Evolent Clinical Guideline 1769 for Shoulder Arthroplasty

Guideline Number: Evolent_CG_1769	**Applicable Codes**	
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Original Date: August 2016	**Last Revised Date:** ~~December 2023~~**November 2024**	**Implementation Date:** July ~~2024~~**2025**

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STATEMENT

General Information

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

Purpose

This guideline addresses elective, non-emergent shoulder arthroplasty (shoulder replacement) procedures, including total shoulder arthroplasty, reverse shoulder arthroplasty, resurfacing arthroplasty, partial shoulder replacement or hemiarthroplasty, and revision arthroplasty procedures.

Scope

Arthroplasty procedures are reserved for end stage arthritis of the shoulder joint, including functional loss of motion, pain, and disability. The choice of arthroplasty is dependent upon surgeon philosophy, experience, and skill. Successful outcome, regardless of procedure, is more likely with high volume (> 20 per year) shoulder specialists.

GENERAL REQUIREMENTS

Elective surgery of the shoulder may be considered if the following general criteria are met:

- Clinical correlation of individual's subjective complaints with objective exam findings and/or imaging (when applicable)
- Individual has limited function (age-appropriate activities of active daily livings (ADLs), occupational, or athletic)
- Individual does not have an active local or systemic infection
- Individual does not have active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in treatment
- Individual has good oral hygiene and does not have major dental work scheduled or anticipated (ideally within one year of joint replacement; due to increased post-surgical infection risk)
- Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with a total joint replacement when comorbidities exist as it pertains to the added risk of complications [1,2]

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations
- Type and duration of non-operative management modalities

Non-operative management, when required, will be specified within the clinical indications below and may include one or more of the following:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Application of heat or ice
- Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
- Corticosteroid injections

INDICATIONS

Total Shoulder Arthroplasty (TSA)

Total Shoulder Arthroplasty may be necessary when the following criteria are met [1,3,4]:

- Evidence of painful osteoarthritis or inflammatory, non-infectious arthritis (e.g., rheumatoid) with functional limitations such as ADLs, employment, or recreation
- Functional and intact rotator cuff and deltoid (adequate abduction strength); confirmed by physical examination, MRI, or CT scan
- Complete or near-complete loss of joint space***** on axillary or AP X-rays (internal rotation and/or external rotation)*****

  ***NOTE**: In those with bone-on-bone articulation on axillary or true AP X-rays, non-operative treatment is not required

  NOTE: MRI should not be the primary imaging study to determine the extent of disease
- Failure of at least 12 weeks of non-operative treatment that includes at least **ONE** of the following:
  - Physical therapy or properly instructed home exercise program
  - Rest or activity modification
  - Application of heat or ice
  - Pharmacologic treatment (oral/topical NSAIDS, acetaminophen, analgesics)
  - Corticosteroid injections
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Contraindications

- Neurological disease resulting in complex regional pain syndrome (CRPS or its variants), Charcot arthropathy, or loss of deltoid or rotator cuff function
- Active infection or any infection within 12 weeks of surgery:
  - History of prior shoulder joint infection without documentation that indolent infection has been eliminated (individual has been off antibiotics for a minimum of 6 weeks). Evidence of resolved infection should include laboratory work

(serologies, including CBC with differential, ESR (erythrocyte sedimentation rate), CRP (C-reactive protein), with or without blood cultures, soft tissue biopsy cultures, or synovial fluid aspiration (cultures, gram stain, cell count, differential, crystals). Cultures should be for aerobic and anaerobic bacteria (AFB, fungal), with special attention to the possibility of *Cutibacterium acnes* (*C. acnes*) formerly *Propionibacterium acnes* (*P. acnes*). [6,11]

- Poor dental hygiene (e.g., tooth extraction should be performed prior to arthroplasty). Major dental work within 2 years after a joint replacement **MAY** lead to seeding of the implant and possible revision surgery. If possible, all dental work must be completed prior to shoulder arthroplasty as these procedures increase risk for infection
- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Hemiarthroplasty

