

Shoulder Arthroplasty

ORG: S-634 (ISC)

[Link to Codes](#)

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Care Planning - Inpatient Admission and Alternatives

Clinical Indications for Procedure


- Procedure is indicated for **1 or more** of the following(1)(2):
 - ☐ Advanced joint disease, as indicated by **ALL** of the following(3)(4):
 - Positive radiographic findings (eg, shoulder joint destruction, severe joint space narrowing, cystic changes)
 - Nonoperative therapy has been tried and failed (eg, anti-inflammatory medications, physical therapy, analgesics).
 - Replacement needed because of **1 or more** of the following:
 - Disabling pain
 - Functional disability
 - Osteonecrosis of the humeral head(5)(6)(7)
 - ☐ Reverse total shoulder arthroplasty, as indicated for **1 or more** of the following(8)(9):
 - Massive rotator cuff tear(10)
 - Failed rotator cuff repair(10)
 - Rotator cuff deficient arthropathy(10)
 - Failed shoulder arthroplasty or hemiarthroplasty(11)(12)
 - Proximal humerus fracture with rotator cuff deficiency or malunion(13)(14)(15)
 - Complex fracture of proximal humerus(14)(15)(16)(17)
 - Reconstruction after tumor resection(18)
 - Arthritis with posterior glenohumeral subluxation
 - Osteonecrosis of the humeral head(19)
 - Rheumatoid arthritis of the shoulder and **ALL** of the following(20)(21):
 - Positive radiographic findings (eg, shoulder joint destruction)
 - Nonoperative therapy has been tried and failed (eg, anti-inflammatory medications, disease-modifying antirheumatic drugs).
 - Replacement needed because of **1 or more** of the following:

- Disabling pain
- Functional disability
- ☐ Replacement (revision) of previous arthroplasty or hemiarthroplasty needed because of **1 or more** of the following(12):
 - Instability of glenoid or humeral components
 - Fracture or mechanical failure of implant
 - Glenoid erosion from humeral prosthetic component of hemiarthroplasty
 - Infection(22)(23)(24)(25)
 - Proximal migration of humeral head


Alternatives to Procedure

- Alternatives include(1)(4):
 - Nonoperative management, which may include(3)(10):
 - Anti-inflammatory medication
 - Analgesics
 - Flexibility and muscle strengthening exercises
 - Physical therapy
 - Intra-articular steroids
 - Reasonable restriction of activities
 - For proximal humerus fracture(13)(17)(26):
 - Open reduction. See Humerus Fracture, Closed or Open Reduction  ISC guideline.
 - Closed reduction with pin fixation or immobilization with orthosis
 - Nonoperative management(27)
 - Hemiarthroplasty. See Shoulder Hemiarthroplasty  ISC guideline.
 - Resection arthroplasty(28)
 - Radiation synovectomy
 - Arthroscopic debridement(29)
 - Serial debridement(22)(29)
 - Superior capsule reconstruction(30)(31)
 - Resurfacing of humeral head or glenoid(32)
 - Staged procedure with insertion of an antibiotic impregnated spacer(25)
 - Osteotomy for malunion
 - For osteonecrosis of humeral head(5)(6):
 - Humeral head core decompression
 - Humeral head bone grafting
 - Hemiarthroplasty. See Shoulder Hemiarthroplasty  ISC guideline.

Operative Status Criteria

- Ambulatory: Patients who are without active or unstable comorbidities (eg, CHF, COPD, CAD) that require prolonged postoperative care(33)(34)
- Inpatient: Patients with active or unstable comorbidities that require prolonged postoperative care(34)(35) 

Preoperative Care Planning

- Preoperative care planning needs may include(1):
 - Routine preoperative evaluation. See Preoperative Education, Assessment, and Planning Tool  SR.
 - Evaluation for metal hypersensitivity
 - Pain management(36)(37)
 - Preoperative treatment, procedures, and stabilization, including:
 - Ruling out sources of infection, including dental and lower urinary tract infections
 - Dental prophylaxis as indicated
 - Imaging
 - Preoperative discharge planning as appropriate. See Discharge Planning in this guideline.

