

5 Total joint replacement algorithm summary (1/3)

Triggers	A surgical procedure for total hip replacement or total knee replacement.
PAP assignment	For each episode, the Principal Accountable Provider (PAP) is the orthopedic surgeon performing the total joint replacement procedure.
Exclusions	<p>Episodes meeting one or more of the following criteria will be excluded:</p> <ul style="list-style-type: none"> A. Beneficiaries who are under the age of 18 at the time of admission B. Beneficiaries with the following comorbidities diagnosed in the period beginning 365 days before the episode start date and concluding on the date of admission for the joint replacement surgery: 1) select autoimmune diseases, 2) HIV, 3) End-Stage Renal Disease, 4) liver, kidney, heart, or lung transplants, 5) pregnancy, 6) sickle cell disease, 7) fractures, dislocations, open wounds and/or trauma C. Beneficiaries with either of the following discharge statuses: 1) left against medical advice or 2) expired during hospital stay D. Beneficiaries who do not have continuous Medicaid enrollment for the duration of the episode
Episode time window	Episode begins 30 days prior to date of admission for the inpatient hospitalization for the total joint replacement surgery and end 60 days after the date of discharge.
Claims included	<ol style="list-style-type: none"> 1. From 30 days prior to the date of admission to the date of the surgery: All evaluation and management, hip- or knee-related radiology and all labs/imaging/other outpatient services 2. During the triggering procedure: all medical, inpatient and outpatient services 3. From the date of the surgery to 30 days after the date of discharge: All cause readmissions, non-traumatic revisions, complications, all follow-up evaluation & management, all emergency services, all home health and therapy, hip/knee radiology and all labs/imaging/other outpatient procedures 4. From 31 days to 90 days after the date of discharge: Readmissions due to infections and complications as well as hip or knee-related follow-up evaluation and management, home health and therapy and labs/imaging/other outpatient procedures
Quality measures	<p><u>Quality measures "to track":</u></p> <ol style="list-style-type: none"> 1. 30-day, all cause readmission rate 2. Frequency of use of prophylaxis against post-op Deep Venous Thrombosis (DVT) / Pulmonary Embolism (PE) (pharmacologic or mechanical compression) 3. Frequency of post-op DVT/PE 4. 30-day wound infection rate
Adjustments	For the purposes of determining a PAP's performance, the total reimbursement attributable to the PAP is adjusted for total joint replacement episodes involving a knee replacement to reflect that knee replacements have higher average costs than hip replacements. Additionally, over time, Medicaid may add or subtract additional risk or severity factors in line with new research and/or empirical evidence.

5 Total joint replacement algorithm summary (2/3)

Trigger codes	<p>Each episode is triggered by a surgical procedure for total hip replacement or total knee replacement. The procedure is identified by a claim with either of the following procedure codes and ICD–9 diagnosis codes.</p> <p>Hip Replacement: CPT codes 27130, 27447; ICD–9 codes 81.51, 81.54</p> <p>Knee Replacement: CPT code 27447; ICD–9 code 81.54</p> <p>Exclusion from Hip or Knee Replacement (disqualifying triggers): ICD–9 codes 800.xx–829.xx, 860.0–869.1, 850.0–854.1, 925.x–929.x, 170.x, 996.xx, V52.xx</p>
Exclusion codes	<p>List of prior diagnoses and meds that would disqualify a patient from the episode</p> <p>Comorbidity codes for exclusion: ICD–9 codes 279, 042, 585.x, V45.1, V56.xx, 630–669.94, V22–V24.99, V27–V27.99, V42.0, V42.1, V42.6, V42.7, 718.35, 718.38, 820.00–920.9, 827.0–827.1, 835.0–835.13, 928.01, 928.11, 959.7, 282.6</p> <p>These codes represent the set of business and clinical exclusions described previously</p>
Codes to assign PAP	<p>PAP is the orthopedic surgeon performing the joint replacement surgery and is identified by the triggers outlined above</p>
Reporting codes	<p>30-day wound infection rate: any claim in the 30 day period following the date of discharge with code for wound infection – CPT codes 10180; ICD–9 codes 998.59, 038.0–038.9</p> <p>Revisions: any claim following the date of discharge with a code for revision – CPT codes 27134, 27137, 27138, 27486, 27487, 27488</p> <p>Complications: any claim in the 90 day period following the date of discharge with code for complications – CPT codes 10180, 12020, 12021, 13160, 35860; ICD–9 codes 998.30–998.81, 998.83–998.9, 996.40–996.49, 997.32–997.39, 038.0–038.9</p> <p>All-cause readmissions: any hospitalization in the 30 day period following the date of discharge</p>

5 Total joint replacement algorithm summary (3/3)

Included claim codes	<p>List of ICD–9 and CPT codes that should be included in episode are as follows:</p> <p><u>ICD–9 Codes</u> Hip Replacement: 81.51, 81.54 Knee Replacement: 81.54 Osteoarthritis and joint degeneration after care: 710–721, 725–733, 736, 738, 739, 755, V54.81, V58.31, V58.32, V58.78, V43.64, V43.65 Complications / Wound Infections / Sepsis: 998.30–998.81, 998.83–998.9, 996.40–996.49, 997.32–997.39, 038.0–038.9 DVT and PE: 451.0–451.2, 453.4–453.42, 454.0–454.9, 444.22</p> <p><u>CPT Codes</u> HIP Replacement: 27130, 27447 Knee Replacement: 27447 Hip / Knee Radiology: 73500–73550, 73560–73580, 73700–73702, 73721–73723 Home Health: T1021, T1021-TD (modifier), T1021-TE (modifier) Personal Care: T1019-U3 (modifier) Physical Therapy: 97001, 97110, 97150, 97110-UB (modifier), 97150-UB (modifier), S9131, S9131-UB (modifier) Occupational Therapy: 97003, 95530, 97150-U2 (modifier), 97530-UB (modifier), 97150-UB-U1 (modifiers 1,2) Revisions: 27134, 27137, 27138, 27486–27488 Complications / Wound Infections / Sepsis: 10180, 12020, 12021, 13160, 35860</p>
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