



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 2510

Corresponding Measures:

Measure Title: Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM)

Measure Steward: Centers for Medicare & Medicaid Services

sp.02. Brief Description of Measure: The SNFRM estimates the risk-standardized rate of all-cause, unplanned hospital readmissions for Skilled Nursing Facility (SNF) Medicare fee-for-service (FFS) beneficiaries within 30 days of discharge from a prior proximal acute hospitalization. The prior proximal hospitalization is defined as an admission to an IPPS, CAH, psychiatric, or cancer hospital. The measure is risk-adjusted for patient demographics, principal diagnosis from the prior hospitalization, comorbidities, and other health status variables that affect the probability of a hospital readmission. The SNFRM includes Medicare FFS beneficiaries who were admitted to a SNF within 1 day of discharge from a hospital. The measure is calculated annually using a 12-month period.

1b.01. Developer Rationale: The anticipated benefit of this quality measure is that if consumers are informed of SNF readmission rates, they will make more educated choices with regard to SNF providers. The SNFRM was designed based on FFS claims to harmonize with CMS' current Hospital-Wide Readmission measure and other readmission measures being developed for other post-acute care settings (i.e., inpatient rehabilitation facilities (IRF), long-term care hospitals (LTCH), home health agencies (HHA), and end-stage renal facilities (ESRD)), and to promote shared accountability for improving care transitions across all settings. Additionally, providers will be encouraged to compete on quality for beneficiaries by focusing on quality improvement efforts to reduce readmissions. The measure can also be used by providers for tracking results of their internal quality improvement initiatives.

Hospital readmissions of Medicare beneficiaries discharged from a hospital to a SNF are prevalent and expensive, and prior studies suggest that a large proportion of readmissions are preventable (Mor et al., 2010). According to Mor et al., based on an analysis of SNF data from 2006 Medicare claims merged with the Minimum Data Set (MDS), 23.5 percent of SNF stays resulted in a rehospitalization within 30 days of the initial hospital discharge. The average Medicare payment for each readmission was \$10,352 per hospitalization, for a total of \$4.34 billion. Of these rehospitalizations, 78 percent were deemed potentially avoidable, and applying this figure to the aggregate cost indicates that avoidable hospitalizations resulted in an excess cost of \$3.39 billion (78 percent of \$4.34 billion) to Medicare (Mor, Intrator, Feng, et al., 2010). Several analyses of hospital readmissions of SNF patients suggest there is opportunity for reducing hospital readmissions among SNF patients (Li et al., 2012; Mor et al., 2010), and multiple studies suggest SNF structural and process characteristics that impact readmission rates (Coleman et al., 2004; MedPAC 2011).

In an analysis the 2008 MDS and the Online, Survey, Certification, and Reporting file, Li and colleagues found that hospital readmission rates varied by SNF patient volume, with a 16.4 percent readmission rate for low volume SNFs (< 45 annual SNF admissions), 15.9 percent for medium volume SNFs (45-107 annual SNF admissions), and 14.3 percent for high volume SNFs (=108 annual SNF admissions) ($P<0.0001$) (Li, Cai, Yin 2012). In addition to being costly, readmission to the hospital interrupts the SNF patient's therapy and care plan, causes anxiety and discomfort, and exposes the patient to hospital-acquired adverse events such as loss of functional status, healthcare-associated infections or medication errors (Covinsky, Palmer, Fortinsky 2003; Boockvar, Fishman, Kyriacou 2004; Ouslander et al. 2011).

Boockvar K, Fishman E, Kyriacou CK, et al. Adverse Events Due to Discontinuations in Drug Use and Dose Changes in Patients Transferred Between Acute and Long Term Care Facilities. *Archives of Internal Medicine* 2004. 164(5); 545-550.

Coleman EA, Smith JD, Frank JC, Min SJ, Parry C, Kramer AM. Preparing patients and caregivers to participate in care delivered across settings: the Care Transitions Intervention. *Journal of the American Geriatrics Society*. Nov 2004;52(11):1817-1825.

Covinsky K, Palmer R, Fortinsky R, et al. Loss of Independence in Activities of Daily Living in Older Adults Hospitalized with Medical Illnesses: Increased Vulnerability with Age. *Journal of the American Geriatrics Society*, 2003. 51:451-458.

Jencks SF, Williams MV, and Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. *N. Engl. J. Med.* 360: 1418-1428, 2009.

Li Y, Cai X, Yin J, Glance LG, Mukamel DB. Is higher volume of postacute care patients associated with a lower rehospitalization rate in skilled nursing facilities? *Medical Care Research and Review : MCRR*. Feb 2012;69(1):103-118.

Medicare Payment Advisory Commission (U.S.). Trends in Risk Adjusted Skilled Nursing Facility Rates of Community Discharge and Potentially Avoidable Rehospitalization 2000-2008. Washington, DC: Medicare Payment Advisory Commission, June 2011

Mor V, Intrator O, Feng Z, Grabowski DC. The revolving door of rehospitalization from skilled nursing facilities. *Health Aff (Millwood)*. Jan-Feb 2010;29(1):57-64.

Ouslander JG, Diaz S, Hain D, Tappen R. Frequency and diagnoses associated with 7- and 30-day readmission of skilled nursing facility patients to a nonteaching community hospital. *JAMDA*. March 2011. 12(3):195-203.

sp.12. Numerator Statement: The outcome for this measure is 30-day unplanned all-cause hospital readmissions of SNF patients. We define readmission as an inpatient admission for any cause, with the exception of certain planned admissions, within 30 days from the date of discharge from the patient's prior proximal acute hospitalization. The prior proximal hospitalization is defined as an admission to an inpatient prospective payment system (IPPS) hospital, critical access hospital (CAH), or PPS-exempt psychiatric or cancer hospital. Because the measure denominator is based on SNF admissions, it is possible that Medicare beneficiaries with more than one eligible admission may be included in the measure multiple times within a given year.

sp.14. Denominator Statement:

The measure includes admissions for SNF Medicare fee for service (FFS) beneficiaries who have been admitted to a SNF within 1 day of discharge from a prior proximal hospitalization.

Additional details are provided in sp.15, Denominator Details.

sp.16. Denominator Exclusions:

The following are excluded from the denominator:

1. SNF stays where the patient had one or more intervening post-acute care (PAC) admissions (inpatient rehabilitation facility [IRF] or long-term care hospital [LTCH]) which occurred either between the prior proximal hospital discharge and SNF admission or after the SNF discharge, within the 30-day risk window. Also excluded are SNF admissions where the patient had multiple SNF admissions after the prior proximal hospitalization, within the 30-day risk window.

Rationale: For patients who have IRF or LTCH admissions prior to their first SNF admission, these patients are starting their SNF admission later in the 30-day risk window and receiving other additional types of services as compared to patients admitted directly to the SNF from the prior proximal hospitalization and their risk for readmission is different than the rest of SNF admissions. Additionally, when patients have multiple PAC admissions, evaluating quality of care coordination is confounded and even controversial in terms of attributing responsibility for a readmission among multiple PAC providers. Similarly, assigning responsibility for a readmission for patients who have multiple SNF admissions subsequent to their prior proximal hospitalization is also controversial.

2. SNF stays with a gap of greater than 1 day between discharge from the prior proximal hospitalization and the SNF admission.

Rationale: These patients are starting their SNF admissions later in the 30-day risk window than patients admitted directly to the SNF from the prior proximal hospitalization. They are clinically different and their risk for readmission is different than the rest of SNF admissions.

3. SNF stays where the patient did not have at least 12 months of FFS Medicare enrollment prior to the proximal hospital discharge and throughout the entire risk period (measured as enrollment during the month of proximal hospital discharge, for 12 months prior to that discharge, and the month after the month of discharge).

Rationale: FFS Medicare claims are used to identify comorbidities during the 12-month period prior to the proximal hospital discharge for risk adjustment. Readmissions occurring within the 30-day risk window when the patient does not have FFS Medicare coverage cannot be detected using claims.

4. SNF stays where the patient was discharged from the SNF against medical advice.

Rationale: The SNF was not able to complete care as needed.

5. SNF stays in which the principal diagnosis for the prior proximal hospitalization was for the medical treatment of cancer. Patients with cancer whose principal diagnosis from the prior proximal hospitalization was for other diagnoses or for surgical treatment of their cancer remain in the measure.

Rationale: Patients with a principal diagnosis of cancer for the prior hospitalization have a very different mortality and readmission risk than the rest of the Medicare population, and outcomes for these admissions do not correlate well with outcomes for other admissions.

6. SNF stays in which the principal primary diagnosis for the prior proximal hospitalization was for “rehabilitation care; fitting of prostheses and for the adjustment of devices”.

Rationale: Hospital admissions for these conditions are not for acute care.

7. SNF stays in which the prior proximal hospitalization was for pregnancy.

Rationale: While SNF stays in which the prior proximal hospitalization for pregnancy are very rare (for example, there were only 9 instances in FY2017) this measure is not intended to measure care related to pregnancy.

8. SNF stays in which data were missing or problematic on any covariate or variable used in the measure’s constructions.

Rationale: The needed data are not available to reliably calculate the measure score for the SNF.

9. SNF stays that took place in a CAH swing bed.

Rationale: CAHs are not paid on the SNF Prospective Payment System (PPS), therefore they are not eligible for the SNF VBP Program.

Note: Due to the ongoing impact of COVID-19 on all quality measures, additional exclusion(s) may be added in the future once more COVID data become available. This work is ongoing and the version of the measure that is used in production may include additional changes to the measure denominator for time periods that include COVID patients.

