Open shoulder surgical procedures involve one or more procedures, including rotator cuff repair with or without allograft augmentation, distal clavicle resection, subacromial decompression, open Bankart repair, capsular shift, or coracoid transfers. An incision is made to access the shoulder joint. Open shoulder surgical procedures are used to treat various problems with the shoulder, such as tendon and ligament injuries, shoulder instability, and bone damage, as well as for coexisting shoulder pathologies and when there is a high likelihood that arthroscopic surgery will fail.[1]

Evaluation of Clinical Harms and Benefits

Cohere Health uses the criteria below to ensure consistency in reviewing the conditions to be met for coverage of open-shoulder surgical procedures. This process helps to prevent both incorrect denials and inappropriate approvals of medically necessary services. Specifically, limiting incorrect approvals reduces the risks associated with unnecessary procedures, such as complications from surgery, infections, and prolonged recovery times.

The potential clinical harms of using these criteria may include:

- Infection. Surgical site infections are among the most serious postoperative complications after shoulder surgery. In surgery involving prosthetics, infections have been reported to occur in 0.2%-3.8% of patients postoperatively. However, continuous local antibiotic perfusion

against surgical site infections has successfully preserved implants and grafts.[1,2]
- Other complications of rotator cuff repair. Deltoid detachment has an incidence of 8%. Tendon re-tear in rotator cuff tear surgical procedures is also common; postoperative re-tear occurs up to 14% of the time.[2-5]
- Increased healthcare costs and complications from the inappropriate use of emergency services and additional treatments.

The clinical benefits of using these criteria include:

- Pain relief. Relief from shoulder pain is a primary goal of open-shoulder surgical procedures, which are more invasive and require a larger incision. However, these procedures have benefits such as the direct visualization of the joint, which allows for a broader range of procedures and better access to complex repairs. Large prosthetic materials require open shoulder surgery, though such repairs have been associated with slightly lower pain levels than with arthroscopic procedures.[2-5]
- Enhanced overall patient satisfaction and healthcare experience.

This policy includes provisions for expedited reviews and flexibility in urgent cases to mitigate risks of delayed access. Evidence-based criteria are employed to prevent inappropriate denials, ensuring that patients receive medically necessary care. The criteria aim to balance the need for effective treatment with minimizing potential harms, providing numerous clinical benefits in helping avoid unnecessary complications from inappropriate care.

In addition, the use of these criteria is likely to decrease inappropriate denials by creating a consistent set of review criteria, thereby supporting optimal patient outcomes and efficient healthcare utilization.

Medical Necessity Criteria

Indications

➔ **Open shoulder surgical procedures** are considered appropriate if **ANY** of the following is **TRUE**:

◆ **Open rotator cuff repair with or without allograft augmentation** is considered appropriate if **ANY** of the following is **TRUE**[2]:

- Acute rotator cuff tear with **ALL** of the following after an inciting event or injury[2]:
    - **ANY** of the following positive exam findings[3-4]:
        - Documentation of Subscapularis injury (internal rotator [IR] weakness, Belly-press test, Bear hug test); **OR**
        - Documentation of Superspinatus and/or External rotation injury (Jobe/empty cast test, Drop arm test, Hornblower's sign); **AND**
    - Significantly impacted activities of daily living (ADLs); **AND**
    - Advanced imaging (e.g., magnetic resonance imaging [MRI], computed tomography [CT]) with image report demonstrates a full-thickness rotator cuff tear (Cofield classification); **OR**
- Chronic rotator cuff tear with **ALL** of the following[2]:
    - **AT LEAST TWO** positive findings from the following[5]:
        - Pain with overhead activities (lateral deltoid pain with activity); **OR**
        - Pain (lateral deltoid pain with sleep and sleep disruption); **OR**
        - Shoulder weakness (e.g., abduction, external rotation, internal rotation); **AND**
    - **ANY** of the following positive exam findings[3-4]:
        - Documentation of Subscapularis injury (internal rotator [IR] weakness, Belly-press test, Bear hug test); **OR**
        - Documentation of Superspinatus and/or External rotation injury (Jobe/empty cast test, Drop arm test, Hornblower's sign); **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; **AND**
        - **ANY** of the following:

