Cohere Medical Policy - Shoulder Arthroplasty

Clinical Policy for Medical Necessity Review

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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.

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:

Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

Policy Information:

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

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Medical Necessity Criteria

Service: Shoulder Arthroplasty

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 arthroplasty is a surgical intervention to reduce shoulder pain and restore function by replacing a damaged or diseased shoulder joint (the glenohumeral joint) with a prosthesis.[1] While hemiarthroplasty replaces only the ball of the ball and socket joint, total shoulder arthroplasty (TSA) replaces both the humeral and glenoid sides of the joint.[2] In anatomic TSA (aTSA) the humeral head is replaced with a prosthetic ball, and the glenoid is either resurfaced or replaced with a prosthetic socket. While TSA procedures require an intact rotator cuff, reverse TSA (rTSA) procedures can be used on patients with cuff tear arthropathy or torn or insufficient cuff.[2] In rTSA procedures, the ball is placed on the glenoid and the socket on the humerus. Patients with a previous joint arthroplasty who present with pain due to loosening, prosthesis failure, instability, or infection may require a revision procedure.[3]

Medical Necessity Criteria

Indications

Shoulder arthroplasty is considered appropriate if **ALL** of the following are **TRUE**:

- **ANY** of the following[3]:
  - The patient is a current nicotine user with no product use for 6 weeks and **ANY** of the following:
    - Negative lab test within 30 days; **OR**
    - Surgery is urgently required for acute fracture or injury; **OR**
  - No history of nicotine product use within the last 12 months; **OR**
  - No lifetime history of nicotine product use; **AND**
- **ANY** of the following:
  - The procedure is a total shoulder arthroplasty and **ANY** of the following is **TRUE**:
    - Complex proximal humerus fracture; **OR**
    - **ALL** of the following:
      - The patient has pain and loss of motion[3,7]; **AND**

- Radiographs are consistent with advanced osteoarthritis or humeral head osteonecrosis[3,6,11,12] (e.g., destruction of shoulder joint, cystic changes, severe narrowing of joint space)[3,7]; **AND**
- **ANY** of the following:
  - Failure of conservative management for greater than 6 weeks, including **ALL** of the following[8,16]:
    - Anti-inflammatory medications, non-opioid analgesics, or prescription medications (e.g., oral steroids, neuropathic pain medications) if not contraindicated; **AND**
    - Physical therapy, including a physician-directed home exercise program, if medically appropriate; **AND**
    - **ANY** of the following:
      - Corticosteroid injection if medically appropriate; **OR**
      - Documentation that corticosteroid injection is contraindicated; **OR**
  - Imaging with report confirms severe osteoarthritis or humeral head osteonecrosis and documentation that further conservative treatment is not medically appropriate or is contraindicated; **OR**

- The procedure is a reverse total shoulder arthroplasty, and **ANY** of the following is **TRUE**:
  - **ALL** of the following:
    - The patient has disabling pain and loss of motion, or functional disability; **AND**
    - Radiographs are consistent with advanced osteoarthritis (e.g., destruction of shoulder joint, cystic changes, severe narrowing of joint space)[3,7]; **AND**
    - Documentation, including imaging, that anatomic total shoulder arthroplasty is not appropriate including **ANY** of the following:
      - Compromised rotator cuff integrity[2,7,16,18] (e.g., irreparable failed rotator cuff repair, massive rotator cuff tear, rotator cuff deficient arthropathy, rotator cuff tear arthropathy); **OR**
      - Significant glenoid bone loss or deformity[26,27] (e.g., severe arthritis with glenoid bone loss, with or without glenohumeral instability); **OR**
      - Advanced rheumatoid arthritis[23,24]; **AND**
    - **ANY** of the following:

        - Failure of conservative management for greater than 6 weeks, including **ALL** of the following[13]:
            - Anti-inflammatory medications, non-opioid analgesics, or prescription medications (e.g., oral steroids, neuropathic pain medications) if not contraindicated; **AND**
            - Physical therapy, including a physician-directed home exercise program, if medically appropriate; **AND**
            - **ANY** of the following:
                - Corticosteroid injection if medically appropriate; **OR**
                - Documentation that corticosteroid injection is contraindicated; **OR**
        - Imaging with report confirms severe osteoarthritis and documentation that further conservative treatment is not medically appropriate or is contraindicated; **OR**
    - Complex proximal humerus fractures[8,14]; **OR**
    - Failed shoulder arthroplasty[15]; **OR**
    - Failed shoulder hemiarthroplasty[15]; **OR**
    - Proximal humerus fracture with **ANY** of the following[7,19,20]:
        - Rotator cuff deficiency; **OR**
        - Malunion; **OR**
    - Reconstruction after tumor resection[21,22]; **OR**
- The procedure is a hemiarthroplasty, and **ANY** of the following is **TRUE**:
    - Rotator cuff tear arthropathy[4]; **OR**
    - Malignancy of the glenohumeral joint[5]; **OR**
    - Humeral head osteonecrosis with preserved glenoid[6,7]; **OR**
    - Complex proximal humerus fracture[8]; **OR**
    - Primary osteoarthritis and **ANY** of the following:
        - Glenoid bone stock is inadequate[9]; **OR**
        - The risk of glenoid loosening is high (i.e., young patients, heavy laborers)[10]; **OR**
- The procedure is a revision total shoulder arthroplasty (reverse or anatomic), and **ALL** of the following are **TRUE**[3,28]:
    - The patient has **ANY** of the following findings:
        - Pain; **OR**
        - Infection; **OR**
        - Instability; **OR**
        - Loosening of the prosthesis; **OR**

        - Failure of the prosthesis; **OR**
        - Periprosthetic fracture; **OR**
        - Glenoid erosion from a humeral prosthetic component of hemiarthroplasty; **OR**
        - Implant fracture; **OR**
        - Implant mechanical failure; **OR**
        - Proximal migration of humeral head; **AND**
    - The patient has **ANY** of the following advanced imaging or radiography findings:
        - Loosening of the prosthesis; **OR**
        - Failure of the prosthesis; **OR**
        - Normal (no findings); **OR**
- The procedure is an explant due to infection.[29]

Non-Indications

Shoulder arthroplasty is not considered appropriate if **ANY** of the following is **TRUE**[30]:

- Active joint infection; **OR**
- Systemic infection; **OR**
- Neuropathic joint.

