NATIONAL QUALITY FORUM
Driving measurable health improvements together

Surgery, Fall 2021 Cycle: CDP Report

TECHNICAL REPORT
SEPTEMBER 26, 2022

This report is funded by the Centers for Medicare & Medicaid Services under contract HHSM-500-2017-00060I Task Order HHSM-500-T0001.

https://www.qualityforum.org

Contents

Executive Summary

Surgical quality measures are essential to improving outcomes for individuals undergoing surgical procedures each year. In the United States (U.S.), over 1 million total knee and total hip procedures occur annually and are expected to rise with the aging population.[1] Provider performance tools, such as patient-reported outcome performance measures (PRO-PMs), gather information directly from the patient without the interpretation of a healthcare provider on key quality indicators (e.g., function, quality of life, pain, and care experience).[2] The use of PRO-PMs allows for a broad view of the patient experience and the opportunity for clinicians to improve their surgical practice.[2–4]

Since 2015, the National Quality Forum (NQF) has endorsed over 50 quality measures (i.e., structural, process, outcome, and composite) to improve surgical outcomes. NQF's surgical portfolio covers various surgeries (e.g., colorectal, cardiac, general, orthopedic, thoracic, and vascular) and care settings (e.g., inpatient/hospital, ambulatory surgical centers). Measures within this portfolio focus on all five phases of a surgical episode (i.e., preoperative, perioperative, intraoperative, postoperative, and post-discharge).

For this project, the Surgery Standing Committee evaluated one newly submitted measure against NQF's standard evaluation criteria. The Standing Committee recommended this measure for endorsement. The Consensus Standards Approval Committee (CSAC) upheld the Standing Committee's recommendation.

The Standing Committee endorsed the following measure:

- NQF #3639 Clinician-Level and Clinician Group-Level Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA and TKA) Patient-Reported Outcome-Based Performance Measure (PRO-PM) (Centers for Medicare & Medicaid Services [CMS]/ Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation [Yale CORE])

A brief summary of the measure and its evaluation are included in the body of the report; a detailed summary of the Standing Committee's discussion and ratings of the criteria is in Appendix A.

Introduction

Surgical quality measures touch on clinically appropriate and meaningful processes designed to improve outcomes, reduce per capita costs, and improve the experience of care for patients and families.[3] Improving surgical care performance is a critical quality issue; protecting patients from unintended consequences requires scientifically sound and appropriately applied measures. Several federal quality improvement programs (i.e., CMS Comprehensive Care for Joint Replacement [CJR] Model, CMS Merit-Based Incentive Payment System [MIPS] Quality Payment Program [QPP]) have adopted surgical quality measures to reduce surgical morbidity and mortality (e.g., infection, disability, and death) and reduce unnecessary expenditures.

By the year 2030, it is estimated that roughly 2 million arthroplasties will be performed annually, with an accrued cost of nearly $50 billion each year.[1] Among Medicare Fee-for-Service (FFS) beneficiaries over the age of 65, elective total hip arthroplasties (THAs) and total knee arthroplasties (TKAs) continue to be the most common surgical procedures among Medicare beneficiaries.[1] Total joint arthroplasties (TJAs), such as THA and TKA, are considered an effective treatment for patients experiencing lower extremity pain and disability related to osteoarthritis. Osteoarthritis is the most common form of arthritis among people with obesity and the aging population, leading to significant morbidity (i.e., pain, quality of life) and disability.[5] Patient-reported outcomes (PROs) allow the provider or entity to view the patient experience directly using tools and instruments that solicit feedback without the interpretation of a clinician or other healthcare professional. These unique measures provide a patient-centered, patient-focused approach to improve quality of care; promote accountability and opportunity for performance improvement; and allow providers to reflect on and improve practice.

NQF Portfolio of Performance Measures for Surgery Conditions

The Surgery Standing Committee (Appendix C) oversees NQF's portfolio of Surgery measures (Appendix B), which includes measures for perioperative safety; general surgery; and a range of specialties, including cardiac, cardiothoracic, colorectal, ocular, orthopedic, urogynecologic, and vascular surgery. This portfolio contains 57 measures: 18 process measures, 28 outcome measures, four structural measures, and seven composite measures.

Additional measures have been assigned to other portfolios. These include healthcare-associated infection measures (Patient Safety), care coordination measures (Geriatrics and Palliative Care), patient experience measures (Patient Experience and Function), imaging efficiency measures (Cost and Efficiency), and a variety of condition- or procedure-specific outcome measures (Cardiovascular, Cancer, Renal, etc.).

Surgery Measure Evaluation

On February 15, 2022, the Surgery Standing Committee evaluated one new measure against NQF's standard measure evaluation criteria.

Table 1. Surgery Measure Evaluation Summary

Measure	Maintenance	New	Total
Measures under review	0	1	1
Measures endorsed	0	1	1

Scientific Methods Panel Measure Evaluation

Prior to the Standing Committee's review, the Scientific Methods Panel (SMP) reviewed five complex measures in this topic area. The SMP passed one measure on validity and reliability (NQF #3639), did not pass one measure on reliability and did not reach consensus on validity (NQF #3649e), did not pass one measure on both reliability and validity (NQF #3638), and did not pass the final measure on validity (NQF #3650e). One measure reviewed by the SMP was withdrawn by the developer prior to the final SMP review (NQF #3652e). Measures that passed the SMP's review or for which the SMP did not reach consensus were reviewed by the Standing Committee. Measures that did not pass the SMP's review may or may not be eligible for a revote and full evaluation conducted by the Standing Committee. A measure is not eligible for a revote if it did not pass the SMP's review for one or more of the following reasons:

1. Inappropriate methodology or testing approach applied to demonstrate reliability or validity
2. Incorrect calculations or formulas used for testing
3. Description of specifications, testing approach, results, or data is insufficient for the SMP to apply the criteria
4. Appropriate levels of testing were not provided or otherwise did not meet NQF's minimum evaluation requirements

Three measures were not eligible for a revote from the Standing Committee:

- NQF #3649e Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) Electronic Clinical Quality Measure (eCQM) (Brigham and Women's Hospital)
- NQF #3650e Risk-Standardized Inpatient Respiratory Depression (IRD) Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) eCQM (Brigham and Women's Hospital)
- NQF #3638 Care Goal Achievement Following a Total Hip Arthroplasty (THA) or Total Knee Arthroplasty (TKA) (Brigham and Women's Hospital)

A meeting summary detailing the SMP's measure evaluation for the fall 2021 cycle is available on the SMP webpage.

Comments Received Prior to Standing Committee Evaluation

NQF accepts comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments for a continuous period during each evaluation cycle via an online tool located on the project webpage. For this evaluation cycle, the commenting period opened on December 6, 2021, and pre-meeting commenting closed on January 19, 2022. As of January 19, 2022, one comment has been submitted and shared with the Standing Committee prior to the measure evaluation meeting (Appendix F).

Comments Received After Standing Committee Evaluation

The continuous public commenting period with NQF member support closed on April 29, 2022. Following the Standing Committee's evaluation of the measures under review, NQF received two comments from two NQF member organizations pertaining to the draft report and the measures under review (Appendix G). All comments for the measure under review have also been summarized in Appendix A.

NQF members had the opportunity to express their support ("support" or "do not support") for each measure reviewed by the Standing Committee for endorsement consideration to inform the Standing Committee's recommendations during the commenting period. This expression of support (or not)

during the commenting period replaces the member voting opportunity that was previously held subsequent to the Standing Committee's deliberations. Two NQF members provided an expression of "do not support" for NQF #3639.

Summary of Measure Evaluation

The following brief summary of the measure evaluation highlights the major issues that the Standing Committee considered. Details of the Standing Committee's discussion and ratings of the criteria for the measure are included in Appendix A.

NQF #3639 Clinician-Level and Clinician Group-Level Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA and TKA) Patient-Reported Outcome-Based Performance Measure (PRO-PM) (Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation [Yale CORE]): Endorsed

Description: This patient-reported outcome-based performance measure uses the same measure specifications as the NQF-endorsed (NQF #3559) hospital-level risk-standardized improvement rate (RSIR) following elective primary THA/TKA with the following exception: this measure attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery; **Measure Type**: Outcome: PRO-PM; **Level of Analysis**: Clinician: Individual, Clinician: Group/Practice; **Setting of Care**: Inpatient/Hospital; **Data Source**: Claims, Other (specify), Instrument-Based Data

This newly submitted PRO-PM for endorsement is the individual and group clinician-level version of NQF #3559 *Hospital-Level Risk-Standardized Improvement Rate (RSIR) Following Elective Primary THA/TKA*. The Standing Committee agreed that the evidence demonstrates a relationship between the patient-reported outcome (PRO) and at least one healthcare structure, process, intervention, or service. It also agreed that patients find the measure to be meaningful. While the Standing Committee did agree that a performance gap exists, a few Standing Committee members raised concerns with the underrepresentation of non-White individuals and individuals of low socioeconomic status (SES) in the sample. The developer acknowledged the disparities in access to hip and knee procedures nationally for vulnerable populations and a limited proportion of hip and knee recipients from racial and ethnic minorities in their testing sample. However, they noted that the sample is representative of patients who undergo elective primary total knee and hip procedures in the national population. The Standing Committee agreed that this outcome was important to measure.

Prior to the Standing Committee's review, the SMP reviewed this measure and passed the measure on reliability and validity. The Standing Committee reviewed the SMP's feedback and requested more information on the methods the developer used to determine patient improvement scores both pre- and postoperatively. The developer explained that the Patient Working Group was consulted to evaluate a variety of situations that could impact the ceiling and floor effects, and the Patient Working Group agreed that the cutoffs were reasonable and important. The Standing Committee acknowledged that robust testing was conducted for reliability yet expressed some concerns regarding validity testing, namely the percentage of missing response rates during the developer's evaluation of instrument responsiveness (37 percent for clinicians; 42 percent for clinician groups), the 53 percent agreement (i.e., strongly or moderately agreed) for face validity, and whether the survey response rates would be

affected if the surveys were offered in languages other than English. The Standing Committee ultimately decided that the measure was reliable and valid despite these concerns and voted to accept the SMP's rating of moderate for both reliability and validity.

The Standing Committee reviewed the feasibility criterion and agreed that the data required for this measure are readily available and captured without undue burden and passed the measure on the feasibility criterion. The Standing Committee noted that patients and clinical experts provided feedback during measure development and acknowledged that the performance results could be used for accountability and performance improvement to achieve the goal of high quality care for individuals undergoing elective THA or TKA. Although the Standing Committee expressed some concerns about patients' ability to interpret the measure, it passed the measure on use, usability, and overall suitability for endorsement.

During the post-comment meeting, the Standing Committee reviewed the two comments on the Standing Committee's recommendations and draft technical report. Both comments supported the development and implementation of PRO-PMs; however, both commenters did not support the Standing Committee's decision to recommend the measure for endorsement and raised concerns with several aspects of the measure. The Standing Committee acknowledged the commenters' concerns and noted that these topics were discussed extensively during the measure evaluation meeting. While the Standing Committee maintains that the measure meets NQF criteria and should be endorsed, it urges the developer to continue to monitor the issues outlined in the comments as the measure is implemented and to make updates as needed (the comments and the full Standing Committee response can be found in the Comment Brief).

The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement. No appeals were received.

Measure Withdrawn From Consideration

One measure previously endorsed by NQF was either not resubmitted for maintenance of endorsement or was withdrawn during the endorsement evaluation process. Endorsement for this measure has been removed.

Table 2. Measures Withdrawn From Consideration

Measure	Reason for withdrawal
NQF #1790 Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer	Retired by the developer

References

1 Lopez CD, Boddapati V, Neuwirth AL, et al. Hospital and Surgeon Medicare Reimbursement Trends for Total Joint Arthroplasty. *Arthroplast Today*. 2020;6(3):437-444. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7320234/. Last accessed March 2022.

2 Springer BD, Levine BR, Golladay GJ. Highlights of the 2020 American Joint Replacement Registry Annual Report. *Arthroplast Today*. 2021;9:141-142. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8239429/. Last accessed March 2022.