Measure Type: Outcome

sp.28. Data Source:

Claims

Enrollment Data

sp.07. Level of Analysis:

Facility

IF Endorsement Maintenance – Original Endorsement Date: 2014-12-23 01:11 PM

Most Recent Endorsement Date: 12/9/2016 4:11:06 PM

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

sp.03. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?:

1. Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria

1ma.01. Indicate whether there is new evidence about the measure since the most recent maintenance evaluation. If yes, please briefly summarize the new evidence, and ensure you have updated entries in the Evidence section as needed.

[Response Begins]

[Response Ends]

Please separate added or updated information from the most recent measure evaluation within each question response in the Importance to Measure and Report: Evidence section. For example:

Current Submission:

Updated evidence information here.

Previous (Year) Submission:

Evidence from the previous submission here.

1a.01. Provide a logic model.

Briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.

[Response Begins]

[Response Ends]

1a.02. Provide evidence that the target population values the measured outcome, process, or structure and finds it meaningful.

Describe how and from whom input was obtained.

[Response Begins]

[Response Ends]

1a.03. Provide empirical data demonstrating the relationship between the outcome (or PRO) and at least one healthcare structure, process, intervention, or service.

[Response Begins]

[Response Ends]

1b.01. Briefly explain the rationale for this measure.

Explain how the measure will improve the quality of care, and list the benefits or improvements in quality envisioned by use of this measure.

[Response Begins]

The anticipated benefit of this quality measure is that if consumers are informed of SNF readmission rates, they will make more educated choices with regard to SNF providers. The SNFRM was designed based on FFS claims to harmonize with CMS' current Hospital-Wide Readmission measure and other readmission measures being developed for other post-acute care settings (i.e., inpatient rehabilitation facilities (IRF), long-term care hospitals (LTCH), home health agencies (HHA), and end-stage renal facilities (ESRD)), and to promote shared accountability for improving care transitions across all settings. Additionally, providers will be encouraged to compete on quality for beneficiaries by focusing on quality improvement efforts to reduce readmissions. The measure can also be used by providers for tracking results of their internal quality improvement initiatives.

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Mor V, Intrator O, Feng Z, Grabowski DC. The revolving door of rehospitalization from skilled nursing facilities. Health Aff (Millwood). Jan-Feb 2010;29(1):57-64.

Ouslander JG, Diaz S, Hain D, Tappen R. Frequency and diagnoses associated with 7- and 30-day readmission of skilled nursing facility patients to a nonteaching community hospital. JAMDA. March 2011. 12(3):195-203.

[Response Ends]

1b.02. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis.

Include mean, std dev, min, max, interquartile range, and scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.

[Response Begins]

As shown in Appendix Table 11, the SNFRM Risk-Stratified Readmission Rate as calculated using 2009 data has a range from 13.1 percent to 36.5 percent, with a median of 21.7 percent and an interquartile range of 19.9-23.7 percent. The mean RSRR is 21.9 percent and the scores have a standard deviation of 2.9 percent.(1) The 2011 data shows a wider total range, with a minimum 11.9 percent to a maximum of 41.7 percent, but a slightly narrower interquartile range of 19.4-22.8 percent. The median RSRR was 21.0 percent, and the mean 21.3 percent with a standard deviation of 2.7 percent.(2)

The distribution of the unadjusted and SNF-level risk-standardized readmission rates (RSRR) is illustrated in Appendix Figures 2 and 3, respectively, where the vertical axis indicates the percentage of SNFs and the horizontal axis the RSRR.

(1) Source: RTI analysis of 2009 MedPAR data (output: readmit085_HLMFinal_RiskEstDescript01_2009.xls)

(2) Source: RTI analysis of 2011 MedPAR data (output: readmit085_HLMFinal_RiskEstDescript01_20011.xls)

[Response Ends]

1b.03. If no or limited performance data on the measure as specified is reported above, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement. Include citations.

[Response Begins]

Hospital readmissions of Medicare beneficiaries discharged from a hospital to a SNF are prevalent and expensive, and prior studies suggest that a large proportion of readmissions are preventable (Mor et al. 2010). Hospital readmissions also put beneficiaries at risk for complications (Ouslander et al., 2011). Several analyses of hospital readmissions of SNF patients suggest there is opportunity for reducing hospital readmissions among SNF patients (Li et al., 2012; Mor et al., 2010), and multiple studies suggest SNF structural and process characteristics that impact readmission rates (Coleman et al., 2004; MedPAC 2011).

There are significant geographic differences in hospital readmission rates for SNF patients. Across the 50 states, readmission rate ranges from a low of 15.1 percent in Utah to a high of 28.1 percent in Mississippi. Within that range, nine states have readmission rates below 17 percent and nine states have rates above 25 percent (Mor et al. 2010). These differences are not aligned neatly with income: the state with the highest 2006 median income,

New Jersey, had a readmission rate of 26.1 percent, while the poorest state, Mississippi, had a similarly high readmission rate of 28.1 percent (Mor et al., 2010). This indicates that state-by-state variation in readmission rates is likely the result of multiple factors, including access to services, cultural preferences, and urban/rural differences.

In addition to geographic variation, readmission rates vary by facility characteristics. Facility characteristics that increase the likelihood of readmission include larger bed size, free-standing status (as opposed to hospital-based), a higher percentage of Medicaid patients, and for-profit status (Li et al. 2012). More hours per resident day of registered nurses, licensed practical nurses, and certified nurse aides are associated with a decrease in the rate of potentially avoidable readmissions (MedPAC 2011).

Coleman EA, Smith JD, Frank JC, Min SJ, Parry C, Kramer AM. Preparing patients and caregivers to participate in care delivered across settings: the Care Transitions Intervention. *Journal of the American Geriatrics Society*. Nov 2004;52(11):1817-1825.

Li Y, Cai X, Yin J, Glance LG, Mukamel DB. Is higher volume of postacute care patients associated with a lower rehospitalization rate in skilled nursing facilities? *Medical Care Research and Review : MCRR*. Feb 2012;69(1):103-118.

Mor V, Intrator O, Feng Z, Grabowski DC. The revolving door of rehospitalization from skilled nursing facilities. *Health Aff (Millwood)*. Jan-Feb 2010;29(1):57-64.

Ouslander JG, Diaz S, Hain D, Tappen R. Frequency and diagnoses associated with 7- and 30-day readmission of skilled nursing facility patients to a nonteaching community hospital. *JAMDA*. March 2011. 12(3):195-203.

Medicare Payment Advisory Commission (U.S.). Trends in Risk Adjusted Skilled Nursing Facility Rates of Community Discharge and Potentially Avoidable Rehospitalization 2000-2008. Washington, DC: Medicare Payment Advisory Commission, June 2011

[Response Ends]

1b.04. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability.

Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included. Include mean, std dev, min, max, interquartile range, and scores by decile. For measures that show high levels of performance, i.e., “topped out”, disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.

[Response Begins]

Analyses of the distribution of patients by race suggest that non-White populations are not evenly distributed across facilities. When the total number of SNFs is broken down by the percentage of patients who are non-white, there are a large proportion of facilities that have non-White populations smaller than the national average (16.5% of US population 60 and older). Under 30 percent (27.1%) of facilities have more than 16.5 percent of their patients who are non-White. 10 percent of facilities have over 40 percent non-white patients. Approximately 6 percent of facilities have a majority non-White patients.(1)

When examining whether facilities with higher percentages of non-White patients have different performance scores for the SNFRM, the data suggest that the RSRR increases slightly as the percentage of non-White patients increases (see Appendix Table 12).(1) This is consistent with prior literature showing that hospitals deemed as “minority serving” (defined as over 30% of patient served are minority) had higher readmission rates (25.5%

readmitted within 30 days) than those that were “non-minority serving” (22.0% readmitted within 30 days) (Joynt 2011). Our data showed results that are less pronounced, with patients in facilities with over 30 percent non-White patients having readmission rates of 23.2 percent, versus facilities with less than 30 percent non-White patients having rates between 21.7-22.6 percent.(1) The clustering of patients by race in facilities makes it difficult to argue for taking steps like reporting stratified measures because many facilities have very small minority populations. Prior literature examining other health outcomes has suggested that disparities in outcomes are due to differential access to quality care facilities, rather than differences in care being received by residents of different races in the same facility (Li, Yue, et al. 2011a; Li, Yue, Mukamel, 2010).

For dual eligible patients (patients enrolled in both Medicare and Medicaid, which serves as a proxy for low-income), the results were similar, in that the RSRR was higher for facilities with larger percentages of Medicaid enrollees. However, differences were small (ranging from 20.8% for facilities with the lowest percentage of dual eligible patients, to 21.6 for facilities with the highest percentage).(2) The results are presented in Appendix Table 12.

(1) SOURCE: RTI analyses of 2011 MedPAR files (N=16,656). (output: readmit138_HLMFinal_Disparity03.xls .xls)

(2) SOURCE: RTI analyses of 2011 MedPAR files (N=16,712). (output: readmit138_HLMFinal_Disparity03.xls)

[Response Ends]

1b.05. If no or limited data on disparities from the measure as specified is reported above, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in above.

[Response Begins]

Research has found that racial disparities exist both in the quality of nursing facilities as well as in hospital readmission rates. Any discussion of disparities in hospitalization or hospital readmission rates should acknowledge the potential influence of differences in preferences for intensity of intervention by patient subgroups. Additionally, previous studies suggest that these disparities arise from vulnerable populations being admitted disproportionately into poorer quality homes, rather than patients or residents receiving care at different levels of quality within the same facility. Multiple studies have found that nursing facilities with higher proportions of African-American residents tend to have poorer results on quality of care indicators, that African-Americans have higher rates of hospital readmission, and that hospitals serving more African-Americans have a higher overall rate of readmission (Howard et al., 2002; Mor et al., 2004; Grabowski 2004; Silverstein et al., 2008; Jencks, Williams, and Coleman 2009).