Hospitalization

Optimal Recovery Course

Day	Level of Care	Clinical Status	Activity	Routes	Interventions	Medications
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1	<ul style="list-style-type: none"> • OR to floor • Social Determinants of Health Assessment • Readmission Risk Assessment • Discharge planning • Possible discharge[A] 	<ul style="list-style-type: none"> • Clinical Indications met[B] 	<ul style="list-style-type: none"> • Ambulatory postoperatively • Possible pendulum exercises as tolerated 	<ul style="list-style-type: none"> • IV fluids • IV medications • Diet as tolerated postoperatively 	<ul style="list-style-type: none"> • Possible sling or shoulder immobilizer • Possible passive ROM postoperatively 	<ul style="list-style-type: none"> • Prophylactic antibiotics • Multimodal analgesia, possible PCA or continuous interscalene nerve block
2	<ul style="list-style-type: none"> • Social Determinants of Health Assessment • Readmission Risk Assessment • Floor to discharge • Complete discharge planning 	<ul style="list-style-type: none"> • Procedure completed • Hemodynamic stability • No evidence of neurologic or vascular compromise • No evidence of surgical site infection • Pain absent or managed • Discharge plans and education understood 	<ul style="list-style-type: none"> • Ambulatory or acceptable for next level of care • Pendulum exercises 	<ul style="list-style-type: none"> • Oral hydration[C] • Oral medications or regimen acceptable for next level of care • Oral diet or acceptable for next level of care 	<ul style="list-style-type: none"> • Physical therapy 	<ul style="list-style-type: none"> • PCA absent[D] • Possible analgesics

(1)(33)(34) **NN**

Recovery Milestones are indicated in **bold**.

Goal Length of Stay: Ambulatory or 1 day postoperative

Note: Goal Length of Stay assumes optimal recovery, decision making, and care. Patients may be discharged to a lower level of care (either later than or sooner than the goal) when it is appropriate for their clinical status and care needs.

Extended Stay




Minimal (a few hours to 1 day), Brief (1 to 3 days), Moderate (4 to 7 days), and Prolonged (more than 7 days).

- Extended stay beyond goal length of stay may be needed for(35)(38):
 - Complications of procedure(39)(40)(41)(42)
 - Complications include vascular or nerve injury, anterior dislocation, periprosthetic fracture, anesthetic complications, bleeding, and infection.
 - Expect brief stay extension.
 - Preoperative injury (eg, fracture, rotator cuff tear, multiple trauma)
 - Expect brief stay extension.
 - Care for comorbidities (eg, anemia, renal insufficiency)(43)(44)(45)(46)
 - Expect brief stay extension.

See Common Complications and Conditions  ISC for further information.








Hospital Care Planning


- Hospital evaluation and care needs may include(1)(38):**II**
 - Treatment and procedure scheduling and completion, including:
 - Venous thromboembolism prophylaxis(51)
 - IV antibiotics

- Tranexamic acid(52)
- Transfusion
- Pain management(37)
- Consultation, assessment, and other services scheduling and completion, including:
 - Physical therapy(53)
- Identification of patient at high risk for readmission to prioritize transition and post-acute care
 - ☐ Risk of readmission is increased by presence of **1 or more** of the following(54)(55)(56)(57)(58)(59)(60)(61)(62)(63):
 - Hospitalization (nonelective) in past 6 months(64)(65)(66)
 - 2 or more emergency department visits in past 6 months
 - No source of outpatient care other than emergency department (eg, no primary care provider)(66)(67)
 - Severe care transition barriers (eg, no caregiver, homeless)(64)(65)(68)
 - Severe or end-stage renal disease (on dialysis or GFR less than 30 mL/min/1.73m² (0.5 mL/sec/1.73m²))(64)(69)
 -  eGFR - Adult Calculator  eGFR - Pediatric Calculator
 - Anemia(50)
 - Revision shoulder arthroplasty(47)
 - Inflammatory arthritis etiology(48)
 - Diabetes mellitus necessitating treatment with insulin(49)
 - Arthroplasty performed due to traumatic proximal humerus fracture(16)
- Monitoring patient's status for deterioration and comorbid conditions (see Inpatient Monitoring and Assessment Tool  SR); key items include:
 - Neurovascular status
 - Wound management
 - Pain management