- Corticosteroid injection if medically appropriate; **OR**
- Corticosteroid injection is contraindicated; **AND**

- Advanced imaging (e.g., MRI, CT) demonstrates evidence of **ANY** of the following:
  - High-grade partial-thickness rotator cuff tear; **OR**
  - Full-thickness rotator cuff tear (Cofield classification); **OR**

- **Open revision of a previous rotator cuff repair** is considered appropriate if **ANY** of the following is **TRUE**[6]:
  - Advanced imaging (e.g., MRI, CT) demonstrates evidence of a recurrent rotator cuff tear; **OR**
  - Suspected postsurgical complication; **OR**
- **Open clavicle resection** is considered appropriate if **ANY** of the following are **TRUE**:
  - Tumor or malignancy requiring claviculectomy for surgical exposure[7,8]; **OR**
  - Intervention of the subclavian artery (e.g., subclavian artery aneurysm) requiring claviculectomy for surgical exposure[9]; **OR**
  - Central venous stenosis that persists after balloon angioplasty, requiring claviculectomy as an alternative to first rib resection for adequate venolysis[10]; **OR**
  - Osteomyelitis or osteitis[11,12]; **OR**
  - **ALL** of the following:
    - The patient has significant pain and/or functional impairment that impacts ADLs[13]; **AND**
    - Localized tenderness to palpation of the acromioclavicular (AC) joint[14]; **AND**
    - **ANY** of the following positive orthopedic tests on physical examination when compared to the non-involved side[14]:
      - Cross-body adduction test; **OR**
      - Resisted AC joint extension test; **AND**
    - Failure of conservative management for greater than 3 months including **ALL** of the following[13,14,15]:

        - Anti-inflammatory medications, non-opioid analgesics, or prescription medications (e.g., oral steroids, neuropathic pain medications) if not contraindicated; **AND**
        - Physical therapy; **AND**
        - **ANY** of the following:
            - Corticosteroid injection if medically appropriate; **OR**
            - Corticosteroid injection is contraindicated; **AND**
    - Plain radiographs demonstrate **ANY** of the following findings consistent with pathology in the subacromial space or at the AC joint[7]:
        - Cystic formation in the distal clavicle; **OR**
        - Presence of osteophytes; **OR**
        - Moderate to severe degenerative changes in the AC joint; **OR**
- **Subacromial decompression** is considered appropriate if **ANY** of the following is **TRUE**[16]:
    - The procedure coincides with the indicated repair of a rotator cuff injury; **OR**
    - The patient has history and exam consistent with subacromial impingement syndrome, including **ALL** of the following[17]:
        - Significant pain and/or functional impairment that impacts activities of daily living; **AND**
        - The patient demonstrates **ANY** of the following positive orthopedic tests on physical examination when compared to the non-involved side:
            - Neer impingement sign/test; **OR**
            - Hawkins-Kennedy impingement sign/test; **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; **AND**

        - ◆ **ANY** of the following:
            - Corticosteroid injection if medically appropriate; **OR**
            - Corticosteroid injection is contraindicated; **AND**
    - Plain radiographs demonstrate **ANY** of the following findings consistent with pathology in the subacromial space:
        - ◆ Subacromial spurs/osteophytes; **OR**
        - ◆ Type III (hooked) acromion; **OR**
        - ◆ Acromioclavicular osteoarthritis with inferior osteophyte formation; **OR**
- ◆ **Arthrotomy with or without biopsy** is considered appropriate if **ANY** of the following is **TRUE:**
    - Septic arthritis[18-23]; **OR**
    - Pre-revision tissue biopsy prior to revision shoulder arthroplasty to evaluate for periprosthetic joint infection in the setting of a painful shoulder arthroplasty without clear evidence of infection[24,25]; **OR**
    - Biopsy of lesion that is suspicious for tumor/neoplasm.[26,27]