Prior research has shown that racial disparities exist in care provided to nursing home residents with respect to occurrence of pressure sores (Li, Yue, et al., 2011a) and provision of influenza and pneumococcal vaccination (Li, Yue, Mukamel, 2010), and data indicate that these racial disparities persist for hospital readmissions. African-Americans have higher rates of hospital readmission (Jencks, Williams & Coleman, 2009) and hospitals serving larger percentages of African-Americans than Whites have a higher overall readmission rates. Using data from a large health maintenance organization and FFS Medicare claims for patients with a stroke occurring in the 2-year period 1998-2000, African-American race was a significant predictor of experiencing at least one complicated transition defined as moving from a less to a more intense care setting after hospital discharge. Patients who had had multiple complicated transitions were 38 percent more likely to be African-American (Kind et al., 2008). Another study analyzing hospital readmission rates using Medicare claims data from 2003-2004 found that African-Americans had a nearly 6 percent higher risk of rehospitalization within 30 days of hospital discharge than those of other races (Jencks, Williams & Coleman, 2009).

However, recent research has pointed to the fact that racial disparities associated with pressure ulcer rates are not due to differences in the way that White and non-White residents are treated within facilities, but instead at least partially attributable to differences across facilities. In other words, results suggest that Black nursing home residents tend to have poorer outcomes than White residents because they are more likely to be receiving services

from poorer performing facilities, not that Black residents residing in the same facility as White residents receive systematically poorer quality services than White residents in the same facility. For example, a recent study of 619 New York state nursing homes using 2006-2007 MDS 2.0 data examined whether differences in the prevalence of pressure ulcers in the high-risk, long-term care residents were due to disparities within facilities or among facilities. Results suggested that, while overall pressure ulcer prevalence for Blacks was higher than Whites (18.2% compared to 13.8%), the higher prevalence for Black nursing home residents was most likely due to the fact that Black residents more often received care in lower quality nursing homes, rather than differential treatment of Black and White residents within nursing homes (Cai, Mukamel, Temkin-Greener 2010).

For the overall Hospital-Wide Readmission Measure, hospitals with greater percentages of African-American patients had higher rates of readmission (and therefore performed worse on the quality measure). This was also true for the acute myocardial infarction (AMI) readmission measure, but not true of the readmission measures for patients with heart failure, pneumonia, or hip/knee replacement, where the results for both patients were similar (Suter et al., 2012). An article utilizing the same statistical approach to measure the CMS hospital readmission measures to determine whether or not disparities exist in Medicare readmission rates found no statistically significant difference between Blacks and Whites (Dombrowski et al., 2012). However, the two studies utilized different years of Medicare claims data, as well as different statistical analysis methods, both of which could have contributed to the different findings. Among studies specifically of hospital readmissions for patients in SNFs, one national study using MDS data found that the unadjusted 30-day readmission rate was 18.6 percent for African-American patients and 14.3 percent for White patients, resulting in an odds ratio of 1.37 (Li et al., 2011b). These numbers were even more dramatic when analyzing the 90-day readmission rate: the readmission rate for African-American patients was 29.5 percent compared to 22.1 percent for White patients, with an odds ratio of 1.48. An underlying question is whether race is a standalone predictor of worse outcomes, or if race acts as a proxy for socioeconomic status and its associated impact on the quality of clinical care. For these reasons, we did not stratify the measure by race/ethnicity or adjust for race/ethnicity in the risk adjustment models. Lastly, we do acknowledge that race and ethnicity may be associated with systematic differences in patient preferences for care, which may impact decisions to hospitalize patients.

Cai S, Mukamel DB, Temkin-Greener H. Pressure ulcer prevalence among black and white nursing home residents in New York state: evidence of racial disparity? *Med Care*. Mar 2010;48(3):233-239.

Dombrowski, Wen et al. "Factors Predicting Rehospitalization of Elderly Patients in a Postacute Skilled Nursing Facility Rehabilitation Program." *Archives of Physical Medicine and Rehabilitation*, October 2012. 93 pp. 1808-1813.

Grabowski DC. The admission of blacks to high-deficiency nursing homes. *Medical Care*. May 2004;42(5):456-464.

Howard DL, Sloane PD, Zimmerman S, et al. Distribution of African Americans in residential care/assisted living and nursing homes: more evidence of racial disparity? *American Journal of Public Health*. Aug 2002;92(8):1272-1277.

Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. *The New England Journal of Medicine*. Apr 2 2009;360(14):1418-1428.

Kind, AJH, et al. "Bouncing Back: Patterns and Predictors of Complicated Transitions 30 Days after Hospitalization for Acute Ischemic Stroke." *Journal of the American Geriatric Society*, 2007 March, 55(3): 365-373.

Li Y, et al. "Association of Race and Sites of Care with Pressure Ulcers in High-Risk Nursing Home Residents." *Journal of the American Medical Association*, July 13, 2011(a). 306:2, pp 179-186.

Li Y, Mukamel DB. "Racial disparities in receipt of influenza and pneumococcus vaccinations among US nursing-home residents." *American Journal of Public Health*. 2010; 100(supp 1) 256-262.

Li Y, Glance LG, Yin J, and Mukamel DB. Racial disparities in rehospitalization among Medicare patients in skilled

nursing facilities. American Journal of Public Health: May 2011; 101(5):875-882.

Mor V, Zinn J, Angelelli J, Teno JM, Miller SC. Driven to tiers: socioeconomic and racial disparities in the quality of nursing home care. The Milbank Quarterly. 2004;82(2):227-256.

Silverstein MD, Qin H, Mercer SQ, Fong J, Haydar Z. Risk factors for 30-day hospital readmission in patients ≥ 65 years of age. Proc (Bayl Univ Med Cent). Oct 2008;21(4):363-372.

Suter LG, et al. "Medicare Hospital Quality Chartbook 2012: Performance Report on Outcome Measures". Center for Outcomes Research and Evaluation.

[Response Ends]

2. Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.

spma.01. Indicate whether there are changes to the specifications since the last updates/submission. If yes, update the specifications in the Measure Specifications section of the Measure Submission Form, and explain your reasoning for the changes below.

[Response Begins]

No

[Response Ends]

spma.02. Briefly describe any important changes to the measure specifications since the last measure update and provide a rationale.

For annual updates, please explain how the change in specifications affects the measure results. If a material change in specification is identified, data from re-testing of the measure with the new specifications is required for early maintenance review.

For example, specifications may have been updated based on suggestions from a previous NQF CDP review.

[Response Begins]

Not applicable

[Response Ends]

sp.01. Provide the measure title.

Measure titles should be concise yet convey who and what is being measured (see [What Good Looks Like](#)).

[Response Begins]

Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM)

[Response Ends]

sp.02. Provide a brief description of the measure.

Including type of score, measure focus, target population, timeframe, (e.g., Percentage of adult patients aged 18-75 years receiving one or more HbA1c tests per year).

[Response Begins]

The SNFRM estimates the risk-standardized rate of all-cause, unplanned hospital readmissions for Skilled Nursing Facility (SNF) Medicare fee-for-service (FFS) beneficiaries within 30 days of discharge from a prior proximal acute hospitalization. The prior proximal hospitalization is defined as an admission to an IPPS, CAH, psychiatric, or cancer hospital. The measure is risk-adjusted for patient demographics, principal diagnosis from the prior hospitalization, comorbidities, and other health status variables that affect the probability of a hospital readmission. The SNFRM includes Medicare FFS beneficiaries who were admitted to a SNF within 1 day of discharge from a hospital. The measure is calculated annually using a 12-month period.

[Response Ends]

sp.04. Check all the clinical condition/topic areas that apply to your measure, below.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Surgery: General*

[Response Begins]

Other (specify)

[Other (specify) Please Explain]

The SNFRM estimates the risk-standardized rate of all-cause, unplanned hospital readmissions for Skilled Nursing Facility (SNF) Medicare fee-for-service (FFS) beneficiaries within 30 days of discharge from a prior proximal acute hospitalization.

[Response Ends]

sp.05. Check all the non-condition specific measure domain areas that apply to your measure, below.

[Response Begins]

Care Coordination: Readmissions

Safety

Safety: Overuse

[Response Ends]

sp.06. Select one or more target population categories.

Select only those target populations which can be stratified in the reporting of the measure's result.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Populations at Risk: Populations at Risk*

[Response Begins]

Elderly (Age >= 65)

[Response Ends]

sp.07. Select the levels of analysis that apply to your measure.

Check ONLY the levels of analysis for which the measure is SPECIFIED and TESTED.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Clinician: Clinician*
- *Population: Population*

[Response Begins]

Facility

[Response Ends]

sp.08. Indicate the care settings that apply to your measure.

Check ONLY the settings for which the measure is SPECIFIED and TESTED.

[Response Begins]

Other

Post-Acute Care

[Response Ends]

sp.09. Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials.

Do not enter a URL linking to a home page or to general information. If no URL is available, indicate "none available".

[Response Begins]

<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/SNF-VBP/Measure>

[Response Ends]

sp.12. Attach the data dictionary, code table, or value sets (and risk model codes and coefficients when applicable). Excel formats (.xlsx or .csv) are preferred.

Attach an excel or csv file; if this poses an issue, [contact staff](#). Provide descriptors for any codes. Use one file with multiple worksheets, if needed.

[Response Begins]

Available in attached Excel or csv file

[Response Ends]

For the question below: state the outcome being measured. Calculation of the risk-adjusted outcome should be described in sp.22.

sp.13. State the numerator.

Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome).

DO NOT include the rationale for the measure.