Discharge

Discharge Planning

- Discharge planning includes[E]:
 - Assessment of needs and planning for care, including(71):
 - Develop treatment plan (involving multiple providers as needed).
 - Evaluate and address preadmission functioning as needed.
 - Evaluate and address psychosocial status issues as indicated. See Psychosocial Assessment  SR for further information.
 - Evaluate and address social determinants of health (eg, housing, food). See Social Determinants of Health Screening Tool  SR for further information.(70)
 - Evaluate and address patient or caregiver preferences as indicated.
 - Identify skilled services needed at next level of care, with specific attention to(72):
 - Neurovascular status assessment(73)
 - Pain management
 - Wound or dressing management
 - Early identification of anticipated discharge destination; options include(74)(75):
 - Home, considerations include:
 - Access to follow-up care
 - Home safety assessment. See Home Safety Assessment  SR for further information.
 - Self-management ability if appropriate. See Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) Assessment  SR for further information.
 - Caregiver need, ability, and availability
 - Post-acute skilled care or custodial care as indicated. See Discharge Planning Tool  SR for further information.
 - Transitions of care plan complete, including(75):
 - Patient and caregiver education complete. See Shoulder Arthroplasty: Patient Education for Clinicians  SR for further information.
 - See Teach Back Tool  SR for further information.
- ☐ Medication reconciliation completion includes(76)(77):
 - Compare patient's discharge list of medications (prescribed and over-the-counter) against provider's admission or transfer orders.
 - Assess each medication for correlation to disease state or medical condition.
 - Report medication discrepancies to prescribing provider, attending physician, and primary care provider, and ensure accurate medication order is identified.
 - Provide reconciled medication list to all treating providers.

- Confirm that patient or caregiver can acquire medication.
- Educate patient and caregiver.
 - Provide complete medication list to patient and caregiver.
 - Importance of presenting personal medication list to all providers at each care transition, including all provider appointments
 - Reason, dosage, and timing of medication (eg, use "teach-back" techniques)(78)
- Encourage communication between patient, caregiver, and pharmacy for obtaining prescriptions, setting up home medication delivery, and reviewing for drug-drug interactions.
- See Medication Reconciliation Tool  SR for further information.
- Plan communicated to patient, caregiver, and all members of care team, including(79)(80):
 - Inpatient care and service providers
 - Primary care provider
 - All post-discharge care and service providers
- Appointments planned or scheduled, which may include:
 - Primary care provider
 - Orthopedic surgeon(81)
 - Rehabilitation therapy services(1)(53)
 - Specialists for management of comorbidities as needed(81)
 - Other
- Outpatient testing and procedure plans made, which may include:
 - Other
- Referrals made for assistance or support, which may include:
 - Financial, for follow-up care, medication, and transportation
 - Tobacco use treatment(82)
 - Other
- Medical equipment and supplies coordinated (ie, delivered or delivery confirmed), which may include:
 - Immobilizers (eg, braces, splints)(83)
 - Wound care equipment and supplies(84)
 - Other

Discharge Destination

- Post-hospital levels of admission may include:
 - Home.
 - Home healthcare. See Home Care Indications for Admission Section  HC in Shoulder Arthroplasty guideline in Home Care.
 - Recovery facility care. See Recovery Facility Care Indications for Admission Section  RFC in Shoulder Arthroplasty guideline in Recovery Facility Care.

