NATIONAL QUALITY FORUM

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 #: 2701
Corresponding Measures:
De.2. **Measure Title:** Avoidance of Utilization of High Ultrafiltration Rate (>=13 ml/kg/hour)
Co.1.1. **Measure Steward:** Kidney Care Quality Alliance (KCQA)
De.3. **Brief Description of Measure:** Percentage of adult in-center hemodialysis patients in the facility whose average ultrafiltration rate (UFR) is >=13 ml/kg/hour AND who receive an average of <240 minutes per treatment during the calculation period.
1b.1. **Developer Rationale:** Ultrafiltration rates (UFRs) are determined by the amount of fluid that must be removed from the patient and dialysis session length. As treatment time decreases, UFR tends to increase and vice versa. Both high UFRs (>=13 ml/kg/hour) and abbreviated session duration (<240 minutes) are associated with a greater risk of all-cause and cardiovascular mortality in hemodialysis patients, and research suggests that dialysis sessions >240 minutes are independently associated with a significantly reduced relative risk of mortality.

The intent of this measure is to generally foster the use of slower, gentler dialysis sessions to reduce hemodialysis-related mortality. Success for the measure can be achieved by employing either or both of two approaches: 1) dialyzing patients at an average UFR <13 ml/kg/hour AND/OR 2) dialyzing patients for an average of >240 minutes per session during the reporting period. Adherence to these conventions will help attenuate the rapid fluctuations in fluid balance and blood pressure that contribute to cardiovascular morbidity and mortality in hemodialysis patients.

S.4. **Numerator Statement:** Number of patients* from the denominator whose average UFR is >=13 mg/kg/hr (NOT just >13) hour AND who receive an average of <240 minutes per treatment during the calculation period.**

*To address the fact that patients may contribute varying amounts of time to the annual denominator population, results will be reported using a "patient-month" construction.

** The calculation period is defined as the same week that the monthly Kt/V is drawn.
S.6. **Denominator Statement:** Number of adult in-center hemodialysis patients in an outpatient dialysis facility undergoing chronic maintenance hemodialysis during the calculation period.
S.8. **Denominator Exclusions:** The following patients are excluded from the denominator population:

1. Patients <18 years of age (implicit in denominator definition).

2. Home dialysis patients (implicit in denominator definition).

3. Patients in a facility <30 days.

4. Patients with >4 hemodialysis treatments during the calculation period.

5. Patients with <7 hemodialysis treatments in the facility during the reporting month.

6. Patients without a completed CMS Medical Evidence Form (Form CMS-2728) in the reporting month.

7. Kidney transplant recipients with a functioning graft.

8. Facilities treating <=25 adult in-center hemodialysis patients during the reporting month.

De.1. **Measure Type:** Process
S.17. **Data Source:** Electronic Health Records
S.20. **Level of Analysis:** Facility

IF Endorsement Maintenance – Original Endorsement Date: Oct 02, 2015 **Most Recent Endorsement Date:** Oct 02, 2015

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?** Not applicable.

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
NQF_EvidenceAttachment_10-27-20REDLINE.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.
Yes

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.
Ultrafiltration rates (UFRs) are determined by the amount of fluid that must be removed from the patient and dialysis session length. As treatment time decreases, UFR tends to increase and vice versa. Both high UFRs (>=13 ml/kg/hour) and abbreviated session duration (<240 minutes) are associated with a greater risk of all-cause and cardiovascular mortality in hemodialysis patients, and research suggests that dialysis sessions >240 minutes are independently associated with a significantly reduced relative risk of mortality.

The intent of this measure is to generally foster the use of slower, gentler dialysis sessions to reduce hemodialysis-related mortality. Success for the measure can be achieved by employing either or both of two approaches: 1) dialyzing patients at an average UFR <13 ml/kg/hour AND/OR 2) dialyzing patients for an average of >240 minutes per session during the reporting period. Adherence to these conventions will help attenuate the rapid fluctuations in fluid balance and blood pressure that contribute to cardiovascular morbidity and mortality in hemodialysis patients.

