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Memo

June 29 & 30, 2021

To: Consensus Standards Approval Committee (CSAC)

From: Patient Safety Project Team

Re: Patient Safety Fall 2020 Cycle

CSAC Action Required

The CSAC will review recommendations from the Patient Safety project at its June 29-30, 2021 meeting and vote on whether to uphold the recommendations from the Standing Committee.

This memo includes a summary of the project, measure recommendations, themes identified and responses to the public and member comments and the results from the NQF member expressions of support. The following documents accompany this memo:

1. **Patient Safety Fall 2020 Cycle Draft Report**. The draft report has been updated to reflect the changes made following the Standing Committee's discussion of public and member comments. The complete draft report and supplemental materials are available on the Patient Safety project webpage.
2. **Comment Table**. Staff identified themes within the comments received. The comment table lists 15 comments received during the post-evaluation comment period and the NQF/Standing Committee responses.

Background

The 1999 Institute of Medicine report entitled To Err Is Human described morbidity and mortality associated with preventable harms from medical errors. The report estimated that nearly 100,000 U.S. deaths per year were attributable to medical errors. More recent evidence has estimated that errors may account for as many as 251,000 deaths annually in the U.S., making medical errors the third leading cause of death. These sobering figures have sparked a national focus on identifying, studying, and improving patient safety across medical settings.

The National Quality Forum (NQF) has been dedicated to the measurement and improvement of patient safety. Through its Consensus Development Process (CDP), NQF's Patient Safety Standing Committee has vetted and endorsed dozens of measures in patient safety across a variety of conditions and settings. This includes measures for mortality and preventable complications, including sepsis care, falls, pressure ulcers, and other outcomes. In addition, the Patient Safety Standing Committee vets process measures, such as medication reconciliation intended to lower medical error rates, and structural measures for nursing staffing ratios and nursing case-mix, which are intended to right-size hospital staffing.

During this cycle, the Patient Safety Standing Committee reviewed measures related to medication reconciliation, or the process of reviewing a patient's medications. In addition, the Standing Committee reviewed measures related to medications to be avoided and specific harmful drug-drug interactions in older adults. The Standing Committee also reviewed risk-adjusted, in-hospital mortality measures

for pneumonia and COPD. Finally, the Standing Committee reviewed a composite measure of in-hospital complications. Five of the six measures under review were recommended by the Standing Committee for endorsement and one was consensus not reached.

Draft Report

The Patient Safety Fall 2020 Cycle draft report presents the results of the evaluation of six measures reviewed under the CDP.* Five are recommended for endorsement.

The measures were evaluated against the 2019 version of the measure evaluation criteria.

Measures	Maintenance	New	Total
Measures under review	6	0	6
Measures recommended for endorsement	5	0	5
Measures not recommended for endorsement	0	0	0
Measures where consensus was not reached[†]	1	0	1
Reasons for not recommending	Importance – 0 Scientific Acceptability – 0 Use – 0 Overall Suitability – 0 Competing Measure – 0	Importance – 0 Scientific Acceptability – 0 Use – 0 Overall Suitability – 0 Competing Measure – 0	

[†]An error in the validity vote (a must-pass criterion) was determined for NQF #0097 prior to CSAC review, in which the measure was stated as "passing on validity", when in fact, the vote score is Consensus Not Reached (CNR). The vote tally is as follows: **Total Votes-23; High-0; Moderate-13; Low-8; Insufficient-2 (57% passing votes)**. Therefore, the measure has not achieved consensus on a must-pass criterion. In normal operations, the Standing Committee would have re-voted on this criterion during the post-comment meeting and, at that time, if consensus was not reached it would not have been recommended for endorsement. However, the error was discovered after the post-comment meeting, and it was not possible to re-convene the Standing Committee again. Therefore, NQF is allowing the measure to retain endorsement, and the Standing Committee will revote on validity and the overall suitability for endorsement during the Fall 2021 cycle.

*During the intent to submit period from August 3, 2020, to November 2, 2020, eight maintenance measures were submitted for the fall 2020 cycle. Two measures, NQF #0202 *Falls With Injury* and NQF #0141 *Patient Fall Rate*, originally under review, did not pass on validity by the Scientific Methods Panel (SMP). The Standing Committee has the option to select measures for reconsideration/voting to overturn the SMP's evaluation, even if they do not pass the SMP's review. These measures were not pulled by the Patient Safety Standing Committee for discussion, and therefore, they were not recommended for endorsement.

CSAC Action Required

Pursuant to the CDP, the CSAC is asked to consider endorsement of five candidate consensus measures.

Measures Recommended for Endorsement

- #0468 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Pneumonia Hospitalization (Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation (Yale CORE))

  Overall Suitability for Endorsement: Yes-21; No-0

- #0531 Patient Safety Indicator (PSI) 90: Patient Safety and Adverse Events Composite (IMPAQ International)

  Overall Suitability for Endorsement: Yes-23; No-0

- #1893 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization (Yale CORE)

  Overall Suitability for Endorsement: Yes-22; No-0

- #2993 Potentially Harmful Drug-Disease Interactions in Older Adults (DDE) (National Committee for Quality Assurance (NCQA))

  Overall Suitability for Endorsement: Yes-20; No-0

- #0022 Use of High-Risk Medications in Older Adults (DAE) (NCQA)

  Overall Suitability for Endorsement: Yes-15; No-2

Measure in Which Consensus Was Not Reached

- #0097 Medication Reconciliation Post-Discharge (NCQA)

Comments and Their Disposition

NQF received 21 total comments, including both pre- and post-evaluation, from nine organizations (including four member organizations) and individuals pertaining to the draft report and to the measures under review.

A table of comments submitted during the post-evaluation comment period, with the responses to each comment and the actions taken by the Standing Committee and measure developers, is posted to the Patient Safety project webpage.

Comment Themes and Committee Responses

Comments about specific measure specifications and rationale were forwarded to the developers, who were invited to respond. NQF received 15 post-evaluation comments: eight were supportive of the measures under review, three were not supportive due to concerns around reliability thresholds and intraclass correlation coefficients at the minimum sample size, three were not supportive due to concerns around the lack of inclusion of social risk factors, and one was not supportive due to concerns about post-surgical hip fracture being the only representative measure used for falls with injury.

The Standing Committee reviewed all of the submitted comments (general and measure specific) and

developer responses. Committee members focused their discussion on measures or topic areas with the most significant and recurring issues.

Themed Comments

For measures *NQF #0468 - Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following pneumonia hospitalization* and *NQF #1893 - Hospital 30-Day, all-cause, risk-standardized mortality rate (RSMR) following chronic obstructive pulmonary disease (COPD) hospitalization*, two major themes were identified in the post-evaluation comments, as follows:

1. Non-support due to concerns around reliability threshold and intraclass correlation coefficients at the minimum sample size.
2. Concern regarding the lack of inclusion of social risk factors in the risk adjustment model.

Measure Steward/Developer Response for 0468:

Reliability

In the testing attachment for this measure, we provided both split-sample and signal-to-noise reliability. Both the split-sample and signal-to noise reliability results indicate sufficient measure score reliability.

As a metric of agreement, we calculated the ICC for hospitals with 25 admissions or more. Using the Spearman-Brown prediction formula, the agreement between the two independent assessments of the RSMR for each hospital was 0.668. The split-sample reliability score represents the lower bound of estimate of the true measure reliability.

We calculated the signal-to-noise reliability score for each hospital with at least 25 admissions. The median reliability score was 0.78, ranging from 0.31 to 0.98. The 25th and 75th percentiles were 0.59 and 0.88, respectively.

Social Risk Factor Adjustment

While there is a conceptual pathway by which patients with social risk factors (SRFs) could experience worse outcomes, the empiric evidence does not support risk adjustment at the hospital level.

As presented in the testing attachment of the NQF submission for this measure, our main empiric finding is that adjusting for social risk has little impact on measure scores – mean changes in measure scores are small, and correlations between measure scores calculated with and without adjustment for social risk are near 1.

In additional analyses we have shown that there is little correlation between measure scores and hospitals' proportion of patients with social risk (DE and low AHRQ SES) across all hospitals, and in the fifth quintile we see a significant negative correlation (PN), meaning that the higher the proportion of patients with social risk, the better (lower) the mortality scores of the hospital.

Given these empiric findings, ASPE's recommendation to not risk adjust publicly reported quality measures for social risk (ASPE, 2020), and complex pathways which could explain the relationship between SRFs and mortality (and do not all support risk-adjustment), CMS chose to not incorporate SRF variables in this measure.

References:

Department of Health and Human Services, Office of the Assistant Secretary of Planning and

Evaluation (ASPE). Second Report to Congress: Social Risk Factors and Performance in Medicare's Value-based Purchasing Programs. 2020; https://aspe.hhs.gov/system/files/pdf/263676/Social-Risk-in-Medicare%E2%80%99s-VBP-2nd-Report.pdf. Accessed May 4, 2021.

Measure Steward/Developer Response for 1893:

Reliability

In the testing attachment for this measure, we provided both split-sample and signal-to-noise reliability. Both the split-sample and signal-to noise reliability results indicate sufficient measure score reliability.

As a metric of agreement, we calculated the ICC for hospitals with 25 admissions or more. Using the Spearman-Brown prediction formula, the agreement between the two independent assessments of the RSMR for each hospital was 0.477. The split-sample reliability score represents the lower bound of estimate of the true measure reliability.

