



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 #: 2496

Corresponding Measures:

De.2. Measure Title: Standardized Readmission Ratio (SRR) for dialysis facilities

Co.1.1. Measure Steward: Centers for Medicare & Medicaid Services

De.3. Brief Description of Measure: The Standardized Readmission Ratio (SRR) for a dialysis facility is the ratio of the number of observed index discharges from acute care hospitals to that facility that resulted in an unplanned readmission to an acute care hospital within 4-30 days of discharge to the expected number of readmissions given the discharging hospitals and the characteristics of the patients and based on a national norm. Note that the measure is based on Medicare-covered dialysis patients.

1b.1. Developer Rationale: Unplanned readmission rates are an important indicator of patient morbidity and quality of life. On average, dialysis patients are admitted to the hospital nearly twice a year and hospitalizations account for approximately 38% of total Medicare expenditures for dialysis patients (U.S. Renal Data System, 2018). In 2010, 37% of dialysis patient discharges from an all-cause hospitalization were followed by an unplanned readmission within 30 days (U.S. Renal Data System, 2018). Measures of the frequency of unplanned readmissions, such as SRR, help efforts to control escalating medical costs, play an important role in providing cost-effective health care, and support coordination of care across inpatient and outpatient settings. Preventive interventions such as fluid weight management, management of mineral and bone disease, anemia management as well as post-discharge processes of care (medication reconciliation) by dialysis facilities, and coordination of care with other providers in the pre and post-discharge periods (communication with the dialysis provider; medication reconciliation) have the potential to prevent hospital readmissions for ESRD dialysis patients. Preventing hospital readmissions is regarded as a shared responsibility that can be impacted by both dialysis providers and hospitals.

Several studies and commentaries strongly suggest pre- and post-discharge interventions within the purview of dialysis providers may reduce the risk of unplanned readmissions within the ESRD chronic dialysis population (Assimon, Wang, and Flythe 2018; Plantinga et al 2018; Flythe et al 2017, 2016; Chan et al 2017; Assimon and Flythe 2017; Plantinga and Jaar 2017). Plantinga et al (2018) found that interventions in the immediate post-discharge period were associated with reduced readmission risk among hemodialysis patients. They also suggest that post-discharge processes of care may help identify certain patients at higher risk for readmission, creating opportunities for dialysis providers to initiate interventions to reduce readmissions. Chan and colleagues (2009) found that certain post-discharge assessments and changes in treatment at the dialysis facility may be associated with a reduced risk of readmission. Assessments included hemoglobin testing and modification of EPO dose; mineral and bone disease testing and modification of vitamin D; and, importantly, modification of dry weight after discharge. The risk of unplanned hospital readmission was reduced when these assessments were completed within the first seven days post-hospital discharge. In a commentary (Wish 2014) the Chan 2009 study and several others are cited as examples of the potential for care coordination to reduce readmissions among ESRD dialysis patients. The findings from Chan 2009 are further supported by results from a recent study (Lin et. al. CJASN, 2019) comparing principal diagnosis of index hospitalizations and their associated readmissions. Tables included in the paper's supplementary materials clearly demonstrate that a significant portion of readmission principal discharge diagnoses are for dialysis-related conditions. For example, regardless of the index hospitalization cause (i.e. infectious, endocrine, cardiovascular, GI, dermatologic, renal, etc), the top principal discharge diagnosis lists for related readmissions prominently included diagnoses typically associated with fluid overload and failure of fluid management in dialysis patients (fluid overload, hypertension, CHF, etc). These results support the early findings from Chan 2009, nearly a decade earlier, showing that adjustment of patient target weight in the early post-hospitalization discharge period (to adjust for the frequent weight loss and/or in-hospital re-assignment of a lower post-dialysis target weight) is a likely mechanism for a substantial minority of unplanned readmissions in the US chronic dialysis population.

Finally, findings from the first two performance years of the Center for Medicare and Medicaid Innovation's Comprehensive ESRD Care Initiative suggest care coordination may reduce readmission risk (The Lewin Group, 2019). The findings of this controlled study showed an overall decrease in the percentage of Medicare beneficiaries with at least one readmission, among those aligned to an ESRD Seamless Care Organization, relative to a matched comparison group of facilities

Studies in the non-dialysis setting have cited post-interventions or a combination of pre-and post-discharge interventions as drivers for reducing unplanned readmissions (Dunn 1994; Bostrom 1996; Dudas 2001; Azevedo 2002; Coleman 2004; Coleman 2006; Balaban 2008; Braun 2009; Naylor 1994; McDonald 2001; Creason 2001; Ahmed 2004; Anderson 2005; Jack 2009; Koehler 2009; Parry 2009). However, a recent study and related commentary challenge the reported magnitude of reductions in hospital-wide readmissions since 2010, as part of the publicly reported Hospital Wide Readmission (HWR) measure for the Hospital Readmission Reduction Program (HRRP) (Wadhera, Yeh, and Joynt-Maddox 2019; Ody et al 2019). They suggest the potential driver of these reductions is in part attributed to a change in diagnosis coding policy for inpatient claims that took effect in October 2012. While it is not yet settled whether the reductions were primarily or only nominally driven by the ability of hospitals to report more condition diagnoses, resulting in more robust comorbidity risk adjustment in the measure, the concern has generated attention about whether reported improvements in readmission rates is a result of the HWR and by extension better care delivery by hospitals. These concerns are not considered germane to drivers of readmission reduction based on the dialysis facility readmission measure. The SRR was implemented by CMS in 2015, after the 2012 coding changes took effect. Therefore trends in dialysis patient 30-day readmissions only reflect the period since the claims based diagnoses coding changes, and observed reductions since that time are not considered an artifact of the 2012 inpatient diagnosis coding changes.