Evidence Summary

Background

A shoulder arthroplasty involves replacement of the ball and socket and may include utilizing components which are opposite of the normal anatomy of the ball and socket (known as a reverse total shoulder arthroplasty). This guideline should be used for total shoulder arthroplasty, reverse total shoulder arthroplasty, and revision shoulder arthroplasty.(1) **(EG 2)**

Criteria

The evidence for the clinical indications found in this guideline includes 22 published peer reviewed articles, 2 specialty society or other evidence-based guidelines, and 1 book section.

Operative Status

Patients who are without active or unstable comorbidities (eg, CHF, COPD, CAD) that require prolonged postoperative care can be treated on an outpatient basis.(33)(34) **(EG 2)** Patients with active or unstable comorbidities that require prolonged postoperative care are treated on an inpatient basis.(34)(35) **(EG 3)**

Hospitalization

Readmission risk and reduction: Multivariate analysis of a database including 3501 patients (70% older than 65 years) who underwent shoulder arthroplasty found that having a revision arthroplasty procedure was independently associated with an increased risk of 30-day readmission.(47) **(EG 2)** Database analysis of 5801 patients who underwent total shoulder arthroplasty found, after multivariate adjustment, that inflammatory arthritis etiology (as opposed to osteoarthritis) was an independent risk factor for readmission at 30 days.(48) **(EG 2)** Database analysis of total shoulder arthroplasties (7246 patients) found, after multivariate adjustment, that the

presence of diabetes treated with insulin was independently associated with an increased risk for 30-day readmission.(49) **(EG 2)** Database analysis of total shoulder arthroplasties performed for degenerative osteoarthritis or traumatic proximal humeral fractures (8950 patients) found, after multivariate analysis, that total shoulder arthroplasty performance due to traumatic proximal humerus fractures was independently associated with increased risk of 30-day readmission.(16) **(EG 2)** Multivariate database analysis of 15,185 patients who underwent primary total shoulder arthroplasty found that preoperative anemia was independently associated with an increased risk of readmission within 30 days.(50) **(EG 2)**

Length of Stay

Analysis of a cohort of 370 consecutive total shoulder arthroplasty patients (mean age 71 years) found that 60% were discharged the day of surgery.(33) **(EG 2)**

Patients discharged the day after surgery can be considered inpatients or outpatients, depending on regulation or contractual arrangements. Whether considered inpatients or outpatients, analysis of data for a commercially insured population shows 90% of patients undergoing a principal procedure of shoulder arthroplasty were discharged the day of or the day after surgery.(34) **(EG 3)** A similar analysis for Medicare-insured patients shows 73% of patients were discharged the day of or the day after surgery.(34) **(EG 3)**

Rationale

Surgical MCG care guidelines help the clinician to identify, for a given procedure, which patient-specific factors and clinical conditions are appropriate for that procedure. The evidence-based clinical indication criteria assist the clinician in the decision to appropriately perform a procedure, evaluating whether the potential benefits of a procedure outweigh the potential risks. For Medicare enrollees, surgical MCG care guidelines also identify which procedures CMS has designated as inpatient only.

Related CMS Coverage Guidance

This guideline supplements but does not replace, modify, or supersede existing Medicare regulations or applicable National Coverage Determinations (NCDs) or Local Coverage Determinations (LCDs).

Code of Federal Regulations (CFR): 42 CFR 412.3(85); 42 CFR 419.22(n)(86); 42 CFR 422.101(87)

Internet-Only Manual (IOM) Citations: CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 1 - Inpatient Hospital Services Covered Under Part A(88); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 6 - Hospital Services Covered Under Part B(89); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services(90); CMS IOM Publication 100-08, Medicare Program Integrity Manual, Chapter 6, Section 6.5 - Medical Review of Inpatient Hospital Claims for Part A Payment(91)

Medicare Coverage Determinations: Medicare Coverage Database(92)

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Footnotes

[A] See Ambulatory Surgery Discharge and Complications: Common Complications and Conditions  ISC for further information. [A in Context Link 1]

[B] See Clinical Indications for Procedure in this guideline. [B in Context Link 1]

