1. **Purpose**
   The purpose of this policy is to establish the criteria when shoulder arthroplasty may be considered medically necessary.

2. **Definitions**
   2.1. **Hemi-arthroplasty** involves replacing the humeral head and not replacing the glenoid (socket), which is typically the best option if the glenoid does not have any arthritis or if there is some concern that the glenoid component might fail if it is replaced.

   2.2. **Total shoulder arthroplasty** involves replacing the humeral head and the glenoid. A total shoulder arthroplasty is typically the best option if the glenoid is damaged, but sufficient bone and rotator cuff remain to ensure that the glenoid component will last.

   2.3. **Reverse shoulder arthroplasty** involves replacing both the humeral head and the glenoid, but the ball and socket are reversed to improve muscle function. This allows the deltoid muscle, which has a longer movement arm, to generate greater force, allowing it to act in place of an inadequate functioning or torn rotator cuff.

   2.4. **Revision shoulder surgery** involves surgical reconstruction or replacement due to failure or complication of previous shoulder arthroplasty.

   2.5. **Shoulder resurfacing** is a surgical procedure that involves replacing the diseased part of the shoulder joint without replacing the humeral head. Resurfacing of the humeral head involves a prosthetic metal covering or cap to provide complete or partial coverage. It can be performed alone (hemi-resurfacing) or in combination with glenoid resurfacing (total or partial shoulder resurfacing).

   2.6. **Shoulder arthrodesis** is a surgical resection and fusion of the shoulder (glenohumeral) joint.

   2.7. **Non-surgical care**, with regard to the treatment of the shoulder, is defined as any non-surgical treatment, which has been demonstrated in the scientific literature as efficacious and/or is considered standard of care in the treatment of shoulder pain or loss of function. The types of treatment involved can include, but are not limited to: ice, relative rest/activity modification, manual therapy, therapy modalities, supervised therapeutic exercise, oral medication, bracing and/or injections (steroid).
3. Statement of Policy

3.1. The determination of medical necessity for the performance of shoulder arthroplasty (Hemi, Total, Reverse or Revision) is always made on a case-by-case basis.

3.2. Hemi-arthroplasty (Replacement)

3.2.1 Hemi-arthroplasty may be considered medically necessary for the treatment of:

- Proximal humerus fracture not amenable to internal fixation; or
- Destructive degenerative joint disease (i.e., rheumatoid arthritis or osteoarthritis) resulting in marked narrowing of the joint space; or
- Arthritic conditions in which the glenoid bone stock is inadequate to support a glenoid prosthesis; or
- Rotator cuff tear arthropathy (severe rotator cuff tearing and end-stage arthritic disease); or
- Osteonecrosis without glenoid involvement; and

That has resulted in severe pain and loss of function and when all of the following criteria have been met:

- Patient has chronic severe disabling pain for at least six (6) months in duration and a documented loss of shoulder function to the extent, which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; and
- Patient has undergone a reasonable course of non-surgical care for at least six (6) weeks in duration; and
- There is no history of active joint infection; and
- There is no current systemic infection; and
- There is no paralytic disorder of the shoulder; and
- Patient has undergone radiographic imaging and/or an advanced diagnostic procedure (i.e., MRI, CT scan, etc.), which is conclusive for underlying pathology (i.e., as stated above) and correlates with the patient’s reported symptoms and physical exam findings.
3.3. Total Shoulder Arthroplasty (Replacement)

3.3.1 Total Shoulder Arthroplasty may be considered medically necessary for the treatment of:

- Destructive degenerative joint disease (rheumatoid arthritis, osteoarthritis, avascular necrosis) resulting in marked narrowing of the joint space or other findings consistent with advanced degenerative change; i.e., one or more of the following:
  - Irregular joint surfaces
  - Glenoid sclerosis Osteophyte changes
  - Flattened glenoid
  - Cystic changes in the humeral head.