Ahmed A, Thornton P, Perry GJ, Allman RM, DeLong JF. Impact of atrial fibrillation on mortality and readmission in older adults hospitalized with heart failure. *Eur J Heart Fail.* 2004;6(4):421–426.

Anderson MA, Clarke MM, Helms LB, Foreman MD. Hospital readmission from home health care before and after prospective payment. *J Nurs Scholarsh.* 2005;37(1):73–79.

Azevedo A, Pimenta J, Dias P, Bettencourt P, Ferreira A, Cerqueira-Gomes M. Effect of a heart failure clinic on survival and hospital readmission in patients discharged from acute hospital care. *Eur J Heart Fail.* 2002 Jun;4(3):353–359.

Balaban RB, Weissman JS, Samuel PA, Woolhandler S. Redefining and redesigning hospital discharge to enhance patient care: a randomized controlled study. *J Gen Intern Med.* 2008;23(8):1228–1233.

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Creason H. Congestive heart failure telemanagement clinic. *Lippencotts Case Management: Managing the Process of Patient Care.* 2001 Jul-Aug;6(4):146-56.

Dudas V, Bookwalter T, Kerr KM et al. The impact of follow-up telephone calls to patients after hospitalization. *American Journal of Medicine.* 2001; 111(9B):26S-30S

Dunn JM, Elliot TB, Lavy JA et al. Outpatient clinic review after arterial reconstruction: is it necessary? *Annals of the Royal College of Surgeons of England.* 1994 Sep;76(5):304-6.

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McDonald, MD. The hospitalist movement: wise or wishful thinking? *Nurse management*. 2001 Mar;32(3):30-1.

Naylor M, Broton D, Jones R et al. Comprehensive discharge planning for the hospitalized elderly. A randomized clinical trial. *Annals of Internal Medicine*. 1994 Jun 15;120(12):999-1006.

Parry C, Min SH, Chugh A et al. Further application of the care transitions intervention: results of a randomized controlled trial conducted in a fee-for-service setting. *Home Health Care Services Quarterly*. 2009;28(2-3):84-99.

United States Renal Data System. 2018 USRDS annual data report: Epidemiology of kidney disease in the United States. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2018

S.4. Numerator Statement: Each facility's observed number of hospital discharges that are followed by an unplanned hospital readmission within 4-30 days of discharge.

S.6. Denominator Statement: The denominator for a given facility is the expected number of the observed index hospital discharges that result in an unplanned readmission in days 4-30 and that are not preceded by an unplanned or competing event. The expectation accounts for patient-level characteristics, including measures of patient comorbidities, and the discharging hospital, and is based on estimated readmission rates for an overall population norm that corresponds to an "average" facility.

S.8. Denominator Exclusions: Index Discharge Exclusions:

A live inpatient hospital discharge is excluded if any of the following hold:

- Associated with a stay of 365 days or longer
- It is against medical advice
- It includes a primary diagnosis of cancer, mental health or rehabilitation
- It includes revenue center codes indicating rehabilitation
- It occurs after a patient's 12th hospital discharge in the calendar year
- It is from a PPS-exempt cancer hospital
- It is followed within 3 days by any hospitalization (at acute care, long-term care, rehabilitation, or psychiatric hospital or unit) or any other competing event (see S.5).

De.1. Measure Type: Outcome

S.17. Data Source: Claims, Registry Data

S.20. Level of Analysis: Facility

IF Endorsement Maintenance – Original Endorsement Date: Dec 23, 2014 **Most Recent Endorsement Date:** Dec 09, 2016

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

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

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?

1. Evidence, Performance Gap, Priority – 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.***

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[2496_NQF_Evidence.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence.

Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

Unplanned readmission rates are an important indicator of patient morbidity and quality of life. On average, dialysis patients are admitted to the hospital nearly twice a year and hospitalizations account for approximately 38% of total Medicare expenditures for dialysis patients (U.S. Renal Data System, 2018). In 2010, 37% of dialysis patient discharges from an all-cause hospitalization were followed by an unplanned readmission within 30 days (U.S. Renal Data System, 2018). Measures of the frequency of unplanned readmissions, such as SRR, help efforts to control escalating medical costs, play an important role in providing cost-effective health care, and support coordination of care across inpatient and outpatient settings. Preventive interventions such as fluid weight management, management of mineral and bone disease, anemia management as well as post-discharge processes of care (medication reconciliation) by dialysis facilities, and coordination of care with other providers in the pre and post-discharge periods (communication with the dialysis provider; medication reconciliation) have the potential to prevent hospital readmissions for ESRD dialysis patients. Preventing hospital readmissions is regarded as a shared responsibility that can be impacted by both dialysis providers and hospitals.

