Warranty for Elective Total Knee & Total Hip Replacement Surgery

The Bree Collaborative Accountable Payment Model workgroup developed a warranty and bundled payment model for total knee and total hip replacement (TKR/THR), approved by the Collaborative in July and November of 2013. The 2013 warranty was based most heavily on a technical expert panel study of TKR/THR complications commissioned by the Centers for Medicare and Medicaid Services (CMS) (referred to as the CMS TEP report’ in this document). The workgroup also worked to align the warranty with the High Value Healthcare Collaborative (HVHC), a group of 18 major medical systems from across the country founded by the Dartmouth Institute for Health Policy and Clinical Practice (TDI), Dartmouth-Hitchcock, Mayo Clinic, Denver Health, Intermountain Healthcare, and Cleveland Clinic, to improve quality for these surgeries and studied private sector data from the Washington State marketplace and bundled payment initiatives from the Integrated Healthcare Association in California, from Meriter Health Plan in Wisconsin, and the CMS bundled payment initiative.2

Starting April 2016, CMS implemented a mandatory total joint bundle for five performance years in 67 geographic areas including Seattle-Tacoma-Bellevue including all related items and services paid under Medicare Part A and Part B for all Medicare fee-for-service beneficiaries with some exceptions.3 The episodes begin with admission under MS-DRG 469 (Major joint replacement or reattachment of lower extremity with major complications or comorbidities) or 470 (Major joint replacement or reattachment of lower extremity without major complications or comorbidities) and end 90 days post-discharge.

The primary intent of the warranty is to set a high priority on patient safety. The warranty is also intended to balance financial gain for providers and institutions performing TKR/THR surgery with financial accountability for complications attributable to these procedures. In this warranty the intent is to distribute financial risk across professional and facility components in proportion to the revenue generated by the procedure.

Definitions related to a warranty for TKR and THR

- Diagnostic code for osteoarthritis - excludes trauma, cancer, inflammatory arthritis (e.g. rheumatoid arthritis) and congenital malformation
- Procedural codes for TKR and THR
- Age limits
- Definition of complications excluded from additional reimbursement
- Definition of warranty period

Diagnostic codes

The diagnostic code for osteoarthritis for either total knee or total hip replacements: ICD-9 diagnostic code = 715.X (“715 Osteoarthrosis and allied disorders”)5

Procedure codes6

- Total hip replacement: ICD-9 procedure code = 81.51 (CPT procedure code = 27130 (total hip replacement)
- Total knee replacement: Associated ICD-9 procedure code = 81.54 (CPT procedure code = 27447 (total knee replacement)
Age limits
≥18 years old (no upper limit)

Complications
Definition of complications included in warranty:
- As specified by CMS TEP report (*attached as an appendix to this warranty*)
- Aligned with ICD-9 codes adopted by HVHC

Complications for warranty are intended to meet the following criteria:
- Represent significant complications attributable to the THA/TKA procedure
- Are identifiable in administrative claims data
- Are fair to hospitals and physicians

1. Death as a result of any of the other complications included in the warranty

2. Surgical complications
   a. Mechanical complications
   b. Periprosthetic joint complications:
      i. Incision and drainage
      ii. Revision
      iii. Removal
   c. Wound infection:
      i. Incision and drainage
      ii. Revision
      iii. Removal
   d. Surgical site bleeding requiring readmission for incision and drainage
   e. Pulmonary embolism

3. Medical complications
   a. Acute myocardial infarction
   b. Pneumonia
   c. Sepsis/septicemia
Warranty period and other terms

1. Warranty period is complication-specific:

<table>
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<tr>
<th>7 days</th>
<th>30 days</th>
<th>90 days</th>
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| • Acute myocardial infarction
  • Pneumonia
  • Sepsis/septicemia        | • Death
  • Pulmonary embolism
  • Surgical site bleeding
  • Wound infection          | • Mechanical complications
  • Periprosthetic joint infection |

2. The warranty is valid only at the hospital performing the surgery. Therefore, patients experiencing complications are strongly encouraged to seek treatment at that hospital.

Source material for definitions:
- Integrated Healthcare Association, CA - (www.iha.org) and personal communication with IHA staff;
- Meriter Health Plan, WI – personal communication with staff; and


Same as HVHC, IHA, and Meriter Health Plan TKR and THR bundle

89% of all Total Hip Replacement (81.51) in Washington State were due to some type of principal diagnosis of Osteoarthrosis (Data Source: CHARS, 2012 1st Quarter, 2011 4th Quarter, 2011 3rd Quarter, 2011 2nd Quarter); 97% of all Total Knee Replacement (81.54) in Washington State were due to some type of principal diagnosis of Osteoarthrosis (Data Source: CHARS, 2012 1st Quarter, 2011 4th Quarter, 2011 3rd Quarter, 2011 2nd Quarter).

Same as HVHC, IHA, and Meriter Health Plan TKR and THR bundle.

The APM subgroup chose no upper age limit on the basis that it is best to defer to surgeons for the decision of whether surgery is appropriate for an older patient. Both IHA and Meriter uses an age cut off of 65 years old; HVHC uses 89 years old; the CMS requires patient to be a Medicare beneficiary (no upper limit).

APM subgroup agreed to adopt the complications list commissioned by CMS and adopted by HVHC. The APM subgroup also reviewed private payer utilization data on complications from TKR and THR produced and shared by payer subgroup members. Complications such as arrhythmia, congestive heart failure, and GI bleeding show up in private payer data analyses as complications but are omitted from HVHC list of complications. The APM subgroup agreed not to include these complications as they are not easily attributable to THR and TKR surgery.

The APM subgroup chose to adopt a warranty timeline model based on the study commissioned by CMS and adopted by HVHC. After reviewing Medicare and private payer data shared by payer subgroup members, the APM subgroup agreed that this model was preferred because it is specific, justified by the readmissions data, likely to capture procedure-related complications, protects purchasers, acceptable to providers, and endorsed by a highly respected group of orthopedists after a yearlong review process.