We also calculated the signal-to-noise reliability score for each hospital with at least 25 admissions. The median reliability score was 0.72, ranging from 0.32 to 0.97. The 25th and 75th percentiles were 0.54 and 0.83, respectively. The median reliability score demonstrates moderate reliability.

Social Risk Factor Adjustment

While there is a conceptual pathway by which patients with social risk factors (SRFs) could experience worse outcomes, the empiric evidence does not support risk adjustment at the hospital level.

As presented in the testing attachment of the NQF submission for this measure, our main empiric finding is that adjusting for social risk has little impact on measure scores – mean changes in measure scores are small, and correlations between measure scores calculated with and without adjustment for social risk are near 1.

In additional analyses we have shown that there is little correlation between measure scores and hospitals' proportion of patients with social risk (DE and low AHRQ SES) across all hospitals, and in the fifth quintile we see no significant association."

Committee Response:

The Standing Committee thanks the commenters for their comments. The Standing Committee and the NQF Scientific Methods Panel have previously considered the scientific acceptability of these measures, including the reliability testing and risk adjustment models. In evaluating these measures against NQF's endorsement criteria, the Standing Committee determined to recommend these measures for endorsement.

Furthermore, the Standing Committee appreciates the importance of social determinants of health and considering those factors within measurement. However, the Standing Committee recognizes that there are limitations in the data that are available to effectively adjust for social risk factors, and it will continue to evaluate measures and approaches to risk adjustment of these social risk factors as they become available.

Member Expression of Support

Throughout the 16-week continuous public commenting period, NQF members had the opportunity to express their support ('support' or 'do not support') for each measure submitted for endorsement review to inform the Committee's recommendations. Four NQF members provided their expression of support. Appendix C details the expression of support.

Removal of NQF Endorsement

Two measures previously endorsed by NQF have not been re-submitted, and endorsement has been removed.

Measure	Measure Description	Reason for Removal of Endorsement
0141 Patient Fall Rate	All documented falls, with or without injury, experienced by patients on eligible unit types in a calendar quarter. Reported as Total Falls per 1,000 Patient Days. (Total number of falls / Patient days) X 1000	Did not pass Scientific Methods Panel (SMP) review. The SMP was concerned with threats to validity, specifically the lack of risk adjustment for case-mix within hospital units. Since the measure would report an aggregate score at the hospital level, the SMP questioned whether stratifying at hospital units level capture the actual case-mix. The SMP was also concerned about the magnitude of the validity testing correlations and the types of measures used for validity testing. The Standing Committee has the option to select measures for reconsideration/voting to overturn the SMP's evaluation, even if they do not pass the SMP's review. These measures were not pulled by the Patient Safety Standing Committee for discussion, and therefore, they were not recommended for endorsement.

Measure	Measure Description	Reason for Removal of Endorsement
0202 Falls With Injury	All documented patient falls with an injury level of minor or greater on eligible unit types in a calendar quarter. Reported as Injury falls per 1000 Patient Days. (Total number of injury falls / Patient days) X 1000 Measure focus is safety. Target population is adult acute care inpatient and adult rehabilitation patients.	Did not pass Scientific Methods Panel review. This measure is a subset of measure #0141. The SMP raised concerns that this measure's relationship to #0141 should result in a large correlation between the measures. Their similarities also necessitate very similar concerns with risk adjustment and validity testing results. Regarding threats to validity, the SMP did not believe that the measure could adequately detect differences across hospitals and they expressed concerns about discriminant validity at both between-unit within a hospital, and between-hospital. There was also a concern over the threshold of a good c statistic, as this measure may be considered low, but a threshold has not been established by NQF. The Standing Committee has the option to select measures for reconsideration/voting to overturn the SMP's evaluation, even if they do not pass the SMP's review. These measures were not pulled by the Patient Safety Standing Committee for discussion, and therefore, they were not recommended for endorsement.

Appendix A: CSAC Checklist

The table below lists the key considerations to inform the CSAC's review of the measures submitted for endorsement review.

Key Consideration	Yes/No	Notes
Were there any process concerns raised during the CDP project? If so, briefly explain.	Yes	Due to miscalculation of quorum voting thresholds, NQF #0097 received a consensus not reached decision on the evidence criterion during the measure evaluation meeting. Therefore, the Standing Committee continued discussing and voting on the remaining criteria. After the call, it was determined that the correct calculation of the evidence criterion showed that the measure did not pass on evidence. After NQF staff reviewed this with the Patient Safety Co-chairs and developer, it was recommended that there should be a re-vote on evidence during the post-comment call. The Standing Committee revoted and passed the measure on evidence and the overall suitability for endorsement. Additionally, an error in the validity vote (a must-pass criterion) was determined for NQF#0097 prior to CSAC review, in which the measure was stated as "passing on validity", when in fact, the vote score is Consensus Not Reached. The vote tally is as follows: Total Votes-23; High-0; Moderate-13; Low-8; Insufficient-2 (57% passing votes). Therefore, the measure has not achieved consensus on a must-pass criterion. In normal operations, the Standing Committee would have re-voted on this criterion during the post-comment meeting and, at that time, if consensus was not reached it would not have been recommended for endorsement. However, the error was discovered after the post-comment meeting, and it was not possible to re-convene the Standing Committee again. Therefore, NQF is allowing the measure to retain endorsement, and the Standing Committee revote on validity and the overall suitability for endorsement during the Fall 2021 cycle.
Did the Standing Committee receive requests for reconsideration? If so, briefly explain.	No	*
Did the Standing Committee overturn any of the Scientific Methods Panel's	No	*

Key Consideration	Yes/No	Notes
ratings of Scientific Acceptability? If so, state the measure and why the measure was overturned.		
If a recommended measure is a related and/or competing measure, was a rationale provided for the Standing Committee's recommendation? If not, briefly explain.	N/A	*
Were any measurement gap areas addressed? If so, identify the areas.	No	*
Are there additional concerns that require CSAC discussion? If so, briefly explain.	No	*

Appendix B: Measures Not Recommended for Endorsement

All measures were recommended for endorsement.

Appendix C: NQF Member Expression of Support Results

Four NQF members provided their expression of support. NQF members provided their expression of support for six measures under review. Results for each measure are provided below.

0022: Use of High-Risk Medications in Older Adults (DAE) (National Committee for Quality Assurance)

Member Council	Support	Do Not Support	Total
Health Professional	1	0	1
QMRI	1	0	1

0097: Medication Reconciliation Post-Discharge (National Committee for Quality Assurance)*

Member Council	Support	Do Not Support	Total
Health Professional	1	0	1
QMRI	1	0	1

0468: Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following pneumonia hospitalization (Centers for Medicare & Medicaid Services / Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation (YNHHSC/CORE))

Member Council	Support	Do Not Support	Total
Health Professional	0	1	1

0531: Patient Safety Indicator (PSI) 90: Patient Safety and Adverse Events Composite (Centers for Medicare & Medicaid Services / IMPAQ International)

Member Council	Support	Do Not Support	Total
Health Professional	0	2	2

1893: Hospital 30-Day, all-cause, risk-standardized mortality rate (RSMR) following chronic obstructive pulmonary disease (COPD) hospitalization (Centers for Medicare & Medicaid Services / Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation (YNHHSC/CORE))

Member Council	Support	Do Not Support	Total
Health Professional	0	1	1

2993: Potentially Harmful Drug-Disease Interactions in Older Adults (DDE) (National Committee for Quality Assurance)

Member Council	Support	Do Not Support	Total
Health Professional	1	0	1

*Due to the CNR on validity, the Patient Safety Team and co-chairs recommend that the measure retain endorsement until the Standing Committee revotes on validity and the overall suitability for endorsement during the Fall 2021 cycle.

Appendix D: Details of Measure Evaluation

Rating Scale: H=High; **M**=Moderate; **L**=Low; **I**=Insufficient; **NA**=Not Applicable
Note: Vote totals may differ between measure criteria and between measures as Standing Committee members often have to join calls late or leave calls early. NQF ensures that quorum is maintained for all live voting. All voting outcomes are calculated using the number of Standing Committee members present for that vote as the denominator. Quorum for the Patient Safety Standing Committee is 17 out of 25 members.

Measures Recommended

#0022 Use of High-Risk Medications in Older Adults (DAE)

Submission | Specifications

Description: The percentage of patients 65 years of age and older who received at least two dispensing events for the same high-risk medication. A lower rate represents better performance

Numerator Statement: Patients who received at least two dispensing events for the same high-risk medication during the measurement year.

Denominator Statement: All patients 65 years of age and older.