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1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, 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 (4b1) under Usability and Use.*

Unadjusted (raw) Readmission Rates:

2016: 0.265

2017: 0.264

2018: 0.263

2016: 6,442 facilities, SRR mean: 0.99, SD: 0.28, min: 0.00, max: 2.61, IQR: 0.33, deciles (10-90): 0.65, 0.78, 0.87, 0.93, 1.00, 1.06, 1.13, 1.20, 1.32

2017: 6,682 facilities, SRR mean: 1.00, SD: 0.28, min: 0.00, max: 2.47, IQR: 0.33, deciles (10-90): 0.66, 0.79, 0.84, 0.94, 1.00, 1.06, 1.13, 1.21, 1.32

2018: 6,937 facilities, SRR mean: 1.00, SD: 0.29, min: 0.00, max: 3.69, IQR: 0.34, deciles (10-90): 0.66, 0.78, 0.87, 0.94, 1.00, 1.06, 1.13, 1.21, 1.34

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, 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.

N/A

1b.4. 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. *(This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.) 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 (4b1) under Usability and Use.*

Sex (Male used as ref. group):

2016: 0.03 estimate, 0.01 standard error, 0.0008 p-value

2017: 0.04 estimate, 0.01 standard error, <0.0001 p-value

2018: 0.04 estimate, 0.01 standard error, <0.0001 p-value

Race (White used as ref. group):

American Indian or Alaskan Native:

2016: 0.0009 estimate, 0.05 standard error, 0.9856 p-value

2017: -0.07 estimate, 0.05 standard error, 0.1076 p-value

2018: 0.03 estimate, 0.04 standard error, 0.5445 p-value

Asian:

2016: -0.05 estimate, 0.02 standard error, 0.0342 p-value

2017: -0.04 estimate, 0.02 standard error, 0.1105 p-value

2018: -0.08 estimate, 0.02 standard error, 0.0005 p-value

Black:

2016: -0.02 estimate, 0.01 standard error, 0.0912 p-value

2017: -0.03 estimate, 0.01 standard error, 0.0067 p-value

2018: -0.02 estimate, 0.01 standard error, 0.0796 p-value

Other race:

2016: -0.08 estimate, 0.07 standard error, 0.3108 p-value

2017: -0.05 estimate, 0.07 standard error, 0.4398 p-value

2018: -0.09 estimate, 0.07 standard error, 0.2045 p-value

Hispanic Ethnicity (Non-Hispanic used as ref. group):

2016: -0.03 estimate, 0.01 standard error, 0.0132 p-value

2017: -0.06 estimate, 0.01 standard error, <0.0001 p-value

2018: -0.04 estimate, 0.01 standard error, <0.0001 p-value

Medicare Dual Eligible (Non-Dual Eligible used as ref. group):

2016: 0.03 estimate, 0.01 standard error, 0.0001 p-value

2017: 0.04 estimate, 0.01 standard error, <0.0001 p-value

2018: 0.06 estimate, 0.01 standard error, <0.0001 p-value

Area Deprivation Index:

2016: 0.0003 estimate, 0.0003 standard error, 0.1903 p-value

2017: 0.0004 estimate, 0.0003 standard error, 0.1294 p-value

2018: 0.0004 estimate, 0.0003 standard error, 0.1749 p-value

The analysis results provided from above are from data year 2018 using a logistic regression model. Investigations of the SRR by population group identified some potential disparities. Female, Medicare dual eligible, and American Indian or Alaskan Native (compared to White) patients are more likely to experience a readmission within 4 to 30 days. On the other hand, compared to White patients, Asian, patients were less likely to experience a readmission. Finally, Black and patients of other races did not have significant differences compared to White patients nor did zip code Area Deprivation Index levels significantly predict readmission. The associations of these respective demographic and SES characteristics with readmission were stable over the time period examined.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, 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 1b.4

N/A

2. Reliability and Validity—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.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Renal, Renal : End Stage Renal Disease (ESRD)

De.6. Non-Condition Specific(check all the areas that apply):

Care Coordination, Care Coordination : Readmissions, Care Coordination : Transitions of Care

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

Populations at Risk

S.1. Measure-specific Web Page (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.)

N/A

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: [2496_Data_Dictionary_Code_Table.xlsx](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

Not an instrument-based measure

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

Yes

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

1. In the currently endorsed SRR, select categories from the 2009 CMS Hierarchical Condition Categories (HCC) were used to identify patient prevalent comorbidities in Medicare outpatient, inpatient, hospice, skilled nursing, and home health claims occurring in the previous 365 days from the index discharge. These categories were then used as prevalent comorbidity indicators in the SRR model. Two changes to this process have been made: the use of AHRQ CCS diagnosis categories to identify patient prevalent comorbidities and the sole use of Medicare inpatient claims as a source of prevalent comorbidities.