Hemiarthroplasty may be necessary when the following criteria are met [3,4]:

- Acute 3 or 4-part fracture of the proximal humerus

  OR

- Individual meets all of the criteria for a Total Shoulder Arthroplasty, as detailed above, or has avascular necrosis or osteonecrosis of the humeral head without advanced glenoid disease
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Contraindications

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- Neurologic disease resulting in CRPS or Charcot shoulder
- Active infection within 12 weeks of surgery

Reverse Total Shoulder Arthroplasty (RTSA)

For the treatment of arthritis, irreparable rotator cuff tears or proximal humeral fractures [12,13]:

Arthritis

RTSA may be indicated for the treatment of arthritis when **ALL** of the following criteria are met [12]:

- Evidence of painful osteoarthritis or inflammatory, non-infectious arthritis (e.g., rheumatoid) with functional limitations (such as activities of daily living or employment or simple recreation)
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis*****
- Complete or near-complete loss of joint space on axillary or AP x-rays (internal

rotation and/or external rotation) **OR** radiographic evidence of advanced glenoid bone loss or excessive retroversion*

*In those with bone-on-bone articulation on axillary or true AP X-rays, **non-operative treatment is not required.**

NOTE: MRI should not be the primary imaging study to determine the extent of disease

- Non-repairable massive tears involving at least two tendons, substantial partial, **OR** focal full thickness rotator cuff tear with significant rotator cuff dysfunction (weakness, impingement signs on exam) **AND** intact deltoid
- Requests for reverse TSA for advanced glenohumeral arthritis with an intact rotator cuff will be reviewed on a case-by-case basis [14,15]
- Failure of **at least 12** weeks of non-operative treatment that includes **at least ONE** of the following:
  - Physical therapy or properly instructed home exercise program
  - Rest or activity modification
  - Application of heat or ice
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
  - Corticosteroid injections
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

***NOTE**: RTSA has been found to be a reliable operation in younger individuals with improvement in pain, range of motion and strength, without a large number of early failures [12,16,17]

Contraindications [12]

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Active infection within 12 weeks of surgery
- Neurologic disease resulting in CRPS or Charcot shoulder
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Proximal Humeral Fractures

RTSA may be indicated for the treatment of fractures when **ALL** of the following criteria are met:

- Acute 2, 3, or 4-part fractures of proximal humerus with or without concomitant tuberosity as evidence by radiographic findings **OR** painful malunion of proximal humerus fracture with rotator cuff dysfunction (weakness, impingement signs on exam) [12]
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis

Rotator Cuff Tears

RTSA may be indicated for the treatment of irreparable rotator cuff tears in the absence of arthritis when **ALL** of the following criteria are met:

- Non-repairable massive rotator cuff tear
- Intact deltoid
- Inability to actively elevate the arm above the level of the shoulder (90 degrees) (i.e., pseudoparalysis); **OR** history of previous failed rotator cuff repair with severe pain and functional disability [12,18]
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis
- Failure of **at least 12** weeks of attempted physical therapy or properly instructed home exercise program unless there is worsening of symptoms [19,20,21]
- No arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]

Contraindications

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Active infection within 12 weeks of surgery
- Neurologic disease resulting in CRPS or Charcot shoulder
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

NOTE: RTSA is a reasonable surgical option for irreparable rotator cuff repair without arthritis. However, caution should be exercised when offering RTSA to individuals without pseudoparalysis because they can have a higher complication and dissatisfaction rate [22,23]

Revision Arthroplasty (See Contraindications*) [24,25]

There are six primary indications for revision shoulder arthroplasty:

1. Conversion of a hemiarthroplasty to a total shoulder arthroplasty
2. Conversion of a hemiarthroplasty to a reverse shoulder arthroplasty
3. Revision of a total shoulder arthroplasty to another total shoulder arthroplasty
4. Revision of a total shoulder arthroplasty to a reverse shoulder arthroplasty
5. Revision of a reverse total shoulder arthroplasty to another reverse shoulder arthroplasty
6. Revision of a total shoulder or reverse shoulder arthroplasty to a hemiarthroplasty