Exclusions: Patients who were enrolled in hospice care at any time during the measurement year.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan

Setting of Care: Outpatient Services

Type of Measure: Process

Data Source: Claims

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING February 10, 2021

1. Importance to Measure and Report: The measure meets the Importance criteria.

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

1a. Evidence: **Total Votes-21**; **H-1; M-10; L-7; I-3**; 1b. Performance Gap: **Total Votes-23**; **H-5; M-15; L-3; I-0**

Post-Comment Revote: 1a. Evidence: **Total Votes-17; H-0; M-13; L-3; I-1**

Rationale:

Evidence

- The Standing Committee noted that the developer provided updated evidence and considered a logic model linking older adults at risk of adverse drug events to clinicians prescribing potentially harmful medications, selecting alternative pharmacologic and non-pharmacologic treatment approaches when possible, thus avoiding adverse drug events, which leads to reduction in morbidity and mortality.
- The list of medications used in this measure has been updated to reflect the most current recommendations included in the AGS 2019 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, and guiding principles on which medications would be included in the measure were also provided.
- The Standing Committee questioned whether the medications for use within the measure included those listed in the Beers criteria (namely Table 2 of the Beers criteria) that had low-grade evidence, noting also that the Beers criteria do not consider medication dosage. The developer clarified that some medications are included in the measures with low-grade

evidence and that that they do not anticipate these rates being perfect, as there are patient-level nuances and clinical decision making that occur.
- Some Standing Committee members mentioned that the Beers criteria are endorsed by the AGS and although there is evidence that some of these drugs are harmful, they are not widely used. Another Standing Committee member commented that there are exceptions to the use of some of these medications in practice because there are no alternative choices for the patient.
- Ultimately, the Standing Committee did not reach consensus for evidence as there were several concerns about the list of medications being a list of "best practice" recommendations rather than sufficient evidence to link their use directly to clinical outcomes.

Performance Gap

- The Standing Committee considered performance gap data, including summarized data extracted from the HEDIS data collection for Medicare Advantage Health Plans (including all HMO and PPO plans) from 2016 to 2018, indicating the average performance increased from 9.1% in 2016 to 9.6% in 2018 with an average eligible population of 25,642 and 28,463, respectively.
- The Standing Committee inquired about any change in performance since the previous endorsement evaluation, to which the developer informed them of no change.
- Regarding disparities, the Standing Committee considered a cross-sectional study examining the prevalence of potentially inappropriate medications in community-dwelling Medicare beneficiaries in California, which found that use was significantly higher in women, White beneficiaries, and low-income beneficiaries. Also considered was a retrospective cohort study of 966,000 men and women treated by the Veteran's Health Administration (VHA), indicating that women were more likely than men to receive medications that may have harmful interactions with chronic conditions as described by the Beers Criteria.
- The Standing Committee passed the measure on performance gap.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria.

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

2a. Reliability: **Total Votes-21**; **H-8; M-11; L-2; I-0**; 2b. Validity: **Total Votes-17**; **H-2; M-10; L-5; I-0**

Rationale:

Reliability

- The Standing Committee considered the reliability testing, which was conducted at the performance measure score level utilizing the beta-binomial model to calculate signal-to-noise reliability.
- With a reliability estimate of 0.936 and 95% CI (0.924, 0.947), this estimate indicated very good reliability for the measure.
- The distribution of plan-level signal-to-noise reliability estimates range from 0.193 to 1.000. The 50th percentile is 0.988.
- The Standing Committee raised no questions or concerns regarding reliability and passed the measure on reliability.

Validity

- The Standing Committee considered validity testing, which was conducted by exploring whether NQF #0022 *Use of High-Risk Medications in Older Adults* correlated with NQF #2993 *Potentially Harmful Drug-Disease Interactions in Older Adults*.
- The correlations were assessed using a Pearson correlation test; it was reported that all correlations were significant at $p<0.001$.
- The Standing Committee questioned the use of a 90-day supply for non-benzodiazepines within the measure, as this was not reflected in the Beers criteria.

- The developer noted previous Beers criteria recommendations for non-benzodiazepines to be avoided beyond 90 days, which was then updated in 2019 with the recommendation to avoid them completely. However, the developer further noted that their Technical Expert Panels (TEPs) were concerned that eliminating non-benzodiazepines from the measure may subsequently turn providers more toward benzodiazepines, which are also recommended to be avoided.
- The Standing Committee passed the measure on validity.

3. Feasibility: Total Votes-17; **H-10; M-6; L-1; 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 considered that this measure uses pharmacy claims data and did not raise any questions or concerns.
- The Standing Committee passed the measure on feasibility.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Total Votes-19**; **Pass-17; No Pass-2** *4b. Usability:* **Total Votes-22**; **H-11; M-5-; L-6; I-0**

Rationale:

- Regarding use, the Standing Committee noted that this measure is currently used in the Quality Payment Program (QPP), which is a reporting program that uses a combination of incentive payments and payment adjustments to promote the reporting of quality information by eligible professionals (EPs). This program is also used in scoring for the accreditation of Medicare Advantage Health Plans, to calculate health plan ratings which are reported on the NCQA website, and is publicly reported nationally and by geographic regions in the NCQA State of Health Care annual report.
  - Regarding usability, the Standing Committee considered that the average performance in 2018 was 9.6%. There was a 9-percentage point difference between plans at the 10th and 90th percentiles, which represents a persistent gap in care and room for improvement in medication safety for older adults, particularly given the substantially large average denominator size of all plans reporting on this measure, and therefore, the great number of older adults at risk for adverse drug events.
  - The Standing Committee also considered that although overall rates are not changing, there has been an increase in the number of plans reporting from 2016-2018.
  - The developer identified a potential harm for the Standing Committee's consideration: Poor implementation could lead to reduced access to medications. The developer also noted that there will always be individual cases that will warrant the use of a potentially harmful medication for clinicians to weigh the risks and benefits.
  - The Standing Committee questioned whether performance data is shared with the prescriber, to which the developer responded that this is a health plan-level measure; however, some health plans implement system interventions to identify events.
  - The Standing Committee also indicated that the use of high-risk medications is a safety edit in place to identify and push notifications to prescribers.
  - The Standing Committee voted to pass the measure on use and usability.

5. Related and Competing Measures

- This measure is related to #2993 *Potentially Harmful Drug-Disease Interactions in Older Adults (DDE)*.
- The Standing Committee reviewed and acknowledged that this measure has been appropriately harmonized. No competing measures were noted.

6. **Standing Committee Recommendation for Endorsement**: **Total Votes-17; Y-15; N-2**

Rationale:

- During the post-comment meeting, the Standing Committee voted to recommend this measure for endorsement.

7. **Public and Member Comment**
   - NQF received three supportive post-evaluation comments on measure 0022.
   - Commenters cited the measure's potential in the prevention of medication-related harm in elderly patients.
8. **Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X**
9. **Appeals**

#0468 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Pneumonia Hospitalization

Submission | Specifications

Description: The measure estimates a hospital-level 30-day risk-standardized mortality rate (RSMR). Mortality is defined as death for any cause within 30 days after the date of admission for the index admission, discharged from the hospital with a principal discharge diagnosis of pneumonia, including aspiration pneumonia or a principal discharge diagnosis of sepsis (not severe sepsis) with a secondary diagnosis of pneumonia (including aspiration pneumonia) coded as present on admission (POA). CMS annually reports the measure for patients who are 65 years or older and are either Medicare fee-for-service (FFS) beneficiaries and hospitalized in non-federal hospitals or patients hospitalized in Veterans Health Administration (VA) facilities.

Numerator Statement: The outcome for this measure is 30-day all-cause mortality (including in-hospital deaths). We define mortality as death from any cause within 30 days of the index admission date from the date of admission for patients hospitalized with a principal discharge diagnosis of pneumonia, including aspiration pneumonia or a principal discharge diagnosis of sepsis (not severe sepsis) with a secondary discharge diagnosis of pneumonia (including aspiration pneumonia) coded as POA and no secondary discharge diagnosis of severe sepsis.

Denominator Statement: This claims-based measure is used for a cohort of patients aged 65 years or over older.

The cohort includes admissions for patients aged 65 years and older discharged from the hospital with principal discharge diagnosis of pneumonia, including aspiration pneumonia or a principal discharge diagnosis of sepsis (not severe sepsis) with a secondary discharge diagnosis of pneumonia (including aspiration pneumonia) coded as POA but no secondary discharge diagnosis of severe sepsis; and with a complete claims history for the 12 months prior to admission. The measure will be publicly reported by CMS for those patients 65 years or older who are Medicare FFS beneficiaries admitted to non-federal hospitals or patients admitted to VA hospitals.

Additional details are provided in S.9 Denominator Details.

Exclusions: The mortality measure excludes index admissions for patients in the following categories:

1. Discharged alive on the day of admission or the following day who were not transferred to another acute care facility
2. With inconsistent or unknown vital status or other unreliable demographic (age and gender) data
3. Enrolled in the Medicare hospice program or used VA hospice services any time in the 12 months prior to the index admission, including the first day of the index admission
4. Discharged against medical advice (AMA)

For patients with more than one admission for a given condition in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort.

Adjustment/Stratification: Statistical risk model with 36 risk factors

Level of Analysis: Facility

Setting of Care: Inpatient/Hospital

Type of Measure: Outcome

Data Source: Claims, Enrollment Data, Other
Measure Steward: Centers for Medicare & Medicaid Services

STANDING COMMITTEE MEETING February 10, 2021

1. **Importance to Measure and Report: <u>The measure meets the Importance criteria.</u>**

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

1a. Evidence: **Total Votes-25**; **Pass-25**; **No Pass-0**; 1b. Performance Gap: **Total Votes-22; H-11**; **M-11**; **L-0**; **I-0**

Rationale:

- The Standing Committee considered the logic model submitted by the developer, which linked specific actions to this outcome.
- The Standing Committee noted that the developer provided updated evidence, which included additional studies that demonstrate the importance of pneumonia mortality as well as specific interventions that can be performed to reduce pneumonia mortality.
- The Standing Committee did not raise any questions or concerns related to the evidence and passed the measure unanimously on evidence.
- The Standing Committee considered the performance gap data, which showed three-year hospital-level, risk-standardized mortality rates with an average of 15.5% and a range from 7.4% to 27.9%. The median risk-standardized rate was 15.4%, and in 2019, the 20th percentile score was 14.0%, the median was 15.4%, and the 80th percentile was 17.2%.
- Regarding disparities, the Standing Committee discussed the impact of COVID-19 on disparities due to the high-risk of mortality with respiratory-related conditions, such as pneumonia. The Standing Committee acknowledged that COVID-19 was not part of the current submission, as the testing was conducted pre-COVID-19. The Standing Committee noted there will most likely be greater differences in disparities in 2020 and ultimately passed the measure on performance gap.