CMS Hierarchical Condition Categories (HCC) were developed to pay Medicare Advantage Organizations differentially based on disease burden and demographics. Thus, ICD codes may not be grouped in clinically meaningful ways. In contrast, AHRQ CCS categories are designed to group ICD codes into clinically meaningful groups. Furthermore, other measures submitted for maintenance by UM-KECC are also proposing to use AHRQ CCS diagnosis categories.

The switch to using only Medicare inpatient claims to identify prevalent comorbidities is due to the lack of Medicare outpatient claims data for the growing Medicare Advantage (MA) patient population. By using the original set of Medicare claims datasets (inpatient, outpatient, hospice, skilled nursing, and home health), MA patient prevalent comorbidities would be systematically biased as they would only be populated by Medicare inpatient claims compared to non-MA patient prevalent comorbidities that would be populated by the aforementioned set of Medicare claim sources. In addition, we have added a variable to the model that indicates whether or not the patient was a Medicare Advantage patient at the time of index discharge.

2. Identification of rehabilitation inpatient stays has been augmented. With the introduction of ICD10 codes, the Agency for Healthcare Research and Quality's Clinical Classification Software (AHRQ CCS) diagnosis category 254 "Rehabilitation care; fitting of prostheses; and adjustment of devices" no longer adequately identified rehabilitation inpatient stays. In addition to the use of AHRQ CCS diagnosis category 254, the inpatient stay hospital CCN is now examined to determine if the stay occurred at a rehabilitation facility or a rehabilitation unit within a hospital. Specifically if the last 4 digits of the 6 digit CCN fall in the range between 3025 and 3099 or include the character value of "R: Critical Access Hospital, Rehabilitation Unit", "T: Rehabilitation Unit", or "Y: Rehabilitation Hospital". Finally, rehabilitation units within hospitals in the state of Maryland do not receive their own CCN. We seek to further identify these rehabilitation inpatient stays occurring at rehabilitation units within hospitals in the state of Maryland by flagging those inpatient stays that use the revenue center codes "0024", "0018", "0128", "0138", "0148", and "0158" as rehabilitation inpatient stays.

3. In addition to removing those index discharges with any type of inpatient admission within the first 0 to 3 days following the index discharge, those index discharges that are associated with a death, transplant, or a change of status to non-dialysis within the first 0 to 3 days have also been removed. This change improves the SRR's measurement of the quality of transitional care 4 to 30 days after an inpatient visit by removing those cases where the transitional care route was impeded by an event.

4. A patient's time spent in the nursing home in the previous 365 days may play a role in readmission rates following an inpatient discharge. UM-KECC has leveraged information from the Medicare Minimum Dataset (MDS) regarding a patient's time spent in a nursing home in the 365 days prior to the index discharge to create three distinct groups to use in the SRR model. The three groups are those patients who have spent 0, 1-89 (short term), or 90 or more (long term) days in the nursing home in the previous 365 days from the index discharge.

S.4. Numerator Statement (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.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Each facility's observed number of hospital discharges that are followed by an unplanned hospital readmission within 4-30 days of discharge.

S.5. Numerator Details (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 S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

The numerator for a given facility is the total number of index hospital discharges that are followed by unplanned readmissions within 4-30 days of discharge and that are not preceded by a "planned" readmission or other competing event that also occurred within 4-30 days of discharge. Terms in this definition are described below.

A readmission is considered "planned" under two scenarios as outlined more completely in [1]:

- i). The patient undergoes a procedure that is always considered planned (e.g., kidney transplant) or has a primary diagnosis that always indicates the hospitalization is planned (e.g., maintenance chemotherapy).
- ii). The patient undergoes a procedure that MAY be considered planned if it is not accompanied by an acute diagnosis. For example, a hospitalization involving a heart valve procedure accompanied by a primary diagnosis of diabetes would be considered planned, whereas a hospitalization involving a heart valve procedure accompanied by a primary diagnosis of acute myocardial infarction (AMI) would be considered unplanned.

1. Centers for Medicare and Medicaid Services. 2018 All-Cause Hospital Wide Measure Updates and Specifications Report Hospital-Level 30-Day Risk-Standardized Readmission Measure – Version 7.0.

https://www.qualitynet.org/files/5d0d375a764be766b010141f?filename=2018_Rdmsn_Updates%26Specs_Rpts.zip

Other competing events include admissions to rehabilitation or psychiatric hospitals, death, transplant, loss to follow up, withdrawal from dialysis, and recovery of renal function.

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

The denominator for a given facility is the expected number of the observed index hospital discharges that result in an unplanned readmission in days 4-30 and that are not preceded by an unplanned or competing event. The expectation accounts for patient-level characteristics, including measures of patient comorbidities, and the discharging hospital, and is based on estimated readmission rates for an overall population norm that corresponds to an "average" facility.