[Response Begins]

The outcome for this measure is 30-day unplanned all-cause hospital readmissions of SNF patients. We define readmission as an inpatient admission for any cause, with the exception of certain planned admissions, within 30 days from the date of discharge from the patient's prior proximal acute hospitalization. The prior proximal hospitalization is defined as an admission to an inpatient prospective payment system (IPPS) hospital, critical access hospital (CAH), or PPS-exempt psychiatric or cancer hospital. Because the measure denominator is based on SNF admissions, it is possible that Medicare beneficiaries with more than one eligible admission may be included in the measure multiple times within a given year.

[Response Ends]

For the question below: describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in sp.22.

sp.14. Provide details needed to calculate the numerator.

All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets.

Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

Outcome definition

The measure counts unplanned hospital inpatient readmissions of SNF patients to any short-term acute care hospital for any cause within 30 days from the date of discharge from the patient's prior proximal acute hospitalization, excluding planned readmissions as defined below.

Observation stays: This measure does not include observation stays as a readmission.

Planned readmissions: Planned readmissions are not counted as readmissions. In order to define whether a readmission is planned or unplanned, the measure uses an RTI-modified version of the CMS Planned Readmission Algorithm (PRA), which includes additional procedures specific to post-acute care (PAC) settings (see <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/SNF-VBP/Downloads/SNF-Planned-Readmission-Algorithm-v30-.xlsx> for the codes with this modified PRA). Planned readmissions should not be counted against facilities, because planned readmissions are not a signal of quality of care. More information about planned readmission can be found in section 2.5 of the April 2019 technical report.

[Response Ends]

For the question below: state the target population for the outcome. Calculation of the risk-adjusted outcome should be described in sp.22.

sp.15. State the denominator.

Brief, narrative description of the target population being measured.

[Response Begins]

The measure includes admissions for SNF Medicare fee for service (FFS) beneficiaries who have been admitted to a SNF within 1 day of discharge from a prior proximal hospitalization.

Additional details are provided in sp.15, Denominator Details.

[Response Ends]

For the question below: describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in sp.22.

sp.16. Provide details needed to calculate the denominator.

All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets.

Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

The denominator includes all patients who have been admitted to a SNF within 1 day of discharge from a prior proximal hospitalization, taking denominator exclusions into account (see sp.16).

[Response Ends]

sp.17. Describe the denominator exclusions.

Brief narrative description of exclusions from the target population.

[Response Begins]

The following are excluded from the denominator:

1. SNF stays where the patient had one or more intervening post-acute care (PAC) admissions (inpatient rehabilitation facility [IRF] or long-term care hospital [LTCH]) which occurred either between the prior proximal hospital discharge and SNF admission or after the SNF discharge, within the 30-day risk window. Also excluded are SNF admissions where the patient had multiple SNF admissions after the prior proximal hospitalization, within the 30-day risk window.

Rationale: For patients who have IRF or LTCH admissions prior to their first SNF admission, these patients are starting their SNF admission later in the 30-day risk window and receiving other additional types of services as compared to patients admitted directly to the SNF from the prior proximal hospitalization and their risk for readmission is different than the rest of SNF admissions. Additionally, when patients have multiple PAC admissions, evaluating quality of care coordination is confounded and even controversial in terms of attributing responsibility for a readmission among multiple PAC providers. Similarly, assigning responsibility for a readmission for patients who have multiple SNF admissions subsequent to their prior proximal hospitalization is also controversial.

2. SNF stays with a gap of greater than 1 day between discharge from the prior proximal hospitalization and the SNF admission.

Rationale: These patients are starting their SNF admissions later in the 30-day risk window than patients admitted directly to the SNF from the prior proximal hospitalization. They are clinically different and their risk for readmission is different than the rest of SNF admissions.

3. SNF stays where the patient did not have at least 12 months of FFS Medicare enrollment prior to the proximal hospital discharge and throughout the entire risk period (measured as enrollment during the month of proximal hospital discharge, for 12 months prior to that discharge, and the month after the month of discharge).

Rationale: FFS Medicare claims are used to identify comorbidities during the 12-month period prior to the proximal hospital discharge for risk adjustment. Readmissions occurring within the 30-day risk window when the patient does not have FFS Medicare coverage cannot be detected using claims.

4. SNF stays where the patient was discharged from the SNF against medical advice.

Rationale: The SNF was not able to complete care as needed.

5. SNF stays in which the principal diagnosis for the prior proximal hospitalization was for the medical treatment of cancer. Patients with cancer whose principal diagnosis from the prior proximal hospitalization was for other diagnoses or for surgical treatment of their cancer remain in the measure.

Rationale: Patients with a principal diagnosis of cancer for the prior hospitalization have a very different mortality and readmission risk than the rest of the Medicare population, and outcomes for these admissions do not correlate well with outcomes for other admissions.

6. SNF stays in which the principal primary diagnosis for the prior proximal hospitalization was for “rehabilitation care; fitting of prostheses and for the adjustment of devices”.

Rationale: Hospital admissions for these conditions are not for acute care.

7. SNF stays in which the prior proximal hospitalization was for pregnancy.

Rationale: While SNF stays in which the prior proximal hospitalization for pregnancy are very rare (for example, there were only 9 instances in FY2017) this measure is not intended to measure care related to pregnancy.

8. SNF stays in which data were missing or problematic on any covariate or variable used in the measure’s constructions.

Rationale: The needed data are not available to reliably calculate the measure score for the SNF.

9. SNF stays that took place in a CAH swing bed.

Rationale: CAHs are not paid on the SNF Prospective Payment System (PPS), therefore they are not eligible for the SNF VBP Program.

Note: Due to the ongoing impact of COVID-19 on all quality measures, additional exclusion(s) may be added in the future once more COVID data become available. This work is ongoing and the version of the measure that is used in production may include additional changes to the measure denominator for time periods that include COVID patients.

[Response Ends]

sp.18. Provide details needed to calculate the denominator exclusions.

All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

Denominator exclusions are based on data from the MedPAR and the Medicare Denominator files, specifically:

1. SNF stays where the patient had one or more intervening PAC admissions (IRF or LTCH), which occurred either between the prior proximal hospital discharge and SNF admission or after the SNF discharge, within the 30-day risk

window or where the patient had multiple SNF admissions after the prior proximal hospitalization were identified using the MedPAR files.

2. SNF stays with a gap of greater than 1 day between discharge from the prior proximal hospitalization and the SNF admission were identified using the MedPAR files.
3. Lack of 12 months of FFS Medicare enrollment prior to the proximal hospital discharge was identified by patient enrollment status in Part A FFS using the Medicare Denominator file. Enrollment must be indicated during the month of prior proximal hospital discharge and the 12 months preceding the prior proximal hospital discharge. Lack of FFS Medicare enrollment during the 30 days after discharge from the prior proximal hospitalization was identified by patient enrollment status in Part A FFS using the Medicare Denominator file. Enrollment must be indicated for the month(s) falling within 30 days of discharge from the prior proximal hospitalization.
4. Discharges from the SNF against medical advice were identified using the discharge disposition indicator on the corresponding SNF claim from the MedPAR files.
5. Cancer discharge condition categories excluded from the measure are identified using claims in the MedPAR files for prior proximal hospitalization.
6. “Rehabilitation care: fitting of prostheses and for the adjustment of devices” are identified by principal diagnosis codes (ICD-10 codes) included in CCS 254, using claims from the MedPAR files for prior proximal hospitalization.
7. SNF stays in which the prior proximal hospitalization was for pregnancy are identified based on the principal diagnosis from the prior proximal hospitalization mapping to CCS categories 176-196, using claims from the MedPAR files for prior proximal hospitalization.
8. SNF stays in which data were missing or problematic on any covariate or variable used in the measure’s constructions are identified in both the MedPAR and denominator files.
9. SNF stays that took place in a CAH swing bed are identified based on the CCN number (the 3rd position of the CCN=Z) which identifies a CAH swing bed, in the MedPAR file

[Response Ends]

sp.19. Provide all information required to stratify the measure results, if necessary.

Include the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate. Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format in the Data Dictionary field.

[Response Begins]

Not applicable. This measure is not stratified.

[Response Ends]

sp.20. Is this measure adjusted for socioeconomic status (SES)?

[Response Begins]

[Response Ends]

sp.21. Select the risk adjustment type.

Select type. Provide specifications for risk stratification and/or risk models in the Scientific Acceptability section.

[Response Begins]

Statistical risk model

[Response Ends]

sp.22. Select the most relevant type of score.

Attachment: If available, please provide a sample report.

[Response Begins]

Rate/proportion

[Response Ends]

sp.23. Select the appropriate interpretation of the measure score.

Classifies interpretation of score according to whether better quality or resource use is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score

[Response Begins]

Better quality = Lower score

[Response Ends]

sp.24. Diagram or describe the calculation of the measure score as an ordered sequence of steps.

Identify the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period of data, aggregating data; risk adjustment; etc.

[Response Begins]

Figure 1 in section 2.4 of the April 2019 technical report depicts the SNF readmission measure 30-day risk window starting from the prior proximal hospitalization discharge date. If the readmission occurred during the SNF stay within the 30-day risk window or after the SNF stay but still within the 30-day risk window, it is counted in the numerator.

Step one: Identify patients meeting the denominator criteria.

Step two: Identify patients meeting the numerator criteria taking into account the planned readmission algorithm.

Step three: Identify presence or absence of risk adjustment variables for each patient.

Step four: Calculate the predicted and expected number of readmissions for each SNF using the hierarchical logistic regression model, and the SNF standardized risk ratio. These calculations are specified in more detail with equations in the Sections 2.8 and 2.9 of the April 2019 technical report.

Step five: Calculate the risk-standardized SNF 30-day readmission rate

To aid interpretation, the SNF standardized risk ratio, or SRR, which is calculated in Step four, is then multiplied by the overall national raw readmission rate for all SNF stays to produce the SNF risk-standardized readmission rate (RSRR). See Section 2.9 of the April 2019 technical report for details.

NOTE: Because the statistic described in step five is a complex function of parameter estimates, re-sampling and simulation techniques (e.g., bootstrapping) are necessary to derive a confidence interval estimate for the final risk-standardized rate, to characterize the uncertainty of the estimate.

[Response Ends]

sp.27. If measure testing is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.

Examples of samples used for testing:

- Testing may be conducted on a sample of the accountable entities (e.g., hospital, physician). The analytic unit specified for the particular measure (e.g., physician, hospital, home health agency) determines the sampling strategy for scientific acceptability testing.
- The sample should represent the variety of entities whose performance will be measured. The [2010 Measure Testing Task Force](#) recognized that the samples used for reliability and validity testing often have limited generalizability because measured entities volunteer to participate. Ideally, however, all types of entities whose performance will be measured should be included in reliability and validity testing.
- The sample should include adequate numbers of units of measurement and adequate numbers of patients to answer the specific reliability or validity question with the chosen statistical method.
- When possible, units of measurement and patients within units should be randomly selected.

[Response Begins]

This measure is not based on a sample.

[Response Ends]

sp.30. Select only the data sources for which the measure is specified.

[Response Begins]

Claims

[Response Ends]

sp.31. Identify the specific data source or data collection instrument.

For example, provide the name of the database, clinical registry, collection instrument, etc., and describe how data are collected.

[Response Begins]

This measure is for Medicare beneficiaries and uses the data in the Medicare eligibility files and inpatient claims data. The eligibility files provide information on date of birth, sex, reasons for Medicare eligibility, periods of Part A coverage and periods in the fee-for-service program. The data elements from the Medicare FFS claims are those basic to the operation of the Medicare payment systems and include date of admission, date of discharge, diagnoses, procedures, indicators for use of dialysis services and indicators of whether the Part A benefit is exhausted. The inpatient claims data files contain beneficiary-level SNF and other hospital records. No data beyond the bills submitted in the normal course of business are required from the providers for the calculation of this measure.

The measure uses one year of data to calculate the measure rate for the Skilled Nursing Facility Readmission Measure, which we believe is sufficient to calculate this measure in a statistically reliable manner. This is because the reliability of a SNF's measure rate is related to its sample size.

Following are the specific files and links to the documentation:

- Medicare Inpatient claims - standard analytical files (2007-2012), index SNF claims (2009-2011)

Documentation for the Medicare claims data is provided online by the CMS contractor, Research Data Assistance Center (ResDAC) at the University of Minnesota. The following web page includes data dictionaries for these files: Standard analytical files (Inpatient RIF): <http://www.resdac.org/cms-data/files/ip-rif/data-documentation>

- Medicare Enrollment Database

Information about the Enrollment Database may be found here:

<http://aspe.hhs.gov/datacncl/datadir/cms.htm>

- Medicare Denominator files (2009-2011)

Documentation available at:

<http://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/IdentifiableDataFiles/DenominatorFile.html>

- AHRQ CCS groupings of ICD-9 codes

Documentation available at:

<http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp>

- CMS-HCC mappings of ICD-9 codes

Mappings are included in the software at the following website: <http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html>

[Response Ends]

sp.32. Provide the data collection instrument.

[Response Begins]

No data collection instrument provided

[Response Ends]

2ma.01. Indicate whether additional empirical reliability testing at the accountable entity level has been conducted. If yes, please provide results in the following section, Scientific Acceptability: Reliability - Testing. Include information on all testing conducted (prior testing as well as any new testing).

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

Current Submission:

Updated testing information here.

Previous Submission:

Testing from the previous submission here.

[Response Begins]

[Response Ends]

2ma.02. Indicate whether additional empirical validity testing at the accountable entity level has been conducted. If yes, please provide results in the following section, Scientific Acceptability: Validity - Testing. Include information on all testing conducted (prior testing as well as any new testing).

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

Current Submission:

Updated testing information here.

Previous Submission:

Testing from the previous submission here.

[Response Begins]

[Response Ends]

2ma.03. For outcome, patient-reported outcome, resource use, cost, and some process measures, risk adjustment/stratification may be conducted. Did you perform a risk adjustment or stratification analysis?

[Response Begins]

[Response Ends]

2ma.04. For maintenance measures in which risk adjustment/stratification has been performed, indicate whether additional risk adjustment testing has been conducted since the most recent maintenance evaluation. This may include updates to the risk adjustment analysis with additional clinical, demographic, and social risk factors.

Please update the Scientific Acceptability: Validity - Other Threats to Validity section.

Note: This section must be updated even if social risk factors are not included in the risk adjustment strategy.

[Response Begins]

[Response Ends]

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate fields in the Scientific Acceptability sections of the Measure Submission Form.

- Measures must be tested for all the data sources and levels of analyses that are specified. If there is more than one set of data specifications or more than one level of analysis, contact NQF staff about how to present all the testing information in one form.
- All required sections must be completed.
- For composites with outcome and resource use measures, Questions 2b.23-2b.37 (Risk Adjustment) also must be completed.
- If specified for multiple data sources/sets of specifications (e.g., claims and EHRs), Questions 2b.11-2b.13 also must be completed.
- An appendix for supplemental materials may be submitted (see Question 1 in the Additional section), but there is no guarantee it will be reviewed.
- Contact NQF staff with any questions. Check for resources at the [Submitting Standards webpage](#).
- For information on the most updated guidance on how to address social risk factors variables and testing in this form refer to the release notes for the [2021 Measure Evaluation Criteria and Guidance](#).

Note: The information provided in this form is intended to aid the Standing Committee and other stakeholders in understanding to what degree the testing results for this measure meet NQF's evaluation criteria for testing.

2a. Reliability testing demonstrates the measure data elements are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period and/or that the measure

score is precise. For instrument-based measures (including PRO-PMs) and composite performance measures, reliability should be demonstrated for the computed performance score.

2b1. Validity testing demonstrates that the measure data elements are correct and/or the measure score correctly reflects the quality of care provided, adequately identifying differences in quality. For instrument based measures (including PRO-PMs) and composite performance measures, validity should be demonstrated for the computed performance score.

2b2. Exclusions are supported by the clinical evidence and are of sufficient frequency to warrant inclusion in the specifications of the measure;

AND

If patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that the exclusion impacts performance on the measure; in such cases, the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

2b3. For outcome measures and other measures when indicated (e.g., resource use):

- an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified; is based on patient factors (including clinical and social risk factors) that influence the measured outcome and are present at start of care; 14,15 and has demonstrated adequate discrimination and calibration

OR

- rationale/data support no risk adjustment/ stratification.

2b4. Data analysis of computed measure scores demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful 16 differences in performance;

OR

there is evidence of overall less-than-optimal performance.

2b5. If multiple data sources/methods are specified, there is demonstration they produce comparable results.

2b6. Analyses identify the extent and distribution of missing data (or nonresponse) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders) and how the specified handling of missing data minimizes bias.

2c. For composite performance measures, empirical analyses support the composite construction approach and demonstrate that:

2c1. the component measures fit the quality construct and add value to the overall composite while achieving the related objective of parsimony to the extent possible; and

2c2. the aggregation and weighting rules are consistent with the quality construct and rationale while achieving the related objective of simplicity to the extent possible.

(if not conducted or results not adequate, justification must be submitted and accepted)

Definitions

Reliability testing applies to both the data elements and computed measure score. Examples of reliability testing for data elements include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing of the measure score addresses precision of measurement (e.g., signal-to-noise).

Validity testing applies to both the data elements and computed measure score. Validity testing of data elements typically analyzes agreement with another authoritative source of the same information. Examples of validity testing of the measure score include, but are not limited to: testing hypotheses that the measures scores indicate quality of care, e.g., measure scores are different for groups known to have differences in quality assessed by another valid quality measure or method; correlation of measure scores with another valid indicator of quality for

the specific topic; or relationship to conceptually related measures (e.g., scores on process measures to scores on outcome measures). Face validity of the measure score as a quality indicator may be adequate if accomplished through a systematic and transparent process, by identified experts, and explicitly addresses whether performance scores resulting from the measure as specified can be used to distinguish good from poor quality. The degree of consensus and any areas of disagreement must be provided/discussed.

Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, variability of exclusions across providers, and sensitivity analyses with and without the exclusion.

Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

Risk factors that influence outcomes should not be specified as exclusions.

With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74 percent v. 75 percent) is clinically meaningful; or whether a statistically significant difference of \$25 in cost for an episode of care (e.g., \$5,000 v. \$5,025) is practically meaningful. Measures with overall less-than-optimal performance may not demonstrate much variability across providers.

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

Current Submission:

Updated testing information here.

Previous (Year) Submission:

Testing from the previous submission here.

2a.01. Select only the data sources for which the measure is tested.

[Response Begins]

[Response Ends]

2a.02. If an existing dataset was used, identify the specific dataset.

The dataset used for testing must be consistent with the measure specifications for target population and healthcare entities being measured; e.g., Medicare Part A claims, Medicaid claims, other commercial insurance, nursing home MDS, home health OASIS, clinical registry).

[Response Begins]

[Response Ends]

2a.03. Provide the dates of the data used in testing.

Use the following format: "MM-DD-YYYY - MM-DD-YYYY"

[Response Begins]

[Response Ends]

2a.04. Select the levels of analysis for which the measure is tested.

Testing must be provided for all the levels specified and intended for measure implementation, e.g., individual clinician, hospital, health plan.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Clinician: Clinician*
- *Population: Population*

[Response Begins]

[Response Ends]

2a.05. List the measured entities included in the testing and analysis (by level of analysis and data source).