Non-Indications

- ➔ **Open shoulder surgical procedures** are not considered appropriate if **ANY** of the following is **TRUE**:
    - ◆ Debridement, rotator cuff repair, and/or removal of intra-articular loose body is not considered to be indicated in the presence of Kellgren-Lawrence grade 3 or 4 osteoarthritis[14]; **OR**
    - ◆ Use of subacromial balloon spacer to treat irreparable rotator cuff tear[28]; **OR**
    - ◆ Presence of active infection[29]; **OR**
    - ◆ Rotator cuff arthropathy.[30]

Level of Care Criteria

Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
23100	Arthrotomy, glenohumeral joint, including biopsy
23120	Claviculectomy; partial
23125	Claviculectomy; total
23130	Acromioplasty or acromionectomy, partial, with or without coracoacromial ligament release
23410	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; acute
23412	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; chronic
23420	Reconstruction of complete shoulder (rotator) cuff avulsion, chronic (includes acromioplasty)

Disclaimer: S Codes are non-covered per CMS guidelines due to their experimental or investigational nature.

Medical Evidence

The American Academy of Orthopaedic Surgeons (AAOS) published a 2019 guideline for the management of rotator cuff injuries. Regarding open vs. arthroscopic repair, a strong recommendation is given regarding supportive evidence for no difference in long-term (greater than one year) patient-reported outcomes or cuff healing rates. They state that the arthroscopic-only technique is associated with better short-term improvement in postoperative recovery of motion and function.[14]

In a 2017 prospective study, Jain et al. examined the diagnostic accuracy of special tests for rotator cuff tears. 208 participants, 45 years of age or older with shoulder pain of at least 4 weeks duration, were included in the study. Special tests that were performed included lift-off test, passive lift-off test, belly-press test, belly-off sign, bear hug, external rotation lag sign at 0°, external rotation lag sign at 90°, Hornblower's sign, full can test, drop arm test, Jobe's test, Neer's sign, Hawkin's sign, bicipital groove tenderness, and Speed's test. The tests were not always performed in the same order. Blind evaluations of MRI results were completed. In conclusion, it was determined that these tests are highly sensitive in diagnosing rotator cuff tears and may reduce reliance on expensive imaging in these cases.[3]

Barber et al. (2012) performed a prospective, randomized evaluation of acellular human dermal matrix augmentation for arthroscopic rotator cuff repair. Twenty-two patients in Group 1 and 20 patients in Group 2 were included. The mean age was 56 years. Group 1 underwent augmentation while Group 2 did not. Large tears greater than 3 cm were measured. The American Shoulder and Elbow Surgeons (ASES) scores in Group 1 were statistically better than Group 2, with intact repairs demonstrated in 85% of Group 1 and 40% in Group 2.[31]

Park et al. (2005) evaluated the diagnostic accuracy of clinical tests for the different degrees of subacromial impingement syndrome. Eight physical examination tests were used, including "the Neer impingement sign, Hawkins-Kennedy impingement sign, painful arc sign, supraspinatus muscle strength test, Speed test, cross-body adduction test, drop-arm sign, and

infraspinatus muscle strength test". The authors concluded that most tests for rotator cuff disease have greater sensitivity than specificity; this is supported by similar studies found in the literature.[4]