S.7. Denominator Details (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 S.2b.)

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

We use Medicare inpatient hospital claims to identify acute hospital discharges. All Medicare covered live inpatient discharges of ESRD dialysis patients in a calendar year are considered eligible for this measure.

An index hospital discharge is a discharge from an acute care hospital that is not followed by a readmission whether planned or unplanned or by any competing event in the first three days following discharge.

Index discharges are attributed to the facility of record on the day of discharge for the patient. That is, if the patient transfers dialysis facilities at the time of hospital discharge, it is the new facility that is assigned the index discharge.

Expected Calculation: We calculate each dialysis facility's expected number of index hospital discharges during the one year period that are followed by an unplanned readmission within 4-30 days of the discharge. The expected number is calculated by fitting a model with random effects for discharging hospitals, fixed effects for facilities, and regression adjustments for a set of patient-level characteristics. We compute the expectation for the given facility assuming readmission rates corresponding to an "average" facility with the same patient characteristics and same discharging hospitals as this facility. Model details are provided in the testing form.

S.8. Denominator Exclusions *(Brief narrative description of exclusions from the target population)*

Index Discharge Exclusions:

A live inpatient hospital discharge is excluded if any of the following hold:

- Associated with a stay of 365 days or longer
- It is against medical advice
- It Includes a primary diagnosis of cancer, mental health or rehabilitation
- It Includes revenue center codes indicating rehabilitation
- It occurs after a patient's 12th hospital discharge in the calendar year
- It is from a PPS-exempt cancer hospital
- It is followed within 3 days by any hospitalization (at acute care, long-term care, rehabilitation, or psychiatric hospital or unit) or any other competing event (see S.5).

S.9. Denominator Exclusion Details *(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 S.2b.)*

- Discharged against medical advice: We determine discharge status from the inpatient claim.
- Certain diagnoses: The primary diagnosis at discharge is available on the inpatient claim; we group these diagnoses into more general categories using AHRQ's Clinical Classification Software (CCS; see <http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp> for descriptions of each CCS). The excluded CCSs are shown below.
 - o Cancer: 42, 19, 45, 44, 17, 38, 39, 14, 40, 35, 16, 13, 29, 15, 18, 12, 11, 27, 33, 32, 24, 43, 25, 36, 21, 41, 20, 23, 26, 28, 34, 37, 22, 31, 30
 - o Psychiatric: 657, 659, 651, 670, 654, 650, 658, 652, 656, 655, 662
 - o Rehab for prosthesis: 254
 - o Presence of one or more of the following revenue center codes: 0024, 0118, 0128, 0138, 0148, 0158
- Number of admissions: We remove any records for a patient after his/her 12th discharge in the calendar year.
- PPS-exempt cancer hospitals: The following hospitals are listed as PPS-exempt cancer hospitals in the Federal Register (<http://www.gpo.gov/fdsys/pkg/FR-2011-07-18/html/2011-16949.htm>): 050146, 050660, 100079, 100271, 220162, 330154, 330354, 360242, 390196, 450076, 500138
- Any index discharge with an inpatient readmission of any type, a death, a transplant, loss to follow-up, withdrawal from dialysis, or recovery of renal function occurring within the first 0-3 days following the index discharge.

S.10. Stratification Information *(Provide all information required to stratify the measure results, if necessary, including 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 with at S.2b.)*

N/A

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

<p>Statistical risk model If other:</p>
<p>S.12. Type of score: Ratio If other:</p> <p>S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score) Better quality = Lower score</p> <p>S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.) See flowchart in appendix.</p>
<p>S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.) If an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed. N/A</p> <p>S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.) Specify calculation of response rates to be reported with performance measure results. N/A</p>
<p>S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED). If other, please describe in S.18. Claims, Registry Data</p> <p>S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.) If instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration. Data are derived from an extensive national ESRD patient database, which is primarily based on the Renal Management Information System (REMIS), CROWNWeb facility-reported clinical and administrative data (including CMS-2728 Medical Evidence Form, CMS-2746 Death Notification Form, and CMS-2744 Annual Facility Survey Form and patient tracking data), the Medicare Enrollment Database (EDB), and Medicare claims data. In addition the database includes transplant data from the Scientific Registry of Transplant Recipients (SRTR), and data from the Nursing Home Minimum Dataset, the Quality Improvement Evaluation System (QIES) Business Intelligence Center (QBIC) (which includes Provider and Survey and Certification data from Automated Survey Processing Environment (ASPEN)), and the Dialysis Facility Compare (DFC).</p> <p>The database is comprehensive for Medicare patients not enrolled in Medicare Advantage. Medicare Advantage patients are included in all sources but their Medicare payment records are limited to inpatient claims. Non-Medicare patients are included in all sources except for the Medicare payment records. Tracking by dialysis provider and treatment modality is available for all patients including those with only partial or no Medicare coverage.</p> <p>Information on hospitalizations is obtained from Part A Medicare Inpatient Claims Standard Analysis Files (SAFs).</p> <p>S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1) No data collection instrument provided</p> <p>S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED) Facility</p> <p>S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)</p>