Conversion of a Hemiarthroplasty to a Total Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative

infection evaluation (including CRP, ESR, with or without negative aspiration). **If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.**

- Clinical and radiographic evidence of intact rotator cuff (or repairable rotator cuff tear), including **ONE** of the following two options:
  - Radiographic evidence of failed humeral component, including aseptic loosening or periprosthetic fracture (documentation should include radiolucencies around cemented or uncemented components) **OR**
  - Clinical and radiographic evidence of glenoid articular cartilage disease (including progressive arthritis)

Conversion of a Hemiarthroplasty to a Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). **If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.**
- Intact deltoid and intact axillary nerve
- Age > 60; requests for individuals < 60 will be reviewed on a case-by-case basis
- Evidence of pseudoparalysis (inability to elevate arm) **OR** severe pain with elevation

Revision of a Total Shoulder Arthroplasty to Another Total Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). **If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.**
- Intact deltoid and intact axillary nerve
- Clinical and radiographic evidence of intact rotator cuff (or repairable rotator cuff tear)
- Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture

Revision of a Total Shoulder Arthroplasty to a Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration**). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.**
- Intact deltoid function
- Age > 60 (requests in individuals < 60 will be reviewed on a case-by-case basis)
- Evidence of pseudoparalysis (inability to elevate arm) **OR** severe pain with elevation

Revision of a Reverse Shoulder Arthroplasty to Another Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- All cases should be reviewed on a case-by-case basis and include the following:
  - Evidence of prior reverse shoulder arthroplasty
  - Persistent pain and functional loss
  - Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). **If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.**
  - Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture
  - Intact deltoid

Revision of a Total Shoulder or Reverse Shoulder Arthroplasty to a Hemiarthroplasty

May be necessary when **ALL** of the following criteria are met

- All cases should be reviewed on a case-by-case basis and include the following:
  - Evidence of prior total shoulder or reverse shoulder arthroplasty
  - Persistent pain and functional loss
  - Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). **If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.**
  - Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture
  - Intact deltoid and intact axillary nerve
  - Insufficient glenoid bone to support a revision glenoid component

**Contraindications for Revision Arthroplasty*

- Active or recent history of infection
- Neurogenic pain syndrome
- Acromial fracture **OR** overly thin acromion from prior subacromial decompression
- Severe osteoporosis as evidenced by radiographic osteopenia, osteomalacia or severe osteoporosis on DXA scan
- Non-functioning deltoid or axillary nerve injury/palsy
- Any arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]

CODING AND STANDARDS

Coding

CPT Codes

Total/Reverse Shoulder Arthroplasty or Resurfacing: 23472

Partial Shoulder Arthroplasty/Hemiarthroplasty: 23470

Revision Shoulder Arthroplasty: 23473, 23474

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

POLICY HISTORY

Date	Summary
November 2024	• **This guideline replaces Evolent Clinical Guideline 317 for Shoulder Arthroplasty** • **For revision arthroplasty, added the requirement for a surgical plan to rule out infection, if inflammation markers are elevated**