That has resulted in severe pain and loss of function and when all of the following criteria have been met:

- Patient has chronic severe disabling pain for at least six (6) months in duration and a documented loss of shoulder function to the extent, which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; and

- Patient has undergone a reasonable course of non-surgical care for at least six (6) weeks in duration; and

- There is no history of active joint infection; and

- There is no current systemic infection; and

- Patient has undergone radiographic imaging and/or an advanced diagnostic procedure (i.e., MRI, CT scan, etc.), which is conclusive for underlying pathology (i.e., as stated above) and correlates with the patient’s reported symptoms and physical exam findings.

3.4. Reverse Shoulder Arthroplasty (Replacement)

3.4.1 Reverse Shoulder Arthroplasty may be considered medically necessary for treatment of:
• Patients with a deficient rotator cuff with severe glenohumeral arthropathy and limited ability to actively flex the upper extremity to 90° against gravity; or

• Patients with a failed hemi-arthroplasty; or

• Patients with a failed total shoulder replacement with a deficient rotator cuff that is non-repairable; or

• Patients that required reconstruction after a tumor resection; or

• Shoulder fractures that are not repairable or cannot be reconstructed with other techniques; and

That has resulted in severe pain and loss of function and when all of the following criteria have been met:

• Patient has chronic severe disabling pain for at least six (6) months in duration and a documented loss of shoulder function to the extent which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; and

• Patient has undergone a reasonable course of non-surgical care for at least six (6) weeks in duration; and

• The patient’s joint must be anatomically and structurally suited (i.e., residual bone allows for firm fixation of implant) to receive the selected implant(s); and

• The patient must possess functional use of the deltoid muscle; and

• At least 90° of passive shoulder range of motion (elevation/flexion); and

• No active or local infection; and

• Does not have a condition that would place excessive stress on the implant (i.e., Charcot' joint); and

3.4.2 Reverse shoulder arthroplasty is considered investigational for all other conditions and; therefore, considered not medically necessary.

3.5. Shoulder Resurfacing
3.5.1 Shoulder Resurfacing, including total, hemi or partial resurfacing, is considered investigational and; therefore, considered not medically necessary.

3.6. Should Revision

3.6.1 Shoulder Revision is considered medically necessary when the following criteria have been met:

- Patient has previously undergone a partial or total shoulder arthroplasty; and
- The patient has developed chronic severe, disabling pain; and
- A documented loss of function to the extent which interferes with their ability to carry out their age appropriate activities of daily living and/or demands of employment; and
- Patient demonstrates one or more of the following:
  - Fracture or dislocation; or
  - Instability of the components; or
  - Aseptic loosening; or
  - Infection; or
  - Periprosthetic fracture; or
  - Unexplained pain for greater than six (6) months not responsive to non-surgical management.

3.6.1 Shoulder Revisions are considered not medically necessary when any of the following criteria are present:

- Patient suffers persistent infection; or
- Patient demonstrates poor bone quality.

3.7. Shoulder Arthrodesis

3.7.1 Shoulder Arthrodesis may be considered medically necessary for the following indications:

- Irreparable deltoid and rotator cuff deficiency
- Failed total shoulder arthroplasty
- Joint infection
- Reconstruction after tumor resection
- Brachial plexus palsy
- Recurrent shoulder instability, which has failed previous repair/reconstruction
- Paralytic disorders in infancy.

That has resulted in severe pain and loss of function and when all of the following criteria have been met:

- Patient has chronic severe, disabling pain and a documented loss of shoulder function to the extent which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; and
- Patient has undergone a reasonable course of non-surgical care for at least six to eight (6-8) weeks in duration or is not a candidate for alternative treatments; and
- Patient has undergone radiographic imaging and/or and advanced diagnostic procedure (i.e., MRI, CT scan, etc.), which is conclusive for underlying pathology and correlates with the patient’s reported symptoms and physical exam findings.

3.6.2 Shoulder Arthrodesis may not be considered medically necessary for the following:

- Deficient functional scapulothoracic motion
- Paralysis of the trapezius, levator, scapulae and serratus anterior
- Charcot arthropathy
- Patients with advanced age and frailty
- Progressive neurologic disease.