Identify the number and descriptive characteristics of measured entities included in the analysis (e.g., size, location, type); if a sample was used, describe how entities were selected for inclusion in the sample.

[Response Begins]

[Response Ends]

2a.06. Identify the number and descriptive characteristics of patients included in the analysis (e.g., age, sex, race, diagnosis), separated by level of analysis and data source; if a sample was used, describe how patients were selected for inclusion in the sample.

If there is a minimum case count used for testing, that minimum must be reflected in the specifications.

[Response Begins]

[Response Ends]

2a.07. If there are differences in the data or sample used for different aspects of testing (e.g., reliability, validity, exclusions, risk adjustment), identify how the data or sample are different for each aspect of testing.

[Response Begins]

[Response Ends]

2a.08. List the social risk factors that were available and analyzed.

For example, patient-reported data (e.g., income, education, language), proxy variables when social risk data are not collected from each patient (e.g. census tract), or patient community characteristics (e.g. percent vacant housing, crime rate) which do not have to be a proxy for patient-level data.

[Response Begins]

[Response Ends]

Note: If accuracy/correctness (validity) of data elements was empirically tested, separate reliability testing of data elements is not required – in 2a.09 check patient or encounter-level data; in 2a.010 enter “see validity testing section of data elements”; and enter “N/A” for 2a.11 and 2a.12.

2a.09. Select the level of reliability testing conducted.

Choose one or both levels.

[Response Begins]

[Response Ends]

2a.10. For each level of reliability testing checked above, describe the method of reliability testing and what it tests.

Describe the steps—do not just name a method; what type of error does it test; what statistical analysis was used.

[Response Begins]

[Response Ends]

2a.11. For each level of reliability testing checked above, what were the statistical results from reliability testing?

For example, provide the percent agreement and kappa for the critical data elements, or distribution of reliability statistics from a signal-to-noise analysis. For score-level reliability testing, when using a signal-to-noise analysis, more than just one overall statistic should be reported (i.e., to demonstrate variation in reliability across providers). If a particular method yields only one statistic, this should be explained. In addition, reporting of results stratified by sample size is preferred (pg. 18, [NQF Measure Evaluation Criteria](#)).

[Response Begins]

[Response Ends]

2a.12. Interpret the results, in terms of how they demonstrate reliability.

(In other words, what do the results mean and what are the norms for the test conducted?)

[Response Begins]

[Response Ends]

2b.01. Select the level of validity testing that was conducted.

[Response Begins]

[Response Ends]

2b.02. For each level of testing checked above, describe the method of validity testing and what it tests.

Describe the steps—do not just name a method; what was tested, e.g., accuracy of data elements compared to authoritative source, relationship to another measure as expected; what statistical analysis was used.

[Response Begins]

[Response Ends]

2b.03. Provide the statistical results from validity testing.

Examples may include correlations or t-test results.

[Response Begins]

[Response Ends]

2b.04. Provide your interpretation of the results in terms of demonstrating validity. (i.e., what do the results mean and what are the norms for the test conducted?)

[Response Begins]

[Response Ends]

2b.05. Describe the method for determining if statistically significant and clinically/practically meaningful differences in performance measure scores among the measured entities can be identified.

Describe the steps—do not just name a method; what statistical analysis was used? Do not just repeat the information provided in Importance to Measure and Report: Gap in Care/Disparities.

[Response Begins]

[Response Ends]

2b.06. Describe the statistical results from testing the ability to identify statistically significant and/or clinically/practically meaningful differences in performance measure scores across measured entities.

Examples may include number and percentage of entities with scores that were statistically significantly different from mean or some benchmark, different from expected; how was meaningful difference defined.

[Response Begins]

[Response Ends]

2b.07. Provide your interpretation of the results in terms of demonstrating the ability to identify statistically significant and/or clinically/practically meaningful differences in performance across measured entities.

In other words, what do the results mean in terms of statistical and meaningful differences?

[Response Begins]

[Response Ends]

2b.08. Describe the method of testing conducted to identify the extent and distribution of missing data (or non-response) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders). Include how the specified handling of missing data minimizes bias.

Describe the steps—do not just name a method; what statistical analysis was used.

[Response Begins]

[Response Ends]

2b.09. Provide the overall frequency of missing data, the distribution of missing data across providers, and the results from testing related to missing data.

For example, provide results of sensitivity analysis of the effect of various rules for missing data/non-response. If no empirical sensitivity analysis was conducted, identify the approaches for handling missing data that were considered and benefits and drawbacks of each).

[Response Begins]

[Response Ends]

2b.10. Provide your interpretation of the results, in terms of demonstrating that performance results are not biased due to systematic missing data (or differences between responders and non-responders), and how the specified handling of missing data minimizes bias.

In other words, what do the results mean in terms of supporting the selected approach for missing data and what are the norms for the test conducted; if no empirical analysis was conducted, justify the selected approach for missing data.

[Response Begins]

[Response Ends]

Note: This item is directed to measures that are risk-adjusted (with or without social risk factors) OR to measures with more than one set of specifications/instructions (e.g., one set of specifications for how to identify and compute the measure from medical record abstraction and a different set of specifications for claims or eQCMs). It does not apply to measures that use more than one source of data in one set of specifications/instructions (e.g., claims data to identify the denominator and medical record abstraction for the numerator). Comparability is not required when comparing performance scores with and without social risk factors in the risk adjustment model. However, if comparability is not demonstrated for measures with more than one set of specifications/instructions, the different specifications (e.g., for medical records vs. claims) should be submitted as separate measures.

2b.11. Indicate whether there is more than one set of specifications for this measure.

[Response Begins]

[Response Ends]

2b.12. Describe the method of testing conducted to compare performance scores for the same entities across the different data sources/specifications.

Describe the steps—do not just name a method. Indicate what statistical analysis was used.

[Response Begins]

[Response Ends]

2b.13. Provide the statistical results from testing comparability of performance scores for the same entities when using different data sources/specifications.

Examples may include correlation, and/or rank order.

[Response Begins]

[Response Ends]

2b.14. Provide your interpretation of the results in terms of the differences in performance measure scores for the same entities across the different data sources/specifications.

In other words, what do the results mean and what are the norms for the test conducted.

[Response Begins]

[Response Ends]

2b.15. Indicate whether the measure uses exclusions.

[Response Begins]

[Response Ends]

2b.16. Describe the method of testing exclusions and what was tested.

Describe the steps—do not just name a method; what was tested, e.g., whether exclusions affect overall performance scores; what statistical analysis was used?

[Response Begins]

[Response Ends]

2b.17. Provide the statistical results from testing exclusions.

Include overall number and percentage of individuals excluded, frequency distribution of exclusions across measured entities, and impact on performance measure scores.

[Response Begins]

[Response Ends]

2b.18. Provide your interpretation of the results, in terms of demonstrating that exclusions are needed to prevent unfair distortion of performance results.

In other words, the value outweighs the burden of increased data collection and analysis. Note: If patient preference is an exclusion, the measure must be specified so that the effect on the performance score is transparent, e.g., scores with and without exclusion.

[Response Begins]

[Response Ends]

2b.19. Check all methods used to address risk factors.

[Response Begins]

[Response Ends]

2b.20. If using statistical risk models, provide detailed risk model specifications, including the risk model method, risk factors, risk factor data sources, coefficients, equations, codes with descriptors, and definitions.

[Response Begins]

[Response Ends]

2b.21. If an outcome or resource use measure is not risk-adjusted or stratified, provide rationale and analyses to demonstrate that controlling for differences in patient characteristics (i.e., case mix) is not needed to achieve fair comparisons across measured entities.

[Response Begins]

[Response Ends]

2b.22. Select all applicable resources and methods used to develop the conceptual model of how social risk impacts this outcome.

[Response Begins]

[Response Ends]

2b.23. Describe the conceptual and statistical methods and criteria used to test and select patient-level risk factors (e.g., clinical factors, social risk factors) used in the statistical risk model or for stratification by risk.

Please be sure to address the following: potential factors identified in the literature and/or expert panel; regression analysis; statistical significance of $p < 0.10$ or other statistical tests; correlation of x or higher. Patient factors should be present at the start of care, if applicable. Also discuss any "ordering" of risk factor inclusion; note whether social risk factors are added after all clinical factors. Discuss any considerations regarding data sources (e.g., availability, specificity).

[Response Begins]

[Response Ends]

2b.24. Detail the statistical results of the analyses used to test and select risk factors for inclusion in or exclusion from the risk model/stratification.

[Response Begins]

[Response Ends]

2b.25. Describe the analyses and interpretation resulting in the decision to select or not select social risk factors.

Examples may include prevalence of the factor across measured entities, availability of the data source, empirical association with the outcome, contribution of unique variation in the outcome, or assessment of between-unit effects and within-unit effects. Also describe the impact of adjusting for risk (or making no adjustment) on providers at high or low extremes of risk.

[Response Begins]

[Response Ends]

2b.26. Describe the method of testing/analysis used to develop and validate the adequacy of the statistical model or stratification approach (describe the steps—do not just name a method; what statistical analysis was used). Provide the statistical results from testing the approach to control for differences in patient characteristics (i.e., case mix) below. If stratified ONLY, enter “N/A” for questions about the statistical risk model discrimination and calibration statistics.

Validation testing should be conducted in a data set that is separate from the one used to develop the model.

[Response Begins]

[Response Ends]

2b.27. Provide risk model discrimination statistics.

For example, provide c-statistics or R-squared values.

[Response Begins]

[Response Ends]

2b.28. Provide the statistical risk model calibration statistics (e.g., Hosmer-Lemeshow statistic).