Date	Summary
	• **<u>Reduced/cut background section</u>**
December 2023	• No content changes • Added table of contents • Reduced Background section • Updated references
May 2023	• Added statement that non-operative treatment is not required in those with X-rays showing bone-on-bone articulation • Additional references to contraindications for cortisone injections within 12 weeks of an arthroplasty. • Added no cortisone injections or arthroscopic surgery within 12 weeks of surgery for a revision arthroplasty
~~May 2022~~	~~• Updated references~~ ~~**Added:**~~ ~~Arthroscopic surgery within 12 weeks of an arthroplasty as a contraindication for surgery.~~ ~~RTSA request with intact rotator cuff to be reviewed on a case-by-case basis~~ ~~Replaced patient is medically stable statement (general requirements) with individual is optimized with no uncontrolled co-morbidities statement~~ ~~Added "or" after, "acute 3 or 4-part fracture of the proximal humerus" (Hemiarthroplasty)~~ ~~**Revised:**~~ ~~Criterion with ages 65 to 60 for consistency (case-by-case review)~~ ~~"no injection" statements to "no cortisone injection" and "any injection statements" to "any cortisone injection"~~ ~~Infection contraindication from 3 months to 12 weeks~~ ~~Non-repairable massive *tears involving at least two tendons* (RTSA arthritis)~~ ~~**Clarified:**~~ ~~Clarification of contraindications for RSTA performed for rotator cuff tears~~ ~~Functional and intact rotator cuff and deltoid is confirmed by physical examination, MRI, *or* CT scan.~~ ~~Chronic regional pain syndrome~~ ~~Replaced "patient" with "individual" where appropriate~~

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

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Purpose

This guideline addresses elective, non-emergent shoulder arthroplasty (shoulder replacement) procedures, including total shoulder arthroplasty, reverse shoulder arthroplasty, resurfacing arthroplasty, partial shoulder replacement or hemiarthroplasty, and revision arthroplasty procedures.

Scope

Arthroplasty procedures are reserved for end stage arthritis of the shoulder joint, including functional loss of motion, pain, and disability. The choice of arthroplasty is dependent upon surgeon philosophy, experience, and skill. Successful outcome, regardless of procedure, is more likely with high volume (> 20 per year) shoulder specialists.

GENERAL REQUIREMENTS

Elective surgery of the shoulder may be considered if the following general criteria are met:

- Clinical correlation of individual's subjective complaints with objective exam findings and/or imaging (when applicable)
- Individual has limited function (age-appropriate activities of active daily livings (ADLs), occupational, or athletic)
- Individual does not have an active local or systemic infection
- Individual does not have active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in treatment
- Individual has good oral hygiene and does not have major dental work scheduled or anticipated (ideally within one year of joint replacement; due to increased post-surgical infection risk)
- Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with a total joint replacement when comorbidities exist as it pertains to the added risk of complications [1,2]

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations
- Type and duration of non-operative management modalities

Non-operative management, when required, will be specified within the clinical indications below and may include one or more of the following:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Application of heat or ice
- Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
- Corticosteroid injections

INDICATIONS

Total Shoulder Arthroplasty (TSA)

Total Shoulder Arthroplasty may be necessary when the following criteria are met [1,3,4]:

- Evidence of painful osteoarthritis or inflammatory, non-infectious arthritis (e.g., rheumatoid) with functional limitations such as ADLs, employment, or recreation
- Functional and intact rotator cuff and deltoid (adequate abduction strength); confirmed by physical examination, MRI, or CT scan
- Complete or near-complete loss of joint space***** on axillary or AP X-rays (internal rotation and/or external rotation)*****

  ***NOTE**: In those with bone-on-bone articulation on axillary or true AP X-rays, non-operative treatment is not required

  NOTE: MRI should not be the primary imaging study to determine the extent of disease
- Failure of at least 12 weeks of non-operative treatment that includes at least **ONE** of the following:
  - Physical therapy or properly instructed home exercise program
  - Rest or activity modification
  - Application of heat or ice
  - Pharmacologic treatment (oral/topical NSAIDS, acetaminophen, analgesics)
  - Corticosteroid injections
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Contraindications

- Neurological disease resulting in complex regional pain syndrome (CRPS or its variants), Charcot arthropathy, or loss of deltoid or rotator cuff function
- Active infection or any infection within 12 weeks of surgery:
  - History of prior shoulder joint infection without documentation that indolent infection has been eliminated (individual has been off antibiotics for a minimum of 6 weeks). Evidence of resolved infection should include laboratory work

