

Quality Measures Fact Sheet

Patient-Centered Surgical Risk Assessment and Communication (QPP #358)

*National Quality Strategy Domain: Person and Caregiver-Centered
Experience and Outcomes*

Quality Measures Set: Alternate

Data Source: Quality Data Codes (Claims) or Registry

BPCI Advanced and Quality

The Center for Medicare & Medicaid Innovation's (the CMS Innovation Center's) BPCI Advanced Model rewards health care providers for delivering services more efficiently, supports enhanced care coordination, and recognizes high quality care. Hospitals and clinicians should work collaboratively to achieve these goals, which have the 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 Patient-Centered Surgical Risk Assessment and Communication

Informed consent and shared decision-making between physicians, patients, their families, and caregivers should have a structured approach. Use of a risk calculator provides more effective preoperative risk stratification and offers a personalized, empirically-based estimate of a patient's risk of post-operative complications.⁴² This kind of process improves the quality of the informed consent/shared decision-making experience, while enhancing patient trust in providers.

CMS Innovation Center Rationale for Including the Patient-Centered Surgical Risk Assessment and Communication Measure in BPCI Advanced

The BPCI Advanced Model intends to promote streamlined, patient-centered care, and the Patient-Centered Surgical Risk Assessment Communication measure promotes informed consent and shared decision making to achieve that aim. Shared decision-making is critically important for preference-sensitive issues. By quantifying this risk and making it a key part of surgical decision-making, a clinician

⁴² Centers for Medicare and Medicaid Services (2013). Patient-centered surgical risk assessment and communication measure specifications. Retrieved from https://qpp.cms.gov/docs/QPP_quality_measure_specifications/CQM-Measures/2020_Measure_358_MIPSCQM.pdf.

can determine the most appropriate treatment modality that meets individual patient’s goals.⁴³ The CMS Innovation Center has added the Patient-Centered Surgical Risk Assessment and Communication measure to the BPCI Advanced Model to promote realistic patient expectations and help them make informed decisions.

Applicable Clinical Episodes

The Patient-Centered Surgical Risk Assessment and Communication measure is included in the Alternate Quality Measures Set and applies to the following inpatient and outpatient Clinical Episodes⁴⁴:

- Back and Neck Except Spinal Fusion (Inpatient): Medicare Severity–Diagnosis-Related Groups (MS-DRGs) 518, 519, and 520
- Back and Neck Except Spinal Fusion (Outpatient): Healthcare Common Procedure Coding System (HCPCS) 62287, 63005, 63011, 63012, 63017, 63030, 63040, 63042, 63045, 63046, 63047, 63056, and 63075
- Bariatric Surgery (Inpatient): MS-DRGs 619, 620, and 621
- Double Joint Replacement of the Lower Extremity (Inpatient): MS-DRGs 461 and 462
- Fractures of the Femur and Hip or Pelvis (Inpatient): MS-DRGs 533, 534, 535, and 536
- Hip and Femur Procedures Except Major Joint (Inpatient): MS-DRGs 480, 481, and 482
- Lower Extremity and Humerus Procedure Except Hip, Foot, Femur (Inpatient): MS-DRGs 492, 493, and 494
- Major Joint Replacement of the Lower Extremity (Inpatient and Outpatient): MS-DRGs 469, 470, 521, and 522; HCPCS: 27447
- Major Joint Replacement of the Upper Extremity (Inpatient): MS-DRG 483
- Spinal Fusion (Inpatient): MS-DRGs 453, 454, 455, 459, 460, 471, 472, and 473

Measure Specifications – Claims Reporting

The Patient-Centered Surgical Risk Assessment and Communication measure selected for BPCI Advanced follows the measure specifications used in the CMS Quality Payment Program (QPP) #358 measure.