[C] Some patients may have their hydration needs met via alternative means (eg, percutaneous endoscopic gastrostomy tube). [C in Context Link 1]

[D] Use Multimodal analgesia or individual analgesic agent as indicated. [D in Context Link 1]

[E] Discharge instructions should be given in the patient's and caregiver's native language using trained language interpreters whenever possible.(70) [E in Context Link 1]

Definitions

Hemodynamic stability

- Hemodynamic stability, as indicated by **1 or more** of the following:
 - Hemodynamic abnormalities at baseline or acceptable for next level of care
 - Patient hemodynamically stable, as indicated by **ALL** of the following(1)(2)(3)(4)(5):
 - Tachycardia absent
 - Hypotension absent
 - No evidence of inadequate perfusion (eg, no myocardial ischemia)
 - No other hemodynamic abnormalities (eg, no Orthostatic hypotension)

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Hypotension absent

- Hypotension absent, as indicated by **1 or more** of the following(1)(2)(3)(4):
 - SBP greater than or equal to 90 mm Hg in adult or child 10 years or older
 - Mean arterial pressure^[A] greater than or equal to 70 mm Hg in adult or child 10 years or older
 - Mean arterial pressure^[A] at patient's baseline (eg, healthy adult with low SBP), at intentional therapeutic goal (eg, patient with heart failure), or acceptable for next level of care (eg, blood pressure stable and no significant signs or symptoms due to low blood pressure)
 - SBP greater than or equal to sum of 70 mm Hg plus twice patient's age in years in child 1 to 9 years of age
 - SBP greater than or equal to 70 mm Hg in infant 1 to 11 months of age

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Footnotes

- A. The mean arterial pressure takes into account both systolic and diastolic blood pressure readings and is calculated as Mean Arterial Pressure (MAP) = $1/3 \text{ SBP} + 2/3 \text{ DBP}$.

Multimodal analgesia

- Multimodal analgesia involves the utilization of 2 or more analgesic agents with different mechanisms of action in order to provide additive or synergistic pain control, while minimizing side effects and reliance on opioids.(1)(2)(3)

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Orthostatic hypotension

- Orthostatic hypotension,[A][B] as indicated by **1 or more** of the following(1)(2)(3):
 - Fall in SBP of 20 mm Hg or more 1 to 3 minutes after patient sits or stands from recumbent position
 - Fall in DBP of 10 mm Hg or more 1 to 3 minutes after patient sits or stands from recumbent position

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Footnotes

- A. Concomitant measurements of the heart rate are important to measure to help diagnose subtypes of orthostatic hypotension (eg, the lack of a compensatory increase in heart rate is typical of autonomic failure and an exaggerated tachycardia may be reflective of volume depletion). However, the heart rate is not a component of the definition of orthostatic hypotension which relies upon blood pressure alone.(1)(2)(3)
- B. Criteria based upon clinician acquired numeric values (eg, vital signs, oxygen saturation) should be used if they are accurate reflections of the patient's condition. Transitory findings (eg, abnormal only upon initial emergency department intake or only one time out of multiple readings) that rapidly improve with no or minimal treatment usually do not reflect disease severity or risk for deterioration. This does not imply that an initial or one-time reading cannot ever be applicable. The goal is to separate erroneous or incidental findings from those that truly represent the patient's clinical picture.

Readmission Risk Assessment

- Risk of readmission is increased by presence of **1 or more** of the following(1)(2)(3)(4)(5)(6)(7)(8)(9)(10):
 - Hospitalization (nonelective) in past 6 months(11)(12)(13)
 - 2 or more emergency department visits in past 6 months
 - No source of outpatient care other than emergency department (eg, no primary care provider)(13)(14)
 - Severe care transition barriers (eg, no caregiver, homeless)(11)(12)(15)
 - Severe or end-stage renal disease (on dialysis or GFR less than 30 mL/min/1.73m² (0.5 mL/sec/1.73m²))(11)(16)



eGFR - Adult Calculator



eGFR - Pediatric Calculator

- Anemia(17)
- Revision shoulder arthroplasty(18)
- Inflammatory arthritis etiology(19)
- Diabetes mellitus necessitating treatment with insulin(20)
- Arthroplasty performed due to traumatic proximal humerus fracture(21)