4. References
4.1. Scientific:

The following scientific references were utilized in the formulation of this medical policy. Triad Healthcare, Inc. will continue to review clinical evidence surrounding shoulder arthroplasty and may modify this policy at a later date based upon the evolution of the published clinical evidence. Should additional scientific studies become available and they are not included in the list, please forward the reference(s) to Triad Healthcare, Inc. so the information can be reviewed by the Academic Advisory Committee (AAC) and the Medical Quality Improvement Committee (MQIC) to determine if a modification of the policy is in order.


• Lollino_Gleno-Humeral arthritis in young patients: clinical and radiographic analysis of humerus resurfacing prosthesis and meniscus interposition


• ORIF. *Shoulder Arthrodesis*. Available at http://www.eorif.com/shoulder-arthrodesis.


• Tibbetts R, Wirth M. Shoulder arthroplasty for the young, active patient. *Instr Course Lect.* 60:99-104; 2011


4.2. Related Triad Medical Policies:
• TMMP 18 Medical Necessity

**CPT Codes**
This policy relates to the use of the following CPT Codes:

<table>
<thead>
<tr>
<th>CPT Codes</th>
<th>Description (AMA CPT Guide)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23330</td>
<td>Removal of foreign body, shoulder; subcutaneous</td>
</tr>
<tr>
<td>23333</td>
<td>Removal of foreign body, shoulder; deep (subfascial or intramuscular)</td>
</tr>
<tr>
<td>23334</td>
<td>Removal of prosthesis, includes debridement and synovectomy when performed; humeral or glenoid component</td>
</tr>
<tr>
<td>23335</td>
<td>Removal of prosthesis, includes debridement and synovectomy when performed; humeral and glenoid components (eg, total shoulder)</td>
</tr>
<tr>
<td>23400</td>
<td>Scapulopexy (e.g., Sprengels deformity or for paralysis)</td>
</tr>
<tr>
<td>23470</td>
<td>Arthroplasty, glenohumeral joint; hemiarthroplasty</td>
</tr>
<tr>
<td>23472</td>
<td>Arthroplasty, glenohumeral joint; total shoulder (glenoid and proximal humeral replacement (e.g., total shoulder)</td>
</tr>
<tr>
<td>23800</td>
<td>Arthrodesis, glenohumeral joint</td>
</tr>
<tr>
<td>23802</td>
<td>Arthrodesis, glenohumeral joint; with autogenous graft (includes obtaining graft)</td>
</tr>
<tr>
<td>29819</td>
<td>Arthroscopy, shoulder, surgical; with removal of loose body or foreign body</td>
</tr>
</tbody>
</table>
This list may not be all inclusive and is not intended to be used for coding/billing purposes.

**Table of Revisions**

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Modified By</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/23/2014</td>
<td>Level 1, 2, 3</td>
<td>Annual Review. §3.2.1. 6th and 7th bullet changed from “patient has chronic severe disabling pain for at least six (6) months to one (1) year in duration and a documented loss of shoulder function to the extent, which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; and Patient has undergone a reasonable course of non-surgical care for at least six to eight (6-8) weeks in duration” to reduce the time period in both statements to “at least six (6) months.” CPT Codes and Descriptions updated. §3.6. Shoulder Revision added.</td>
</tr>
<tr>
<td>06/10/2013</td>
<td>Level 1, 2, 3</td>
<td>Annual Review. Document revised for punctuation and formatting.</td>
</tr>
<tr>
<td>03/26/2012</td>
<td>Level 1, 2, 3</td>
<td>New medical policy.</td>
</tr>
</tbody>
</table>

Triad’s Medical Policies are not recommendations for treatment and providers are expected to exercise their clinical judgment in providing the most appropriate care. Health care providers and patients should not rely on these Medical Policies in making health care decisions. These Medical Policies are guidelines and do not constitute an authorization, certification, explanation of benefits or guarantee of payment. Applications of Triad’s Medical Policies are determined by the enrollee’s benefit documents and contracts and as such individual benefits must be verified. Determinations of medical necessity apply only if the benefit exists and no contract exclusions are applicable. In the event of a conflict, a participant’s benefit plan document shall supersede the information contained in Triad’s Medical Policies.