Providers will report this measure through claims for the following Clinical Episodes, if selected:

- Back and Neck Except Spinal Fusion (Inpatient or Outpatient)
- Spinal Fusion (Inpatient)

Risk calculators based on multi-institutional, validated clinical data are acceptable for this measure. The American Academy of Orthopaedic Surgeons (AAOS), Society of Thoracic Surgeons (STS), and American College of Surgeons (ACS) offer risk calculators that will satisfy the measure requirements. Other risk calculators are also available and acceptable for this measure.

Providers should use a procedure and patient-specific, data-based risk calculator which relies on a validated, risk-adjusted statistical model predicting the 30-day postoperative complications detailed below for the patient’s planned procedure. Providers should base risk calculations on preoperative patient-specific clinical data and should include the following groups of variables: patient demographic characteristics (e.g., age, gender); relevant lifestyle and clinical risk factors (e.g., smoking status,

⁴³ Lee, E., & Emanuel, E. J. (2013). Shared decision making to improve care and reduce costs. *New England Journal of Medicine*, 368, 6-8. Retrieved from <https://www.nejm.org/doi/full/10.1056/NEJMp1209500>.

⁴⁴ MS-DRGs are up to date as of Model Year 3 (2020) and will be updated for Model Year 4 as needed.

American Society of Anesthesiologists class, body mass index); patient comorbidities (e.g., diabetes, neurologic event/disease, disseminated cancer); and procedure type. Postoperative complications should include:

- 30-day risk-adjusted mortality
- 30-day risk-adjusted overall morbidity (superficial surgical site infection, deep incisional surgical site infection, wound dehiscence, pneumonia, deep venous thrombosis, pneumonia, renal failure, urinary tract infection, prolonged ventilator dependence, bleeding complications, sepsis, and pulmonary embolism)
- serious complications (cardiac arrest, myocardial infarction, pneumonia, progressive renal insufficiency, acute renal failure; pulmonary embolism, deep venous thrombosis, return to the operating room deep incisional surgical site infection, organ space surgical site infection, systemic sepsis, unplanned intubation, urinary tract infection, and wound dehiscence)
- surgical site infection
- average length of stay

The CMS Innovation Center will calculate the measure at the Episode Initiator level, limited to BPCI Advanced Beneficiaries treated during an attributed Model Year Clinical Episode that ends during the calendar year. The term “BPCI Advanced Beneficiary” refers to a Medicare beneficiary eligible for the Model⁴⁵ who receives care from a clinician in an acute care hospital (ACH) or physician group practice (PGP) that participates in BPCI Advanced, and who triggers a Clinical Episode as specified in the “Applicable Clinical Episodes” section above. An Episode Initiator must have a minimum of 10 attributed Clinical Episodes that fit the criteria for the denominator to generate a score.

Denominator

The denominator for the claims-based Patient-Centered Surgical Risk Assessment and Communication measure includes all Model Year Clinical Episodes from the “Applicable Clinical Episodes” section above that end during the calendar year, involving BPCI Advanced Beneficiaries aged 18 years or over, that CMS attributes to a BPCI Advanced Episode Initiator at reconciliation, and that do not meet the exclusion criterion below. CMS attributes Clinical Episodes to Episode Initiators based upon their CMS Certification Number if they are an ACH, or by their Taxpayer Identification Number if they are a PGP. The anchor end date of the Clinical Episode (the last date of the Anchor Stay or the date of the Anchor Procedure) will determine the calendar year to which the Clinical Episode belongs. The exclusion for this measure includes patients undergoing emergency surgery during the anchor event as indicated by the Current Procedure Terminology (CPT) II code below.

⁴⁵ Medicare beneficiaries entitled to benefits under Part A and enrolled under Part B on whose behalf an Episode Initiator submits a claim to Medicare FFS for an Anchor Stay or Anchor Procedure. The term BPCI Advanced Beneficiary specifically excludes: (1) Medicare beneficiaries covered under United Mine Workers or managed care plans (e.g., Medicare Advantage, Health Care Prepayment Plans, or cost-based health maintenance organizations); (2) beneficiaries eligible for Medicare on the basis of an end-stage renal disease (ESRD) diagnosis; (3) Medicare beneficiaries for whom Medicare is not the primary payer; and (4) Medicare beneficiaries who die during the Anchor Stay or Anchor Procedure. A BPCI Advanced Beneficiary must meet this definition for the full duration of the Clinical Episode and the 90-day lookback period. (2021 BPCI Advanced Participation Agreement)