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Social Determinants of Health Assessment

- Risk of poor health outcomes may be increased by the presence of **1 or more** of the following social determinants of health(1)(2)(3)(4):
 - Housing insecurity, as indicated by **1 or more** of the following:
 - Individual or caregiver's current living situation is **1 or more** of the following(5):
 - Does not have own housing (eg, staying in a hotel, shelter, or with others)

- Has own housing (eg, house, apartment), but at risk of losing it in the future (ie, behind on rent or mortgage)
- Has own housing (eg, house, apartment), but has lived in 3 or more places in past year
- Current housing has **1 or more** of the following:
 - Electrical appliances (eg, stove, refrigerator) not working or unavailable
 - Insufficient heating or cooling
 - Insufficient ventilation
 - Lead paint or pipes
 - Mold
 - Pests (eg, bugs) or rodents
 - Smoke detectors not working or unavailable
- Food insecurity, as indicated by **1 or more** of the following(6):
 - In the past year, individual or caregiver ran out of food and did not have money to buy more food.
 - In the past year, individual or caregiver worried that they would run out of food before they received money to buy more food.
- Insufficient transportation, as indicated by **1 or more** of the following(7):
 - In the past year, individual or caregiver missed medical appointments or could not get medications due to lack of transportation.
 - In the past year, individual or caregiver missed nonmedical activities, work, or could not get things needed for daily living due to lack of transportation.
- Insufficient utilities, as indicated by **1 or more** of the following(8):
 - Utilities (eg, electricity, water, gas, or oil) are currently shut off or unavailable.
 - In the past year, electric, water, gas, or oil company threatened to shut off services.
- Personal safety risk, as indicated by **2 or more** of the following(6):
 - Individual is sometimes or frequently physically hurt by another person (including family member).
 - Individual is sometimes or frequently insulted or talked down to by another person (including family member).
 - Individual is sometimes or frequently threatened with physical harm by another person (including family member).
 - Individual is sometimes or frequently screamed or cursed at by another person (including family member).
- Insufficient dependent care, as indicated by **1 or more** of the following:
 - In the past year, individual or caregiver was unable to work due to lack of dependent care.
 - In the past year, individual or caregiver was unable to work more (additional) hours due to lack of dependent care.
 - In the past year, individual or caregiver missed medical appointments or could not get medications due to lack of dependent care.
 - In the past year, individual or caregiver missed nonmedical activities (eg, school, church, social activity) due to lack of dependent care.
- Depression risk, as indicated by **ALL** of the following:
 - In the past 2 weeks, individual had little interest or pleasure in normal activities on at least several days.
 - In the past 2 weeks, individual felt down, depressed, or hopeless on at least several days.

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Tachycardia absent

- Tachycardia absent, as indicated by **1 or more** of the following(1)(2):
 - Heart rate less than or equal to 100 beats per minute in adult or child 6 years or older
 - Heart rate less than or equal to 115 beats per minute in child 3 to 5 years of age

- Heart rate less than or equal to 125 beats per minute in child 1 or 2 years of age
- Heart rate less than or equal to 130 beats per minute in infant 6 to 11 months of age
- Heart rate less than or equal to 150 beats per minute in infant 3 to 5 months of age
- Heart rate less than or equal to 160 beats per minute in infant 1 or 2 months of age