2. **Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria.</u>**

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

Does the Standing Committee accept the Scientific Methods Panel's High rating for Reliability? **Total Votes-20; Yes-20; No-0**

Does the Standing Committee accept the Scientific Methods Panel's Moderate rating for Validity? **Total Votes-22; Yes-20; No-2**

- This measure was deemed as complex and was evaluated by the NQF Scientific Methods Panel.
- The NQF Scientific Methods Panel's ratings for Reliability: **H-4; M-4; L-0; I-0**
- The NQF Scientific Methods Panel's ratings for Validity: **H-1; M-5; L-1; I-1**
- The Standing Committee voted to accept the NQF Scientific Methods Panel's High rating for reliability and moderate rating of validity.

Rationale:

- The Standing Committee noted that this measure was reviewed by the Scientific Methods Panel (SMP), which passed the measure on both reliability and validity.

Reliability

- The Standing Committee considered the reliability testing, in which two types of reliability testing were conducted at the measure score-level: (1) the intra-class correlation coefficient (ICC) using a split sample (i.e., test-retest) method and (2) the facility-level reliability (signal-to-noise reliability).
- The ICCs were calculated for hospitals with 25 admissions or more. Using the Spearman-Brown prediction formula, the agreement between the two independent assessments of RSMR for each hospital was 0.668.

- The median signal-to-noise reliability score was 0.78, ranging from 0.31 to 0.98. The 25th and 75th percentiles were 0.59 and 0.88, respectively.
- The SMP reviewed this measure and passed the measure on reliability (H-4; M-4; L-0; I-0).
- The Standing Committee raised some concern with the lower case-volume facilities (<25th percentile) and the associated reliability scores. The developer commented that reliability is a function of sample size and, as a result, reliability scores increase as the sample size (i.e., case volume) increases. However, with an increase in the case-volume cutoff (i.e., >25 admissions), a tradeoff with transparency to the public occurs regarding how well those providers are performing. The Standing Committee further considered that case-volume cutoffs should be set based on a reliability threshold. The Standing Committee further acknowledged that this is dependent on CMS' use of the measure, that NQF Scientific Acceptability standards are agnostic to use, and that changes to volume cutoffs by CMS would not be done quickly.
- Ultimately, the Standing Committee voted to uphold the SMP's decision to pass the measure on reliability.

Validity

- The Standing Committee considered the validity testing, in which the developer conducted empirical validity testing at the measure score-level. Two measures were used for validity testing correlations: the Hospital Star-Rating Mortality group and the overall Hospital Star rating.
- The correlation between PN RSMRs and the Star-Rating mortality score is -0.653, which suggests that hospitals with lower PN RSMRs are more likely to have higher Star-Rating mortality scores.
- The correlation between PN RSMRs and the Star-Rating summary score is -0.306, which suggests that hospitals with lower PN RSMRs are more likely to have higher Star-Rating summary scores.
- The Standing Committee reviewed the risk adjustment model, noting that 36 risk factors were included in the model. The Standing Committee acknowledged that dual eligibility and the Agency for Healthcare Research and Quality's (AHRQ) Socioeconomic Status (SES) index were considered in testing but were not included in the final model.
- The SMP reviewed this measure and passed the measure on validity (H-1; M-5; L-1; I-1).
- The Standing Committee raised some concerns about the lack of inclusion of source of admission and social risk factor (SRF) adjustments. The Standing Committee expressed that this measure may under adjust and not account for where patients are admitted from. The developer clarified that source of admission was not utilized because historically, this field in claims was not audited. Regarding social risk factor adjustment, the Standing Committee considered the developer's rationale for not including these factors in the model. The developer mentioned that the impact of any of these SRF indicators is small to negligible on model performance and hospital-level results. Given these empirical findings, the Assistant Secretary for Planning and Evaluation recommended not to risk adjust publicly reported quality measures for SRFs. CMS chose to not incorporate SRF variables in this measure.
- The Standing Committee ultimately upheld the SMP's decision to pass the measure on validity.

3. Feasibility: Total Votes-21; H-19; M-2; 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 considered that this measure uses electronic claims data and did not raise any questions or concerns.
- The Standing Committee passed the measure on feasibility.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Total Votes-21; Pass-21; No Pass-0** *4b. Usability:* **Total Votes-20; H-9; M-10-; L-1; I- 0**

Rationale:

- The Standing Committee noted that this measure is currently used in the Hospital Value-Based Purchasing Program and Care Compare for accountability and public reporting.
- The Standing Committee considered how those entities that are being measured are provided with performance results, noting that each hospital receives their measure results in the spring of each calendar year through CMS' QualityNet website. The results are then publicly reported on CMS' Care Compare website in July of each calendar year.
- The Standing Committee voted to pass the measure on use.
- Regarding usability, the Committee considered that the median hospital 30-day, all-cause, RSRR for the pneumonia mortality measure for the three-year period between July 1, 2016, and June 30, 2019, was 15.4%. The median RSRR decreased by one absolute percentage point from July 2016-June 2017 (median RSRR: 15.9%) to July 2018-June 2019 (median: RSRR: 14.9%).
- The Standing Committee also considered the unintended consequences of the measure, noting that this measure may drive hospitals to turn away patients in order to avoid the index admission and not be held accountable for any mortality. The Standing Committee noted that this was based on studies that showed readmission rates declining while mortality rates were increasing. However, the other studies have shown no apparent increase. The Standing Committee acknowledged that an independent research group, commissioned by CMS to investigate this issue, found insufficient evidence to tie the implementation of this measure with rising mortality rates.
- After reviewing this information, the Standing Committee agreed that this measure meets NQF's standards for this criterion and passed the measure on usability.

5. **Related and Competing Measures**
   - This measure is related to the following measures:
     - #0231 Pneumonia Mortality Rate (IQI #20)
     - #0279 Community-Acquired Pneumonia Admission Rate (PQI 11)
     - #0506 Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Pneumonia Hospitalization
     - #1891 Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization
     - #1893 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization
     - #2579 Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode of Care for Pneumonia (PN)
     - #3502 Hybrid Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure
     - #3504 Claims-Only Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure
   - The Standing Committee reviewed the related measures and acknowledged that this measure has been appropriately harmonized. No related or competing measures were noted.
6. **Standing Committee Recommendation for Endorsement**: **Total Votes-21; Y-21**; **N-0**
7. **Public and Member Comment**
   - NQF received two pre-evaluation comments and two post-evaluation comments.

   Comments received expressed:
   - Concern around whether the measure meets the scientific acceptability criteria due to the reliability threshold and intraclass correlation coefficients at the minimum sample size.
   - Concern regarding the lack of inclusion of social risk factors in the risk adjustment model.
8. **Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X**
9. **Appeals**

#0531 Patient Safety Indicator (PSI) 90: Patient Safety and Adverse Events Composite

Submission | Specifications

Description: The PSI 90 composite measure summarizes patient safety across multiple indicators for the CMS Medicare fee-for-service population.

Numerator Statement: PSI 03: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-10-CM diagnosis codes for pressure ulcer stage III or IV (or unstageable).

PSI 06: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-10-CM diagnosis codes for iatrogenic pneumothorax.

PSI 08: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-10-CM diagnosis codes for hip fracture.

PSI 09: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with: any secondary ICD-10-CM diagnosis codes for perioperative hemorrhage or hematoma and any-listed ICD-10-CM procedure codes for treatment of hemorrhage or hematoma (Note: The ICD-10-CM specification is limited to postoperative hemorrhage or hematoma).

PSI 10: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-10-CM diagnosis codes for acute renal failure and any-listed ICD-10-CM procedure codes for dialysis.

PSI 11: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either: any secondary ICD-10-CM diagnosis code for acute respiratory failure; or any-listed ICD-10-CM procedure codes for a mechanical ventilation for 96 consecutive hours or more that occurs zero or more days after the first major operating room procedure code (based on days from admission to procedure); or any-listed ICD-10-CM procedure codes for a mechanical ventilation for less than 96 consecutive hours (or undetermined) that occurs two or more days after the first major operating room procedure code (based on days from admission to procedure); or any-listed ICD-10-CM procedure codes for a reintubation that occurs one or more days after the first major operating room procedure code (based on days from admission to procedure).

PSI 12: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with a secondary ICD-10-CM diagnosis code for proximal deep vein thrombosis or a secondary ICD-10-CM diagnosis code for pulmonary embolism.

PSI 13: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-10-CM diagnosis codes for sepsis.

PSI 14: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any-listed ICD-10-PCS procedure codes for repair of the abdominal wall and any-listed ICD-10-CM diagnosis code for disruption of internal surgical wound

PSI 15: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-10-CM diagnosis codes for accidental puncture or laceration during a procedure and second abdominopelvic operation >=1 day after an index abdominopelvic operation.