Description	CPT II Code
Emergency surgery	G9752

Numerator

The numerator for the claims-based Patient-Centered Surgical Risk Assessment and Communication measure includes Clinical Episodes in the previously defined denominator where the BPCI Advanced Beneficiary has documentation of empirical, personalized risk assessment based on the patient’s risk factors with a validated risk calculator using multi-institutional clinical data, the specific risk calculator used, and communication of risk assessment from a risk calculator with the patient and/or family. Health care teams indicate the use of a risk assessment tool by the Current Procedure Terminology (CPT) II code below. The CPT II code must be documented at any point in the three months prior to the surgery date and must be billed on a claim with a payable code.

Description	CPT II Code
Documentation of patient-specific risk assessment with a risk calculator based on multi-institutional clinical data, the specific risk calculator used, and communication of risk assessment from risk calculator with the patient or family	G9316

Measure Specifications – Registry Reporting

The Patient-Centered Surgical Risk Assessment and Communication measure selected for BPCI Advanced follows the measure specifications used in the CMS Quality Payment Program (QPP) #358 measure. Providers will report this measure through registries for the following Clinical Episodes if they select these:

Reported by ACS Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP)[®]

- Bariatric Surgery (Inpatient): MS-DRGs 619, 620, and 621

Reported by AAOS Registry Program:

- Double Joint Replacement of the Lower Extremity (Inpatient): MS-DRGs 461 and 462
- Fractures of the Femur and Hip or Pelvis (Inpatient): MS-DRGs 533, 534, 535, and 536
- Hip and Femur Procedures Except Major Joint (Inpatient): MS-DRGs 480, 481, and 482
- Lower Extremity and Humerus Procedure Except Hip, Foot, Femur (Inpatient): MS-DRGs 492, 493, and 494
- Major Joint Replacement of the Lower Extremity (Inpatient or Outpatient): MS-DRGs 469 and 470; HCPCS: 27447
- Major Joint Replacement of the Upper Extremity (Inpatient): MS-DRG 483

Risk calculators based on multi-institutional, validated clinical data are acceptable for this measure. The risk calculator must be appropriate and relevant for the Clinical Episode. The AAOS, STS, and ACS offer risk calculators that will satisfy the measure requirements. Other risk calculators are also available and acceptable for this measure.

Providers should use a procedure and patient-specific, data-based risk calculator which uses a validated, risk-adjusted statistical model predicting the 30-day postoperative complications detailed below for the patient’s planned procedure. Providers should base risk calculations on preoperative patient-specific clinical data and should include the following groups of variables: patient demographic characteristics (e.g., age, gender); relevant lifestyle and clinical risk factors (e.g., smoking status, American Society of Anesthesiologists class, body mass index); patient comorbidities (e.g., diabetes, neurologic event/disease, disseminated cancer); and procedure type. Postoperative complications should include:

- 30-day risk-adjusted mortality
- 30-day risk-adjusted overall morbidity (superficial surgical site infection, deep incisional surgical site infection, wound dehiscence, pneumonia, deep venous thrombosis, pneumonia, renal failure, urinary tract infection, prolonged ventilator dependence, bleeding complications, sepsis, and pulmonary embolism)
- serious complications (cardiac arrest, myocardial infarction, pneumonia, progressive renal insufficiency, acute renal failure; pulmonary embolism, deep venous thrombosis, return to the operating room deep incisional surgical site infection, organ space surgical site infection, systemic sepsis, unplanned intubation, urinary tract infection, and wound dehiscence)
- surgical site infection
- average length of stay⁴⁶

The registry will calculate Acute Care Hospital (ACH) level performance for all patients included in the denominator. The term “patients” refers to people 18 years and older who undergo a procedure at the hospital associated with the Clinical Episodes from the “Applicable Clinical Episodes” section, not limited to Medicare beneficiaries or BPCI Advanced Beneficiaries. For Physician Group Practices (PGPs), the registry will calculate the measure as specified at individual hospitals, then the CMS Innovation Center will weight measure performance based on PGP Clinical Episode volume for each eligible ACH where a PGP triggers an episode.