3 New Approach to Surgical Measurement: Phases of Surgical Care. American College of Surgeons. http://www.facs.org/advocacy/quality/phases. Last accessed March 2022.

4 The IHI Triple Aim | IHI - Institute for Healthcare Improvement. http://www.ihi.org:80/Engage/Initiatives/TripleAim/Pages/default.aspx. Last accessed March 2022.

5 Lyn March, AM, MD, PhD, Marita Cross, PhD. Epidemiology and risk factors for osteoarthritis. https://www.uptodate.com/contents/epidemiology-and-risk-factors-for-osteoarthritis/print. Last accessed March 2022.

Appendix A: Details of Measure Evaluation

Rating Scale: H=High; **M**=Moderate; **L**=Low; **I**=Insufficient; **NA**=Not Applicable

NQF ensures that quorum is maintained for all live voting. Quorum is 66 percent of active Standing Committee members minus any recused Standing Committee members. Due to the exclusion of recused Standing Committee members from the quorum calculation, the required quorum for live voting may vary among measures. Quorum (12 out of 17 Standing Committee members for NQF #3639) was reached and maintained during the full measure evaluation meeting on February 15, 2022. Vote totals may differ between measure criteria and between measures, as Standing Committee members may have joined the meeting late, stepped away for a portion of the meeting, or had to leave the meeting before voting was complete. The vote totals listed below reflect Standing Committee members present and eligible to vote at the time of the vote. Voting results are provided below.

A measure is recommended for endorsement by the Standing Committee when greater than 60 percent of voting members select a passing vote option (Pass, High and Moderate, or Yes) on all must-pass criteria and overall suitability for endorsement. A measure is not recommended for endorsement when less than 40 percent of voting members select a passing vote option on any must-pass criterion or overall suitability for endorsement.

Endorsed Measure

NQF #3639 Clinician-Level and Clinician Group-Level Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA and TKA) Patient-Reported Outcome-Based Performance Measure (PRO-PM)

Measure Worksheet | Specifications

Description: This patient-reported outcome-based performance measure uses the same measure specifications as the NQF-endorsed (NQF # 3559) hospital-level risk-standardized improvement rate (RSIR) following elective primary THA/TKA with the following exception: this measure attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery.

Numerator Statement: The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 point or more improvement, for hip replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs). The patient-level improvement thresholds are an a priori, patient-defined substantial clinical benefit (SCB) threshold of improvement, which is an anchor-based threshold developed using patient-report of satisfaction with change in Hip Dysfunction and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR)/Knee Injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR) scores (Lyman and Lee, 2018). This measure uses the same SCB threshold developed for the hospital-level measure, which was reviewed and recommended for endorsement by the NQF Surgery Standing Committee in 2020. SCB improvement is defined as follows:

- For THA patients, an increase of 22 points or more on the Hip Dysfunction and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR); and

- For TKA patients, an increase of 20 points or more on the Knee Injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR). SCB thresholds were defined using published literature (Lyman and Lee, 2018) and vetted by the hospital-level THA/TKA PRO-PM development Patient Working Group, Technical Expert Panel (TEP), Technical Advisory Group, and Orthopedic Clinical Expert.

References: Lyman S and Lee YY. (2018). What are the minimal and substantial improvements in the HOOS and KOOS and JR versions after total joint replacement? Clin Orthop Relat Res, 467(12):2432-2441.

Denominator Statement: The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures. The cohort does not include patients with hip fractures, pelvic fractures, revision THAs/TKAs, and bone metastases. The rationale for each is outlined below:

*Facture of the pelvis or lower limbs coded in the principal or secondary discharge diagnosis fields on the index admission claim (Note: Periprosthetic fractures must be additionally coded as POA in order to disqualify a THA/TKA from cohort inclusion, unless exempt from POA reporting.) Rationale: Patients with fractures have higher mortality, complication, and readmission rates, and the procedures are typically not elective. *A concurrent partial hip or knee arthroplasty procedure rationale: Partial arthroplasty procedures are primarily done for hip and knee fractures and are typically performed on patients who are older, frailer, and have more comorbid conditions. *A concurrent revision, resurfacing, or implanted device/prosthesis removal procedure rationale: Revision procedures may be performed at a disproportionately small number of hospitals and are associated with higher mortality, complication, and readmission rates. Resurfacing procedures are a different type of procedure involving only the joint's articular surface and are typically performed on younger, healthier patients. Elective procedures performed on patients undergoing removal of implanted device/prostheses procedures may be more complicated.

*Malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm coded in the principal discharge diagnosis field on the index admission claim rationale: Patients with these malignant neoplasms are at increased risk for complication, and the procedure may not be elective.

Exclusions: The measure has three denominator exclusions listed below:

1. Staged Procedures

Patients with staged procedures, defined as more than one elective primary THA or TKA performed on the same patient during distinct hospitalizations during the measurement period, are excluded. All THA/TKA procedures for patients with staged procedures during the measurement period are removed from the measure cohort.

2. Patients who die within 270 days of the procedure

All patients who expired within 9 months (270 days) of the THA/TKA procedure are removed from the measure cohort.

3. Patients who leave against medical advice from the inpatient index admission

Finally, patients who leave their index admission against medical advice are removed from the measure cohort. Please note that hospice patients should not be excluded from the measure cohort because any patient undergoing a major surgery, such as THA/TKA, most likely has short-term survival as the primary goal.

Please also note that patients without complete PROM data, such as those that refuse to complete the PROM, are excluded from the measure results, given the measure requires complete PROM data to calculate the measure outcome. Patients with incomplete or no PROM data are included in the non-response bias adjustment to alleviate potential bias. Further, CMS is exploring reporting response rate or other information along with the measure results to provide the end user of the measure results with a better sense of the sample being assessed by the measure.

Adjustment/Stratification: Statistical risk model, this measure is not stratified

Level of Analysis: Clinician: Individual; Clinician: Group/Practice

Setting of Care: Inpatient/Hospital

Type of Measure: Outcome: PRO-PM

Data Source: Claims, Other (specify), Instrument-Based Data

Measure Steward: Centers for Medicare & Medicaid Services (CMS)

STANDING COMMITTEE MEETING [February 15, 2022]

1. Importance to Measure and Report:

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Total votes-15; Pass-15; No Pass-0**; 1b. Performance Gap: **Total votes-14; H-3; M-10; L-1; I-0**

Rationale:

- The Standing Committee noted that the evidence provided demonstrates a relationship between the PRO and at least one healthcare structure, process, intervention, or service (such as surgical approach and technique, perioperative planning, shared decision making, provider communication, and improved care

coordination). The Standing Committee also agreed that the measure was meaningful to patients and voted to pass the measure on evidence.

- The Standing Committee noted that the mean RSIRs for clinicians (64.21 percent) and clinician groups with greater than or equal to 25 THA/TKA patients (64.74 percent) along with a range in performance of 20 to 30 percent indicated a performance gap exists.
- A few Standing Committee members raised concerns with the underrepresentation of non-White individuals and individuals of low SES in the sample. The developer acknowledged the disparities in access to hip and knee procedures nationally for vulnerable populations, and there is a limited proportion of hip and knee recipients from racial and ethnic minorities in their testing sample. They also noted that the sample is representative of patients who undergo elective primary total knee and hip procedures in the national population. The Standing Committee agreed that this level of variation was acceptable, and the measure passed on performance gap.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **Total votes-15; Yes-15; No-0**; 2b. Validity: **Total votes-15; Yes-15; No-0**

Rationale:

- The SMP reviewed this measure and passed it with a rating of moderate on both reliability (**Total votes-9; H-3, M-3, L-1, I-2**) and validity (**Total votes-9; H-0, M-7, L-1, I-1**).
- The Standing Committee noted that the developer used test-re-test and internal consistency to assess patient/encounter-level reliability of both PRO-PM instruments (i.e., HOOS, JR and KOOS, JR). Internal consistency was calculated using the Pearson Separation Index (PSI) for both instruments (0.84–0.87) and between five dimensions (Pain, Symptoms, Activities of Daily Living, Sport and Recreation Function, and Quality of Life) of the HOOS, JR and the KOOS, JR (0.75–0.97).
- For accountable-entity level reliability, the Standing Committee noted that the developer used the signal-to-noise ratio (SNR) approach, and among clinicians and clinician-groups with at least 25 cases, the SNR ratio yielded median reliability scores ranging from 0.87 (a mean of 0.87 [standard deviation [SD] 0.05], interquartile range [IQR] of 0.09) to 0.92 (a mean of 0.90 [SD 0.06], IQR 0.10), respectively.
- The Standing Committee agreed that the reliability testing at both levels was robust and voted to pass the measure on reliability.
- The Standing Committee noted that the developer conducted validity testing using Spearman's correlation to evaluate the responsiveness for the HOOS, JR (0.84–0.94) and KOOS, JR (0.72–0.91) and asked for clarity on the methods used to determine the 22-point PROM improvement threshold. The developer explained that they used a patient satisfaction anchor from the original instrument and provided the empirically and patient-derived deltas to a Patient Working Group that reviewed and provided feedback on whether the cutoffs were reasonable and meaningful.
- The Standing Committee highlighted a concern raised by the SMP related to the level of agreement among the 17 members of the Technical Expert Panel (TEP). While 76 percent of the members either strongly or moderately agreed that this measure will provide a valid assessment of functional status and pain among patients undergoing an elective primary THA/TKA, only 53 percent either strongly or moderately agreed that this measure can be used to distinguish between better and worse quality of care among clinicians and clinician groups. The Standing Committee agreed that the validity testing was strong despite the low percentage of TEP members in agreement on the measure's ability to distinguish performance.
- The Standing Committee highlighted that the instruments used in the measure (HOOS, JR, and KOOS, JR) are validated only in English and expressed concern with the population of non-White patients who may not have been included during testing. The Standing Committee also asked the developer whether they are validating those surveys in other languages. The developer responded to the Standing Committee's concerns and noted translations of the source survey across more than 30 languages, and the translational validation in Spanish is currently in progress.
- During the Standing Committee's review of instrument responsiveness, a few members raised concern with the missing response rates. The developer explained that the data were collected as part of the CMS Comprehensive Care for Joint Replacement (CJR) Model, and there are some challenges that impact response rates, such as providers and facilities that have not integrated patient-reported data into their

clinical workflows and or that have not established processes of universally collecting PRO data. The Standing Committee accepted the developer's rationale and passed the measure on validity.

3. Feasibility: Total votes-15; H-9; M-6; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified; 3d. Data collection strategy can be implemented)

Rationale:

- The Standing Committee agreed that the data elements needed to compute the measure score could be collected and used by healthcare personnel during the provision of care without undue burden on clinicians or clinician groups. Additionally, most of the clinical data elements can feasibly be captured in the electronic health record (EHR), considering the PRO and clinical variables are standardized results that can be captured within discrete fields.

4. Usability and Use:

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

4a. Use**: Total votes-15; Pass-15; No Pass-0**; 4b. Usability: **Total votes-15; H-9; M-6; L-0; I-0**

Rationale:

- The Standing Committee acknowledged that the measure is not currently in use; however, the developer is taking steps to get the measure put in use.
- The Standing Committee noted that multiple entities (e.g., TEP, Clinical Working Group, and Patient Working Group) were engaged during measure development, and the developer received positive feedback on the measure.
- The Standing Committee raised concern with patients and families' ability to interpret the meaning of the threshold and the risk of survey fatigue. The Standing Committee agreed that educating patients and families on the meaning of the survey, which is to include anticipated outcomes (i.e., functional status), is important.
- The Standing Committee noted that this is a new PRO-PM with no performance results to assess, and the developer identified no unintended consequences.

5. Related and Competing Measures

- NQF #3639 is related to the following measures:
    - NQF #0425 Functional Status Change for Patients With Low Back Impairments
    - NQF #1550 Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)
    - NQF #1551 Hospital-Level 30-Day Risk-Standardized Readmission Rate (RSRR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)
    - NQF #3461 Functional Status Change for Patients With Neck Impairments
    - NQF #3493 Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) for Merit-Based Incentive Payment System (MIPS)-Eligible Clinicians and Eligible Clinician Groups
    - NQF #3559 Hospital-Level, Risk-Standardized Patient-Reported Outcomes Following Elective Primary Total Hip and/or Total Knee Arthroplasty (THA/TKA)
- The Standing Committee reviewed the related measures and agreed that the measure specifications have been harmonized to the extent possible.