[Response Begins]

[Response Ends]

2b.29. Provide the risk decile plots or calibration curves used in calibrating the statistical risk model.

The preferred file format is .png, but most image formats are acceptable.

[Response Begins]

[Response Ends]

2b.30. Provide the results of the risk stratification analysis.

[Response Begins]

[Response Ends]

2b.31. Provide your interpretation of the results, in terms of demonstrating adequacy of controlling for differences in patient characteristics (i.e., case mix).

In other words, what do the results mean and what are the norms for the test conducted?

[Response Begins]

[Response Ends]

2b.32. Describe any additional testing conducted to justify the risk adjustment approach used in specifying the measure.

Not required but would provide additional support of adequacy of the risk model, e.g., testing of risk model in another data set; sensitivity analysis for missing data; other methods that were assessed.

[Response Begins]

[Response Ends]

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3.01. Check all methods below that are used to generate the data elements needed to compute the measure score.

[Response Begins]

Coded by someone other than person obtaining original information (e.g., DRG, ICD-10 codes on claims)

[Response Ends]

3.02. Detail to what extent the specified data elements are available electronically in defined fields.

In other words, indicate whether data elements that are needed to compute the performance measure score are in defined, computer-readable fields.

[Response Begins]

ALL data elements are in defined fields in a combination of electronic sources

[Response Ends]

3.03. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using data elements not from electronic sources.

[Response Begins]

[Response Ends]

3.04. Describe any efforts to develop an eCQM.

[Response Begins]

[Response Ends]

3.06. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

[Response Begins]

[Response Ends]

Consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

3.07. Detail any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm),

Attach the fee schedule here, if applicable.

[Response Begins]

Not applicable

[Response Ends]

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making.

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement, in addition to demonstrating performance improvement.

4a.01. Check all current uses. For each current use checked, please provide:

Name of program and sponsor

URL

Purpose

Geographic area and number and percentage of accountable entities and patients included

Level of measurement and setting

[Response Begins]

[Response Ends]

4a.02. Check all planned uses.

[Response Begins]

Public reporting

Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

Quality Improvement (internal to the specific organization)

[Response Ends]

4a.03. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing), explain why the measure is not in use.

For example, do policies or actions of the developer/steward or accountable entities restrict access to performance results or block implementation?

[Response Begins]

The measure is not currently publicly reported or used in at least one other accountability application but is currently under consideration for public reporting. The measure production has not been finalized.

[Response Ends]

4a.04. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes: used in any accountability application within 3 years, and publicly reported within 6 years of initial endorsement.

A credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.

[Response Begins]

The measure is not currently publicly reported or used in at least one other accountability application but is under consideration for public reporting. The measure production has not been finalized. Because the measure is based on Medicare fee-for-service claims, no new data collection mechanisms need to be put into place.

[Response Ends]

4a.05. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

Detail how many and which types of measured entities and/or others were included. If only a sample of measured entities were included, describe the full population and how the sample was selected.

[Response Begins]

The SNF 30-Day All-Cause Readmission Measure (SNFRM) was adopted for the SNF Value-Based Purchasing (SNF VBP) Program beginning in the SNF PPS FY 2016 final rule. It was first used to determine payment in FY 2019. SNFs have received quarterly confidential feedback reports with facility-specific measure data since December 2016.

The SNF VBP Program has performed provider outreach through National Providers Calls, the Medicare Learning Network, a CMS website, which includes a Frequently Asked Questions (FAQ) document, and other outreach activities.

Baseline Period (CY 2015) measure data were posted on Nursing Home Compare, and, more recently, full FY 2020 Program year/2018 performance period results. The SNF VBP Program has a Help Desk available for providers who have questions about the measure, Program, or are requesting a correction to data.

Per statute, the SNF VBP Program applies to all SNFs paid under the SNF PPS nationally. To be scored in the Program, SNFs that have at least one eligible stay receive a facility-specific quarterly confidential feedback report via the Certification and Survey Provider Enhanced Report (CASPER) reporting system.

For the first four quarterly reports, SNFs received annual performance data (CY 2013, CY 2014, CY 2015, and FY 2016). In December 2017, CMS began providing SNFs with a “snap shot” of their performance period stay-level data as it became available, on a quarterly basis, as a full year of data was not yet available. The first performance score report was issued on August 2nd, 2018. This report contained baseline and performance period measure performance information, along with achievement scores, improvement scores, performance scores and payment incentive information for the FY 2019 SNF VBP Program Year. CMS conducted targeted provider outreach including a national call and YouTube video to assist SNFs in using these reports.

[Response Ends]

4a.06. Describe the process for providing measure results, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

[Response Begins]

As part of the implementation process, SNFs have received quarterly interim stay-level reports which include information about all stays in the measurement period, such as the readmitting hospital, readmission diagnosis, and date of readmission for stays included in the measure numerator (if applicable). SNFs also received a

performance score report, which provides information about resident stays for the performance period as well as risk-standardized readmission rates, improvement scores, achievement scores, performance scores and incentive payments as part of the SNF VBP Program. All reports contained a detailed data dictionary explaining the contents of the report. An online tutorial was developed by CMS to help providers understand the performance score reports.

All facility-level information contained in the performance score reports has been made publicly available to date. A FAQ document is also available on the SNF VBP website.

[Response Ends]

4a.07. Summarize the feedback on measure performance and implementation from the measured entities and others. Describe how feedback was obtained.

[Response Begins]

The SNFRM was finalized for implementation for the SNF VBP Program in the FY 2016 SNF PPS Final Rule (80 FR 46411-46427). CMS received feedback from stakeholders as part of public comment during rulemaking; SNF PPS rules with public comment and CMS responses can be accessed from this URL:
<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/SNF-VBP/SNF-VBP-Page>

CMS has conducted user-centered design interviews with key stakeholders to determine how these stakeholders use these reports, including information about measure performance and resultant payment, and solicit input on enhancements that could be made to improve the reports.

CMS also currently collects ongoing feedback from stakeholders through the SNF VBP helpdesk.

[Response Ends]

4a.08. Summarize the feedback obtained from those being measured.

[Response Begins]

Following implementation, providers have largely requested clarification with interpretation of their measure scores and the calculation of incentives based on measure performance. Specifically, providers requested that patient-level data be made available to facilities (which was subsequently incorporated into the quarterly reports). Key stakeholders, interviewed during user-centered design testing, suggested including plain language definitions of the measure and its exclusions as well as plain language interpretations of measure performance their feedback reports.

Other feedback on the SNFRM has included comments about the readmission risk window. Notably, some stakeholders supported either a longer readmission risk window or the use of two measures, one to measure readmissions during the SNF stay and a second to measure readmissions after SNF discharge. Lastly, we have received feedback through rulemaking supporting the risk-adjustment for social risk factors. Given this measure was included in the trial period for SES testing, measure development contractors (RTI International) have conducted extensive empirical testing which did not support adding these factors to the risk model. More specifically, the measure developer tested dual eligibility (DE) as a potential risk adjuster and found it was associated with a lower odds of readmission.

Questions from measured entities are answered directly through the SNF VBP help desk emails. Measure-specific questions from measured entities have mostly focused on specific questions related to their claims data, including coding errors, patient attribution to their facility, patients that fall into one of the exclusion categories, and questions about procedures covered by the Planned Admissions Algorithm.

[Response Ends]

4a.09. Summarize the feedback obtained from other users.

[Response Begins]

Not applicable.

[Response Ends]

4a.10. Describe how the feedback described has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

[Response Begins]

The quarterly reports were revised to include patient-level data so that providers can determine which patients were readmitted. CMS is also in process of considering refinements to reports, including adding plain language explanations of the measure and SNF's performance on it, to help address stakeholder feedback obtained through user-centered design interviews.

Initial social-risk factor testing did not support the addition dual eligibility as a risk factor. However, CMS continues to monitor the effects of the SNF VBP program on SNFs that serve different types of populations, and will consider an upcoming MedPAC report on the topic (due in 2021) as well as ongoing stakeholder feedback.

[Response Ends]

4b.01. You may refer to data provided in Importance to Measure and Report: Gap in Care/Disparities, but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included). If no improvement was demonstrated, provide an explanation. If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

[Response Begins]

No improvement was demonstrated because this measure is not currently used for performance improvement at the time of the initial endorsement submission.

[Response Ends]

4b.02. Explain any unexpected findings (positive or negative) during implementation of this measure, including unintended impacts on patients.

[Response Begins]

No unintended or negative consequences were identified during testing, and this measure has not yet been publicly reported. A potential unintended consequence that should be monitored is that SNFs may be deterred from sending patients back to the hospital for a readmission, even when a hospital admission may be warranted. This potential issue could be mitigated by training, and making it clear that there is no expectation of perfect scores (no patients readmitted). Additionally, we recommend ongoing monitoring and evaluation for these unintended consequences.

[Response Ends]

4b.03. Explain any unexpected benefits realized from implementation of this measure.

[Response Begins]

[Response Ends]

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

If you are updating a maintenance measure submission for the first time in MIMS, please note that the previous related and competing data appearing in question 5.03 may need to be entered in to 5.01 and 5.02, if the measures are NQF endorsed. Please review and update questions 5.01, 5.02, and 5.03 accordingly.

5.01. Search and select all NQF-endorsed related measures (conceptually, either same measure focus or target population).

(Can search and select measures.)

[Response Begins]

[Response Ends]

5.02. Search and select all NQF-endorsed competing measures (conceptually, the measures have both the same measure focus or target population).

(Can search and select measures.)

[Response Begins]

[Response Ends]

5.03. If there are related or competing measures to this measure, but they are not NQF-endorsed, please indicate the measure title and steward.