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.*
A structural reporting measure based on KCQA's UFR metric is being implemented in the ESRD Quality Incentive Program (QIP) for PY 2020. Facilities must report all data elements required by the measure to calculate the UFR:

- HD Kt/V Date
- Post-Dialysis Weight
- Pre-Dialysis Weight
- Delivered Minutes of Hemodialysis
- Number of dialysis sessions delivered to the patient in the reporting month

Thus while at this time we thus have no formal performance scores to report, as has been the case with other reporting measures in the QIP we anticipate the UFR measure will be converted to a clinical measure after confirmation that the data elements can be feasibly captured.

Additionally, the measure was tested using data from three KCQA member dialysis organizations, each with the capacity to provide retrospective analyses from a data warehouse/repository. All pertinent data from all eligible (i.e., adult in-center hemodialysis) patients of the participating organizations during the testing period were included in the datasets. Testing encompassed 4,252 dialysis facilities and 412,522 patients across the three organizations. The study was conducted retrospectively on data from January 1, 2013-December 31, 2013.

Performance scores obtained during testing are as follows:

- Mean Score = 11.66% (lower = better performance)
- 95% CI = 11.46-11.87%
- Standard Deviation = 6.92
- Minimum Score = 0%
- Maximum Score = 50%*
- Median = 10.88%
- Mode = 8.00%
- Interquartile Range = 8.14

Results show a significant spread between both the minimum and maximum scores, as well as the median and minimum and maximum scores, indicating that the measure identifies clinically and practically meaningful differences in performance among the measured entities.

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.

In addition to the testing data presented above, a recent national sample of DOPPS data indicate that hemodialysis sessions performed at UFR >=13.0 ml/kg/hour remains at approximately 10 percent as of February 2020, indicating continued room for improvement in this aspect of dialysis care. (See Graph 1 in Appendix.)

The same DOPPS data also demonstrate considerable room for improvement in achieved average dialysis session length >240 minutes, the second approach by which the measure criteria can be met. This benchmark has moved little over the past decade, remaining at only approximately 30 percent as of February 2020 for a national sample. (See Graphs 2 and 3 in Appendix.)

Reference: US DOPPS Practice Monitor, April 2020, https://www.dopps.org/DPM.

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.*

As noted, a structural reporting measure based on NQF 2701 is currently being implemented in the ESRD Quality Incentive Program (QIP) for PY 2020. As such, no data on disparities are yet available. Likewise, SDS data were not collected during measure testing by KCQA.

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
DOPPS also provides little additional information in this regard. Only two SDS groups—black vs non-black—are displayed, and the data show little difference between the two in either average UFR or achieved session length as of February 2019, with blacks faring slightly better in both categories. (See Graphs 4 and 5 in Appendix.).

However, as cited in the Evidence Attachment, we have identified one large observational study of 118,394 hemodialysis patients in a large dialysis organization between 2008 and 2012 that demonstrates a more pronounced association between high UFRs and all-cause mortality in blacks, non-Hispanics, and in patients with a higher BMI. The authors also found that patients with average UFR >13 were significantly more likely (p <0.005 for all associations) to be female (1.33 [1.29-1.37]), non-black (1.28 [1.24-1.31]), and Hispanic (1.20 [1.14-1.27]).

References:
1. US DOPPS Practice Monitor, April 2020, https://www.dopps.org/DPM.
2. Assimon MM et al. Ultrafiltration rate and mortality in maintenance hemodialysis patients. Am J Kidney Dis. 2016;68:911-922.

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 : Transitions of Care, Safety : Complications

De.7. **Target Population Category** *(Check all the populations for which the measure is specified and tested if any):*
Elderly, Populations at Risk, Populations at Risk : Dual eligible beneficiaries, Populations at Risk : Individuals with multiple chronic conditions

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.)*
https://kidneycarepartners.com/wp-content/uploads/2020/10/tbKCQA_NQFendorsedSpecs10-10-20.pdf

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)*
No data dictionary **Attachment:**

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.
No

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.
Not applicable; no changes.