6. **Standing Committee Recommendation for Endorsement**: **Total votes- 15; Yes-15; No-0**

7. Public and Member Comment

- One pre-evaluation commenter expressed concern about the burden of data collection and the multistep approach to risk adjustment. They also expressed concern about the minimum acceptable thresholds of 0.7 for reliability and suggested that the developer set the case minimum at 25 cases to achieve this threshold.

- NQF received two post-evaluation comments (Appendix G) on the Standing Committee's recommendations and draft technical report. Both comments supported the development and implementation of PRO-PMs; however, both commenters did not support the Standing Committee's decision to recommend the measure for endorsement and raised concerns with several aspects of the measure:
    - The potential for survey fatigue among patients and the data collection burden posed to clinicians, practices, and patients
    - The potential impact that additional PRO-PMs may have on reporting other well-established measures, specifically the Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS) and the Clinician and Group Consumer Assessment of Healthcare Providers and Systems Survey (CG-CAHPS)
    - The case minimum and the minimum reliability threshold for reliability
    - The measure's risk adjustment approach and the addition of social risk variables supplementary to clinical risk factors after the model's development for validity
    - One commenter requested clarification on which version of this measure is under endorsement review by highlighting the differences in the postoperative timeline specified in the Measure Applications Partnership's (MAP) measure under consideration (MUC201-107) of 300–425 days and the time frame included in the measure specifications for this endorsement review, which is 270–365 days.
- During the post-comment meeting, the Standing Committee reviewed the comments received and the proposed Standing Committee responses. The Standing Committee recognized the importance of improving outcomes for individuals undergoing surgical procedures and the opportunity for clinicians to enhance their surgical practice using provider performance tools (i.e., PRO-PMs); however, it acknowledged that the commenters' concerns were valid and noted that these topics were discussed extensively during the measure evaluation meeting. While the Standing Committee maintains that the measure meets NQF criteria and should be endorsed, it urges the developer to continue to monitor these issues as the measure is implemented and to make updates as needed. The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement. No appeals were received.

8. Consensus Standards Approval Committee (CSAC) Endorsement Decision: Total votes: 9; Yes- 9; No- 0 (July 26, 2022): Endorsed

- The CSAC upheld the Standing Committee's decision to recommend the measure for endorsement.

9. Appeals

- No appeals were received.

Appendix B: Surgery Portfolio—Use in Federal Programs*

NQF #	Title	Federal Programs: Active as of March 6, 2022
0113	Participation in a Systematic Database for Cardiac Surgery	None
0114	Risk-Adjusted Postoperative Renal Failure	Merit-Based Incentive Payment System (MIPS) Program
0115	Risk-Adjusted Surgical Re-exploration	MIPS Program
0116	Anti-Platelet Medication at Discharge	None
0117	Beta Blockade at Discharge	None
0118	Anti-Lipid Treatment Discharge	None
0119	Risk-Adjusted Operative Mortality for CABG	MIPS Program
0120	Risk-Adjusted Operative Mortality for Aortic Valve Replacement (AVR)	None
0121	Risk-Adjusted Operative Mortality for Mitral Valve (MV) Replacement	None
0122	Risk-Adjusted Operative Mortality for Mitral Valve (MV) Replacement + CABG Surgery	None
0123	Risk-Adjusted Operative Mortality for Aortic Valve Replacement (AVR) + CABG Surgery	None
0126	Selection of Antibiotic Prophylaxis for Cardiac Surgery Patients	None
0127	Preoperative Beta Blockade	None
0128	Duration of Antibiotic Prophylaxis for Cardiac Surgery Patients	None

NQF #	Title	Federal Programs: Active as of March 6, 2022
0129	Risk-Adjusted Postoperative Prolonged Intubation (Ventilation)	MIPS Program
0130	Risk-Adjusted Deep Sternal Wound Infection	None
0131	Risk-Adjusted Stroke/Cerebrovascular Accident	None
0134	Use of Internal Mammary Artery (IMA) in Coronary Artery Bypass Graft (CABG)	None
0268	Perioperative Care: Selection of Prophylactic Antibiotic: First or Second Generation Cephalosporin	Care Compare MIPS Program
0269	Timing of Prophylactic Antibiotics – Administering Physician	None
0271	Perioperative Care: Discontinuation of Prophylactic Parenteral Antibiotics (Non-Cardiac Procedures)	None
0456	Participation in a Systematic National Database for General Thoracic Surgery	None
0465	Perioperative Anti-Platelet Therapy for Patients Undergoing Carotid Endarterectomy	None
0527	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision	None
0528	Prophylactic Antibiotic Selection for Surgical Patients	None

NQF #	Title	Federal Programs: Active as of March 6, 2022
0529	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time	None
0696	STS CABG Composite Score	None
0697	Risk-Adjusted Case Mix-Adjusted Elderly Surgery Outcomes Measure	None
0706	Risk-Adjusted Colon Surgery Outcome Measure	None
0732	Surgical Volume for Pediatric and Congenital Heart Surgery: Total Programmatic Volume and Programmatic Volume Stratified by the Five STAT Mortality Categories	None
0733	Operative Mortality Stratified by the Five STAT Mortality Categories	None
0734	Participation in a National Database for Pediatric and Congenital Heart Surgery	None
1501	Risk-Adjusted Operative Mortality for Mitral Valve (MV) Repair	Care Compare MIPS Program
1502	Risk-Adjusted Operative Mortality for Mitral Valve (MV) Repair + CABG Surgery	None
1519	Statin Therapy at Discharge After Lower Extremity Bypass (LEB)	None
1523	Rate of Open Repair of Abdominal Aortic Aneurysms (AAA) Where Patients Are Discharged Alive	None

NQF #	Title	Federal Programs: Active as of March 6, 2022
1534	In-Hospital Mortality Following Elective EVAR of AAAs	None
1540	Postoperative Stroke or Death in Asymptomatic Patients Undergoing Carotid Endarterectomy	None
1543	Postoperative Stroke or Death in Asymptomatic Patients Undergoing Carotid Artery Stenting (CAS)	None
1550	Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	Hospital Value-Based Purchasing Care Compare
1551	Hospital-Level 30-Day, All-Cause Risk-Standardized Readmission Rate (RSRR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	Hospital Readmissions Reduction Program (HRRP) Care Compare
2038	Performing Vaginal Apical Suspension at the Time of Hysterectomy to Address Pelvic Organ Prolapse	None
2063	Performing Cystoscopy at the Time of Hysterectomy for Pelvic Organ Prolapse to Detect Lower Urinary Tract Injury	MIPS Program

NQF #	Title	Federal Programs: Active as of March 6, 2022
2558	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	Hospital Value-Based Purchasing Care Compare
2561	STS Aortic Valve Replacement (AVR) Composite Score	None
2563	STS Aortic Valve Replacement (AVR) + Coronary Artery Bypass Graft (CABG) Composite Score	None
2677	Preoperative Evaluation for Stress Urinary Incontinence Prior to Hysterectomy for Pelvic Organ Prolapse	None
2683	Risk-Adjusted Operative Mortality for Pediatric and Congenital Heart Surgery	None
2687	Hospital Visits After Hospital Outpatient Surgery	Hospital Outpatient Quality Reporting
3030	STS Individual Surgeon Composite Measure for Adult Surgery	None
3031	STS Mitral Valve Repair/Replacement (MVRR) Composite Score	None
3032	STS Mitral Valve Repair/Replacement (MVRR) + Coronary Artery Bypass Graft (CABG) Composite Score	None
3294	STS Lobectomy for Lung Cancer Composite Score	None

NQF #	Title	Federal Programs: Active as of March 6, 2022
3357	Facility-Level Seven-Day Hospital Visits After General Surgery Procedures Performed at Ambulatory Surgical Centers	Ambulatory Surgical Center Quality Reporting
3493	Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) for Merit-Based Incentive Payment System (MIPS) Eligible Clinicians and Eligible Clinician Groups	None)
3494	Hospital 90-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	None
3639	Clinician-Level and Clinician Group-Level Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA and TKA) Patient-Reported Outcome-Based Performance Measure (PRO-PM)	None

* CMS Measures Inventory Tool Last Accessed on March 6, 2022.

Appendix C: Surgery Standing Committee and NQF Staff

STANDING COMMITTEE

Alex Sox-Harris, PhD, MS (Co-Chair)
Associate Professor, Department of Surgery, Stanford University
Stanford, California

Vilma Joseph, MD, MPH, FASA (Co-Chair)
Professor of Anesthesiology, Albert Einstein College of Medicine/Montefiore Medical Center
Bronx, New York

Ashrith Amarnath, MD
Patient Safety Officer, Sutter Valley Medical Foundation
Sacramento, California

Sherry Bernardo, CRNA
Director of Anesthesia Quality and Practice, Atrium Health
Charlotte, North Carolina

Richard D'Agostino, MD
Cardiothoracic Surgery Specialist, Lahey Clinic Medical Center
Burlington, Massachusetts

TeMaya Eatmon
Patient Advocate
Atlanta, Georgia

Michael Firstenberg, MD, FACC, FAIM
Chief of Cardiothoracic and Vascular Surgery, The Medical Center of Aurora
Aurora, Colorado

Linda Groah, MSN, RN, CNOR, NEA-BC FAAN
CEO-Executive Director, Association of periOperative Registered Nurses
Denver, Colorado

Miklos Kertai, MD, PhD
Professor, Division of Cardiothoracic Anesthesiology, Vanderbilt
Brentwood, Tennessee

Jaime Ortiz, MD, MBA, FASA
Professor of Anesthesiology, Baylor College of Medicine
Houston, Texas

Shawn Rangel, MD, MSCE
Senior Surgical Advisor for Quality and Safety, Boston Children's Hospital
Boston, Massachusetts

Kimberly Richardson
Advocate Leader for the Ovarian Cancer Research Alliance (OCRA)
Chicago, Illinois

Christopher Saigal, MD, MPH
Professor, UCLA
Los Angeles, California

Salvatore T. Scali, MD, FACS, DFSVS, RPVI
Associate Professor of Surgery, University of Florida
Gainesville, Florida

Allan Siperstein, MD
Chairman Endocrine Surgery, Cleveland Clinic
Cleveland, Ohio

Joshua Stein, MD, MS
Associate Professor of Ophthalmology and Visual Sciences, University of Michigan
Department of Health Management & Policy, Director, Center for Eye Policy, and Innovation
Ann Arbor, Michigan

Kevin Wang, MHA *(recused from discussion)*
Senior Director, Performance Programs, Hospital for Special Surgery
New York, New York

Mark A. Wilson, MD, PhD
National Director of Surgery, Department of Veterans Affairs
Washington, District of Columbia

Gerri Lamb, PhD, RN, FAAN *(non-voting member)*
Associate Professor, Arizona State University
Tucson, Arizona

Christopher Stille, MD, MPH, FAAP *(non-voting member)*
University of Colorado School of Medicine
Aurora, Colorado

NQF STAFF

Kathleen F. Giblin, RN (*former*)
Interim Senior Vice President, Measurement Science & Application

Tricia Elliot, DHA, MBA, CPHQ, FNAHQ
Senior Managing Director, Measurement Science & Application

Matt Pickering, PharmD
Senior Director, Measurement Science & Application

Poonam Bal, MHSA
Senior Director, Measurement Science & Application

LeeAnn White, MS, BSN
Director, Measurement Science & Application

Monika Harvey, MBA, PMP
Project Manager, Program Operations

Isaac Sakyi, MSGH
Manager, Measurement Science & Application

Karri Albanese, BA (*former*)
Analyst, Measurement Science & Application

Tristan Wind, BS, ACHE-SA
Analyst, Measurement Science & Application

Taroon Amin, PhD
Consultant, Measurement Science & Application

Appendix D: Measure Specifications

NQF #3639 Clinician-Level and Clinician Group-Level Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA and TKA) Patient-Reported Outcome-Based Performance Measure (PRO-PM)

STEWARD

Centers for Medicare & Medicaid Services

DESCRIPTION

This patient-reported outcome-based performance measure uses the same measure specifications as the NQF-endorsed (NQF # 3559) hospital-level risk-standardized improvement rate (RSIR) following elective primary THA/TKA with the following exception: this measure attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery.