Denominator

The denominator for the Patient-Centered Surgical Risk Assessment and Communication measure includes all patients 18 or older in the hospital who undergo procedures included in the Clinical Episode that Episode Initiators elect to participate in through the BPCI Advanced Model. This measure is not limited to Medicare beneficiaries or BPCI Advanced Beneficiaries.

Numerator

The numerator includes individuals in the previously defined denominator who meet the following criteria:

- prior to surgery, the surgeon assessed and documented a personalized risk of procedure-specific, 30-day postoperative complications
- the surgeon utilized a clinical data-based, patient-specific risk calculator and documented a personal discussion with the patient about surgical risks

⁴⁶ The ACS MBSAQIP® calculator does not include average length of stay, but this is an appropriate calculator for the Bariatric Surgery Clinical Episode.

Measure Submission

For the Clinical Episode categories where this measure is reported through claims, the CMS Innovation Center will calculate this measure using Medicare Part B claims data for the calendar year period that aligns to the BPCI Advanced Model Year. Model Participants only need to make sure they are reporting the relevant codes listed above on their claims.

For the Clinical Episode categories where this measure is reported through a registry, BPCI Advanced Participants must submit this measure through the registries specified above. Please note that depending on the mix of Clinical Episodes for which the Model Participant has opted into the alternative measure set, the Model Participant may need to report to both registries.

Revisions to the Published Specifications

If reporting through the registry, there are no revisions to the measure from the published specifications.

If reporting through claims, BPCI Advanced calculates this version of the measure at the Episode Initiator level and limits the patient population to BPCI Advanced Beneficiaries, as opposed to all Medicare beneficiaries in the current NQF-endorsed specifications.

Composite Quality Score

Each version of the Patient-Centered Surgical Risk Assessment and Communication measure (claims-based, ACS MBSAQIP® registry, and AAOS Registry Program) is treated as one component of the BPCI Advanced Composite Quality Score (CQS) calculation and will be weighted based depending on the number of the Episode Initiator's Clinical Episodes for which the version is relevant. The CMS Innovation Center uses the CQS to adjust a portion of any Positive Total Reconciliation Amount and any Negative Total Reconciliation Amount. The CQS adjustment will not adjust the Positive Total Reconciliation Amount down by more than 10 percent, nor will it adjust the Negative Total Reconciliation Amount up by more than 10 percent. More information is available at the BPCI Advanced website provided below.

Other Resources

This table also includes examples of available risk calculators, but other risk calculators which meet the criteria listed above are acceptable for this measure.

Organization/ Resource	Website Address
QPP #358 measure specifications	https://qpp.cms.gov/docs/QPP_quality_measure_specifications/CQM-Measures/2020_Measure_358_MIPSCQM.pdf
BPCI Advanced	https://innovation.cms.gov/initiatives/bpci-advanced
ACS MBSAQIP®	https://www.facs.org/quality-programs/mbsaqip

ACS NSQIP®	https://www.facs.org/quality-programs/acs-nsqip
ACS NSQIP® Universal Risk Calculator	https://riskcalculator.facs.org/RiskCalculator/index.jsp
ACS Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Bariatric Surgical Risk/Benefit Calculator	https://www.facs.org/quality-programs/mbsaqip/calculator
STS Adult Cardiac Surgery Risk Calculator	http://riskcalc.sts.org/stswebriskcalc/#/
AAOS Registry Program	https://www.aaos.org/registries/
AAOS Joint Replacement Risk Calculator	https://www.aaos.org/registries/
BPCI Advanced Quality Measures Frequently Asked Questions	https://innovation.cms.gov/innovation-models/bpci-advanced/quality-measures-fact-sheets