

**Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective
Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)
(NQF #1550)
National Quality Strategy Domain: Patient Safety**

BPCI Advanced and Quality

The Center for Medicare and Medicaid Innovation's (Innovation Center) BPCI Advanced Model rewards healthcare providers for delivering services more efficiently, supports enhanced care coordination, and recognizes high quality care. Hospitals and physicians should work collaboratively to achieve these goals which have potential to improve the BPCI Advanced Beneficiary experience and align to the CMS Quality Strategy goals of promoting effective communication and care coordination, highlighting best practices, and making care safer and more affordable. A goal of the BPCI Advanced Model is to promote seamless, patient-centered care throughout each Clinical Episode, regardless of who is responsible for a specific element of that care.

Background on THA and TKA Complications

Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA) procedures are common among the Medicare population and over time have become relatively efficient, with regimented steps to encourage safety and best practices. At the same time, complications from THA and TKA are burdensome to patients, impacting not only their length of recovery but their mobility as well.

Innovation Center Rationale for Including the THA and TKA Complications Measure in BPCI Advanced

The entire process for THA and TKA from inpatient admission through recovery can be lengthy, and hospitals and care teams should collaborate to ensure that patients undergoing THA and TKA have a coordinated care process. Measuring and reporting the complication rate will inform providers about opportunities to improve care, strengthen incentives for quality improvement, and ultimately improve the quality of care received by Medicare beneficiaries. This National Quality Forum (NQF) endorsed measure has been utilized in multiple federal programs including CMS' Partnership for Patients and CMS' Hospital Inpatient Quality Reporting (IQR) Program.

Clinical Episode Categories

The THA and/or TKA Complications measure applies to the following Clinical Episode Categories:

- Double Joint Replacement of the Lower Extremity: MS-DRGs: 461, 462
- Major Joint Replacement of the Lower Extremity: MS-DRGs: 469, 470

Measure Specifications

The THA and/or TKA Complications measure estimates a hospital-level risk-standardized complication rate (RSCR) associated with elective primary THA and TKA procedures for Medicare beneficiaries. Acute Care Hospital (ACH) performance will be calculated at the hospital level for all Medicare beneficiaries included in the denominator. For Physician Group Practices (PGPs), the measure will be calculated as specified, then weighted based on PGP Clinical Episode volume for each BPCI Advanced ACH where an episode is triggered. Performance on the THA and/or TKA Complications measure is risk standardized and is the same as the IQR THA and/or TKA Complications measure reported on Hospital Compare, with the exception that the reporting period has been adjusted to the calendar year to align with the BPCI Advanced Model.

Denominator

The denominator for this hospital level measure is comprised of all Medicare Fee-For-Service (FFS) beneficiaries aged 65 years and older who are hospitalized at non-federal acute care hospitals and undergoing elective primary THA and/or TKA procedures. These Medicare FFS beneficiaries must have 12 months of continuous Medicare Part A and B enrollment prior to the THA and/or TKA procedure. Medicare beneficiaries are excluded from the measure if they satisfy one of the following criteria:

- Without at least 90 days post-discharge enrollment in Medicare FFS
- Who were discharged against medical advice (AMA)
- Who had more than two THA and/or TKA procedure codes during the index hospitalization

Numerator

The numerator for this hospital-level measure is comprised of all Medicare beneficiaries in the denominator who experience a complication with an elective primary THA and/or TKA procedure. Any Medicare beneficiary with a complication occurring during the index admission (not coded present on arrival), or during a readmission up to 90 days post-date of the index admission, is included in the numerator.

Measure Submission and Calculation

This measure is already collected by CMS under the Hospital IQR Program using Medicare Claims data and calculated using a performance period of three years. The BPCI Advanced Model uses only one calendar year of data, from January 1st through December 31st, for measure calculation. This one-year time period better aligns with the BPCI Advanced Model. This means that the BPCI Advanced measure results may differ from those that providers receive under the Hospital IQR Program and as posted on Hospital Compare.

Revisions from the Published Specifications

The BPCI Advanced version of this measure follows a single calendar year rather than a three-year period.

Composite Quality Score

The THA and/or TKA Complications measure is one component of the BPCI Advanced Composite Quality Score (CQS) calculation. The CQS is used to adjust a portion of any Positive Total Reconciliation Amount and any Negative Total Reconciliation Amount for Model Participants. The CQS adjustment will not adjust the Positive Total Reconciliation Amount down, nor will it adjust the Negative Total Reconciliation Amount up by more than 10 percent. More information is available below.

Other Resources

Organization/Resource	Website Address
NQF (#1550) Measure Specifications	http://www.qualityforum.org/QPS/1550
CMS/Medicare Learning Network Major Joint Replacement	https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/jointreplacement-ICN909065.pdf
Inpatient Quality Reporting (IQR)	https://www.cms.gov/newsroom/fact-sheets/cms-improve-quality-care-during-hospital-inpatient-stays
BPCI Advanced website	https://innovation.cms.gov/initiatives/bpci-advanced