TYPE

Outcome: PRO-PM

DATA SOURCE

Instrument-Based Data, Claims, Other (specify)

The PROM surveys used to define the measure outcome are 1) the Hip dysfunction and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR) for THA patients, and 2) the Knee injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR) for TKA patients. These instruments can be administered in paper or electronic form, filled out in person or over the phone. The HOOS, JR and KOOS, JR are presently available in English, not yet in other languages. For measurement of global mental health for risk adjustment, the Patient-Reported Outcomes Measurement Information System (PROMIS) Global or the Veterans RAND 12 Item Health Survey (VR-12) are used. The PROMIS Global is available in sixteen languages; the VR-12 is available in Spanish, Chinese and German. Below we provide a response to a question from NQF staff: Please clarify if the use of a surrogate/interpreter for non-English speaking patients has been tested for these tools. What other tools used to calculate the measure are not available for non-English speaking patients? We were unable to identify studies testing the HOOS, JR and KOOS, JR on surrogates (such as family caregivers) or use of interpreters. However, the option of completing a survey via a surrogate was provided in CJR to allow for flexibility for patients and help maximize responses. In CJR, there was no information captured on whether the patient responded to the surveys in English or another language. In discussions with patients, patients noted the importance of the role of the family caregiver in providing support, such as assisting with survey responses. In discussions with providers, many noted that when translations are not available in patients' native language, use of interpreters or family members is helpful. The full forms of the HOOS and KOOS are publicly available in several languages and work is ongoing to validate the HOOS, JR and

KOOS, JR in other languages. The PROMIS-Global is translated into sixteen languages and the VR-12 is available in Spanish, Chinese and German.

LEVEL

Clinician: Group/Practice, Clinician: Individual

SETTING

Inpatient/Hospital

NUMERATOR STATEMENT

The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 point or more improvement, for hip replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs). The patient-level improvement thresholds are an a priori, patient-defined substantial clinical benefit (SCB) threshold of improvement which is an anchor-based threshold developed using patient-report of satisfaction with change in Hip dysfunction and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR)/Knee injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS JR) scores (Lyman and Lee, 2018). This measure uses the same SCB threshold developed for the hospital-level measure, which was reviewed and recommended for endorsement by the NQF Surgery Standing Committee in 2020. SCB improvement is defined as follows: For THA patients, an increase of 22 points or more on the Hip dysfunction and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR); and For TKA patients, an increase of 20 points or more on the Knee injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR). SCB thresholds were defined using published literature (Lyman and Lee, 2018) and vetted by the hospital-level THA/TKA PRO-PM development Patient Working Group, Technical Expert Panel (TEP), Technical Advisory Group, and Orthopedic Clinical Expert. References:Lyman S and Lee YY. (2018). What are the minimal and substantial improvements in the HOOS and KOOS and JR versions after total joint replacement? Clin Orthop Relat Res, 467(12):2432-2441.

NUMERATOR DETAILS

This is a patient-reported outcome-based performance measure (PRO-PM). Two joint-specific patient reported outcome measures (PROMs) are used to collect the data for calculating the numerator: 1) the Hip dysfunction and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR) for THA patients, and 2) the Knee injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR) for TKA patients. These PROM data and specific risk variable data will be collected 90 to 0 days prior to surgery, and PROM data will be collected again 270 to 365 days following surgery. Data elements used to define the numerator and for risk adjustment that are collected with PROM data include: - HOOS, JR or KOOS, JR- Date of Birth - Single-Item Literacy Screening (SILS2) Questionnaire- Body Mass Index (BMI) or Weight (kg) and Height (cm)- Chronic (>90 Day) Narcotic Use-Total Painful Joint Count (Patient-Reported in Non-Operative Lower Extremity Joint)- Quantified Spinal Pain (Patient-Reported Back Pain, Oswestry Index Question)- Patient-Reported Outcomes Measurement Information Systems (PROMIS) Global Mental Health Score (calculated with data from the PROMIS Global or Veteran's Rand 12-Item Health Survey (VR-12); data from VR-12 is translated to PROMIS Global Mental Health scores using a crosswalk created by Cella et al. for PROsetta® Stone)(Please note: Data elements listed above are detailed in the Data Dictionary accompanying this NQF submission; see Tabs: Risk Variables with PRO

Data; HOOS, JR; KOOS, JR; PROMIS Global; VR-12) Table 1 describes each data element and if it is collected pre and/or post-operatively. Table 1. Data Elements Collected for MIPS THA/TKA PRO-PM Type of Element Data Element Collection timingPROMsVR-12 (all items) Preoperative PROMIS-Global (all items)Preoperative HOOS, JR (six items)Pre- and postoperative KOOS, JR (seven items)Pre- and postoperative Risk VariablesSILS2 questionnaire ("How comfortable are you filling out medical forms by yourself?")PreoperativeBMIaPreoperativeHeightbPreoperativeWeightbPreoperativeUse of Chronic (≥ 90 days) Narcotics Preoperative Total Painful Joint Count: Patient-Reported Pain in Non-Operative Lower Extremity Joint ("What amount of pain have you experienced in the last week in your other knee/hip?")Preoperative Quantified Spinal Pain: Patient-Reported Back Pain, Oswestry Index Question ("My BACK PAIN at the moment is")Preoperative a collection of Height and Weight together will substitute the requirement to collect BMI. b collection of BMI will substitute the requirement to collect Height and Weight. Centers for Medicare and Medicaid Services (CMS) administrative data are used to identify eligible THA/TKA procedures for the measure cohort (denominator) (ICD-10 codes for eligible THA/TKA procedures identified in the Data Dictionary accompanying this NQF submission; see Tab Cohort Inclusions) and additional risk variables, including patient demographics and clinical comorbidities (see Tab Risk Variables with PRO data and Risk Variables in Risk Modeling). The numerator is the risk-adjusted proportion of patients undergoing an elective primary THA/TKA that meet or exceed a SCB improvement on the HOOS, JR or KOOS, JR from preoperative to postoperative assessment. SCB improvement is defined as:- For THA patients, an increase of 22 points or more on the HOOS, JR- For TKA patients, an increase of 20 points or more on the KOOS, JR SCB thresholds were defined using published literature (Lyman and Lee, 2018) and vetted by the hospital-level THA/TKA PRO-PM development Patient Working Group, TEP, Technical Advisory Group, and Orthopedic Clinical Expert. This measure uses the same SCB threshold developed for the hospital-level measure, which was reviewed and recommended for endorsement by the Surgery Standing Committee in 2020. The numerator is the same as the NQF-endorsed hospital-level measure. The measure numerator was defined with extensive patient and clinician input during the development of the hospital-level THA/TKA PRO-PM. Specifically, clinical experts and patients engaged during development of the hospital-level THA/TKA PRO-PM supported a numerator definition that assessed change in PROM score from preoperative to postoperative assessment over a numerator definition that focused on postoperative PROM score. TEP members and patients noted that patients want to see improvement and that the numerator definition should reflect change following surgery. Stakeholders also strongly supported a numerator definition assessing a threshold change in PROM score over averaging patient change in PROM scores for performance measure reporting. They noted that measurement of a threshold change will distinguish patients with and without substantial clinical improvement. Comments against a reported average change included concern that a hospital whose patients all achieve average results could have a reported measure score similar to a hospital whose patients achieve either very good or very poor results; an average change numerator could show similar results for hospitals with very different patient outcomes. The numerator definition of SCB improvement, supported by patients and clinical experts, provides an easy-to-understand metric that patients found intuitive. Using a SCB threshold incentivizes providers to perform surgery on patients with greater preoperative severity and lower preoperative PROM scores, a group that might otherwise not be offered surgery, as these patients can experience substantial clinical improvement but may not reach a pre-determined postoperative state and with poorer baseline PRO scores, have more room to improve and thus a greater opportunity to achieve SCB. It also encourages providers to not perform THA/TKA procedures on patients with minimal symptoms who will not benefit at all from surgery. Furthermore, since the SCB was defined using published literature (Lyman and Lee, 2018) and with close input from patients and clinicians during development of the hospital-level THA/TKA PRO-PM, it does set a minimum improvement threshold, but not one so large as to cause surgeons to avoid performing THA/TKA procedures on patients who would

benefit. The clinician- and clinician group-level THA/TKA PRO-PM uses the same measure outcome to align with the hospital-level THA/TKA PRO-PM and ensure usability and understanding of the measure results across settings. NQF Staff requested clarification on issues around PROM validity; below we respond to their questions below: NQF Question: Please clarify the following: did the developer test the accuracy and consistency of collecting data from 7 different PROMs? Are they all standardized and validated? Was the assembly of individual PROs from the PROMs tested for the assembled use? How is the data collected for each PROMCORE response: To clarify, the measures primarily uses two procedure-specific PROMs to define the measure outcome, the HOOS, JR and KOOS, JR. Both of these PROMs are well validated surveys (Lyman et al, 2016a and Lyman et al, 2016b). The measure uses the PROMIS-Global (Hays et al., 2009) or VR-12 (Kazis et al., 2017) to assess mental health for use in the risk model. The PROMIS-Global and VR-12 are also well validated surveys. The measure also uses the SILS2 (a measure of health literacy) (Morris et al., 2006) as well as assessments of back pain (Fairbank et al., 2000) and other low extremity joint pain (Ayers et al., 2013), which are all valid patient assessments. Orthopedic surgeons and their professional societies provided specific recommendations through public comment on the initial CJR proposed rule to address concomitant low back pain and other lower extremity joint pain. These experts felt it was clinically essential to accurately capture the impact of the THA/TKA and not have the PROM scores confounded by known clinical conditions that impact knee and hip PROMs. Similarly, literacy experts and patient advocates supported the use of the SILS2 as a valid tool, citing the critical need to capture health literacy without greatly increasing patient burden. Finally, the CJR model did not specify an order of the PROs or collected risk variables to be presented to the patients nor did it ask participants to report on the order of the data collected; therefore, it was not possible to test the assembly of the PROMs. The CJR data underwent data cleaning and quality assurance steps including, identification of missing CMS Certification Number (CCN), file conversion to comma-separated values (CSV), assessing accuracy of procedure type, patient identification, and whether each variable is the correct data type and within range, where applicable. During data cleaning and quality assurance, CORE also assessed logic such as alignment of procedure type and PROM type, identification of missing variables, and removing duplicate submissions. The data used in measure testing was collected from hospitals voluntarily reporting PRO and risk variable data in CJR. Hospitals were allowed to choose the PRO and risk variable data collection approach and some hospitals collected data on paper, electronically, or telephone. Among submissions from performance year 4 of CJR, 49.7% were completed on paper, followed by electronic (web-based, EHR, etc) 26.7%, and telephone 7.1%. Of note, 16.5% of submission had missing mode of collection information. NQF Question: The developer discusses SCB threshold incentives and provider practice improvements to achieve the SCB. Please add some explanation of the following considerations to your testing analysis: 1) In the era of reducing opioid use, patients may need to suffer significant pain to meet a threshold of potential PROM results increases. 2) Patients with a high pain threshold may not be considered improved candidates for potential PROM results increases, and 3) The use of potential PROM results increases may increase administrative burden of elective surgical clearances, 4) The importance to achieving the PROM results that may trigger providers "practicing to the measure". Upon full submission, please be sure to address these concerns fully in the Use section. CORE response: Thank you for highlighting these important topics for our team's consideration. Opioid use: Opioid use (as assessed with the variable use of Chronic [≥ 90 days] Narcotics) was evaluated as a potential risk adjustment variable during development of the hospital-level measure and was included in the final risk model based on its importance. Of note, the hospital-level THA/TKA PRO-PM which this measure is based developed the final risk model and included risk variables identified in a systematic literature review/environmental scan and by orthopedists surveyed about what risk variables they consider important in predicting THA/TKA outcomes that were then prioritized by the hospital-level THA/TKA PRO-PM measure development team's technical expert panel (TEP) and clinical experts as both clinically important and feasible. CMS