Denominator Statement: PSI 03: Surgical or medical discharges, for patients ages 18 years and older. Surgical and medical discharges are defined by specific MS-DRG codes.

PSI 06: Surgical and medical discharges, for patients ages 18 years and older. Surgical and medical discharges are defined by specific MS-DRG codes.

PSI 08: Discharges, for patients ages 18 years and older, in a medical DRG or in a surgical DRG, with any listed ICD-10-PCS procedure codes for an operating room procedure.

PSI 09: Surgical discharges, for patients ages 18 years and older, with any-listed ICD-10-PCS procedure codes for an operating room procedure. Surgical discharges are defined by specific MS-DRG codes.

PSI 10: Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-10-PCS procedure codes for an operating room procedure. Elective surgical discharges are defined by specific MS-DRG codes with admission type recorded as elective.

PSI 11: Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-10-PCS procedure codes for an operating room procedure. Elective surgical discharges are defined by specific MS-DRG codes with admission type recorded as elective.

PSI 12: Surgical discharges, for patients ages 18 years and older, with any-listed ICD-10-PCS procedure codes for an operating room procedure. Surgical discharges are defined by specific MS-DRG codes.

PSI 13: Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-10-PCS procedure codes for an operating room procedure. Elective surgical discharges are defined by specific MS-DRG codes with admission type recorded as elective.

PSI 14: Discharges, for patients ages 18 years and older, with any-listed ICD-10-CM procedure codes for abdominopelvic surgery, open approach, or with any-listed ICD-10-PCS procedure codes for abdominopelvic surgery, other than open approach.

PSI 15: Surgical and medical discharges, for patients ages 18 years and older, with any ICD-10-PCS procedure code for an abdominopelvic procedure

Exclusions: PSI 03:

- Length of stay of less than 3 days
- Principal ICD-10-CM diagnosis code for pressure ulcer stage III or IV (or unstageable)
    - All secondary ICD-10-CM diagnosis codes for pressure ulcer III or IV (or unstageable) present on admission. If more than one diagnosis of pressure ulcer is present, all diagnoses must be present on admission for the discharge to be excluded.
- Any listed ICD-10-CM diagnosis code for severe burns (>20% body surface area)
- Any listed ICD-10-CM diagnosis code for exfoliative disorders of the skin (>20% body surface area)
- MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 06:
    - Principal ICD-10-CM diagnosis code for iatrogenic pneumothorax
- Any secondary ICD-10-CM diagnosis code for iatrogenic pneumothorax present on admission, among patients qualifying for the numerator

  Any listed ICD-10-CM diagnosis codes for specified chest trauma (rib fractures, traumatic pneumothorax and related chest wall injuries)
- Any listed ICD-10-CM diagnosis codes for pleural effusion
- Any listed ICD-10-PCS procedure codes for thoracic surgery
- Any listed ICD-10-CM procedure codes for cardiac procedure;
- MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 08:
    - Principal ICD-10-CM diagnosis code for hip fracture
- Any secondary ICD-10-CM diagnosis code for hip fracture present on admission, among patients otherwise qualifying for the numerator
    - Principal ICD-10-CM diagnosis code for seizure
    - Principal ICD-10-CM diagnosis code for syncope
    - Principal ICD-10-CM diagnosis code for stroke and occlusion of arteries
    - Principal ICD-10-CM diagnosis code for coma
    - Principal ICD-10-CM diagnosis code for cardiac arrest
    - Principal ICD-10-CM diagnosis code for poisoning
    - Principal ICD-10-CM diagnosis code for trauma
    - Principal ICD-10-CM diagnosis code for delirium and other psychoses
    - Principal ICD-10-CM diagnosis code for anoxic brain injury
- Any listed ICD-10-CM diagnosis codes for metastatic cancer
- Any listed ICD-10-CM diagnosis codes for lymphoid malignancy
- Any listed ICD-10-CM diagnosis codes for bone malignancy
- MDC 14 (pregnancy, childbirth, and puerperium)

- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 09:
- Principal ICD-10-CMS diagnosis code for perioperative hemorrhage or postoperative hematoma
- Any secondary ICD-10-CM diagnosis present on admission for perioperative hemorrhage or postoperative hematoma, among discharges that otherwise qualify for the numerator
- The only operating room procedure is for treatment of perioperative hemorrhage, or hematoma and with any secondary ICD-10-CM diagnosis codes for perioperative hemorrhage or hematoma
- Treatment of postoperative hemorrhage or hematoma occurs one day or more before the first operating room procedure, and with any secondary ICD-10-CM diagnosis codes for postoperative hemorrhage or hematoma
- With any listed ICD-10-CM diagnosis codes for coagulation disorders
- MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 10:
- Principal ICD-10-CM diagnosis code for acute renal failure, cardiac arrest, cardiac dysrhythmia, shock or chronic kidney failure
- Any secondary ICD-10-CM diagnosis code for acute kidney failure, cardiac arrest, cardiac dysrhythmia, shock or chronic kidney failure, present on admission, among patients otherwise qualifying for the numerator
- Any dialysis procedure that occurs before or on the same day as the first operating room procedure
- Any dialysis access procedure occurring before or on the same day as the first operating room procedure
- Principal ICD-10-CM (or secondary diagnosis present on admission) for urinary tract obstruction
- Any ICD-10-CM diagnosis code present on admission for solitary kidney disease and any ICD-10-PCS procedure code for partial nephrectomy
- MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 11:
- Principal ICD-10-CM diagnosis code for acute respiratory failure
- Any secondary ICD-10-CM diagnosis code for respiratory failure present on admission, among patients otherwise qualifying for the numerator
- Only operating room procedure is tracheostomy
- Procedure for tracheostomy occurs before the first operating room procedure
- Any listed ICD-10-CM diagnosis codes for neuromuscular disorder
- Any listed ICD-10-PCS procedure codes for laryngeal or pharyngeal, nose, mouth pharynx or facial surgery
    - Any listed ICD-10-CM procedure codes for esophageal resection
    - Any listed ICD-10-CM procedure codes for lung cancer
    - Any listed ICD-10-CM diagnosis codes for degenerative neurological disorder
    - Any listed ICD-10-CM procedure codes for lung transplant
- MDC 4 (diseases/disorders of respiratory system);
- MDC 5 (diseases/disorders of circulatory system);
- MDC 14 (pregnancy, childbirth, and puerperium)
- -Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 12:

- Principal ICD-10-CM diagnosis code for proximal deep vein thrombosis (DVT) or pulmonary embolism (PE),
- Any secondary ICD-10-CM diagnosis code for DVT or PE present on admission, among patients otherwise qualifying for the numerator
- Procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure
- Only operating room procedure was interruption of vena cava
- Any listed ICD-10-CM diagnosis code for acute brain or spinal injury present on admission
- -Any listed ICD-10-PCS procedure code for extracorporeal membrane oxygenation (ECMO)
- Procedure for pulmonary arterial thrombectomy occurs before or on the same day as the first operating room procedure
- Only operating room procedure was for pulmonary arterial thrombectomy
- MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 13:
- Principal ICD-10-CM diagnosis code for sepsis or infection
- Any secondary ICD-10-CM diagnosis code for sepsis or infection present on admission, among patients otherwise qualifying for the numerator
- MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- SI 14:
- Procedure for abdominal wall reclosure occurs on or before the day of the first open abdominopelvic surgery procedure, if any, and the day of the first laparoscopic abdominopelvic surgery procedure, if any
- Any listed ICD-10-CM diagnosis codes or any-listed ICD-10-PCS procedure codes for immunocompromised state
- Principal ICD-10-CM diagnosis code for disruption of internal operation wound
- Any secondary ICD-10-CM diagnosis code for disruption of internal operation wound present on admission
- Length of stay less than two (2) days-MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- PSI 15:
- Principal ICD-10-CM diagnosis code for accidental puncture or lacerations during a procedure
- Any secondary ICD-10-CM diagnosis code for accidental puncture or laceration during a procedure, among patients otherwise qualifying for the numerator
- MDC 14 (pregnancy, childbirth, and puerperium)
- Missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)

Adjustment/Stratification: Statistical risk model with 49 (PSI 14B) - 135 (PSI 03) risk factors

Level of Analysis: Facility

Setting of Care: Inpatient/Hospital

Type of Measure: Composite

Data Source: Claims

Measure Steward: Centers for Medicare & Medicaid Services

STANDING COMMITTEE MEETING February 10, 2021

1. Importance to Measure and Report: The measure meets the Importance criteria.

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

1a. Evidence: **Total Votes-21; Pass-21; No Pass-0;** 1b. Performance Gap: **Total Votes-23; H-12**; **M-11**; **L-0**; **I-0;** 1c. Composite Quality Construct: **Total Votes-22; H-11; M-11; L-0; I-0**

Rationale:

- The developer provided detailed literature reviews of the evidence for each of the component outcome measures for NQF #0531, with information showing that one or more healthcare actions can be performed to reduce the incidence of each measure.
- The developer submitted performance gap information that demonstrated variation in hospital performance on PSI 90 using Medicare Fee-for-Service claims from 2016-2019.
- The developer also presented data demonstrating a performance gap for each of the individual components of PSI-90.
- Regarding the quality construct of the composite measure, PSI 90 combines information from 10 common patient safety events that may occur in hospitalized patients. It was created to provide a simple and transparent single metric that can be used to better understand, communicate, and track patient safety in U.S. hospitals.
- The Standing Committee did not raise any major concerns or questions and passed the measure on evidence and performance gap.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria.