References

1. Fares MY, Boufadel P, Daher M, et al. Anterior shoulder instability and open procedures: History, indications, and clinical outcomes. *Clin Orthop Surg*. 2023 Aug;15(4):521-533. doi: 10.4055/cios23018. PMID: 37529197; PMCID: PMC10375816.
2. Cobb TE, Dimock RAC, Memon SD, et al. Rotator cuff repair with patch augmentation: What do we know? *Arch Bone Jt Surg*. 2022 Oct;10(10):833-846. doi: 10.22038/ABJS.2022.61345.3012. PMID: 36452419.
3. Jain N, Luz J, Higgins L, et al. The diagnostic accuracy of special tests for rotator cuff tear: The ROW Cohort Study. *Am J Phys Med Rehabil*. 2017;96(3):176–183. doi: 10.1097/PHM.0000000000000566. PMID: 27386812; PMCID: PMC5218987.
4. Park H, Yokota A, Gill H, et al. Diagnostic accuracy of clinical tests for the different degrees of subacromial impingement syndrome. *J Bone Joint Surg Am*. 2005;87(7):1446–1455. doi: 10.2106/JBJS.D.02335. PMID: 15995110.
5. Coghlan JA, Buchbinder R, Green S, et al. Surgery for rotator cuff disease. *Cochrane Database Syst Rev*. 2008 Jan 23;2008(1):CD005619. doi: 10.1002/14651858.CD005619.pub2. Erratum in: *Cochrane Database Syst Rev*. 2019 Jan 17;1:CD005619. doi: 10.1002/14651858.CD005619.pub3. PMID: 18254085; PMCID: PMC6464842
6. Lädermann A, Denard PJ, Burkhart SS. Management of failed rotator cuff repair: A systematic review. *J ISAKOS*. 2016 Jan;1(1):32-37. doi: 10.1136/jisakos-2015-000027. PMID: 27134759; PMCID: PMC4849215.
7. Mehl A, Kercher JS. Open and arthroscopic distal clavicle excision technique. In: *Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine*. 3rd ed. Philadelphia, PA: Elsevier; 2022:5, 37-44
8. Chen Y, Yu X, Huang W, Wang B. Is clavicular reconstruction imperative for total and subtotal claviculectomy? A systematic review. *JSES*. 2018 May 1;27(5):e141-8
9. Vierhout BP, Zeebregts CJ, Van den Dungen JJ, Reijnen MM. Changing profiles of diagnostic and treatment options in subclavian artery aneurysms. *EJVES*. 2010 Jul 1;40(1):27-34

10. Auyang PL, Chauhan Y, Loh TM, Bennett ME, Peden EK. Medial claviculectomy for the treatment of recalcitrant central venous stenosis of hemodialysis patients. *JVS: Venous and Lymphatic Disorders*. 2019 May 1;7(3):420-7
11. Jiang N, Zhang P, Hu WR, et al. Similarities and differences between clavicular bacterial osteomyelitis and nonbacterial osteitis: comparisons of 327 reported cases. *J Immunol Res*. 2021;2021(1):4634505
12. Hu WR, Yao ZL, Yu B, Jiang N. Clinical characteristics and treatment of clavicular osteomyelitis: A systematic review with pooled analysis of 294 reported cases. *JSES*. 2019 Jul 1;28(7):1411-21
13. Kim J, Bryant S, Gardner B, et al. Distal clavicle excision for acromioclavicular joint osteoarthritis using a fluoroscopic Kirschner wire guide. *Arthrosc Tech*. 2021;10(2):e359-e365. doi: 10.1016/j.eats.2020.10.010. PMID: 33680767; PMCID: PMC7917026.
14. American Academy of Orthopaedic Surgeons (AAOS). Management of rotator cuff injuries: Evidence-based clinical practice guideline. Published March 11, 2019. https://www.aaos.org/globalassets/quality-and-practice-resources/rotator-cuff/rotator-cuff-cpg-final-12-20-19.pdf
15. Hashem MH, Hegazy MO, Mohamed MK, et al. Arthroscopic distal clavicle resection versus conservation in patients with combined rotator cuff tears and acromioclavicular joint osteoarthritis. *EJOST*. 2024 May;34(4):1795-801
16. Karjalainen TV, Jain NB, Page CM, et al. Subacromial decompression surgery for rotator cuff disease. *Cochrane Database Syst Rev*. 2019 Jan 17;1(1):CD005619. doi: 10.1002/14651858.CD005619.pub3. PMID: 30707445.
17. Harrison A, Flatow E. Subacromial impingement syndrome. *J Am Acad Orthop Surg.* 2011 Nov;19(11):701-8. doi: 10.5435/00124635-201111000-00006. PMID: 22052646.
18. Bovonratwet P, Fu MC, Pathak N, et al. Surgical treatment of septic shoulders: A comparison between arthrotomy and arthroscopy. *Arthroscopy*. 2019 Jul 1;35(7):1984-91