will continue to monitor this issue during measure reevaluation. High pain thresholds: The intent of THA/TKA procedures is to relieve pain and improve function, both of which are validly captured by the HOOS, JR and KOOS, JR PROMs. Further, the SCB thresholds were defined using diverse patients during development of the HOOS, JR and KOOS, JR and were then vetted again with diverse patients during measure development. Our clinical experts anticipate that the impact of high pain thresholds will not negatively impact the measure results as the PROMs ask patients to rate both their pain and functional impairment. Burden: Collecting PROMs can increase patient and provider burden, but simultaneously helps providers focus clinical and decision-making conversations on the outcomes repeatedly shown to be the most meaningful to patients, namely pain and function. In addition, CMS is carefully planning for potential implementation of this measure which is informed by stakeholder input and with careful consideration of clinician and clinician group burden. While patient-reported outcomes performance measures (PRO-PMs) require providers to integrate data collection into clinical workflows, this integration provides opportunity for patient reported outcomes (PROs) to inform clinical decision making and benefit patients by engaging them in discussions about potential outcomes. CMS will be mindful of the flexibility providers will need to implement the THA/TKA PRO-PM. Unintended consequences: Thank you for sharing this concern. CMS plans to monitor for any unintended consequences of the measure. References: Ayers, D.C., et al., Patient-reported outcomes after total knee replacement vary on the basis of preoperative coexisting disease in the lumbar spine and other nonoperatively treated joints: the need for a musculoskeletal comorbidity index. The Journal of bone and joint surgery. American volume, 2013. 95(20): p. 1833.Cella D, Schalet BD, Kallen M, Lai JS, Cook KF, Rutsohn J, Choi SW. PROsetta® Stone Analysis Report Volume 2: A Rosetta Stone for Patient Reported Outcomes, PROMIS Global Health – Mental Component and VR-12 – Mental Component (Algorithmic Scores). http://www.prosettastone.org/LinkingTables1/GlobalHealth/Pages/default.aspx, 2018.Fairbank, J.C. and P.B. Pynsent, The Oswestry Disability Index. Spine (Phila Pa 1976), 2000. 25(22): p. 2940-52; discussion 2952.Hays, R. D., Bjorner, J. B., Revicki, D. A., Spritzer, K. L., & Cella, D. (2009). Development of physical and mental health summary scores from the patient-reported outcomes measurement information system (PROMIS) global items. Quality of Life Research, 18(7), 873–880. https://doi.org/10.1007/s11136-009-9496-9Kazis, L., Rogers, W., Rothendler, J., Qian, S., Selim, A., Edelen, M., Stucky, B., Rose, A., & Butcher, E. (2017). Outcome Performance Measure Development for Persons with Multiple Chronic Conditions. In RAND Corporation. https://doi.org/10.7249/rr1844Lyman S, Lee YY, Franklin PD, Li W, Mayman DJ, Padgett DE. (2016a). Validation of the HOOS, JR: A Short-form Hip Replacement Survey. Clinical Orthopaedics and Related Research®, 474(6):1472-1482.Lyman S, Lee YY, Franklin PD, Li W, Cross MB, Padgett DE. (2016b). Validation of the KOOS, JR: A Short-form Knee Arthroplasty Outcomes Survey. Clinical Orthopaedics and Related Research®, 474(6):1461-1471.Lyman S and Lee YY. (2018). What are the minimal and substantial improvements in the HOOS and KOOS and JR versions after total joint replacement? Clin Orthop Relat Res, 467(12):2432-2441.Morris, N. S., MacLean, C. D., Chew, L. D., & Littenberg, B. (2006). The Single Item Literacy Screener: Evaluation of a brief instrument to identify limited reading ability. BMC Family Practice, 7(21), 1–7. https://doi.org/10.1186/1471-2296-7-21

DENOMINATOR STATEMENT

The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures. The cohort does not include patients with hip fractures, pelvic fractures, revision THAs/TKAs, and bone metastases. The rationale for each is outlined below: Facture of the pelvis or lower limbs coded in the principal or secondary discharge diagnosis fields on the index admission claim Note: Periprosthetic fractures must be additionally coded as POA in order to disqualify a THA/TKA from cohort inclusion, unless exempt from POA reporting.) Rationale: Patients with fractures have higher mortality, complication, and readmission rates, and the procedures are

typically not elective. A concurrent partial hip or knee arthroplasty procedure Rationale: Partial arthroplasty procedures are primarily done for hip and knee fractures and are typically performed on patients who are older, frailer, and have more comorbid conditions. A concurrent revision, resurfacing, or implanted device/prosthesis removal Rationale: Revision procedures may be performed at a disproportionately small number of hospitals and are associated with higher mortality, complication, and readmission rates. Resurfacing procedures are a different type of procedure involving only the joint's articular surface and are typically performed on younger, healthier patients. Elective procedures performed on patients undergoing removal of implanted device/prostheses procedures may be more complicated. Malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm coded in the principal discharge diagnosis field on the index admission claim Rationale: Patients with these malignant neoplasms are at increased risk for complication, and the procedure may not be elective.

DENOMINATOR DETAILS

The cohort for this measure is Medicare FFS patients 65 years of age and older undergoing an elective primary THA/TKA procedure at a non-federal short-term acute care hospital. Inclusion criteria includes patients: Enrolled in Medicare FFS Part A and Part B for the 12 months prior to the date of the index admission, and enrolled in Part A during the index admission Discharged alive from a non-federal short-term acute care hospital Undergoing only elective primary THA/TKA procedures (patients with fractures and revision procedures or with bone metastases are not included) Inclusion criteria are exactly the same as the CMS's existing measure cohort for the NQF-endorsed hospital-level THA/TKA PRO-PM. Centers for Medicare and Medicaid Services (CMS) administrative data are used to identify qualifying THA/TKA procedures for the measure cohort. (ICD-10 codes for eligible THA/TKA procedures are identified in the Data Dictionary accompanying this NQF submission; see Tab Cohort Inclusions.) Please note that at this time, we do not include Medicare Advantage patients in the measure results. CMS is investigating the feasibility of including Medicare Advantage data in quality measurement. In addition, the measure does not utilize claims data after the procedure; therefore, we do not include a requirement of Part B enrollment after the procedure.

EXCLUSIONS

The measure has three denominator exclusions, listed below.1. Staged Procedures Patients with staged procedures, defined as more than one elective primary THA or TKA performed on the same patient during distinct hospitalizations during the measurement period, are excluded. All THA/TKA procedures for patients with staged procedures during the measurement period are removed from the measure cohort. 2. Patients who die within 270 days of the procedure All patients who expired within 9 months (270 days) of the THA/TKA procedure are removed from the measure cohort. 3. Patients who leave against medical advice from the inpatient index admission Finally, patients who leave their index admission against medical advice are removed from the measure cohort. Please note that hospice patients should not be excluded from the measure cohort because any patient undergoing a major surgery such as THA/TKA most likely has short-term survival as the primary goal. Please also note that patients without complete PROM data, such as those that refuse to complete the PROM, are excluded from the measure results given the measure requires complete PROM data to calculate the measure outcome. Patients with incomplete or no PROM data are included in the non-response bias adjustment to alleviate potential bias. Further, CMS is exploring reporting response rate or other information along with the measure results to provide the end user of the measure results with a better sense of the sample being assessed by the measure. Below we answer additional questions from NQF staff regarding these exclusions: Question 1, Staged Procedures: Please explain how staged procedures are assessed

when they overlap the end and beginning of measurement periods. Is there an acceptable range in days for a staged procedure? Are all staged procedures planned? Do all staged procedures need to occur in the inpatient/acute care setting? Is it possible to have 1 inpatient and 1 outpatient surgery on the same joint? Are these procedures staged? How does that impact the denominator? CORE response: To clarify, a "staged procedure" is a bilateral THA or TKA (both right and left hips or both right and left knees). Bilateral THAs and TKAs can be performed at the same time (these are included in the measure cohort), or during separate hospitalizations (these are the excluded "staged procedures"). Therefore, all staged procedures are planned. Theoretically, a staged procedure could be performed in different settings (for example, right THA performed inpatient followed by a left THA performed in the outpatient setting), but our clinical advisors suggest this is currently rare, although it may increase in prevalence over time. During measure development, we only assessed staged procedures as any subsequent elective, primary THA/TKA procedure in the inpatient setting that occurred during the measurement period. In the future, we will need to assess the feasibility of extending the assessment of staged procedures to before and/or after the measurement period. Of note, this exclusion represents a small number of the total patients undergoing THA and TKA procedures in our testing dataset. Based on discussions with our orthopedic experts, including Dr. Kevin Bozic, many staged THA/TKA procedures occur within 6 months of each other; timing is solely dependent upon provider and patient discussion of the patient's unique situation and formal guidelines do not exist. We used the measurement period given the measure has approximately a year postoperative PRO data collection window and any procedure that occurs during the postoperative PRO data collection window may negatively impact the recovery of the first procedure and it may be challenging to distinguish the recovery for either procedure from the other when they occur within 12 months of each other. In our dataset, we found that 1,181 (91.4%) of staged procedures occurred within 1 year and 111 (8.6%) of staged procedures occurred within 2 years. To qualify as a staged procedure in the measure, the procedure must meet the criteria of an elective primary procedure. Yes, the current cohort exclusion requires staged procedures to occur in the inpatient setting. In the future we will assess staged procedures that may occur in the outpatient setting (hospital outpatient departments and ambulatory surgical setting). In the example of 1 inpatient and 1 outpatient surgery on the same joint is unlikely a staged procedure, rather a revision or other non-elective procedure on the same joint. As noted above, this is not how we define "staged procedures". The measure cohort does not include revision procedures in measure cohort therefore subsequent procedures on the same joint that do not meet cohort criteria would not be included in the cohort. Question 2: AMA exclusion Are there any other forms of AMA that are appropriate for the measure, such as patients who "fire" their providers? At this time, we only use the discharge disposition code to identify patients who leave AMA. In the example you provide of a patient "firing" their provider, please note that this information would not be systematically captured in claims data and therefore we would be unable to investigate these instances.

EXCLUSION DETAILS

1. Staged Procedures Patients with staged procedures in the measure period are excluded. A staged procedure is identified if a patient has more than one hospitalization for an eligible, elective primary THA or TKA procedure during the measurement period. ICD-10 codes for eligible, elective primary THA/TKA procedures (listed in the Data Dictionary on "Cohort Inclusions" tab) are used to identify all eligible procedures during the measurement period. Patients with an ICD-10 code for an eligible elective primary THA or TKA procedure in two or more hospital admissions during the measurement period are identified as having a staged procedure, and the patient, including all procedures, is removed from the measure cohort.2. Patients who die within 270 days of the procedure Patients who die within 270 days are unable to complete PROM data in alignment with the postoperative PROM collection timeframe. The Medicare Enrollment Database, which is updated by the Social Security Administration, is used to

obtain the mortality information for Medicare beneficiaries.3. Patients who leave against medical advice Providers are unable to deliver full care and prepare the patient for discharge when patients leave against medical advice. Specifically, if the discharge disposition code on the index admission claim is '7' (Left against medical advice or discontinued care), the procedure performed during that index admission is not considered eligible for cohort inclusion.

RISK ADJUSTMENT

Statistical risk model with risk factors (specify number of risk factors)

For model development we used a logistic regression model, with outcome Yi for the ith patient equal to 1 if the patient had achieved substantial clinical benefit (SCB) improvement on the PROM score from preoperative to postoperative assessment, and zero otherwise. SCB improvement is measured as a 22-point increase on the HOOS, JR from preoperative to postoperative assessment for THA patients, and a 20-point increase on the KOOS, JR from preoperative to postoperative assessment for TKA patients. We applied the risk model developed by the hospital-level THA/TKA PRO-PM which was developed using risk variables identified in a systematic literature review/environmental scan and by orthopedists surveyed about what risk variables they consider important in predicting THA/TKA outcomes that were then prioritized by the hospital-level THA/TKA PRO-PM measure development team's technical expert panel (TEP) and clinical experts as both clinically important and feasible. The risk variables included in the final model are:

- Age, in years
- Male sex
- Body Mass Index (BMI), in kg per m2
- Procedure: THA
- Bilateral procedure
- Baseline PROMIS Global Mental Health Subscale Score
- Health literacy (assessed by response to Single Item Literacy Screener questionnaire, "Comfort Filling Out Medical Forms by Yourself") (Wallace et al, 2006; Sarkar et al, 2011)
- Pain in Non-Operative Lower Extremity Joint (Total painful joint count: Patient-Reported in Non-operative Lower Extremity Joint) (Ayers et al, 2013)
- Back Pain at preoperative assessment (Quantified Spinal Pain: Patient-Reported Back Pain, Oswestry Disability Index question) (Fairbank et al, 2000; Ayers et al, 2013)
- Narcotic use for >90 days
- Severe infection; other infectious diseases (CC 1, 3-7)
- Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)
- Liver disease (CC 27-31)
- Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)
- Depression (CC 61)
- Other psychiatric disorders (CC 63)
- Coronary atherosclerosis or angina (CC 88-89)
- Vascular or circulatory disease (CC 106-109)
- Renal failure (CC 135-140)

We estimated the clinician- and clinician group-specific RSIR using a hierarchical logistic regression model to account for the natural clustering of observations within clinicians or clinician groups. The model employs a logit link function to link the risk factors to the outcome with a clinician- or clinician

group-specific random effect. The risk variable coefficients can be found in the data dictionary (Tab Candidate Risk Variables Included in Risk Modeling). Let denote the outcome (equal to one if patient has an improvement, zero otherwise) for patient I attributed to a clinician or clinician group j; denotes a set of risk factors for patient attributed to clinician or clinician group ; and is the number of index admissions attributed to the clinician or clinician group .We assume the outcome is related linearly to the covariates via a logit
function:logit(Prob(Yij=1))=αj+βZij Where αj=μ+ωj;ωj N(0,τ2)where αj represents the clinician- or clinician group-specific intercept, μ is the adjusted average intercept over all clinicians or clinician groups in the sample, is the clinician- or clinician group-specific intercept deviation from μ, and τ2 is the between-clinician or clinician group variance component. This approach models the log odds of patient improvement on the PROM as a function of patient demographics and clinically relevant comorbidities with an intercept for the clinician- and clinician group-specific random effect. The random effects accommodate the assumption that underlying differences in the quality of care across clinicians and clinician groups lead to systematic differences in patient outcomes. To account for potential response bias, we calculated stabilized inverse probability weights (IPW) from a propensity score analysis using multinomial logistic regression to model three PRO data response groups: complete PRO submission, incomplete PRO submission, and no response (see 2b6.1 for a detailed description of the analytic approach to addressing potential response bias). We fit the hierarchical logistic regression model to the corresponding parameters along with the stabilized IPW adjust for response bias. We calculated the clinician and clinician group-specific RSIRs, as the ratio of a clinicians or clinician group's "predicted" number of improvements to "expected" number of improvements multiplied by the overall observed improvement rate. The expected number of improvements for each clinician or clinician group (denominator) was estimated as the sum of the estimated probability of improvement among the clinician's or clinician group's patients accounting for the observed patient characteristics. The predicted number of improvements for each clinician or clinician group (numerator) was estimated as the sum of the estimated probability of improvement of the clinician's or clinician group's patients accounting for the patients' characteristics and the clinician- or clinician group-specific intercept. References: Ayers DC, Li W, Oatis C, Rosal MC, Franklin PD. (2013). Patient-reported outcomes after total knee replacement vary on the basis of preoperative coexisting disease in the lumbar spine and other nonoperatively treated joints: the need for a musculoskeletal comorbidity index. The Journal of bone and joint surgery American volume, 95(20):1833. Fairbank JCP, Paul B. (2000). The Oswestry disability index. Spine, 25(22):2940-2953. Sarkar U, Schillinger D, López A, Sudore R. Validation of self-reported health literacy questions among diverse English and Spanish-speaking populations. J Gen Intern Med. 2011 Mar;26(3):265-71. Epub 2010 Nov 6. Wallace LS, Rogers ES, Roskos SE, Holiday DB, Weiss BD. Brief report: screening items to identify patients with limited health literacy skills. J Gen Intern Med. 2006 Aug;21(8):874-7.

STRATIFICATION

N/A; this measure is not stratified.

TYPE SCORE

Rate/proportion

Better quality = Higher score

ALGORITHM

Target population: Medicare FFS patients 65 years and older undergoing an elective primary THA or TKA in a non-federal short-term acute care hospital. To create the denominator: Step 1. If the patient is a Medicare FFS patient, go to Step 2. If not, do not include in the denominator. Step 2. If the patient is identified in CMS administrative claims data as having undergone an eligible elective primary THA or TKA during the measurement period, go to Step 3. If not, do not include in the denominator. Step 3. If the patient is 65 years of age or older, go to Step 4. If not, do not include in the denominator. Step 4. If the patient was enrolled in Medicare FFS Part A and Part B for the 12 months prior to index admission, and enrolled in Part A during the index admission, then go to Step 5. If not, do not include in the denominator. Step 5. If the patient was discharged alive from the hospital, include in the denominator. If not, do not include in the denominator. Step 6. If the patient experienced only one elective primary THA/TKA during the measurement period, or if the patient experienced more than one elective primary THA/TKA during a singular hospitalization during the measurement period, include in the denominator. If the patient experienced two elective primary THA/TKA procedures during the measurement period performed during distinct hospitalizations, do not include in the denominator. Step 7. If patient died within 270 days of the procedure, do not include in the denominator. Step 8. If patient was discharged against medical advice from the hospital, do not include in the denominator. To create the numerator: If the patient has complete PRO data collected during the prescribed preoperative and postoperative time windows and meets or exceeds the SCB improvement threshold on the joint-specific PROM between the preoperative and postoperative assessment:- for THA patients, an increase of 22 points on the HOOS, JR- for TKA patients, an increase of 20 points on the KOOS, JRthen include in the numerator. If not, then do not include in the numerator. The clinician- and clinician group-level measure results are calculated by aggregating all patient-level results among patients who meet the cohort definition treated by the same clinician or clinician group. The minimum case volume used for measure testing was 25 elective primary THA/TKA patients with complete PRO and risk variable data collected 90 – 0 days preoperatively and complete PRO data collected 270 – 365 days postoperatively. Clinician- and clinician group-specific risk-standardized improvement rates (RSIRs) are calculated as the ratio of a clinician's or clinician group's "predicted" improvement to "expected" improvement multiplied by the overall observed improvement rate. Both predicted improvement and expected improvement are derived based on the output of a hierarchical logistic regression model that adjusts for patient case-mix and applies stabilized inverse probability weighting (IPW) to address potential non-response bias.

Copyright / Disclaimer

N/A

Appendix E: Related and Competing Measures

Comparison of NQF #3639 and NQF #0425

Steward/Developer

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

CMS/Yale CORE

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

Focus on Therapeutic Outcomes

Description

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

A patient-reported outcome-based performance measure that attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery. Include any notes here that may add clarity for 24 the Committee.

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

This is a patient-reported outcome performance measure (PRO-PM) consisting of an item response theory-based patient-reported outcome measure (PROM) of risk-adjusted change in functional status (FS) for patients aged 14 years and older with low back impairments.

Numerator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 points or more improvement, for hip replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs).

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

The numerator is based on residual scores (actual change scores -predicted change after risk adjustment) of patients receiving care for Low Back impairments and who completed the Low Back PRO-PM.

Denominator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures.

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

All patients 14 years and older with a Low Back impairment who have initiated an episode of care and completed the Low Back FS PROM.

Measure Type

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Outcome: PRO-PM

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

Outcome: PRO-PM

Data Source

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Claims

Instrument-Based Data

Other (Medicare Enrolment Database, Master Beneficiary Summary File)

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

Instrument-Based Data

Target Population

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Elderly (Age>= 65)

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

Populations at Risk; Elderly; Dual eligible beneficiaries; Individuals with multiple chronic conditions; Veterans

Care Setting

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Inpatient/Hospital Services

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

Outpatient Services

Level of Analysis

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Clinician: Group/Practice Clinician: Inpatient/Hospital

NQF #0425 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH LOW BACK IMPAIRMENTS

Clinician: Individual Clinician: Group/Practice

Comparison of NQF #3639 and NQF #1550

Steward/Developer

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

CMS/Yale CORE

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Focus on Therapeutic Outcomes

Description

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

A patient-reported outcome-based performance measure that attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery. Include any notes here that may add clarity for 24 the Committee.

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Hospital-level risk-standardized complication rate (RSCR) associated with elective primary THA and TKA in Medicare Fee-For-Service beneficiaries who are age 65 and older. The outcome (complication) is defined as any one of the specified complications occurring from the date of index admission to 90 days post date of the index admission (the admission included in the measure cohort).

Numerator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 points or more improvement, for hip

replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs).

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Identified during the index admission OR associated with readmission up to 90 days postdate of index admission, depending on the complication.

Denominator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures.

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Patients that had an elective primary THA and/or a TKA AND had continuous enrollment in Part A and Part B Medicare fee-for-service (FFS) 12 months prior to the date of index admission.

Measure Type

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Outcome: PRO-PM

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Outcome: PRO-PM

Data Source

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Claims

Instrument-Based Data

Other (Medicare Enrolment Database, Master Beneficiary Summary File)

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Instrument-Based Data

Target Population

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Elderly (Age>= 65)

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Populations at risk; Elderly

Care Setting

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Inpatient/Hospital Services

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Inpatient/Hospital Services

Level of Analysis

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Clinician: Group/Practice Clinician: Inpatient/Hospital

NQF #1550 HOSPITAL-LEVEL RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Facility

Comparison of NQF #3639 and NQF #1551

Steward/Developer

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

CMS/Yale CORE

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Centers for Medicare & Medicaid Services/ Yale-New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE)

Description

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

A patient-reported outcome-based performance measure that attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery. Include any notes here that may add clarity for 24 the Committee.

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

The measure estimates a hospital-level risk-standardized readmission rate (RSRR) following elective primary THA and/or TKA in Medicare Fee-For-Service (FFS) beneficiaries who are 65 years and older.

Numerator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 points or more improvement, for hip replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs).

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

The outcome for this measure is 30-day readmissions. We define readmissions as inpatient admissions for any cause, with the exception of certain planned readmissions, within 30 days from the date of discharge of the index hospitalization. If a patient has more than one unplanned admission (for any reason) within 30 days after discharge from the index admission, only one is counted as a readmission.

Denominator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures.

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Admissions for Medicare FFS beneficiaries who are at least 65 years of age undergoing elective primary THA and/or TKA procedures.

Measure Type

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Outcome: PRO-PM

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Outcome: PRO-PM

Data Source

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Claims

Instrument-Based Data

Other (Medicare Enrolment Database, Master Beneficiary Summary File)

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Claims

Enrollment Data

Target Population

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Elderly (Age>= 65)

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Populations at Risk; Elderly

Care Setting

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Inpatient/Hospital Services

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Inpatient/Hospital Services

Level of Analysis

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Clinician: Group/Practice Clinician: Inpatient/Hospital

NQF #1551 HOSPITAL-LEVEL 30-DAY RISK-STANDARDIZED READMISSION RATE (RSRR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA)

Facility

Comparison of NQF #3639 and NQF #3461

Steward/Developer

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

CMS/Yale CORE

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Focus on Therapeutic Outcomes

Description

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

A patient-reported outcome-based performance measure that attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery. Include any notes here that may add clarity for 24 the Committee.

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Patient-reported outcome performance measure (PRO-PM) consisting of a patient-reported outcome measure (PROM) of risk-adjusted change in functional status (FS) for patients aged 14 years and older with neck impairments.

Numerator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 points or more improvement, for hip replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs).

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Based on residual scores (actual change scores -predicted change after risk adjustment) of patients receiving care for neck impairments and who: a) completed the Neck PRO-PM at admission and at the end of the episode of care; and b) were discharged from care.

Denominator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures.

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

All patients 14 years and older with a neck impairment who have an episode of care and completed the neck functional status PROM at admission and discharge.

Measure Type

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Outcome: PRO-PM

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Outcome: PRO-PM

Data Source

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Claims

Instrument-Based Data

Other (Medicare Enrolment Database, Master Beneficiary Summary File)

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Instrument-Based Data

Target Population

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Elderly (Age>= 65)

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Patients aged 14 years and older with neck impairments

Care Setting

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Inpatient/Hospital Services

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Outpatient Services

Level of Analysis

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Clinician: Group/Practice Clinician: Inpatient/Hospital

NQF #3461 FUNCTIONAL STATUS CHANGE FOR PATIENTS WITH NECK IMPAIRMENTS

Clinician: Individual Clinician: Group/Practice

Comparison of NQF #3639 and NQF #3493

Steward/Developer

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

CMS/Yale CORE

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Centers for Medicare & Medicaid Services

Description

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

A patient-reported outcome-based performance measure that attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery. Include any notes here that may add clarity for 24 the Committee.

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Re-specified version of the measure, NQF 1550 Hospital-level risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA), which was developed for patients 65 years and older using Medicare claims data. This measure attributes outcomes to MIPS participating Eligible Clinicians and/or Eligible Clinician Groups ("providers"), rather than to hospitals, and assesses each provider's complication rate.

Numerator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 points or more improvement, for hip replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs).

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Any complication occurring during the index admission (not coded present on arrival) to 90 days post-date of the index admission.

Denominator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures.

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Admissions for Medicare FFS beneficiaries who are at least 65 years of age who have undergone elective primary THA and/or TKA procedures.

Measure Type

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Outcome: PRO-PM

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Outcome

Data Source

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Claims

Instrument-Based Data

Other (Medicare Enrolment Database, Master Beneficiary Summary File)

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Claims

Enrollment Data

Target Population

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Elderly (Age>= 65)

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Elderly (Age >= 65)

Care Setting

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Inpatient/Hospital Services

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Outpatient Services; Inpatient/Hospital Services

Level of Analysis

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Clinician: Group/Practice; Clinician: Inpatient/Hospital

NQF #3493 RISK-STANDARDIZED COMPLICATION RATE (RSCR) FOLLOWING ELECTIVE PRIMARY TOTAL HIP ARTHROPLASTY (THA) AND/OR TOTAL KNEE ARTHROPLASTY (TKA) FOR MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) ELIGIBLE CLINICIANS AND ELIGIBLE CLINICIAN GROUPS

Clinician: Individual; Clinician: Group/Practice

Comparison of NQF #3639 and NQF #3559

Steward/Developer

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

CMS/Yale CORE

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Centers for Medicare & Medicaid Services/Yale-New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE)

Description

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

A patient-reported outcome-based performance measure that attributes the outcome to a clinician or clinician group. Specifically, this measure will estimate a clinician-level and/or a clinician group-level RSIR following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older. Improvement will be calculated with patient-reported outcome data collected prior to and following the elective procedure. The preoperative data collection timeframe will be 90 to 0 days before surgery and the postoperative data collection timeframe will be 270 to 365 days following surgery. Include any notes here that may add clarity for 24 the Committee.

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Patient-reported outcome-based performance measure will estimate a hospital-level, risk-standardized improvement rate (RSIR) following elective primary THA/TKA for Medicare fee-for-service (FFS) patients 65 years of age and older.

Numerator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The numerator is the risk-standardized proportion of patients undergoing an elective primary THA or TKA who experience a 22 point or 20 points or more improvement, for hip replacement and knee replacement patients respectively between preoperative and postoperative assessments on joint-specific patient-reported outcome measures (PROMs).

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

The risk-standardized proportion of patients undergoing an elective primary THA or TKA who meet or exceed an a priori, patient-defined substantial clinical benefit (SCB) threshold of improvement between preoperative and postoperative assessments on joint-specific patient-reported outcome measure (PROM) surveys.

Denominator

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

The cohort (target population) includes Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures.

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Medicare fee-for-service (FFS) patients 65 years of age and older undergoing elective primary THA/TKA procedures, excluding patients with hip fractures, pelvic fractures, and revision THAs/TKAs.

Measure Type

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Outcome: PRO-PM

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Outcome: PRO-PM

Data Source

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Claims

Instrument-Based Data

Other (Medicare Enrolment Database, Master Beneficiary Summary File)

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Claims

Instrument-Based Data

Target Population

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Elderly (Age>= 65)

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Elderly (Age >= 65)

Care Setting

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Inpatient/Hospital Services

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Outpatient Services; Inpatient/Hospital Services

Level of Analysis

NQF #3639 CLINICIAN-LEVEL AND CLINICIAN GROUP-LEVEL TOTAL HIP ARTHROPLASTY AND/OR TOTAL KNEE ARTHROPLASTY (THA AND TKA) PATIENT-REPORTED OUTCOME-BASED PERFORMANCE MEASURE

Clinician: Group/Practice; Clinician: Inpatient/Hospital

NQF #3559 HOSPITAL-LEVEL, RISK-STANDARDIZED PATIENT-REPORTED OUTCOMES FOLLOWING ELECTIVE PRIMARY TOTAL HIP AND/OR TOTAL KNEE ARTHROPLASTY (THA/TKA)

Clinician: Individual; Clinician: Group/Practice

Appendix F: Pre-Evaluation Comments

Comments received as of January 19, 2022.

NQF #3639 Clinician-Level and Clinician Group-Level Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA and TKA) Patient-Reported Outcome-Based Performance Measure (PRO-PM)

Commenter

American Medical Association

Comment

The American Medical Association (AMA) appreciates the opportunity to comment on NQF #3639 Clinician-Level and Clinician Group-Level Total Hip and Total Knee Arthroplasty (THA/TKA) Patient-Reported Outcome-Based Performance Measures (PRO-PMs). The AMA supports the assessment of patient-reported outcomes but believes that the burden of data collection to the clinician, practice, and patient must be adequately addressed, and the continued multi-step approach to risk adjustment must be reconsidered prior to implementation of this measure in the Merit-Based Incentive Payment System (MIPS). We also request clarification on which version of this measure is undergoing endorsement review since MUC2021-107 includes a different post-operative assessment time frame. We believe that the alignment of the time frame with the 1-year follow-up visit as recommended by the Technical Expert Panel feedback per MUC2021-107 is preferable. On review of the measure specifications, we note that the information required for the numerator and risk variables includes multiple data elements from additional patient-reported surveys beyond those used to assess the patient-reported outcome of interest. Furthermore, this information is expected to be collected between 90 to 0 days prior to surgery. The AMA supports the inclusion of many of these variables within the risk model given their relevance to how patients may or may not be able to achieve improvement but questions whether CMS adequately assessed the feasibility and potential data collection burden to the clinician, practice, and patient, particularly since the data used for measure development relies on hospital reporting through the Comprehensive Care for Joint Replacement Model. The limited information on feasibility does not provide any detail on how the testing sites coordinated data collection across settings or on whom the responsibility of the additional items was placed. This question is particularly important since the specifications require clinicians and practices to collect data for one measure from 90 days pre-operatively to up to 425 days post-operatively, which the hospital is also likely collecting at the same time. The inclusion of this measure in addition to the one at the hospital-level further raises our concerns over how duplication of effort in collecting these data required for the measure numerator and risk adjustment variables can be avoided. The NQF submission form does not adequately address these concerns, and the AMA urges CMS to complete additional testing around the feasibility of data collection and reduction of reporting burden prior to endorsement. Perhaps even more importantly, we would have expected to see an assessment from the patient's perspective on whether the timing and number of items solicited throughout this process were appropriate and does not result in survey fatigue, particularly now that they may have the hospital and clinician requesting the same data. For example, would the number of surveys throughout the pre-, intra-, and post-operative time frames lead them to be less likely to complete other surveys, such as HCAHPS or CG-CAHPS? CMS should also examine if whether the timing of data collection is appropriate, such as if the pre-operative PRO-PM data were collected on the morning of the surgery, could stress and anxiety have impacted responses? We believe that it is critical to understand the potential impact and burden that could be experienced. While it may seem reasonable for one measure, if this measure is an example of how future measures could be specified, what is the potential long-term

impact on patients, hospitals, clinicians, and practices as more and more PRO-PMs are implemented? The AMA also believes that measures must meet *minimum* acceptable thresholds of 0.7 for reliability. We urge NQF to require the developer to set the case minimum at 25 cases in order to achieve this threshold. The AMA strongly supports the inclusion of health literacy in the risk model but remains concerned that CMS continues to test social risk factors *after* the assessment of clinical and demographic risk factors, and it is unclear why this multi-step approach is preferable. On review of the Evaluation of the NQF Trial period for Risk Adjustment for Social Risk Factors report, it is clear that the approaches to testing these data should be revised to strategies such as multi-level models or testing of social factors prior to clinical factors and that as access to new data becomes available, it may elucidate more differences that are unrelated to factors within a hospital's control. Additional testing that evaluates clinical and social risk factors at the same time or social prior to clinical variables rather than the current approach with clinical factors prioritized should be completed. The AMA believes that additional information on these concerns is needed prior to endorsement of this measure. We respectfully ask the Standing Committee to consider these comments and seek additional information prior to any decision on endorsement. Reference: National Quality Forum. Evaluation of the NQF Trial period for Risk Adjustment for Social Risk Factors.

Final report. July 18, 2017. Available at:

https://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=85635. Last accessed January 17, 2022.

Appendix G: Post-Evaluation Comments

NQF #3639 Clinician-Level and Clinician Group-Level Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA and TKA) Patient-Reported Outcome-Based Performance Measure (PRO-PM)

Ms. Koryn Y. Rubin, MHA, American Medical Association

Comment ID#: 7954 (Submitted: 04/20/2022)
Council / Public: Health Professionals Council (HPR)
Level of Support: Member Does NOT Support

Comment

The American Medical Association (AMA) continues to have concerns with NQF #3639, Clinician-Level and Clinician Group-Level Total Hip and Total Knee Arthroplasty (THA/TKA) Patient-Reported Outcome-Based Performance Measures (PRO-PMs). While the AMA supports the assessment of patient-reported outcomes, we believe that the burden of data collection to the clinician, practice, and patient must be adequately addressed and the continued multi-step approach to risk adjustment must be reconsidered prior to implementation of this measure in the Merit-Based Incentive Payment System (MIPS).

Developer Response

The American Medical Association (AMA) submitted a public comment on April 20, 2022, for the National Quality Forum (NQF) Measure #3639, stating support for patient-reported outcome-based performance measure (PRO-PM) development but noting concerns about the burden of data collection and the multi-step approach to risk adjustment. We thank the American Medical Association for their comment and provide responses to their concerns below. During measure development we carefully considered the issue of burden and will continue to carefully consider burden for future measure implementation. The manner in which data collection for this measure is integrated into clinical workflows will be at the discretion of the clinician/clinician group, which allows them freedom and flexibility to choose an approach that meets their needs and considers their patients' needs. The Centers for Medicare and Medicaid Innovation's (CMMI's) Comprehensive Care for Joint Replacement (CJR) Model, the source of the data for measure development and testing of this PRO-PM, served as proof of concept for patient-reported outcome (PRO) data collection and submission.

Challenges to PRO data collection can be mitigated by strong leadership support, flexibility in rearranging clinical workflows to accommodate PRO data collection, ability to access PRO data in real-time for clinical decision making, and universal staff buy-in on the value of PROs in improving care and quality. This approach also serves to increase patient engagement; patients have expressed to us the importance of knowing what PRO survey results will be used for and noted a greater willingness to complete surveys if they are collected by their provider and used in shared decision making. This integration benefits patients by engaging them in discussions about potential outcomes of their surgery. In addition, during the development of the NQF endorsed hospital-level total hip and total knee arthroplasty (THA/TKA) PRO-PM (NQF #3559) on which this measure is based, the development team solicited extensive patient and provider feedback to ensure the measure included low burden patient-reported outcome measure (PROM) instruments. Extensive input from patients has indicated strong support for a PRO-based performance measure following elective primary THA and TKA. The Centers for Medicare & Medicaid Services (CMS) will carefully consider these concerns and comments during future implementation planning. Regarding the multi-step approach to risk adjustment, the clinician- and clinician group-level THA/TKA PRO-PM uses the same risk model as the hospital-level THA/TKA PRO-PM.