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

Does the Standing Committee accept the NQF Scientific Methods Panel's Moderate rating for Reliability?

Total Votes-24; Yes –24; No- 0

Does the Standing Committee accept the NQF Scientific Methods Panel's Moderate rating for Validity?

Total Votes-24; Yes -23; No -1

Does the Standing Committee accept the NQF Scientific Methods Panel's Moderate rating for Composite Construction? **Total Votes-25**; **Yes- 25; No-0**

This measure was deemed as complex and was evaluated by the NQF Scientific Methods Panel.

- The NQF Scientific Methods Panel's ratings for Reliability: **H-2; M-5; L-0; I-1**
- The NQF Scientific Methods Panel's ratings for Validity: **H-2; M-4; L-1; I-1**
- The NQF Scientific Methods Panel's ratings for Composite Construction: **H-2; M-4; L-1; I-1**

• The Standing Committee voted to accept the NQF Scientific Methods Panel's moderate rating for reliability, validity, and composite construction.

Rationale:

- The Standing Committee considered the component-level reliability, which was reported using signal-to-noise ratios for each of PSI 90's components. Weighted mean scores ranged in CMS v10.0 from 0.152 for PSI 08 to 0.777 for PSI 03.
- Split-sample reliability testing was conducted to assess the composite, as well as test-retest reliability. The median ICC for 24 months of data was 0.74 and 0.81 for 36 months of data for split-sample reliability.
- For test-retest reliability, ICC was 0.60 for 24 months of data and 0.70 for 36 months of data.
- Validity testing was conducted at three levels: face, component, and composite-level, using convergent validity.
- For component validity, the PSI 90 components were correlated with a variety of other related outcomes, showing variable effects.
- For convergent validity, PSI 90 as a composite was correlated with several other measures of hospital quality, all showing positive associations.
- When compared to some measures of culture of safety, workforce measures, and nursing ratios, there was no consistent association between PSI 90 and these other measures.
- A Technical Expert Panel (TEP) voted 12-1 in favor of PSI 90 in July 2020.
- The Standing Committee considered the SMP's review, which passed the measure on reliability, validity, and the composite construction.
- The Standing Committee upheld the SMP's decision.

3. **Feasibility: Total Votes-23**; **H-18; M-5; 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:

- All data elements are in defined fields in electronic claims.
- The Standing Committee did not raise any major concerns and passed the measure on feasibility.

4. **Use and Usability**

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Total Votes-25**; **Pass-25; No Pass-0** *4b. Usability:* **Total Votes-24**; **H-19; M-5; L-0; I-0**

Rationale:

- The measure is currently publicly reported in a variety of programs and used in accountability programs.
- Several feedback mechanisms exist for PSI 90.
- From 2016-2018, PSI 90 showed minimal changes in national Medicare FFS data; however, the outlier values have decreased.
- Several national observed rates of PSI 90 component measures have improved from 2016 to 2019.
- The Standing Committee did not raise any major concerns and passed the measure on use and usability.

5. **Related and Competing Measures**
   - No related or competing measures were noted.
6. **Standing Committee Recommendation for Endorsement**: **Total Votes-23**; **Y-23**; **N-0**

7. **Public and Member Comment**
   - NQF received two pre-evaluation comments and three post-evaluation comments.

Comments received expressed:

- Concern around whether the measure meets the scientific acceptability criteria.
- Concerns around reliability threshold and intraclass correlation coefficients (ICC) at the minimum sample size.
- Concern regarding the lack of inclusion of social risk factors in the risk adjustment model.
- Concern with the measure of Post-Surgical Hip Fracture being used as the only representative measure of falls with injury.

8. **Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X**
9. **Appeals**

#1893 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization

Submission | **Specifications**

Description: The measure estimates a hospital-level 30-day risk-standardized mortality rate (RSMR), defined as death from any cause within 30 days after the index admission date, for patients discharged from the hospital with either a principal discharge diagnosis of COPD or a principal discharge diagnosis of respiratory failure with a secondary discharge diagnosis of acute exacerbation of COPD. CMS annually reports the measure for patients who are 65 years or older and enrolled in fee-for-service (FFS) Medicare and hospitalized in non-federal hospitals or are patients hospitalized in Veterans Health

Administration (VA) facilities.

Numerator Statement: The outcome for this measure is 30-day all-cause mortality. We define mortality as death from any cause within 30 days from the date of admission for patients hospitalized with either a principal diagnosis of COPD or a principal diagnosis of respiratory failure with a secondary diagnosis of acute exacerbation of COPD.

Denominator Statement: This claims-based measure is used for a cohort of patients aged 65 years or older.

The cohort includes admissions for patients aged 65 years and older discharged from the hospital with a principal discharge diagnosis of COPD and with a complete claims history for the 12 months prior to admission. The measure is publicly reported by CMS for those patients 65 years and older who are Medicare FFS or VA beneficiaries admitted to non-federal or VA hospitals, respectively.

Additional details are provided in S.7 Denominator Details.

Exclusions: The mortality measures exclude index admissions for patients in the following categories:

1. With inconsistent or unknown vital status or other unreliable demographic (age and gender) data
2. Enrolled in the Medicare hospice program or used VA hospice services any time in the 12 months prior to the index admission, including the first day of the index admission
3. Discharged against medical advice (AMA)

For patients with more than one admission for a given condition in a given year, only one index admission for that condition is randomly selected for inclusion in the cohort for each year.

Adjustment/Stratification: Statistical risk model with 41 risk factors

Level of Analysis: Facility

Setting of Care: Inpatient/Hospital

Type of Measure: Outcome

Data Source: Claims, Enrollment Data, Other

Measure Steward: Centers for Medicare & Medicaid Services

STANDING COMMITTEE MEETING February 10, 2021

1. Importance to Measure and Report: The measure meets the Importance criteria.

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

1a. Evidence: **Total Votes-23**; **Pass-23; No Pass-0**; 1b. Performance Gap: **Total Votes-22**; **H-11; M-11; L-0; I-0**

Rationale:

- The Standing Committee reviewed and considered the logic model submitted by the developer, which linked specific actions to this outcome.
- The Standing Committee noted the developer provided literature that supported COPD as an important, common, high-cost, and complex condition.
- The Standing Committee voted unanimously to pass the measure on the evidence criterion based on the strength of the evidence in measuring differences in quality, along with literature reviews supporting the use of interventions in reducing COPD mortality.
- The Standing Committee considered performance gap data, which demonstrated that data from July 1, 2016, to June 30, 2019, with Medicare claims and VA administrative data (n= 716,323 admissions from 4,642 hospitals), the three-year hospital-level, risk-standardized mortality rates (RSMRs) had a mean of 8.4% and range from 5.1-13.6% in the study cohort. The median risk-standardized rate was 8.3%.
- The Standing Committee did not raise any major concerns and voted to pass the measure on performance gap.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

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

Does the Standing Committee accept the NQF Scientific Methods Panel's Moderate rating for Reliability?

Total Votes-22; **Yes – 22 No-0**

Does the Standing Committee accept the NQF Scientific Methods Panel's Moderate rating for Validity?

Total Votes-22; **Yes - 22 No -0**

- This measure was deemed as complex and was evaluated by the NQF Scientific Methods Panel.
- The NQF Scientific Methods Panel's ratings for Reliability: **H-0; M-6; L-1; I-0**
- The NQF Scientific Methods Panel's ratings for Validity: **H-2; M-5; L-0; I-0**
- The Standing Committee voted to accept the NQF Scientific Methods Panel's moderate rating for reliability and validity.

Rationale:

- The Standing Committee noted that this measure was reviewed by the Scientific Methods Panel (SMP), which passed the measure on both reliability and validity.

Reliability

- The Standing Committee considered the reliability testing, in which two types of reliability testing were conducted at the measure score-level: (1) the intra-class correlation coefficient (ICC) using a split sample (i.e., test-retest) method and (2) the facility-level reliability (signal-to-noise reliability).
- The median reliability was 0.72 with a range of 0.32 to 0.97 with the IQR of 0.54 (25^{th}) to 0.83 (75^{th}).
- The SMP reviewed this measure and passed the measure on reliability (H-0; M-6; L-1; I-0).
- The Standing Committee did not raise any major concerns with reliability and voted to uphold the SMP's decision to pass the measure on reliability.

Validity

- The Standing Committee considered the validity testing, in which the developer conducted empirical validity testing at the measure score-level. Two measures were used for validity testing correlations: the Hospital Star Rating Mortality group and the overall Hospital Star-Rating.
- The correlation between COPD RSMRs and the Star-Rating mortality score was -0.618, suggesting that hospitals with lower COPD RSMRs are more likely to have higher Star-Rating mortality scores.
- The correlation between COPD RSMRs and the Star-Rating summary score was -0.165, suggesting that hospitals with lower COPD RSMRs are more likely to have higher Star-Rating summary scores.
- The Standing Committee reviewed the risk adjustment model, noting that 41 risk factors were included in the model. The Standing Committee acknowledged that dual eligibility data obtained through enrollment data, the Agency for Healthcare Research and Quality's (AHRQ) Socioeconomic Status (SES) index, and Health Administration data were also included in the testing subset.
- The SMP reviewed this measure and passed the measure on validity (H-2; M-5; L-0; I-0).
- The Standing Committee did not raise any major concerns and voted to uphold the SMP's decision to pass the measure on validity.