<p>Other If other: Dialysis Facility</p>
<p>S.22. <u>COMPOSITE Performance Measure</u> - Additional Specifications <i>(Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)</i> N/A</p>
<p>2. Validity – See attached Measure Testing Submission Form 2496_NQF_testing_508.docx</p> <p>2.1 <u>For maintenance of endorsement</u> <i>Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.</i> Yes</p> <p>2.2 <u>For maintenance of endorsement</u> <i>Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.</i> Yes</p> <p>2.3 <u>For maintenance of endorsement</u> <i>Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.</i> Yes - Updated information is included</p>
<p>3. Feasibility</p> <p>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.</p> <p>3a. Byproduct of Care Processes For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).</p> <p>3a.1. Data Elements Generated as Byproduct of Care Processes. Generated or collected by and used by healthcare personnel during the provision of care (e.g., blood pressure, lab value, diagnosis, depression score), Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims) If other:</p> <p>3b. Electronic Sources The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.</p> <p>3b.1. To what extent are the specified data elements available electronically in defined fields <i>(i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields)</i> Update this field for <u>maintenance of endorsement.</u> ALL data elements are in defined fields in electronic claims</p> <p>3b.2. 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 other than electronic sources. For <u>maintenance of</u></p>

endorsement, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

N/A

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. 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.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

Data collection is accomplished via Medicare Claims and CROWNWeb, a web-based and electronic batch submission platform maintained and operated by CMS contractors.

Measures reported on DFC are reviewed on a regular basis by dialysis facility providers. Review of comments and questions received in the past 3 years for SRR showed only rare instances of concern expressed about inaccurate or missing data.

3c.2. Describe 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).

N/A

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.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

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 performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)
Regulatory and Accreditation Programs	Public Reporting
Quality Improvement (Internal to the specific organization)	Dialysis Facility Compare https://www.medicare.gov/dialysisfacilitycompare/ Payment Program ESRD QIP https://www.qualitynet.org/esrd/esrdqip

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

DFC:

Purpose: Dialysis Facility Compare helps patients find detailed information about Medicare-certified dialysis facilities. They can compare the services and the quality of care that facilities provide.

Geographic area: United States

Number of accountable entities: All Medicare-certified dialysis facilities that are eligible for the measure, and have at least 10 patient years at risk (due to public reporting requirements). For the most recent update to Dialysis Facility Compare January 2020), 7,578 facilities had data reported on DFC.

Patients included: All patients who meet the requirements to be included in the measure from included facilities.

QIP:

Purpose: The ESRD QIP will reduce payments to ESRD facilities that do not meet or exceed certain performance standards. The measure was added to the program for PY2017.

Geographic area: United States

Number of accountable entities: All Medicare-certified dialysis facilities that are eligible for the measure, and have at least 10 patient years at risk (due to public reporting requirements). For the most recent QIP report that is publically available (PY 2020), this was 7,420 facilities.

Patients included: All patients who meet the requirements to be included in the measure from included facilities.

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

N/A

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (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.)

N/A

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

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.

Results of this measure are currently reported on Dialysis Facility Compare and in the ESRD Quality Incentive Program. All Medicare-certified dialysis facilities are eligible for reporting in both programs (approximately 7,000 dialysis facilities). Each program has a helpdesk and supporting documentation available to assist with interpretation of the measure results.

The measure developer (UM-KECC) produces and distributes the DFC data under contract with CMS. Other CMS contractors calculate and distribute the ESRD QIP measure results.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

For DFC, the results are first reported to facilities via a closed preview period, where facilities can review their data prior to each of the quarterly updates of the public facing Dialysis Facility Compare website. These preview reports are posted on dialysisdata.org, where facilities can also find a detailed Guide to the Quarterly Dialysis Facility Compare Reports and other supporting documentation. Facilities can submit comments/questions about their results at any time, and can request patient lists for their facilities during the specified preview periods.

For the ESRD QIP, results are first reported to facilities via closed preview period on an annual basis; facilities can review their data

prior to the results becoming public at the end of the calendar year. These preview reports are posted on qualitynet.org, where facilities can also find supporting documentation and can submit comments/questions about their results.

A measures manual that describes the calculations for both of these programs in detail is published on the CMS website: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/ESRDQIP/06_MeasuringQuality.html

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

For DFC, feedback can be provided any time through contacting the dialysisdata.org helpdesk. Preview periods allow for specific times for facilities to review and comment on measure calculations, and provide an opportunity to request a patient list.

For the ESRD QIP, feedback can be provided any time through contacting the QIP helpdesk. Preview periods allow for specific times for facilities review and comment on measure calculations. Comments can also be submitted in response to the Notice of Proposed Rulemaking for each QIP payment year.

4a2.2.2. Summarize the feedback obtained from those being measured.