The hospital-level THA/TKA PRO-PM development team used a consensus-based approach to identify and vet clinically relevant risk variables important in predicting the improvement outcome, including a systematic literature review and environmental scan, a survey of orthopedists, consultation with an expert clinical consultant, extensive input from the Technical Expert Panel (TEP), and detailed public comments. During development of the hospital-level measure, the TEP and measure development team felt that health literacy held particular relevance for a measure based upon PRO data and this variable is included in the risk model. In consideration of additional social risk factors, we recognize that patients with social risk factors may present later with more severity or greater comorbidity. The increased clinical risk this presents is addressed through the clinical risk factors in the model. When we evaluated the impact of social risk factors, it was in the context of what additional impact they may pose. Although neither dual eligibility, Agency for Healthcare Research and Quality (AHRQ) socioeconomic (SES) index lowest quartile, nor non-white race were statistically significantly associated with the measure outcome, they were included in the statistical approach to non-response adjustment of the measure due to their statistically significant association with survey response in measure development data and in the literature. We will continue to evaluate the relationship between social risk factors and the measure outcome and evaluate the risk model over time.

NQF Response

Thank you for your comment. It has been shared with the Standing Committee and the measure developer.

NQF Standing Committee Response

Thank you for your comment. The Standing Committee recognizes the importance of improving outcomes for individuals undergoing surgical procedures and the opportunity for clinicians to enhance their surgical practice using provider performance tools, such as patient-reported outcome-performance measures (PRO-PMs). The Standing Committee recognizes the commenters' concerns and discussed these topics extensively during the measure evaluation meeting. While the Standing Committee maintains the measure meets NQF criteria and should be endorsed, it urges the developer to continue to monitor these issues as the measure is implemented and to make updates as needed.

Ms. Tilithia McBride

Comment ID#: 8053 (Submitted: 04/29/2022)
Council / Public: Provider Organizations Council (PRO)
Level of Support: Member Does NOT Support

Comment

The Federation of American Hospitals (FAH) supports the development and implementation of patient-reported outcomes performance measures (PRO-PMs) but we also believe that additional questions and work remain before their widespread use such as the degree to which multiple PRO-PMs could lead to survey fatigue for patients; the potential impact that additional PRO-PMs may have on the reporting of well-established measures such as HCAHPs and CG-CAHPS; the PRO survey must demonstrate that it assesses outcomes that are relevant to the clinicians and facilities being measured; the PRO survey and PRO-PM must be tested across a diverse set of patients and facilities; and the PRO-PM results demonstrate meaningful gaps in care on which quality improvement activities can be focused. The FAH requests clarification on which version of this measure is under NQF endorsement review. Specifically, there are the differences in the post-operative timeframe of 270-365 days that is included in this measure under endorsement consideration and the timeframe of 300-425 days included in MUC2021-

107. We believe that the updated timeframe of 300-425 days is more appropriate given the feedback from the Technical Expert Panel on timing of the 1-year follow-up visit.

On review of the measure specifications, the FAH notes that multiple data points beyond the typical clinical variables are required to ensure that the measure results are adequately risk adjusted. The FAH supports the inclusion of these data points but we are concerned that the developer has not provided sufficient information on how these data are collected and what additional workload and time will be required. For example, several of the data elements needed for risk adjustment are derived from patient-reported surveys, which must be collected within 0-90 days pre-operative. No information was provided on the processes used by the clinicians and practices such as whether it required coordination with the hospital or if the burden of the additional data collection was placed on hospital staff on the day of surgery. To what extent did these requirements impact clinical workflows and were additional staff resources required? What additional costs might an individual clinician and practice encounter as a result of implementation of this PRO-PM? Alternatively, from the patient's perspective, did the additional questions seem relevant and was the point in time during which these additional data were collected appropriate? It would also be useful to understand whether there is a potential for individuals to prioritize the completion of one survey over another and therefore lead to negative unintended consequences on response rates for other PRO-PMs such as HCAHPS and CG-CAHPS? Furthermore, we question whether this measure has been adequately tested for reporting by clinicians and practices since the data used to assess reliability, feasibility, and usability are based on hospital implementation of these PRO-PMs in the Comprehensive Care for Joint Replacement Model.

The FAH is also concerned that the measure does not include a case minimum in order to achieve an acceptable minimum threshold for reliability. The FAH believes that the developer must increase the minimum sample size to at least 25 cases to produce a minimum reliability threshold of sufficient magnitude (e.g. 0.7 or higher). While the FAH strongly supports the inclusion of health literacy in the risk adjustment model, we believe that the risk adjustment approach used by many developers considers the identification and testing of social risk factors as supplementary to clinical risk factors. This approach was identified as a concern by the NQF Disparities Standing Committee. Given that this was a new measure, it provided an opportunity for CMS to include these factors within the testing of the model rather than the previous approach of "adding on" factors after the model is developed. This type of approach would assist clinicians, practices, and others in understanding how their inclusion could impact the model and provide additional information for groups examining this issue such as the NQF and Office of the Assistant Secretary for Planning and Evaluation. As a result, the FAH believes that this measure lacks sufficient information on the potential impact these social risk variables have on the risk adjustment model. The FAH does not support the endorsement of this measure at this time and asks that the Standing Committee re-consider their recommendation. Thank you for the opportunity to comment.

Developer Response

The Federation of American Hospitals (FAH) submitted a public comment on April 29, 2022 for the National Quality Forum (NQF) Measure #3639, stating support for patient-reported outcome-based performance measure (PRO-PM) development and implementation in general but noting concerns about the burden of data collection, survey fatigue, reliability, feasibility, and usability of the measure, timing of patient-reported outcome measure (PROM) and risk variable data collection, and approach to risk adjustment. We thank the Federation of American Hospitals for their comment and provide responses to their concerns below. This PRO-PM, based on the NQF endorsed hospital-level total hip and total knee arthroplasty (THA/TKA) PRO-PM (NQF# 3559), has been developed to assess

improvement in pain and functional status for patients following an elective primary THA/TKA. Attribution to the clinicians performing the surgery was supported by the Technical Expert Panel (TEP), the expert clinical consultant, and the Patient Working Group members engaged in this measure's development. The PROM instruments chosen to measure the improvement outcome were supported for their importance to clinicians and patients, feasibility, low burden, ability to be used to inform care management decisions, and ability to inform healthcare quality improvement efforts. Patient-reported outcome (PRO) data collected at the hospital level in the Center for Medicare and Medicaid Innovation's (CMMI's) Comprehensive Care for Joint Replacement (CJR) Model were successfully linked to the clinicians conducting the THA and TKA procedures performed in these hospitals, which were selected to be representative of the case mix experienced at various hospitals nationwide. Variation in risk-standardized improvement rates for clinicians and clinician groups demonstrate meaningful differences in performance measure scores, with risk-standardized improvement rates ranging from 18.36% to 88.56% for clinicians and 20.86% to 85.90% for clinician groups. Measure score reliability across a range of minimum case volume thresholds was conducted for the Centers for Medicare & Medicaid Services' (CMS) consideration in future implementation planning.

We are confident in the reliability, feasibility, and usability of this measure based on these testing results and recommend continued assessment in reevaluation. During measure development we carefully considered the issue of burden and will continue to carefully consider burden for future measure implementation. The manner in which data collection for this measure is integrated into clinical workflows will be at the discretion of the clinician/clinician group, which allows them freedom and flexibility to choose an approach that meets their needs and considers their patients' needs. CMMI's CJR Model served as proof of concept for PRO data collection and submission. Challenges to PRO data collection can be mitigated by strong leadership support, flexibility in rearranging clinical workflows to accommodate PRO data collection, ability to access PRO data in real-time for clinical decision making, and universal staff buy-in on the value of PROs in improving care and quality. This approach also serves to increase patient engagement; patients have expressed to us the importance of knowing what PRO survey results will be used for and noted a greater willingness to complete surveys if they are collected by their provider and used in shared decision making. This integration benefits patients by engaging them in discussions about potential outcomes of their surgery. We do not anticipate that this measure will contribute to survey fatigue or negatively impact response to other measures such as Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) or the Consumer Assessment of Healthcare Providers and Systems Clinician & Group Survey (CG-CAHPS). This PRO-PM's eligible population is procedure-specific, which reduces the likelihood of the same patients receiving the HCAHPS/CG-CAHPS and the PROMs for this measure. Additionally, there is no overlap in the data collection timelines for these measures; the HCAHPS or CG-CAHPS are typically administered two weeks after a hospital or clinician visit, months before the postoperative data collection for this PRO-PM.

This measure utilizes the risk variables finalized for the hospital-level THA/TKA PRO-PM on which this measure is based. The hospital-level THA/TKA PRO-PM development team used a consensus-based approach to identify and vet clinically relevant risk variables important in predicting the improvement outcome, including a systematic literature review and environmental scan, a survey of orthopedists, consultation with an expert clinical consultant, extensive input from the TEP (which included patient members), and detailed public comments. Patient Working Group members were also strongly supportive of the risk variables included in this measure. The timing of preoperative PROM and risk variable data collection for this measure, intentionally aligned with the hospital-level measure, was determined with extensive TEP and stakeholder input and chosen to give flexibility for providers collecting these data. The commenter's support for including health literacy in the risk model is noted.

During development of the hospital-level measure, the TEP supported inclusion of health literacy due to particular relevance for a measure based upon PRO data. In consideration of additional social risk factors, we recognize that patients with social risk factors may present later with more severity or greater comorbidity. The increased clinical risk this presents is addressed through the clinical risk factors in the model. When we evaluated the impact of social risk factors, it was in the context of what additional impact they may pose. Although neither dual eligibility, Agency for Healthcare Research and Quality (AHRQ) socioeconomic (SES) index lowest quartile, nor non-white race were statistically significantly associated with the measure outcome, they were included in the statistical approach to non-response adjustment of the measure due to their statistically significant association with survey response in measure development data and in the literature.

We will continue to evaluate the relationship between social risk factors and the measure outcome and evaluate the risk model over time. Finally, we appreciate the commenter's support of a postoperative PROM data collection timeframe of 300-425 days after the procedure. The PRO postoperative data collection period finalized for CJR was 270 to 365 days after the procedure; these were the data used in the development and testing of this measure and in the NQF submission. However, we have heard from multiple clinical experts strongly recommending a refinement to the postoperative data collection period to better align with clinical workflow and typical one-year follow-up scheduling, and to allow for better postoperative PRO data capture. Based on extensive input, we have proposed measure specifications for future measure implementation with a postoperative PRO data collection period representing this small shift to 300 to 425 days after the procedure. We do not anticipate that this will impact improvement results; we do anticipate an increase in PRO response.

NQF Response

Thank you for your comment. NQF evaluates each measure as specified by the developer at submission. The Consensus Development Process (CDP) and Measures Application Process (MAP) are two distinct review processes with the potential to review measures with specification variance. We encourage those who implement these measures to use the endorsed version.

NQF Standing Committee Response

Proposed Response: Thank you for your comment. The Standing Committee recognizes the importance of improving outcomes for individuals undergoing surgical procedures and the opportunity for clinicians to enhance their surgical practice using provider performance tools, such as patient-reported outcome-performance measures (PRO-PMs). The Standing Committee recognizes the commenters' concerns and discussed these topics extensively during the measure evaluation meeting. While the Standing Committee maintains the measure meets NQF criteria and should be endorsed, it urges the developer to continue to monitor these issues as the measure is implemented and to make updates as needed.

National Quality Forum
1099 14th Street NW, Suite 500
Washington, DC 20005
https://www.qualityforum.org/