3. Feasibility: Total Votes-23; **H-16; M-7; 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 considered that this measure uses electronic claims data and did not raise any questions or concerns.
- The Standing Committee passed the measure on feasibility.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Total Votes-2**4; **Pass-24; No Pass-0** 4b. Usability: **Total Votes-22**; **H-8; M-13; L-1; I-0**

Rationale:

- The Standing Committee noted that this measure is currently used in the Hospital Value-Based Purchasing Program and Care Compare for accountability and public reporting.
- The Standing Committee considered how those entities that are being measured are provided with performance results, noting that each hospital receives their measure results in the spring of each calendar year through CMS' QualityNet website. The results are then publicly reported on CMS' Care Compare website in July of each calendar year.
- The Standing Committee voted to pass the measure on use.
- The Committee considered that progress toward achieving the goal of high quality, efficient healthcare for individuals or populations is demonstrated as evidenced by the median hospital 30-day, all-cause, RSMR for the COPD mortality measure for the three-year period between July 1, 2016, and June 30, 2019, was 8.3%. The median RSMR decreased by 0.7 absolute percentage points from July 2016-June 2017 (median RSMR: 8.6%) to July 2018-June 2019 (median: RSRR: 7.9%).
- The Standing Committee considered that this measure may have unintended consequences as the mortality rate for COPD has increased, lending concern to patients being denied care. The Standing Committee acknowledged that such claims are unfounded, also noting that because it is publicly reported and currently in use, no adverse unintended consequences have been demonstrated.
- After reviewing this information, the Standing Committee agreed that this measure meets NQF's standards for this criterion and passed the measure on usability.

5. Related and Competing Measures

- This measure is related to the following measures:
    - #0231 Pneumonia Mortality Rate (IQI #20)
    - #0279 Community-Acquired Pneumonia Admission Rate (PQI 11)
    - #0468 Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Pneumonia Hospitalization
    - #0506 Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Pneumonia Hospitalization
    - #1891 Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization
    - #2579 Hospital-Level, Risk-Standardized Payment Associated With a 30-Day Episode of Care for Pneumonia (PN)
    - #3502 Hybrid Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure
    - #3504 Claims-Only Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure
- The Standing Committee reviewed the related measures and acknowledged that this measure has been appropriately harmonized.

6. Standing Committee Recommendation for Endorsement: **Total Votes-22**; **Y-22**; **N-0**

7. **Public and Member Comment**
   - NQF received two pre-evaluation comments and two post-evaluation comments.

   Comments received expressed:
   - Concern around whether the measure meets the scientific acceptability criteria due to the reliability threshold and intraclass correlation coefficients at the minimum sample size.
   - Concern regarding the lack of inclusion of social risk factors in the risk adjustment model.

8. **Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X**

9. **Appeals**

#2993 Potentially Harmful Drug-Disease Interactions in Older Adults (DDE)

Submission | Specifications

Description: The percentage of patients 65 years of age and older who have evidence of an underlying disease, condition or health concern and who are dispensed an ambulatory prescription for a potentially harmful medication, concurrent with or after the diagnosis. Three rates are reported for this measure:

- Rate 1: The percentage of those with a history of falls that received a potentially harmful medication
- Rate 2: The percentage of those with dementia that received a potentially harmful medication
- Rate 3: The percentage of those with chronic kidney disease that received a potentially harmful medication

A lower rate represents better performance for all rates.

Numerator Statement: Numerator 1: Patients with a history of falls who received at least one potentially harmful medication from Table DDE-A or Table DDE-B

Numerator 2: Patients with a diagnosis of dementia who received at least one potentially harmful medication from Table DDE-D

Numerator 3: Patients with chronic kidney disease who received at least one potentially harmful medication from Table DDE-E

Denominator Statement: All patients 65 years of age and older with a history of falls, dementia or chronic kidney disease in the measurement year or the year prior to the measurement year.

Exclusions: For those who meet denominator criteria for the history of falls rate (Rate 1): exclude those with a diagnosis of psychosis, schizophrenia, schizoaffective disorder, bipolar disorder, major depressive disorder or seizure disorder.

For those who meet denominator criteria for the dementia rate (Rate 2): exclude those with a diagnosis of psychosis, schizophrenia, schizoaffective disorder or bipolar disorder.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan

Setting of Care: Outpatient Services

Type of Measure: Process

Data Source: Claims

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING February 10, 2021

1. **Importance to Measure and Report: The measure meets the Importance criteria.**

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

1a. Evidence: **Total Votes-21**; **H-6; M-14; L-1; I-0**; 1b. Performance Gap: **Total Votes-20**; **H-7; M-13; L-0; I-0**

Rationale:

- The Standing Committee considered updated evidence for this measure, including changes to the 2019 Beers Criteria, guiding principles on which conditions would be included in the measure, and the American Geriatrics Society 2019 Beers Criteria Update Expert Panel.
- No questions or concerns were raised by the Standing Committee, which passed the measure on evidence.
- The Standing Committee considered data extracted from the HEDIS data collection for Medicare Advantage Health Plans (including both HMO and PPO plans), which indicated opportunity for improvement.
- Regarding disparities, the Standing Committee considered HEDIS data stratified by type of insurance and the fact that the measure can also be stratified by demographic variables, such as race/ethnicity or socioeconomic status, in order to assess the presence of health care disparities if the data are available to a plan. The Standing Committee considered that while disparities for this measure have not been well studied, there is some evidence to suggest differences in the use of potentially inappropriate medications by gender, race, and income status, reviewing two such studies cited by the developer.
- The Standing Committee ultimately passed the measure on performance gap.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria.</u>

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

2a. Reliability: **Total Votes-21**; **H-4; M-17; L-0; I-0**; 2b. Validity: **Total Votes-19**; **H-5; M-14; L-0; I-0**

Rationale:

Reliability

- The Standing Committee considered reliability testing performed at the performance measure score level on three measure rates for specific underlying conditions in which a potentially harmful medication was prescribed: (1) A history of falls and a prescription for anticonvulsants, antipsychotics, benzodiazepines, non-benzodiazepine hypnotics, or antidepressants, (2) dementia and a prescription for antipsychotics, benzodiazepines, non-benzodiazepine hypnotics, tricyclic antidepressants, or anticholinergic agents, and (3) chronic kidney disease and prescription for Cox-2 selective NSAIDs or non-aspirin NSAIDs.
- Signal-to-noise testing was conducted, as well as Standard Error and 95% Confidence Interval.
- The Standing Committee considered that while all three measure rates appear reliable, there is lower reliability in some health plans that fall well below the 0.7 threshold.
- No questions or concerns were raised by the Standing Committee.
- The Standing Committee passed the measure on reliability.

Validity

- The Standing Committee considered validity testing performed at the performance measure score level.
- Empirical validity testing was performed for construct validity as compared to a similar measure, NQF #0022 *Use of High-Risk Medications in Older Adults*, which assesses the percentage of Medicare members ages 65 years and older who had at least two dispensing events for the same high-risk medication and a correlation between the three different patient populations. Correlations between the DDE measure for the three rates were all positive and varied from 0.24 to 0.63.
- Face validity was performed through advisory panels, NCQA staff, and public review.
- Empirical validity testing suggested that there was a significant correlation in the direction expected with a similar measure of medication safety in health plans in addition to positive correlations found among the three measured populations. For face validity, the developer ensured that the measure was aligned with the 2019 Beers criteria.
- The Standing Committee did not raise any major questions or concerns and passed the measure on validity.

3. **Feasibility: Total Votes-21**; **H-13; M-8; 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 considered that the data elements are generated or collected by and used by healthcare personnel during the provision of care and are in defined fields in a combination of electronic sources.
- The Standing Committee did not raise any questions or concerns and passed the measure on feasibility.

4. **Use and Usability**

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Total Votes-19**; **Pass-19; No Pass-0** *4b. Usability:* **Total Votes-20**; **H-4; M-13; L-3; I-0**

Rationale:

- The Standing Committee noted that this measure is currently used in scoring for accreditation of Medicare Advantage Health Plans and NCQA's ACO Accreditation program. It is also used to calculate health plan ratings, which are reported on the NCQA website, and is publicly reported nationally and by geographic regions in the NCQA State of Health Care annual report.
- The Standing Committee considered that the developer publicly reports rates across all plans and creates benchmarks in order to help plans understand how they perform relative to other plans. The Standing Committee also considered that health plans that report HEDIS calculate their rates and know their performance when submitting to NCQA, with no reported barriers to implementation.
- Regarding usability, the Standing Committee considered data for all three rates of the measure for 2018, noting significant room for improvement in medication safety for older adults, particularly for the history of falls and dementia rates. The Standing Committee also considered that among all rates, there is a sizeable gap between the plans at the 10th and 90th percentiles, demonstrating a persistent gap in care between the best and worst performing health plans.
- Related to potential harm, the Standing Committee considered the potential for reduced access to medications should the measure be implemented poorly, in addition to individual cases that warrant the use of a potentially harmful medication based on the relative risk/benefit.
- The Standing Committee inquired whether there was a threshold to consider when reviewing improvement over time, to which NQF staff informed them that although there is no threshold, it is dependent on the context of use for the measure, namely when and how it is used, how long it is used, and any updates to the measure.
- The Standing Committee passed the measure on use and usability.