19. Böhler C, Pock A, Waldstein W, et al. Surgical treatment of shoulder infections: A comparison between arthroscopy and arthrotomy. *JSES*. 2017 Nov 1;26(11):1915-21
20. Khazi ZM, Cates WT, Shamrock AG, et al. Arthroscopic débridement has similar 30-day complications compared with open arthrotomy for the treatment of native shoulder septic arthritis: A population-based study. *JSES*. 2020 Jun 1;29(6):1121-6
21. Memon M, Kay J, Ginsberg L, et al. Arthroscopic management of septic arthritis of the native shoulder: A systematic review. *Arthroscopy*. 2018 Feb 1;34(2):625-46
22. Acosta-Olivo C, Vilchez-Cavazos F, Blazquez-Saldana J, et al. Comparison of open arthrotomy versus arthroscopic surgery for the treatment of septic arthritis in adults: A systematic review and meta-analysis. *Int Ortho.* 2021 Aug;45(8):1947-59
23. Mascioli AA, Park AL. Infectious arthritis. In: Azar FM, Beaty JH, editors. *Campbell's Operative Orthopaedics*. 14th ed. Philadelphia, PA: Elsevier; 2021:842-867.e2
24. Cotter EJ, Winzenried AE, Polania-Gonzalez E, et al. Role of pre-revision tissue biopsy in evaluation of painful shoulder arthroplasty: A systematic review and meta-analysis. *JSES*. 2021 Jun 1;30(6):1445-57
25. Tashjian RZ, Granger EK, Zhang Y. Utility of pre-revision tissue biopsy sample to predict revision shoulder arthroplasty culture results in at-risk patients. *JSES*. 2017 Feb 1;26(2):197-203
26. Lee DH, Hills JM, Jordanov MI, Jaffe KA. Common tumors and tumor-like lesions of the shoulder. *JAAOS*. 2019 Apr 1;27(7):236-45
27. Hashimoto K, Nishimura S, Ito T, et al. Limitations and usefulness of biopsy techniques for the diagnosis of metastatic bone and soft tissue tumors. *Ann Med Surg*. 2021 Aug 1;68:102581
28. Kishan A, Russo R, Goldfarb SI, et al. Arthroscopic subacromial balloon spacer for massive rotator cuff tears demonstrates improved shoulder functionality and high revision-free survival rates at a minimum 5-year follow-up. *Arthroscopy*. 2024 Jun 22:S0749-8063(24)00459-6. doi: 10.1016/j.arthro.2024.06.024. Epub ahead of print. PMID: 38914297

29. Everhart JS, Altneu E, Calhoun JH. Medical comorbidities are independent preoperative risk factors for surgical infection after total joint arthroplasty. *Clin Orthop Rel Res*. 2013 Oct;471:3112-9.n
30. Clifford AL, Hurley E, Anakwenze O, Klifto CS. Rotator cuff arthropathy: A comprehensive review. *JHS GO*. 2024 Feb 29;6(4):458-462. doi: 10.1016/j.jhsg.2023.12.014. PMID: 39166197; PMCID: PMC11331153
31. Barber F, Burns J, Deutsch A, et al. A prospective, randomized evaluation of acellular human dermal matrix augmentation for arthroscopic rotator cuff repair. *Arthroscop*y. 2012;28(1):8-15. doi: 10.1016/j.arthro.2011.06.038. PMID: 21978432.
32. Salunkhe R, Patil VS, Muneer MT, et al. Arthroscopic subacromial decompression in patients with subacromial impingement syndrome. *Cureus*. 2024 Sep 30;16(9):e70569. doi: 10.7759/cureus.70569. PMID: 39483938; PMCID: PMC11524983.

Clinical Guideline Revision History/Information

Original Date: March 27, 2025		
Review History		
Version 2	5/22/2025	Added total claviculectomy code, as well as four additional indications to address this code (malignancy, subclavian access, central venous stenosis, osteomyelitis) and the corresponding references Removed redundant indication for subacromial decompression Removed impingement tests from open claviculectomy indication as not relevant to testing for AC joint pain Added arthrotomy/biopsy code, as well as three indications to address this code (septic arthritis, pre-revision biopsy, tumor biopsy) Simplified positive exam criteria for rotator cuff injury to improve ease of policy use