References

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Codes

ICD-10 Diagnosis: M05.011, M05.012, M05.019, M05.611, M05.612, M05.619, M05.711, M05.712, M05.719, M05.811, M05.812, M05.819, M06.011, M06.012, M06.019, M12.511, M12.512, M12.519, M12.811, M12.812, M12.819, M12.9, M13.111, M13.112, M13.119, M19.011, M19.012, M19.019, M19.112, M19.119, M19.212, M19.219, M80.011A, M80.012A, M80.019A, M80.811A, M80.812A, M80.819A, M84.311A, M84.312A, M84.319A, M84.411A, M84.412A, M84.419A, M84.511A, M84.512A, M84.519A, M84.611A, M84.612A, M84.619A, M87.011, M87.012, M87.019, M87.021, M87.022, M87.029, M87.121, M87.122, M87.129, M87.221, M87.222, M87.229, M87.321, M87.322, M87.329, M87.821, M87.822, M87.829, M90.511, M90.512, M90.519, M96.621, M96.622, M96.629, M97.31XA, M97.32XA, S42.001A, S42.001B, S42.002A, S42.002B, S42.009A, S42.009B, S42.031A, S42.031B, S42.032A, S42.032B, S42.033A, S42.033B, S42.034A, S42.034B, S42.035A, S42.035B, S42.036A, S42.036B, S42.121A, S42.121B, S42.122A, S42.122B, S42.123A, S42.123B, S42.124A, S42.124B, S42.125A, S42.125B, S42.126A, S42.126B, S42.131A, S42.131B, S42.132A, S42.132B, S42.133A, S42.133B, S42.134A, S42.134B, S42.135A, S42.135B, S42.136A, S42.136B, S42.141A, S42.141B, S42.142A, S42.142B, S42.143A, S42.143B, S42.144A, S42.144B, S42.145A, S42.145B, S42.146A, S42.146B, S42.151A, S42.151B, S42.152A, S42.152B, S42.153A, S42.153B, S42.154A, S42.154B, S42.155A, S42.155B, S42.156A, S42.156B, S42.201A, S42.201B, S42.202A, S42.202B, S42.209A, S42.209B, S42.211A, S42.211B, S42.212A, S42.212B, S42.213A, S42.213B, S42.214A, S42.214B, S42.215A, S42.215B, S42.216A, S42.216B, S42.221A, S42.221B, S42.222A, S42.222B, S42.223A, S42.223B, S42.224A, S42.224B, S42.225A, S42.225B, S42.226A, S42.226B, S42.231A, S42.231B, S42.232A, S42.232B, S42.239A, S42.239B, S42.241A, S42.241B, S42.242A, S42.242B, S42.249A, S42.249B, S42.251A, S42.251B, S42.252A, S42.252B, S42.253A, S42.253B, S42.254A, S42.254B, S42.255A, S42.255B, S42.256A, S42.256B, S42.261A, S42.261B, S42.262A, S42.262B, S42.263A, S42.263B, S42.264A, S42.264B, S42.265A, S42.265B, S42.266A, S42.266B, S42.271A, S42.272A, S42.279A, S42.291A, S42.291B, S42.292A, S42.292B, S42.293A, S42.293B, S42.294A, S42.294B, S42.295A, S42.295B, S42.296A, S42.296B, S42.90XA, S42.90XB, S42.91XA, S42.91XB, S42.92XA, S42.92XB, S49.001A, S49.002A, S49.009A, S49.011A, S49.012A, S49.019A, S49.021A, S49.022A, S49.029A, S49.031A, S49.032A, S49.039A, S49.041A, S49.042A, S49.049A, S49.091A, S49.092A, S49.099A, T84.018A, T84.028A, T84.038A, T84.058A, T84.098A, T84.110A, T84.111A, T84.120A, T84.121A, T84.190A, T84.191A, T84.318A, T84.328A, T84.398A, T84.410A, T84.418A, T84.420A, T84.428A, T84.490A, T84.498A, T84.59XA, T84.84XA, T84.89XA, T84.9XXA [Hide]

ICD-10 Procedure: 0RRJ00Z, 0RRJ07Z, 0RRJ0JZ, 0RRJ0KZ, 0RRK00Z, 0RRK07Z, 0RRK0JZ, 0RRK0KZ

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