5. **Related and Competing Measures**
   - This measure is related to NQF #0022 *Use of High-Risk Medications in Older Adults (DAE)*.
   - The Standing Committee reviewed and acknowledged that this measure has been appropriately harmonized. No competing measures were noted.
6. **Standing Committee Recommendation for Endorsement**: **Total Votes-20**; **Y-20**; **N-0**

7. **Public and Member Comment**
   - NQF received one supportive post-evaluation comment noting that drug-disease interactions in the setting of a history of falls, dementia, and chronic kidney disease warrant performance measurement and continued prioritization in outpatient settings.
8. **Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X**
9. **Appeals**

Measure in Which Consensus Was Not Reached

#0097 Medication Reconciliation Post-Discharge

Submission | Specifications

Description: The percentage of discharges from January 1–December 1 of the measurement year for patients 18 years of age and older for whom medications were reconciled the date of discharge through 30 days after discharge (31 days total).

Numerator Statement: Medication reconciliation conducted by a prescribing practitioner, clinical pharmacist or registered nurse, as documented through either administrative data or medical record review on the date of discharge through 30 days after discharge (31 total days).

Denominator Statement: All acute or nonacute inpatient discharges on or between January 1 and December 1 of the measurement year for patients who are 18 years and older.

Exclusions: No exclusions

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan

Setting of Care: Outpatient Services

Type of Measure: Process

Data Source: Claims, Electronic Health Records, Paper Medical Records

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING February 10, 2021

1. Importance to Measure and Report: The measure meets the Importance criteria.

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

1a. Evidence: **Total Votes-23**; **H-0; M-8; L-4; I-11**; 1b. Performance Gap: **Total Votes-23**; **H-9; M-11; L-2; I-1**

Post-Comment Revote: 1a. Evidence: **Total Votes-17; H-0; M-11; L-3; I-3**

Rationale:

- The Standing Committee reviewed the evidence supporting medication reconciliation and concluded that there was not a clear link to patient outcomes to justify measurement.
- A 2018 Cochrane systematic review did not find clear evidence that linked medication reconciliation to a variety of patient outcomes.
- However, the Standing Committee considered several studies that the developer provided that have suggested a decrease in medication errors when medication reconciliation, and other transition interventions, are implemented (Bayoumi 2009, Coleman 2003, Geurts 2012, Gillespie 2009, Midlov 2012, Nassaralla 2007).
- During the February 10, 2021 measure evaluation meeting, the NQF staff clarified quorum voting thresholds that are needed to pass the measure on evidence, which is based on the number of Standing Committee members present on the call and eligible to vote. NQF staff noted on the call that the Standing Committee did not reach consensus on evidence, which caused the Standing Committee to proceed with reviewing the measure against the remaining NQF criteria. However, after the call ended, it was identified that the measure did not pass on evidence. NQF staff and Standing Committee Co-Chairs suggested that due to the lack of clarity on the voting thresholds during the call, the evidence criterion will proceed with a revote during the post-comment meeting on June 4, 2021.
- The developer noted the high prevalence of adverse drug events and that about half of all adverse drug events are considered preventable. The developer also noted that on average, 82% of adults in the U.S. take at least one medication and 62% have multiple chronic conditions.

- The developer provided data demonstrating a performance gap from 2016 to 2018 HEDIS data with mean rates of 47%, 53%, and 61% in those years, respectively, with variation across health plans.
- During the post-comment discussions, quorum was achieved with 17 members of the Standing Committee present for the vote. The Standing Committee reviewed and discussed the comments received during the public commenting period, which were all supportive in continuing measurement of medication reconciliation, particularly until more robust measures of medication-related outcomes could be developed. Additionally, there was a comment that noted the success of medication reconciliation in reducing medication discrepancies at discharge. Finally, there was a supportive comment about medication reconciliation to ensure patient safety and continuity of care post-discharge. During the Standing Committee discussion, there were expressions of support for the measure, describing the importance of medication review from a recent JAMA article. Some Standing Committee members commented that lack of medication reconciliation is a significant risk factor for readmission to the hospital in a large rehabilitation setting. One Standing Committee member shared that medication reconciliation is performed daily by pharmacists, and did in his personal experience, result in catching medication errors. Based on this discussion and review of public comments, the Standing Committee revoted and passed the measure on evidence.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria.

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

2a. Reliability: **Total Votes-21**; **H-14; M-6; L-1; I-0**; 2b. Validity: **Total Votes-23**; **H-0; M-13; L-8; I-2 – Consensus Not Reached**

Rationale:

- The Standing Committee considered the signal-to-noise reliability testing, which was conducted across 472 Medicare plans with scores ranging from 0.977 to 1.00.
- The Standing Committee did not raise any major questions or concerns and passed the measure on reliability.
- The Standing Committee reviewed the validity testing submitted by the developer.
- Construct validity testing was performed comparing medication reconciliation post-discharge to three other HEDIS measures. The correlations were all positive and ranged from 0.43 for receipt of discharge information to 0.60 for patient engagement after inpatient discharge.
- The developer reported that their measure advisory panels agreed with the measure's intent and proposed specification. The majority of public comments received supported the measure, and their CPM, and subsequently our Board of Directors, approved the measure for HEDIS reporting.
- Standing Committee members raised concern that this measure is an example of a "checkbox" measure that is easy to achieve in the EHR without a clear linkage to care management or outcomes.
- There was an error in the validity vote (a must-pass criterion) occurring during the measure evaluation meeting for NQF #0097, in which the measure was stated as "passing on validity", when in fact, the vote score is Consensus Not Reached. The vote tally is as follows: Total Votes-23; High-0; Moderate-13; Low-8; Insufficient-2 (57% passing votes). In normal operations, the Standing Committee would have re-voted on this criterion during the post-comment meeting and, at that time, if consensus was not reached it would not have been recommended for endorsement. However, the error was discovered after the post-comment meeting, and it was not possible to re-convene the Standing Committee again. Therefore, NQF is allowing the measure to retain endorsement, and the Standing Committee revote on validity and the overall suitability for endorsement during the Fall 2021 cycle.

3. Feasibility: Total Votes-22; **H-11; M-10; L-1; 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:

- Some data elements are in defined fields in electronic sources. Health plans and providers that use an EHR to capture medication reconciliation use that data to report on this measure.
- The Standing Committee did not raise any major questions or concerns and passed the measure on feasibility.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Total Votes-2**1; **Pass-20; No Pass-1** *4b. Usability:* **Total Votes-23**; **H-8; M-14; L-1; I-0**

Rationale:

- The Standing Committee acknowledged that this measure is both publicly reported and used in accountability programs.
- The 2016-2018 data show that although performance rates for this measure are low, they have increased. In 2018, the average performance was 61.3.
- The Standing Committee did not raise any major questions or concerns and passed the measure on use and usability.

5. Related and Competing Measures

- The measure is related to the following measures:
  - #0419 Documentation of Current Medications in the Medical Record
  - #0553 Care for Older Adults (COA) – Medication Review
  - #2456 Medication Reconciliation: Number of Unintentional Medication Discrepancies per Medication per Patient
  - #2988 Medication Reconciliation for Patients Receiving Care at Dialysis Facilities
  - #3317 Medication Reconciliation on Admission

6. Standing Committee Recommendation for Endorsement: **Total Votes-17; Y-16; N-1***

Rationale

- During the February 10, 2021 measure evaluation meeting, NQF staff clarified quorum voting thresholds that are needed to pass the measure on evidence, which is based on the number of Standing Committee members present on the call and eligible to vote. NQF staff noted on the call that the Standing Committee did not reach consensus on evidence, which caused the Standing Committee to proceed with reviewing the measure against the remaining NQF criteria. However, after the call ended, it was identified that the measure did not pass on evidence. NQF staff and Standing Committee Co-Chairs suggested that due to the lack of clarity on the voting thresholds during the call, the evidence criterion will proceed with a revote during the post-comment meeting on June 4, 2021.
- During the post-comment meeting, the Standing Committee reviewed and discussed the comments received and passed the measure on evidence and the overall suitability for endorsement.

- *However, there was an error in the validity vote (a must-pass criterion) that occurred during the measure evaluation meeting for NQF #0097, in which the measure was stated as “passing on validity”, when in fact, the vote score is Consensus Not Reached. The vote tally is as follows: Total Votes-23; High-0; Moderate-13; Low-8; Insufficient-2 (57% passing votes). In normal operations, the Standing Committee would have re-voted on this criterion during the post-comment meeting and, at that time, if consensus was not reached it would not have been recommended for endorsement. However, the error was discovered after the post-comment meeting, and it was not possible to re-convene the Standing Committee again. Therefore, NQF is allowing the measure to retain endorsement, and the Standing Committee revote on validity and the overall suitability for endorsement during the Fall 2021 cycle.

7. **Public and Member Comment**
    - NQF received four supportive post-evaluation comments on measure 0097.

    The comments expressed:
    - Support of the measure because it addresses a performance gap and mitigates potential patient harm when an outcome measure is not yet available or does not have a robust body of knowledge to merit a high ranking for scientific availability.
    - Support because of the success of medication reconciliation in decreasing medication discrepancies at discharge.
    - Support of the measure to ensure patient safety and continuity of care post-discharge.
8. **Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X**
9. **Appeals**