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).
Number of patients* from the denominator whose average UFR is >=13 mg/kg/hr (NOT just >13) hour AND who receive an average of <240 minutes per treatment during the calculation period.**

*To address the fact that patients may contribute varying amounts of time to the annual denominator population, results will be reported using a "patient-month" construction.

** The calculation period is defined as the same week that the monthly Kt/V is drawn.

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).
Numerator Data Elements
For all patients meeting the denominator criteria in the reporting month, collect the following data elements for all dialysis sessions (including supplemental sessions) falling within the same week that the monthly Kt/V is drawn:*

- Pre-Dialysis Weight for Session
- Post-Dialysis Weight for Session
- Time Delivered Per Session, in Minutes
- Session Date
- Sessions Per Week

* If more than one Kt/V is drawn in a given month, the last draw for the month will be used to define the data collection period (i.e., these data elements will be collected during the week that the final Kt/V value of the month is drawn).

Numerator Case Identification
For each facility, for all dialysis sessions falling within the calculation period for all patients meeting the denominator criteria:

1. Calculate the UFR (in ml/kg/hour) for each dialysis session (including supplemental sessions):

Session X UFR = ([{Session X Pre-Dialysis Weight in kg – Session X Post-Dialysis Weight in kg} x 1000 ml/kg] ÷ Session X Post-Dialysis Weight in kg) ÷ (Session X Delivered Treatment Time in minutes) x 60 minutes/hour

2. Calculate each patient's average UFR for all dialysis sessions (including supplemental sessions) during the calculation period:

Average UFR = (UFR1 + UFR2 + …. + UFRX) ÷ X Treatments

3. Calculate each patient's average treatment time over all dialysis sessions (including supplemental sessions) during the calculation period:

Average Treatment Time (in minutes) = (Time1 + Time 2 + … + TimeX) ÷ X Treatments

4. Identify all patients with <4 dialysis sessions during the calculation period.

5. For each facility, include in the numerator all patients with:
• an average UFR during the calculation period (Step 2 value) >=13 ml/kg/hour; AND
• an average treatment time during the calculation period (Step 3 value) <240 minutes.

S.6. **Denominator Statement** *(Brief, narrative description of the target population being measured)*
Number of adult in-center hemodialysis patients in an outpatient dialysis facility undergoing chronic maintenance hemodialysis during the calculation period.

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).
Identify all patients in the dialysis facility during the reporting period whose:

• Primary Type Treatment/Modality = Hemodialysis.

• Primary/Current Dialysis Setting = In-center.

• Date of Birth = >18 years prior to treatment date.

S.8. **Denominator Exclusions** *(Brief narrative description of exclusions from the target population)*
The following patients are excluded from the denominator population:

1. Patients <18 years of age (implicit in denominator definition).

2. Home dialysis patients (implicit in denominator definition).

3. Patients in a facility <30 days.

4. Patients with >4 hemodialysis treatments during the calculation period.

5. Patients with <7 hemodialysis treatments in the facility during the reporting month.

6. Patients without a completed CMS Medical Evidence Form (Form CMS-2728) in the reporting month.

7. Kidney transplant recipients with a functioning graft.

8. Facilities treating <=25 adult in-center hemodialysis patients during the reporting month.

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.)*

For all patients meeting the denominator criteria in the reporting month, identify all patients meeting any of the following exclusion criteria during the calculation period and remove from the denominator population:

1. Date of Birth = <18 years prior to treatment date (implicit in denominator definition).

2. Primary Type Treatment/Modality = Peritoneal dialysis or home hemodialysis (implicit in denominator definition).

3. Date Patient Started Chronic Dialysis at Current Facility = >30 days prior to treatment date.

4. Sessions Per Week = >4

5. Transient Status = Not transient OR patients with <7 hemodialysis treatments in the facility during the reporting month.