Level of Care Criteria

Inpatient and Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
23334	Removal of prosthesis, includes debridement and synovectomy when performed; humeral or glenoid component
23335	Removal of prosthesis, includes debridement and synovectomy when performed; humeral and glenoid components (eg, total shoulder)
23470	Arthroplasty, glenohumeral joint; hemiarthroplasty
23472	Arthroplasty, glenohumeral joint; total shoulder

	(glenoid and proximal humeral replacement [e.g., total shoulder])
23473	Revision of total shoulder arthroplasty, including allograft when performed; humeral or glenoid component
23474	Revision of total shoulder arthroplasty, including allograft when performed; humeral and glenoid component
23929	Unlisted procedure, shoulder

Medical Evidence

Li et al. (2025) conducted a meta-analysis of 45 studies comparing patients treated with primary reverse total shoulder arthroplasty (rTSA), hemiarthroplasty, or anatomic total shoulder arthroplasty (aTSA).[31] Their final analysis consisted of 1,152 patients involved in studies comparing rTSA and hemiarthroplasty and 26,786 patients in studies comparing rTSA and aTSA. Patients treated with rTSA showed significantly more improvement than those treated with hemiarthroplasty in all functional and outcome measures except forward flexion. The comparison between aTSA and rTSA was more complicated, with some measures favoring the former and others the latter. Overall, patients treated with aTSA appeared to have somewhat better outcomes, though the authors could not rule out the potential influence of preoperative factors. The authors summarized that while clinical outcomes are generally better after rTSA than after hemiarthroplasty, clinical outcomes are most improved after aTSA. However, the authors concluded that individual patient, disease, and shoulder characteristics should determine the appropriate procedure.

In their review, Harrison et al. (2020) noted that rTSA has relatively high complication (6–50%) and reoperation (5–24%) rates; however, this procedure can improve pain, function, and patient satisfaction when other surgical interventions are not viable.[15] The reverse design may address complications following aTSA or hemiarthroplasty, such as glenoid component removal, rotator cuff failure or deficiency, or proximal humerus bone loss.[15] In patients 65 years of age or older, rates of rTSA have increased while rates of hemiarthroplasty have decreased.[19] Compared to other surgical procedures, rTSA offers superior functional outcomes, range of motion, and patient satisfaction, and is the preferred treatment for 3-part, 4-part, and head-splitting fractures of the proximal humerus in older adults.[19]

In a systematic review of 20 studies comparing complication rates, hospital readmissions, and emergency department visits in patients undergoing TSA procedures in either inpatient or outpatient settings, Puzzitiello et al. (2020) reported no significant differences in safety or cost measures between

groups. The authors concluded that since outpatient TSA is generally safe, less costly, and less resource-intensive, it may be preferable for select low-risk patients. However, the authors also note that careful patient selection is critical as older, more medically infirm patients may require inpatient treatment.[32]

Leroux et al. (2018) conducted a retrospective cohort study of the medical records of 332,593 patients, 17,883 of whom had a diagnosis of rheumatoid arthritis, who underwent shoulder arthroplasty including hemiarthroplasty, aTSA, and rTSA procedures. The authors reported no significant differences in adverse events or hospitalization costs between patients with or without rheumatoid arthritis and a difference of only 0.1 days in hospital stay.[23]

In 2023, the American Shoulder and Elbow Surgeons (ASES) and the European Society for Surgery of the Shoulder and Elbow (SECEC) collaborated to issue their international consensus statement on the management of glenohumeral arthritis in patients 50 years old or younger.[7] Consensus statements included the following: patients with severe symptoms who had failed a course of conservative management and for whom imaging confirms advanced disease be considered for surgery, regardless of young age; rTSA is preferred for patients with glenohumeral arthritis and incompetent rotator cuffs; hemiarthroplasty is preferred for patients with advanced avascular necrosis; and aTSA is preferred for patients with inflammatory arthritis, intact rotator cuffs and mild glenoid wear.

In the 2020 clinical practice guideline on the management of glenohumeral osteoarthritis, the American Academy of Orthopaedic Surgeons (AAOS) noted strong evidence for (TSA) in patients with destructive or degenerative disease when conservative therapy has been unsuccessful or is not appropriate. The guideline also cautions that TSA procedures also carry risks and complications.[3] Moreover, the guidelines note that TSA procedures result in "more favorable function and pain relief in the short- to mid-term follow-up when compared to hemiarthroplasty for the treatment of glenohumeral osteoarthritis."

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Policy Revision History/Information

Original Date: December 9, 2020		
Review History		
Version 2	12/29/2023	Policy criteria reviewed and updated per medical literature.
Version 3	03/29/2024	Policy criteria reviewed and updated per medical literature.
Version 4	07/10/2025	Annual review. Removed CPT Code 20680. Added criteria for nicotine cessation. Clarified criteria for reverse TSA (patient not a candidate for TSA). Literature review - Medical Evidence section updated (including references).