DFC:

Comments received during DFC preview periods tend to be technical in nature, asking for clarification on how the SRR is calculated for particular facilities, including questions about patient assignment and application of exclusion criteria.

QIP:

We reviewed the public comments that were addressed in the ESRD QIP Final Rules (FRs) that have been published since the last endorsement (PY2017 – PY2022, described below). Note that since UM-KECC is not the contractor responsible for the ESRD Quality Incentive Program, we do not have access to the detailed comments that are submitted during the annual preview period for that program.

4a2.2.3. Summarize the feedback obtained from other users

QIP: Since the SRR was first proposed in the PY 2017 proposed rule, commenters raised issues related to additional risk adjustment for SDS factors or clinical factors, and question whether the outcome of the measure was attributable to the dialysis facility. Both of these issues are addressed in our submission. Commenters also echoed the concerns raised about the measure's reliability, based on the measure's calculated IUR.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

As part of our Comprehensive Review of the measure, we have carefully considered the public comments and other feedback summarized above. We have significantly revised the approach to co-morbidity risk adjustment in response to comments, utilizing CCS condition categories rather than CMS HCC groupers in our modeling of expected results. In addition, we utilized a stepwise selection technique for inclusion of co-morbidity categories, creating an objective, empirically-driven approach to co-morbidity adjustment. We have not included adjustments for sociodemographic variables for the reasons described in Section 2b3.4b in the testing results for this submission (see Testing Form). No additional changes to the measure were made in response to the reliability concern. However, we have included additional information about our assessment of the measure's reliability in the form of additional testing and reporting of the Profile IUR (PIUR), a new approach for measuring reliability that is based on the ability of the measure to consistently flag outliers and that emphasizes more the ability of the measure to identify facilities whose outcomes are extreme.

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b 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, what are the reasons? 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.

Our analyses of the entire US Medicare chronic dialysis population demonstrate little or no improvement in the unadjusted readmission rate (readmissions/index hospitalization) over calendar years 2016-2018. In addition, we developed a three-year model of SRR (2016-2018) in order to determine whether there was a trend in the fully risk-adjusted SRR over that time period. This comparison also failed to demonstrate improvement in the several years since SRR was first implemented in Medicare value-based and public reporting programs.

The failure to demonstrate improvement can be interpreted in at least two ways. First, dialysis facilities might not be able to sufficiently influence the readmission rate for this population through expected coordination of care. However, the ongoing Comprehensive ESRD Care Initiative demonstration project has recently shown significant improvement in readmission after hospitalization, utilizing a modified SRR outcome metric and sophisticated Difference-in-Difference methodology to compare CECI participants to Medicare chronic dialysis patients receiving traditional care. (Marrufo, et al, 2019) The CECI project intervention began in October 2015 and results were reported over the two subsequent study years. The CECI preliminary results demonstrate the potential to reduce readmissions when dialysis facilities and nephrologists are incentivized to work in coordination to address this important quality initiative.

Alternatively, failure of readmission rates to decline after introduction of SRR may be a spurious finding. Readmission rates may have been influenced by concomitant changes in the hospital utilization in the chronic dialysis population, confounding the ability to measure real improvement in care coordination and readmission avoidance. This measure is potentially sensitive to changes in hospitalization patterns because its denominator is based on index hospitalizations, not population size. In fact, we have shown that risk adjusted hospitalization, but not unadjusted hospitalization rates have declined over the years 2016-2018. Specifically, the risk adjusted hospitalization rate for 2016 decreased by 2.7% compared to 2015 (p-value <0.0001). Subsequent years had a larger decrease in the hospitalization rate compared to 2015 at 6.8% lower for 2017 and about 5.7% lower for 2018 (p-value<0.0001 for both) compared to 2015. While the rate increased slightly for 2018 compared to 2017, this is likely due to random variation. The discrepancy between raw and risk-adjusted hospitalization in this population suggests that recently hospitalized dialysis patients may have relatively more medical complexity compared to those hospitalized in the early years of the decade when the SRR was first developed and tested. If true, then we might expect an increased readmission rate in the target population. Absence of increased readmissions in an observation period where sicker, more complicated patients are being hospitalized implies some relative beneficial effect of the measure, but the results are not sufficiently robust to unambiguously demonstrate improvement over time.

Reference

Marrufo G, Negrusa B, Ullman D, Hirth R, Messana J, Maughan B, Nelson J, Lindsey N, Gregory D, Svoboda R, Melin C, Chung A, Dahlerus C, Nahra T, Jiao A, McKeithen K, and Gilfix Z. Comprehensive End-Stage Renal Disease Care (CEC) Model. Performance Year 2 Annual Evaluation Report. Prepared for: Centers for Medicare & Medicaid Services. September 2019.
<https://innovation.cms.gov/Files/reports/cec-annrpt-py2.pdf>

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

None

4b2.2. Please explain any unexpected benefits from implementation of this measure.