6. Patients without a completed CMS Medical Evidence Form (Form CMS-2728) in the reporting month.

7. Kidney transplant recipients with a functioning graft

Note: Facilities treating <=25 adult in-center hemodialysis patients during the reporting month are also excluded.

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.)*
Not applicable.

S.11. **Risk Adjustment Type** (Select type. Provide specifications for risk stratification in measure testing attachment)
No risk adjustment or risk stratification
If other:

S.12. **Type of score:**
Rate/proportion
If other:

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

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.)*
Data are collected and scores for each facility are calculated on a monthly basis; scores are then averaged over the 12-month reporting period to obtain the facility's annual score.

Scores are calculated using the following algorithm:

1. Build the "Month 1 Raw Denominator Population."
For the Month 1 calculation period,* identify all patients in the facility during the reporting month whose:

a. Primary Type Treatment/Modality = Hemodialysis

b. Primary/Current Dialysis Setting = In-center

c. Date of Birth = >18 years prior to treatment date

* The calculation period is defined as the same week that the monthly Kt/V is drawn. If more than one Kt/V is drawn in a given month, the last draw for the month will be used to define the data collection period (i.e., these data elements will be collected

during the week that the final Kt/V value of the month is drawn).

2. Remove patients with exclusions to define the "Month 1 Final Denominator Population."
For all patients meeting all of the Step 1 requirements, identify all patients meeting any of the following exclusion criteria and remove from the denominator population:

a. Date Patient Started Chronic Dialysis at Current Facility = >30 days prior to treatment date.

b. Transient Status = Not transient OR patients with <7 hemodialysis treatments in the facility during the month.

c. Sessions Per Week = >4.

d. Patients without a completed CMS Medical Evidence Form (Form CMS-2728) in the reporting month.

e. Kidney transplant recipients with a functioning graft.

3. Identify the "Month 1 Numerator Data Elements."
For all patients remaining in the denominator after Step 2, collect each of the following data elements for each dialysis session (including supplemental sessions) delivered during the Month 1 calculation period:

a. Pre-Dialysis Weight for Session

b. Post-Dialysis Weight for Session

c. Session Date

d. Time Delivered Per Session, in Minutes

e. Sessions Per Week

4. Build the "Month 1 Numerator Population."
For each patient, for all dialysis sessions included in the final Month 1 Numerator Data Set:

a. Calculate the UFR (in ml/kg/hour) for each dialysis session (including supplemental sessions):

Session X UFR = ([{Session X Pre-Dialysis Weight in kg – Session X Post-Dialysis Weight in kg} x 1000 ml/kg] ÷ Session X Post-Dialysis Weight in kg) ÷ (Session X Delivered Treatment Time in minutes) x 60 minutes/hour

b. Calculate each patient's average UFR for all dialysis sessions (including supplemental sessions) during the calculation period:

Average UFR = (UFR1 + UFR2 + …. + UFRX) ÷ X Treatments

c. Calculate each patient's average treatment time over all dialysis sessions (including supplemental sessions) during the calculation period:

Average Treatment Time (in minutes) = (Time1 + Time 2 + … + TimeX) ÷ X Treatments

d. For each facility, include in the numerator all patients with:

i. an average UFR during the calculation period (4.b. value) >= 13 ml/kg/hour;

AND

ii. an average treatment time during the calculation period (4.c. value) <240 minutes.

5. Calculate the facility's Month 1 performance score:

Month 1 Performance Score = Month 1 Numerator Population ÷ Month 1 Denominator Population

6. Repeat Steps 1 through 5 for each of the remaining 11 months of the reporting year.

7. Calculate the facility's annual performance score:

Facility's Average Annual Performance Score = (Facility's Month 1 Score + Month 2 Score +….. + Month 12 Score) ÷ 12

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.
Not applicable.

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.
Not applicable.

S.17. **Data Source** *(Check ONLY the sources for which the measure is SPECIFIED AND TESTED).*
If other, please describe in S.18.
Electronic Health Records

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.
CROWNWeb Electronic Data Interchange, available at URL: https://mycrownweb.org

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

S.20. **Level of Analysis** *(Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)*
Facility

S.21. **Care Setting** *(Check ONLY the settings for which the measure is SPECIFIED AND TESTED)*
Post-Acute Care
If other:

S.22. **COMPOSITE Performance Measure** - Additional Specifications *(Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)*
Not applicable.

2. Validity – See attached Measure Testing Submission Form
NQF2701_TestingAttachment_10-27-20-637408819382156345.docx

2.1 For maintenance of endorsement
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.
No

2.2 For maintenance of endorsement
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.
No

2.3 For maintenance of endorsement
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.
No - This measure is not risk-adjusted

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.

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).

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)
If other:

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.

3b.1. **To what extent are the specified data elements available electronically in defined fields** (*i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields*) Update this field for **maintenance of endorsement**.
ALL data elements are in defined fields in electronic clinical data (e.g., clinical registry, nursing home MDS, home health OASIS)

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 **maintenance of endorsement**, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).
Not applicable; all data elements defined fields in electronic clinical data.

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.
The measure was readily implemented by the three large dialysis organizations that participated in testing; no difficulties were encountered regarding data collection or availability, missing data, sampling, patient confidentiality, time, frequency, cost, or other

feasibility/implementation issues. No modifications were made following testing.

Additionally, CMS is currently implementing a structural reporting measure based on NQF 2701 in the ESRD QIP for PY 2020. We note, however, that unlike most "checkbox" style reporting measures, CMS is requiring that all the discrete data elements defined by 2701 to calculate UFR be reported:

1. HD Kt/V Date
2. Post-Dialysis Weight
3. Pre-Dialysis Weight
4. Delivered Minutes of Hemodialysis
5. Number of sessions of dialysis delivered to the patient in the reporting month

Thus while CMS is not yet calculating facilities' UFR per se, successful collection of these data elements will effectively and fully demonstrate the feasibility of 2701.

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)*.
Not applicable.

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)
Not in use	Public Reporting ESRD QIP https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/ESRDQIP Payment Program ESRD Quality Incentive Program (QIP) https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/ESRDQIP Quality Improvement (external benchmarking to organizations) ERSD QIP https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/ESRDQIP Quality Improvement (Internal to the specific organization) Measure is being used by numerous dialysis organizations for IQI NA

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

NQF 2701 is currently being implemented as a facility-level reporting measure within CMS´s ESRD QIP for the purposes of public reporting, payment, and external quality improvement/benchmarking. The ESRD QIP is a nation-wide program encompassing all dialysis facilities receiving payment from Medicare as "a provider of services or a renal dialysis facility for renal dialysis services" under the ESRD PPS.

The measure is also being used as a facility-level internal quality improvement metric by numerous dialysis organizations.

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?*)
Currently publicly reported.

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.*)
Currently publicly reported.

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.
KCQA is not the measure implementer and thus does not have access to the requested information from the current implementation of the measure specifications in the ESRD QIP. However, as previously noted, the measure was tested within three KCQA member large dialysis organizations (LDOs). Assistance was available throughout the study, and performance results and feedback were provided to each LDO upon conclusion of field-testing.

There was no sampling; all pertinent data from all eligible (i.e., adult in-center hemodialysis) patients in the participating organizations during the testing period were included in the dataset. Testing encompassed 4,252 dialysis facilities, with an average mean facility census (i.e., the number of patients receiving care at the facility) of 84.11 patients (range 1-664 patients per month).

412,522 patients across the three organizations met the measure's denominator criteria and were included, with a range of 15,184 to 215,008 patients per organization. The following is a composite description of patient demographics:

- Mean patient age: 61.66 years
- Range of patient ages: 18.01-104.00 years
- Gender: 56.26% male, 43.74% female
- Race/Ethnicity:
  - 52.37% white
  - 36.33% African American
  - 2.82% Asian
  - 1.16% American Indian/Native Alaska
  - 0.67% Native Hawaiian/other Pacific Islander
  - 0.57% other/missing/declined
  - 15.60% Hispanic (independent of race)

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.**
Assistance was available to each participating LDO at all times on request throughout the study. Performance results and feedback

were provided to each LDO upon conclusion of field-testing. Descriptive statistics for the annual performance measure scores for all tested entities (individual facilities within the LDOs) were constructed, including the mean, standard deviation and standard error, 95% confidence interval, median, mode, range of scores, and the interquartile range of scores across the measured entities.

The measure was readily implemented by the LDOs, with no difficulties encountered with data collection or availability, patient confidentiality, or other feasibility/implementation issues. No comprehension difficulties were encountered, with no need to additional educational/explanatory efforts.

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.
The measure was readily implemented by the three participating LDOs and their member dialysis facilities, with no difficulties reported regarding data collection or availability, patient confidentiality, or other feasibility/implementation issues. Participating entities reported no difficulty understanding the measure concept or scores.

Additionally, the LDOs' and other dialysis organization member representatives participated in KCQA's face validity assessment for the measure, indicating that the scores obtained from the measure as specified will provide an accurate reflection of quality and can be used to distinguish good from poor quality.

4a2.2.2. **Summarize the feedback obtained from those being measured.**
Representatives from KCQA's member patient organizations and advocacy groups also participated in KCQA's face validity assessment for the measure, unanimously indicating that the scores obtained from the measure as specified will provide an accurate reflection of quality and can be used to distinguish good from poor quality.

4a2.2.3. **Summarize the feedback obtained from other users**
Likewise, representatives from KCQA's other member groups participated in the measure's face validity assessment, again indicating that the scores obtained from the measure as specified will provide an accurate reflection of quality and can be used to distinguish good from poor quality.

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 noted, feedback gathered from the participating and other dialysis organizations, dialysis facilities, patient groups, and other KCQA member organizations indicate that that measure is feasible, meaningful, and will provide an accurate reflection of quality. No modifications were made following testing.

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.
A structural reporting measure based on NQF 2701 is being implemented in the ESRD Quality Incentive Program for PY 2020. While we anticipate subsequent conversion to a clinical metric, data on improvement trends are not yet available. However, we postulate that performance results will promote the use of lower UFRs and longer dialysis session lengths to help attenuate rapid fluctuations in fluid balance and blood pressure that contribute to cardiovascular morbidity and mortality in hemodialysis patients. Associated hospitalization, readmissions, and mortality will consequently be minimized.

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.**
The measure is currently being implemented for PY2020 in CMS´s ESRD QIP; no data on unexpected findings are yet available. No unintended consequences were identified during testing.

4b2.2. **Please explain any unexpected benefits from implementation of this measure.**
The measure is currently being implemented for PY2020 in CMS´s ESRD QIP; no data on unexpected benefits are yet available.

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)**
0249 : Delivered Dose of Hemodialysis Above Minimum
0256 : Minimizing Use of Catheters as Chronic Dialysis Access
0257 : Maximizing Placement of Arterial Venous Fistula (AVF)
0258 : Consumer Assessment of Healthcare Providers and Systems (CAHPS) In-Center Hemodialysis Survey (ICH CAHPS)
1460 : Bloodstream Infection in Hemodialysis Outpatients
2977 : Hemodialysis Vascular Access: Standardized Fistula Rate
2978 : Hemodialysis Vascular Access: Long-term Catheter Rate

5.1b. **If related or competing measures are not NQF endorsed please indicate measure title and steward.**
NHSN Dialysis Event Reporting Measure, CDC

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?
Yes

5a.2. **If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.**
Not applicable; specifications of this and other NQF-endorsed facility-level performance measures applicable to adult in-center ESRD hemodialysis patients are harmonized to extent possible.

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.)

Not applicable; no competing NQF-endorsed measures.

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:** NQF2701_Appendix_10-27-20FINAL.pdf

Contact Information

Co.1 **Measure Steward (Intellectual Property Owner):** Kidney Care Quality Alliance (KCQA)
Co.2 **Point of Contact:** Lisa, McGonigal, lmcgon@msn.com, 203-530-9524-
Co.3 **Measure Developer if different from Measure Steward:** Kidney Care Quality Alliance (KCQA)
Co.4 **Point of Contact:** Lisa, McGonigal, lmcgon@msn.com, 203-530-9524-

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 KCQA Steering Committee guides the measure development process and decision-making. Steering Committee members include:

- Edward Jones, MD, KCQA Co-Chair—Renal Physicians Association
- Allen Nissenson, MD, KCQA Co-Chair—DaVita
- Akhtar Ashfaq, MD—Amgen
- Donna Bednarski, RN, MSN—American Nephrology Nurses Association
- Barbara Fivush, MD—American Society of Pediatric Nephrology
- Raymond Hakim, MD, PhD—American Society of Nephrology
- Eduardo Lacson, Jr., MD, MPH—Fresenius Medical Care North America
- Chris Lovell, RN, MSN—Dialysis Clinics, Inc.
- Thomas Manley, RN, BSN—National Kidney Foundation
- Gail Wick, MHSA, BSN, RN—American Kidney Fund
- Shari M. Ling, MD, Chief Medical Officer, Centers for Medicare and Medicaid Services, Center for Clinical Standards and Quality (CCSQ)–CMS Liaison Member

The KCQA Measure Feasibility/Testing Workgroup provided technical expertise and guidance during the measure development process. Workgroup members include:

- Scott Bieber, DO—Northwest Kidney Centers
- Steven Brunelli, MD, MSCE—DaVita
- Maggie Carey—Forum of ESRD Networks
- Allan Collins, MD—NxStage Medical
- Joseph Flynn, MD—American Society of Pediatric Nephrology
- Lori Hartwell—Renal Support Network
- Jeffrey Hymes, MD—Fresenius Medical Care North America
- Mahesh Krishnan, MD, MPH, MBA, FASN—DaVita
- Eduardo Lacson, MD, MPH—Fresenius Medical Care North America
- Klemens Meyer, MD—Dialysis Clinics, Inc.
- Paul Miller, MD—Renal Physicians Association
- Donald Molony, MD—Forum of ESRD Networks
- Tom Parker, MD—Renal Ventures Management

- Glenda Payne, MS, RN, CNN—American Nephrology Nurses Association
- Daniel Weiner, MD, MS—National Kidney Foundation

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 **Year the measure was first released:** 2015

Ad.3 **Month and Year of most recent revision:** 02, 2015

Ad.4 **What is your frequency for review/update of this measure?** nnually and as needed with changes or additions to the evidence base.

Ad.5 **When is the next scheduled review/update for this measure?** 10, 2021

Ad.7 **Disclaimers:** Dialysis facility performance measures (Measures) and related data specifications, developed by the Kidney Care Quality Alliance (KCQA), primarily funded by Kidney Care Partners, are intended to facilitate quality improvement activities by dialysis providers.

These Measures are intended to assist dialysis facilities in enhancing quality of care. Measures are designed for use by any dialysis facility. These performance Measures are not clinical guidelines and do not establish a standard of medical care. KCQA has not tested its Measures for all potential applications. KCQA encourages the evaluation of its Measures.

Measures are subject to review and may be revised or rescinded at any time by KCQA. The Measures may not be altered without the prior written approval of KCQA. Measures developed by KCQA, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes, e.g., use by dialysis providers in connection with their care delivery or for research. Commercial use is defined as the sale, license, or distribution of the Measures for commercial gain, or incorporation of the Measures into a product or service that is sold, licensed or distributed for commercial gain. Commercial uses of the Measures require a license agreement between the user and Kidney Care Partners, on behalf of KCQA.

Neither KCQA nor its members shall be responsible for any use of these Measures.

THE MEASURES ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND

Ad.8 **Additional Information/Comments:**