(serologies, including CBC with differential, ESR (erythrocyte sedimentation rate), CRP (C-reactive protein), with or without blood cultures, soft tissue biopsy cultures, or synovial fluid aspiration (cultures, gram stain, cell count, differential, crystals). Cultures should be for aerobic and anaerobic bacteria (AFB, fungal), with special attention to the possibility of *Cutibacterium acnes* (*C. acnes*) formerly *Propionibacterium acnes* (*P. acnes*). [6,11]

- Poor dental hygiene (e.g., tooth extraction should be performed prior to arthroplasty). Major dental work within 2 years after a joint replacement **MAY** lead to seeding of the implant and possible revision surgery. If possible, all dental work must be completed prior to shoulder arthroplasty as these procedures increase risk for infection
- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Hemiarthroplasty

Hemiarthroplasty may be necessary when the following criteria are met [3,4]:

- Acute 3 or 4-part fracture of the proximal humerus

  OR

- Individual meets all of the criteria for a Total Shoulder Arthroplasty, as detailed above, or has avascular necrosis or osteonecrosis of the humeral head without advanced glenoid disease
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Contraindications

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- Neurologic disease resulting in CRPS or Charcot shoulder
- Active infection within 12 weeks of surgery

Reverse Total Shoulder Arthroplasty (RTSA)

For the treatment of arthritis, irreparable rotator cuff tears or proximal humeral fractures [12,13]:

Arthritis

RTSA may be indicated for the treatment of arthritis when **ALL** of the following criteria are met [12]:

- Evidence of painful osteoarthritis or inflammatory, non-infectious arthritis (e.g., rheumatoid) with functional limitations (such as activities of daily living or employment or simple recreation)
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis*****
- Complete or near-complete loss of joint space on axillary or AP x-rays (internal

rotation and/or external rotation) **OR** radiographic evidence of advanced glenoid bone loss or excessive retroversion*

*In those with bone-on-bone articulation on axillary or true AP X-rays, **non-operative treatment is not required.**

NOTE: MRI should not be the primary imaging study to determine the extent of disease

- Non-repairable massive tears involving at least two tendons, substantial partial, **OR** focal full thickness rotator cuff tear with significant rotator cuff dysfunction (weakness, impingement signs on exam) **AND** intact deltoid
- Requests for reverse TSA for advanced glenohumeral arthritis with an intact rotator cuff will be reviewed on a case-by-case basis [14,15]
- Failure of **at least 12** weeks of non-operative treatment that includes **at least ONE** of the following:
  - Physical therapy or properly instructed home exercise program
  - Rest or activity modification
  - Application of heat or ice
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
  - Corticosteroid injections
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

***NOTE**: RTSA has been found to be a reliable operation in younger individuals with improvement in pain, range of motion and strength, without a large number of early failures [12,16,17]

Contraindications [12]

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Active infection within 12 weeks of surgery
- Neurologic disease resulting in CRPS or Charcot shoulder
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Proximal Humeral Fractures

RTSA may be indicated for the treatment of fractures when **ALL** of the following criteria are met:

- Acute 2, 3, or 4-part fractures of proximal humerus with or without concomitant tuberosity as evidence by radiographic findings **OR** painful malunion of proximal humerus fracture with rotator cuff dysfunction (weakness, impingement signs on exam) [12]
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis

Rotator Cuff Tears

RTSA may be indicated for the treatment of irreparable rotator cuff tears in the absence of arthritis when **ALL** of the following criteria are met:

- Non-repairable massive rotator cuff tear
- Intact deltoid
- Inability to actively elevate the arm above the level of the shoulder (90 degrees) (i.e., pseudoparalysis); **OR** history of previous failed rotator cuff repair with severe pain and functional disability [12,18]
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis
- Failure of **at least 12** weeks of attempted physical therapy or properly instructed home exercise program unless there is worsening of symptoms [19,20,21]
- No arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]

Contraindications

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Active infection within 12 weeks of surgery
- Neurologic disease resulting in CRPS or Charcot shoulder
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

NOTE: RTSA is a reasonable surgical option for irreparable rotator cuff repair without arthritis. However, caution should be exercised when offering RTSA to individuals without pseudoparalysis because they can have a higher complication and dissatisfaction rate [22,23]

Revision Arthroplasty (See Contraindications*) [24,25]

There are six primary indications for revision shoulder arthroplasty:

1. Conversion of a hemiarthroplasty to a total shoulder arthroplasty
2. Conversion of a hemiarthroplasty to a reverse shoulder arthroplasty
3. Revision of a total shoulder arthroplasty to another total shoulder arthroplasty
4. Revision of a total shoulder arthroplasty to a reverse shoulder arthroplasty
5. Revision of a reverse total shoulder arthroplasty to another reverse shoulder arthroplasty
6. Revision of a total shoulder or reverse shoulder arthroplasty to a hemiarthroplasty

Conversion of a Hemiarthroplasty to a Total Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative

infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.

- Clinical and radiographic evidence of intact rotator cuff (or repairable rotator cuff tear), including **ONE** of the following two options:
  - Radiographic evidence of failed humeral component, including aseptic loosening or periprosthetic fracture (documentation should include radiolucencies around cemented or uncemented components) **OR**
  - Clinical and radiographic evidence of glenoid articular cartilage disease (including progressive arthritis)

Conversion of a Hemiarthroplasty to a Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
- Intact deltoid and intact axillary nerve
- Age > 60; requests for individuals < 60 will be reviewed on a case-by-case basis
- Evidence of pseudoparalysis (inability to elevate arm) **OR** severe pain with elevation

Revision of a Total Shoulder Arthroplasty to Another Total Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
- Intact deltoid and intact axillary nerve
- Clinical and radiographic evidence of intact rotator cuff (or repairable rotator cuff tear)
- Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture

Revision of a Total Shoulder Arthroplasty to a Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
- Intact deltoid function
- Age > 60 (requests in individuals < 60 will be reviewed on a case-by-case basis)
- Evidence of pseudoparalysis (inability to elevate arm) **OR** severe pain with elevation

Revision of a Reverse Shoulder Arthroplasty to Another Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- All cases should be reviewed on a case-by-case basis and include the following:
  - Evidence of prior reverse shoulder arthroplasty
  - Persistent pain and functional loss
  - Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
  - Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture
  - Intact deltoid

Revision of a Total Shoulder or Reverse Shoulder Arthroplasty to a Hemiarthroplasty

May be necessary when **ALL** of the following criteria are met

- All cases should be reviewed on a case-by-case basis and include the following:
  - Evidence of prior total shoulder or reverse shoulder arthroplasty
  - Persistent pain and functional loss
  - Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
  - Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture
  - Intact deltoid and intact axillary nerve
  - Insufficient glenoid bone to support a revision glenoid component

**Contraindications for Revision Arthroplasty*

- Active or recent history of infection
- Neurogenic pain syndrome
- Acromial fracture **OR** overly thin acromion from prior subacromial decompression
- Severe osteoporosis as evidenced by radiographic osteopenia, osteomalacia or severe osteoporosis on DXA scan
- Non-functioning deltoid or axillary nerve injury/palsy
- Any arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]

CODING AND STANDARDS

Coding

CPT Codes

Total/Reverse Shoulder Arthroplasty or Resurfacing: 23472

Partial Shoulder Arthroplasty/Hemiarthroplasty: 23470

Revision Shoulder Arthroplasty: 23473, 23474

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 317 for Shoulder Arthroplasty • For revision arthroplasty, added the requirement for a surgical plan to rule out infection, if inflammation markers are elevated • Reduced/cut background section

Date	Summary
December 2023	• No content changes • Added table of contents • Reduced Background section • Updated references
May 2023	• Added statement that non-operative treatment is not required in those with X-rays showing bone-on-bone articulation • Additional references to contraindications for cortisone injections within 12 weeks of an arthroplasty. • Added no cortisone injections or arthroscopic surgery within 12 weeks of surgery for a revision arthroplasty

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

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