Open Shoulder Surgical Procedures - Single Service

Clinical Guidelines for Medical Necessity Review

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Important Notices

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Guideline Information:

Specialty Area: Diseases & Disorders of the Musculoskeletal System (M00-M99)
Guideline Name: Open Shoulder Surgical Procedures (Single Service)

Literature review current through: 12/29/2023
Document last updated: 12/29/2023
Type: [**X**] Adult (18+ yo) | [_] Pediatric (0-17yo)

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Medical Necessity Criteria

Service: Open Shoulder Surgical Procedures

General Guidelines

- **Units, Frequency, & Duration:** None
- **Criteria for Subsequent Requests:** The patient has a different diagnosis.
- **Recommended Clinical Approach:** Open shoulder surgical procedures can involve one or more of several procedures. These include rotator cuff repair (RCR) with or without allograft augmentation, distal clavicle resection, and subacromial decompression.
- **Exclusions:** Other pathologies (e.g., cervical radiculopathy).

Medical Necessity Criteria

Indications

➔ **Open Shoulder Surgical Procedures** are considered appropriate if **ANY** of the following is **TRUE**:

- ◆ **Open rotator cuff repair (RCR) with or without allograft augmentation** is considered appropriate if **ANY** of the following is **TRUE**:
  - **Acute rotator cuff tear** and **ALL** of the following after an inciting event or injury:
    - The patient has **2 or more** positive diagnostic tests[1,2]:
      - ◆ Jobe/empty can test; **OR**
      - ◆ Belly-press test; **OR**
      - ◆ Lift-off/Gerber's test; **OR**
      - ◆ External rotation lag test; **OR**
      - ◆ Hornblower's sign; **OR**
      - ◆ Bear hug test; **OR**
      - ◆ Full can test; **OR**
      - ◆ Hawkins/Hawkins-Kennedy; **OR**
      - ◆ Painful arc test; **OR**
      - ◆ Neer/Neer impingement test; **OR**
      - ◆ Drop arm test; **AND**
    - Significantly impacted activities of daily living (ADLs); **AND**
    - Advanced diagnostic imaging (e.g., MRI, CT) demonstrates a full-thickness rotator cuff tear (Cofield classification); **OR**

- **Chronic rotator cuff tear** and **ALL** of the following:
    - The patient has **2 or more** positive findings from the following:
        - Pain with overhead activities (lateral deltoid pain with activity); **OR**
        - Pain (lateral deltoid pain with sleep and sleep disruption); **OR**
        - Weakness with activity away from the body (away from the midline); **AND**
    - The patient has **2 or more** positive diagnostic tests:[1,2]
        - Jobe/empty can test; **OR**
        - Belly-press test; **OR**
        - Lift-off/Gerber's test; **OR**
        - External rotation lag test; **OR**
        - Hornblower's sign; **OR**
        - Bear hug test; **OR**
        - Full can test; **OR**
        - Hawkins/Hawkins-Kennedy; **OR**
        - Painful arc test; **OR**
        - Neer/Neer impingement test; **OR**
        - Drop arm test; **AND**
    - Failure of conservative management for greater than 3 months, including **ALL** of the following:
        - Oral steroids or anti-inflammatory medication; **AND**
        - Physical therapy; **AND**
        - **ANY** of the following:
            - Corticosteroid injection if medically appropriate; **OR**
            - Corticosteroid injection is contraindicated; **AND**
    - Advanced diagnostic imaging (e.g., MRI, CT) demonstrates **ANY** of the following:
        - High-grade partial-thickness rotator cuff tear; **OR**
        - Full-thickness rotator cuff tear (Cofield classification)[3]; **OR**
- **Open revision of a previous rotator cuff repair** is considered appropriate if **ANY** of the following is **TRUE**[3]:
    - Advanced diagnostic imaging findings of a recurrent rotator cuff tear; **OR**

- Suspected postsurgical complication; **OR**

◆ **Open distal clavicle resection** is considered appropriate if **ALL** of the following are **TRUE**[4]:

- Significant pain and/or functional impairment that impact activities of daily living; **AND**
- The patient demonstrates localized tenderness to palpation of the acromioclavicular (AC) joint **AND ANY** of the following positive orthopedic tests on physical examination when compared to the non-involved side:
  - Cross body adduction test; **OR**
  - Resisted AC joint extension test; **OR**
  - Neer impingement test; **OR**
  - Hawkins-Kennedy impingement test; **AND**
- Failure of conservative management for greater than 3 months including **ALL** of the following:
  - Oral steroids or anti-inflammatory medication; **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[5]:
  - 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**:

- The procedure coincides with the indicated repair of a rotator cuff injury; **OR**
- There is a need for decompression and debridement after a full-thickness rotator cuff tear; **OR**
- Subacromial impingement syndrome including **ALL** of the following[6]:
  - Significant pain and/or functional impairment that impact 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:
  - Oral steroids or anti-inflammatory medication; **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.

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; **OR**
- Use of subacromial balloon spacer to treat irreparable rotator cuff tear; **OR**
- Rotator cuff and/or labral repair in the presence of active infection (local or remote); **OR**
- Rotator cuff arthropathy.

Level of Care Criteria

Outpatient

Procedure Codes (HCPCS/CPT)

HCPCS/CPT Code	Code Description
23120	Claviculectomy; partial
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)

Medical Evidence

In a 2017 prospective study, Jain et al. examined the diagnostic accuracy of special tests for rotator cuff tear. 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 slgn 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.[1]

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 (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). Their conclusion that most tests for rotator cuff disease have greater sensitivity than specificity and is supported by similar studies found in the literature.[2]

Barber et al. (2012) performed a prospective, randomized evaluation of acellular human dermal matrix augmentation for arthroscopic rotator cuff repair. 22 patients in Group 1 and 20 in Group 2 with a mean age of 56 years were evaluated, with the Group 1 patients undergoing augmentation and in Group 2, augmentation was not performed. Tears were measured >3 cm (large). The American Shoulder and Elbow Surgeons (ASES) scores in Group 1 were statistically better than Group 2, with intact repairs in 85% of Group 1 and 40% in the nonaugmented Group 2.[3]

Kim et al. (2021) published a Technical Note regarding distal clavicle excision for acromioclavicular joint osteoarthritis using a fluoroscopic Kirschner wire guide. Distal clavicle excision procedures have evolved greatly from open procedures to a predominance of arthroscopic procedures. The report describes an indirect subacromial arthroscopic distal clavicle excision using a fluoroscopic Kirschner wire guide placed at the proximal border prior to

resection to serve as a visual and mechanical reference to overexcision. The procedure is stated to reduce the risk of damaging AC capsular ligaments.[5]

National and Professional Organizations

The American Academy of Orthopaedic Surgeons published a 2019 guideline for 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 arthroscopic-only technique is associated with better short-term improvement in post operative recovery of motion and function.[4]

References

1. 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.
2. Park H, Yokota A, Gill H, El Rassi G, McFarland E. Diagnostic accuracy of clinical tests for the different degrees of subacromial impingement syndrome. *J Bone Joint Surg Am*. 2005;87(7):1446–1455.
3. Barber F, Burns J, Deutsch A, Labbé M, Litchfield R. 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.
4. American Academy of Orthopaedic Surgeons management of rotator cuff injuries evidence-based Clinical Practice Guideline. https://www.aaos.org/rccpg Published March 11, 2019.
5. 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.
6. 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.

Clinical Guideline Revision History/Information

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