[Response Begins]

Competing Measures: Same Target Population and Same Measure Focus
There are no measures with the same SNF target population and same measure focus.

Measures with Same Target Population and Similar Focus

One measure, “Heart failure: percentage of patients with heart failure readmitted for acute episode of heart” failure (not NQF endorsed and recently withdrawn from the AHRQ National Measures Clearinghouse) has the same target population (nursing facility patients) and a similar focus (readmissions). However, this measure is only measuring readmissions for patients with heart failure who are readmitted for complications relating to heart failure, as opposed to the SNFRM, which is much more broadly focused.

Measures with Similar Focus and Similar Target Population that are Not NQF-Endorsed

PacifiCare Hospital Readmission: This is an all-cause hospital readmission measure examining readmissions, but the patient population is both the Medicare and commercial payer populations (excluding maternity and pediatric discharges) and therefore not competing with the SNFRM. The measure is calculated using an “observed/expected” ratio, but utilizing much simpler statistical analysis techniques than were utilized in the SNFRM. Additionally, the American Health Care Association (AHCA) is developing a 30-day re-hospitalization measure, called the Pointright30. The Pointright30 is not claims-based, but instead uses MDS 3.0 data, and includes planned and unplanned readmissions in the numerator. It also has no patient-level exclusions.

Measures with Similar Focus and Different Target Population that are Not NQF-Endorsed

Heart failure: percentage of patients with heart failure readmitted for acute episode of heart failure: this is a condition-specific measure with a broad patient population (measure population: patients 18 and older). The importance of this issue is not ignored, as incidence of heart failure within this population resulting in hospitalization would be captured in the SNFRM measure. This measure was recently withdrawn from the AHRQ

National Measures Clearinghouse.

Venous thromboembolism (VTE) prophylaxis: percentage of discharged patients who are readmitted to the hospital for conditions related to VTE within 30 days of discharge: this is a condition-specific measure with a broad patient population (measure population: patients 18 and older). The importance of this issue is not ignored, as incidence of VTE within this population resulting in hospitalization would be captured in the SNFRM measure.

Diagnosis and management of asthma: percentage of discharged patients with asthma who are readmitted to hospital within 30 days of discharge: This measure is disease specific, and also has a much broader patient population that includes children (measure population: patients 5 years of age and older) and is therefore not a relevant measure for comparison.

CMS is submitting four other measures focusing on readmissions of patients from other post-acute care providers (i.e., inpatient rehabilitation facilities (IRFs), long-term care hospitals (LTCHs), home health agencies (HHAs)) as well as from end-stage renal (ESRD) facilities. These measures are all claims based and have been harmonized with CMS' Hospital-Wide Readmission Measure (NQF #1768), like the SNFRM, and the other measures under development for the IRF and LTCH settings.

[Response Ends]

5.04. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s), indicate whether the measure specifications are harmonized to the extent possible.

[Response Begins]

No

[Response Ends]

5.05. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

[Response Begins]

The SNFRM is harmonized to the greatest extent possible with CMS' 30-day All-Cause Hospital-Wide Unplanned Readmission Measure (HWR), developed by Yale University. The SNFRM is harmonized to some extent with the several other measures (listed below) developed using the same modeling techniques and applied to disease specific patient populations. However, the HWR measure is the primary focus for harmonization, as it has the same general population approach (as opposed to a disease specific approach) as the SNFRM. As the HWR population is different from the SNFRM population, this necessitates different approaches to stratification, risk adjustment, and the exclusion of planned readmissions; however, the overall analytic approach is harmonized as much as possible. The risk adjustment method is similar in that hierarchical logistic regression is applied to account for SNFs as clusters, but the exact covariates used to adjust the model are different to account for the differences in patient population. The HWR measure has created different stratifications (i.e., cohorts), based on the principal diagnosis, which correspond to hospital care teams. The SNFRM tested the use of SNF cohorts and found that they did not improve the risk adjustment model, so SNF cohorts were not applied in the final model. Patient frailty over the previous 12 months was taken into account by including a count of the number of HCCs for each patient as well as a quadratic term to account for nonlinearity of the effect of additional comorbidities (i.e., that a patient's readmission risk increases exponentially as the number of HCCs increases.) Also, the list of planned readmissions excluded from the HWR measure was expanded for the SNFRM measure, to include procedures commonly seen in the SNF population that may not be seen in the general Medicare population (See Appendix A). The other measure specifications, with regard to other exclusions, numerator/denominator specifications, time windows, and others, are harmonized. Additionally, the American Health Care Association (AHCA) is developing a Re-Hospitalization Metric, AHCA's PointRight's OnPoint30 Re-Hospitalization Metric, which was examined for potential alignment and harmonization. The SNFRM and PointRight's OnPoint30 Re-Hospitalization Metric each provide different insights

into the issue of hospital readmissions from Skilled Nursing Facilities (SNFs). Although both are all-cause hospital readmission measures, these two measures provide SNFs with two different perspectives on their hospital readmission rates. The SNFRM is designed more for quality reporting purposes by focusing on the readmissions most likely to be attributable to the facility, by reporting the rate of unplanned readmissions on a more selected set of patients. The SNFRM excludes certain types of hospitalizations, including planned readmissions, observation stays, and readmissions for medical cancer treatment, whereas PointRight's measure does not contain any such exclusions. The broader population captured by the PointRight metric, provides a more comprehensive general rate useful for quality improvement efforts. SNFs may even find it useful to compare the readmission rates, to determine what factors are driving their individual results. Additionally, the two measures rely on different data sources - the SNFRM uses Medicare fee-for-service claims (FFS), whereas PointRight uses the MDS. There are distinct advantages and disadvantages to each. The SNFRM was designed based on FFS claims, in order to be harmonized with CMS' current Hospital-Wide Readmission measure as well as other readmission measures being developed for other settings (i.e., inpatient rehabilitation facilities (IRFs), long-term care hospitals (LTCHs), home health agencies (HHAs), and end-stage renal (ESRD) facilities), and to promote shared accountability for improving care transitions across all settings. One disadvantage to claims data however, is that there is a six month lag in the availability of claims, meaning that it is more difficult for SNFs to use claims to monitor the results of quality improvement efforts, whereas MDS data is available sooner. Therefore, the PointRight measure can provide facilities with information about their readmission rates on a faster and more frequent time scale. Facilities may find it useful to supplement their annual readmission rates as determined from the claims data with more real-time information from the MDS in order to evaluate rapid-cycle quality improvement activities, allowing for both measures to add value to the process.

[Response Ends]

5.06. Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality). Alternatively, justify endorsing an additional measure.

Provide analyses when possible.

[Response Begins]

There are no measures with the same SNF target population and same measure focus.

[Response Ends]

Appendix

Supplemental materials may be provided in an appendix.:

Contact Information

Measure Steward (Intellectual Property Owner): Centers for Medicare & Medicaid Services

Measure Steward Point of Contact: , , helen.dollar-maples@cms.hhs.gov

, , helen.dollar-maples@cms.hhs.gov

Measure Developer if different from Measure Steward: Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE)

Measure Developer Point(s) of Contact: Peter, Doris, doris.peter@yale.edu

Peter, Doris, doris.peter@yale.edu

Peter, Doris, doris.peter@yale.edu

Additional Information

1. Provide any supplemental materials, if needed, as an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be collated one file with a table of contents or bookmarks. If material pertains to a specific criterion, that should be indicated.

[Response Begins]

[Response Ends]

2. List the workgroup/panel members' names and organizations.

Describe the members' role in measure development.

[Response Begins]

- Gregory Arling, PhD- Indiana University Center for Aging Research and IU School of Medicine
- Debra Bakerjian, PhD, FNP, RN- UC Davis Betty Irene Moore School of Nursing
- Susannah Bernheim, MD, MHS- Yale/Yale New Haven Health Services Corporation (YNHHSC) Center for Outcomes Research and Evaluation (CORE)
- Toby Edelman, JD- Center for Medicare Advocacy
- David Gifford, MD, MPH-American Health Care Association
- Lawrence Martinelli, FACP, FIDSA- Infectious Diseases Society of America
- Vincent Mor, PhD- Brown University
- Dana Mukamel, PhD- University of California, Irvine
- Joseph Ouslander, MD- Charles E. Schmidt College of Medicine
- Marilyan Rantz, PhD, RN, FAAN/Curators' Professor- Sinclair School of Nursing, University of Missouri
- Ellen Strunk, PT, MS, GCS, CEEA- Rehab Resources and Consulting, Inc.

Members participated in multiple technical expert panels spanning from 2011-2013. The panels provided technical insight as to the development of measure specifications, but also discussed the implications of the measure's implementation, including potential unintended consequences. Specific topics discussed included measure exclusions (including the list of planned readmissions, and options for handling decedents), potential covariates to be considered for risk adjustment, and how the measure could be used to promote care coordination between acute care and post-acute care facilities. Additionally, a broader list of stakeholders was asked to publicly comment on the measure specifications.

[Response Ends]

3. Indicate the year the measure was first released.

[Response Begins]

[Response Ends]

4. Indicate the month and year of the most recent revision.

[Response Begins]

[Response Ends]

5. Indicate the frequency of review, or an update schedule, for this measure.

[Response Begins]

[Response Ends]

6. Indicate the next scheduled update or review of this measure.

[Response Begins]

[Response Ends]

7. Provide a copyright statement, if applicable. Otherwise, indicate "N/A".

[Response Begins]

Not applicable

[Response Ends]

8. State any disclaimers, if applicable. Otherwise, indicate "N/A".

[Response Begins]

Not Applicable

[Response Ends]

9. Provide any additional information or comments, if applicable. Otherwise, indicate "N/A".

[Response Begins]

[Response Ends]