None

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.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually

both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

0369 : Standardized Mortality Ratio for Dialysis Facilities

1463 : Standardized Hospitalization Ratio for Dialysis Facilities (SHR)

1789 : Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)

2510 : Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM)

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

No

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

SRR is harmonized with the Standardized Hospitalization Ratio for Admissions (NQF #1463) and Standardized Mortality Ratio (NQF #0369) currently undergoing measure maintenance. The SRR applies to the same population—Medicare-covered ESRD patients—as SHR and SMR. SRR, SMR, and SHR include Medicare Advantage patients as they constitute a growing population of ESRD beneficiaries (approaching 20%); both SRR and SHR include an indicator accounting for the proportion of Medicare Advantage coverage in order to minimize potential bias due to incomplete comorbidity ascertainment for MA patients. SRR, SHR, and SMR all restrict to inpatient claims for comorbidity risk adjustment and all measures adjust for a similar set of patient characteristics as the SRR and utilize fixed effects in their modeling approach. However, SRR adjusts for a different set of comorbidities that are associated with a high risk of readmission. There are several NQF endorsed measures that share the same focus with SRR but target different patient populations and/or care settings. The proposed SRR has the same measure focus—unplanned 30-day readmissions—as CMS’ Hospital-Wide All-Cause Readmission Rate (NQF #1789), and the Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNF; NQF #2510). SRR is harmonized with both the HWR and SNF measures in restricting to the use of inpatient Medicare claims for comorbidity risk adjustment, and exclusion of planned readmissions. There are several differences between the SRR and the existing CMS HWR and SNF measures. Some of the differences are intended to account for unique features of the ESRD chronic dialysis population: Inclusion/Exclusion 1) SRR includes patients with incomplete claims history from the prior year. We do this to allow capture of incident ESRD patients that may not have a complete year of Medicare coverage; 2) SRR includes Medicare Advantage patients (approaching 20% of ESRD dialysis patients) while HWR and SNF are restricted to Medicare FFS patients with Part A only; 3) only SRR excludes discharges that follow a patient’s 12th admission in the year; 4) SRR excludes from the numerator planned readmissions that include a diagnosis of “fluid and electrolyte disorders” (CCS 55) that meet other criteria for planned readmissions (see Appendix). Risk Adjustment 1) SRR does not adjust for comorbidities that are highly prevalent in the ESRD population, such as acute renal failure, dialysis status, kidney transplant, fluid/electrolyte disorders, and iron deficiency 2) SRR additionally adjusts for diagnoses (grouped by the Clinical Classification Software [CCS] method) that are relatively rare but have a high risk of 30-day readmission in the ESRD population; 3) SRR adjusts for length of hospital stay, diabetes as the primary cause of ESRD, time on dialysis, and sex; 4) only SRR includes an indicator for Medicare Advantage coverage at time of index discharge; (5) SRR adjusts for comorbidities identified during the index hospitalization which were not present on admission whereas HWR does not. Additional differences between the SRR and SNF are 1) the SNF includes a different target population (though we recognize a notable proportion of ESRD dialysis patients reside in nursing homes); and 2) SNF includes readmissions within 1-day of discharge while SRR excludes readmissions within 3-days of discharge.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):
Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)
[N/A](#)

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

[Attachment](#) **Attachment:** [2496_Flowchart.pdf](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [Centers for Medicare & Medicaid Services](#)

Co.2 Point of Contact: [Helen, Dollar-Maples, Helen.Dollar-Maples@cms.hhs.gov, 410-786-7214-](#)

Co.3 Measure Developer if different from Measure Steward: [University of Michigan Kidney Epidemiology and Cost Center](#)

Co.4 Point of Contact: [Casey, Parrotte, parrotte@med.umich.edu, 734-763-6611-](#)

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

[The following TEP members served an advisory role to CMS during the development process:](#)

[Brady Augustine: Aggressive Analytics, Inc](#)

[Steven Brunelli, MD MSCE: Independent Consultant](#)

[Paul Eggers, PhD \(non-voting member\): NIDDK, National Institutes of Health](#)

[Stephen Jencks, MD MPH: Independent Consultant](#)

[Richard Knight: American Association of Kidney Patients](#)

[Christopher Lovell, RN MSN CNN: Dialysis Clinic, Inc](#)

[Frank Maddux, MD FACP: Fresenius Medical Care](#)

[Allen Nissenson, MD FACP FASN FNKF: DaVita, Inc](#)

[Paul Palevsky, MD: University of Pittsburgh School of Medicine](#)

[Sharon Perlman, MD: All Children's Hospital](#)

[Daniel Weiner, MD MS: Tufts University School of Medicine](#)

[Jay Wish, MD: University Hospitals Case Medical Center](#)

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: [2014](#)

Ad.3 Month and Year of most recent revision: [04, 2020](#)

Ad.4 What is your frequency for review/update of this measure? [Annually](#)

Ad.5 When is the next scheduled review/update for this measure? [04, 2021](#)

Ad.6 Copyright statement:

Ad.7 Disclaimers:

Ad.8 Additional Information/Comments: