



## 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 subcriterion 1b).

### Brief Measure Information

**NQF #:** 2700

**Corresponding Measures:**

**De.2. Measure Title:** Ultrafiltration rate greater than 13 ml/kg/hr

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

**De.3. Brief Description of Measure:** Percentage of patients months for patients an ultrafiltration rate greater than 13 ml/kg/hr.

**1b.1. Developer Rationale:** This measure is intended to guard against risks associated with high ultrafiltration (i.e., rapid fluid removal) rates for adult dialysis patient undergoing hemodialysis (HD). Despite the majority of dialysis patients achieving targets for urea removal, the mortality rate among hemodialysis patients has remained unacceptably high. Published literature suggests that higher UFR is an independent predictor of mortality. Faster UFR (depending on the magnitude of interdialytic fluid loss and the duration of dialysis session) may lead to higher frequency of intradialytic hypotension (IDH), which currently occurs at high frequency and has been associated with higher mortality. Phenomena, such as repetitive 'myocardial stunning', recurrent central nervous system, bowel, and other organ-perfusion related damage could result if large volumes of fluid are removed rapidly during each dialysis session, with deleterious consequences for the patient both in the short and longer term.

**S.4. Numerator Statement:** Number of patient months for adult ESRD patients at a dialysis facility with an ultrafiltration rate greater than 13 ml/kg/hr.

**S.7. Denominator Statement:** Total number of patient months for adult patients reported at a dialysis facility undergoing hemodialysis (HD).

**S.10. Denominator Exclusions:** Exclusions that are implicit in the denominator definition include 1) pediatric patients 2) PD patients, 3) patients new to ESRD (less than 90 days on chronic dialysis) and 4) patients that have not been with the same facility for the entire reporting month (transient patients). There are no additional exclusions for this measure.

**De.1. Measure Type:** Outcome

**S.23. Data Source:** Electronic Health Records

**S.26. Level of Analysis:** Facility

**IF Endorsement Maintenance – Original Endorsement Date: Most Recent Endorsement Date:**

**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 subcriteria to pass this criterion and be evaluated against the remaining criteria.**

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

2700\_UFR\_\_Evidence\_revised.docx

**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., the benefits or improvements in quality envisioned by use of this measure)**

This measure is intended to guard against risks associated with high ultrafiltration (i.e., rapid fluid removal) rates for adult dialysis patient undergoing hemodialysis (HD). Despite the majority of dialysis patients achieving targets for urea removal, the mortality rate among hemodialysis patients has remained unacceptably high. Published literature suggests that higher UFR is an independent predictor of mortality. Faster UFR (depending on the magnitude of interdialytic fluid loss and the duration of dialysis session) may lead to higher frequency of intradialytic hypotension (IDH), which currently occurs at high frequency and has been associated with higher mortality. Phenomena, such as repetitive 'myocardial stunning', recurrent central nervous system, bowel, and other organ-perfusion related damage could result if large volumes of fluid are removed rapidly during each dialysis session, with deleterious consequences for the patient both in the short and longer term.

**1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis.** *(This is required for endorsement maintenance. 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 included).* This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.

The measured entities include ultrafiltration rate values (calculated from non-missing data elements in pre-dialysis weight (kg), post-dialysis weight (kg), and delivered time of dialysis (mins)) from 400,308 adult ESRD patients on hemodialysis from 5,556 dialysis facilities with a minimum of 11 patients across all regions of the United States in 2013. Facilities vary in size, and include anywhere from 11 to 448 patients. UFR values were restricted from between 0 ml/kg/hr to 20 ml/kg/hr.

Based on calendar year 2013 CROWNWeb data, the facility level mean was 15.9% of patients at a facility with UFR > 13 ml/kg/hr (SD 7.4%) with the 25th percentile, median, and 75th percentile being 10.5%, 15%, and 20.2%, respectively.

**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 endorsement maintenance. 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 subcriterion on improvement (4b.1) under Usability and Use.

Disparity analyses were performed among the entire eligible population (n= 3024 patient-months from 2013 CROWNWeb data) to examine the difference in performance scores by sex, race, and ethnicity. This was achieved by first classifying each facility as a function of its distribution of patients within each demographic category. In particular, for each facility, the percent of patient-months by demographic group (sex, race, and ethnicity) was calculated. For each demographic category, facilities were divided into quintiles (Q1-Q5) based on the percentage of patient-months in the particular demographic category (i.e., a facility with percentage of females similar to the national median will be included in quintile 3). The top 20% of facilities in terms of rank based on the percentages of females were classified as Q5, while the bottom 20% of facilities were classified as Q1. Then, for each quintile of facility demographic distribution, the average (mean) facility performance for the measure was calculated. The means were examined for trend across quintiles (Q1-Q5). The Cochran-Armitage test for trend was performed to assess for disparities in performance scores. All the results for each group across quintiles were statistically significant (p<0.0001), which imply that there are statistically significant changes in performance scores depending on facility level quintile by population group, specifically for age older than 65. The conservative interpretation would be that these differences reflected in the trend analysis reflect disparities in care for certain subpopulations. In the absence of biological effects explaining these differences, risk adjustment for these factors would potentially mask disparities in care.

The mean performance scores for percent of patients with UFR > 13 mL/kg/hr (Adult HD patients) in each quintile, by demographic group is presented below. Males, non-Black, non-White, non-Hispanic, and Age 18-64 are the respective reference categories.

Mean Performance Scores for Facility Level Quintiles by Population Group (Q1-Q5) and p-values for trend tests (p):

Black (Q1 = 16.16%; Q2 = 16.18%; Q3 = 16.22%; Q4 = 15.37%; Q5 = 15.30%; p<.0001)

White (Q1 = 15.73%; Q2 = 15.86%; Q3 = 16.38%; Q4 = 16.11%; Q5 = 15.16%; p<.0001)

Hispanic (Q1 = 15.01%; Q2 = 15.54%; Q3 = 14.80%; Q4 = 15.87%; Q5 = 18.10%; p<.0001)

Female (Q1 = 15.22%; Q2 = 16.05%; Q3 = 16.19%; Q4 = 15.70%; Q5 = 16.05%; p<.0001)

Age 65+ (Q1 = 16.80%; Q2 = 16.30%; Q3 = 15.86%; Q4 = 15.38%; Q5 = 14.88%; p<.0001)

**1b.5. If no or limited data on disparities from the measure as specified is reported in 1b4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations.**

N/A

**1c. High Priority** (previously referred to as High Impact)

The measure addresses:

- a specific national health goal/priority identified by DHHS or the National Priorities Partnership convened by NQF; OR
- a demonstrated high-priority (high-impact) aspect of healthcare (e.g., affects large numbers of patients and/or has a substantial impact for a smaller population; leading cause of morbidity/mortality; high resource use (current and/or future); severity of illness; and severity of patient/societal consequences of poor quality).

**1c.1. Demonstrated high priority aspect of healthcare**

A leading cause of morbidity/mortality, Frequently performed procedure, Patient/societal consequences of poor quality

**1c.2. If Other:**

**1c.3. Provide epidemiologic or resource use data that demonstrates the measure addresses a high priority aspect of healthcare.**

List citations in 1c.4.

Despite the majority of dialysis patients achieving targets for urea kinetics, the mortality rate among hemodialysis patients has remained unacceptably high. Published literature suggests that higher UFR is an independent predictor of mortality. UFR >10 ml/h/kg was associated with higher odds of intradialytic hypotension (IDH) (OR=1.30; P=0.045) and a higher risk of mortality (RR=1.09; P=0.02), although this was the only threshold that was discussed in this paper (Saran 2006). Since this publication there have been others confirming the association between ultrafiltration rate and mortality, using multivariable analyses, thus corroborating its biological plausibility [Flythe 2011, Movilli 2007]. Movilli et al quoted a higher threshold UFR of 12 ml/h/kg as being associated with higher mortality [Movilli 2007]. More recently, in an attempt to disentangle the relationship between UFR and mortality, Flythe et al [Flythe 2013], examined the session length and interdialytic weight gain independent of each other. Their findings suggest that among patients with adequate urea clearance, shorter dialysis session length and greater interdialytic weight gain are each independently associated with higher mortality. The underlying thesis is that faster UFR can lead to higher frequency of IDH, which is harmful for patients both in the short term and if repetitive, in the longer term as well. McIntyre and his group have shown that there is a direct relationship between ultrafiltration volume and intradialytic decreases in blood pressure with the development of hemodialysis –induced regional wall abnormalities (OR of 5.1 for 1 L UF compared to OR of 26.2 for 2 L UF (p=0.007)[Burton 2009]. This phenomenon, which has been described as “myocardial stunning” , has implications for recurrent central nervous system, intestinal and other organ perfusion related damage [McIntyre 2010]. There are as yet no known randomized clinical trials comparing different UFR strategies in hemodialysis.

**1c.4. Citations for data demonstrating high priority provided in 1a.3**

Flythe JE, Kimmel SE, Brunelli SM. Rapid fluid removal during dialysis is associated with cardiovascular morbidity and mortality. *Kidney International* (2011) Jan; 79(2):250-7. PMID: 20927040

Flythe JE, Curhan GC, Brunelli SM. Disentangling the Ultrafiltration Rate–Mortality Association: The Respective Roles of Session Length and Weight Gain. *Clin J Am Soc Nephrol*. 2013 Jul;8(7):1151-61

Movilli, Ezio, et al. “Association between high ultrafiltration rates and mortality in uraemic patients on regular haemodialysis. A 5-year prospective observational multicenter study.” *Nephrology Dialysis Transplantation* 22.12(2007): 3547-3552

Saran R, Bragg-Gresham JL, Levin NW, Twardowski ZJ, Wizemann V, Saito A, Kimata N, Gillespie BW, Combe C, Bommer J, Akiba T,

Mapes DL, Young EW, Port FK.: "Longer treatment time and slower ultrafiltration in hemodialysis: associations with reduced mortality in the DOPPS." *Kidney International* (2006) 69: 1222–28.

Burton J, Jefferies HJ, et al. Hemodialysis-Induced Cardiac Injury: Determinants and Associated Outcomes. *Clin J Am Soc Nephrol*. 2009; 4: 914-920.

McIntyre CW. "Haemodialysis-induced myocardial stunning in chronic kidney disease—a new aspect of cardiovascular disease." *Blood Purif*. 2010;29:105–10.

• 2009 UK Renal Association Guidelines for Hemodialysis

<http://www.renal.org/Clinical/GuidelinesSection/Haemodialysis.aspx>

**1c.5. If a PRO-PM (e.g. HRQoL/functional status, symptom/burden, experience with care, health-related behaviors), provide evidence that the target population values the measured PRO and finds it meaningful. (Describe how and from whom their input was obtained.)**

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 subcriteria 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):

**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.)

**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:

**S.3. For endorsement maintenance**, please briefly describe any changes to the measure specifications since last endorsement date and explain the reasons.

N/A

**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)

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

Number of patient months for adult ESRD patients at a dialysis facility with an ultrafiltration rate greater than 13 ml/kg/hr.

**S.5. Time Period for Data** (What is the time period in which data will be aggregated for the measure, e.g., 12 mo, 3 years, look back to August for flu vaccination? Note if there are different time periods for the numerator and denominator.)

One Month

**S.6. 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, 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.

Ultrafiltration rate is calculated for a single session per month (CROWNWeb records data from the last session) using data elements for pre-dialysis weight, post-dialysis weight, and delivered minutes of dialysis. The formula for UFR is:

$$\text{UFR} = \left( \frac{((\Delta \text{wt kg}) * 1000) / (\text{delivered time} / 60)}{\text{post wt kg}} \right)$$

If the monthly ultrafiltration rate exceeds 13 ml/kg/hr then a patient is counted in the numerator.

**S.7. Denominator Statement** (Brief, narrative description of the target population being measured)

Total number of patient months for adult patients reported at a dialysis facility undergoing hemodialysis (HD).

**S.8. Target Population Category** (Check all the populations for which the measure is specified and tested if any):

Populations at Risk

**S.9. Denominator Details** (All information required to identify and calculate the target population/denominator such as definitions, 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)

All adult (=18 years old) hemodialysis patients with ESRD >= 3 months and who are assigned to the same provider for at least the full reporting month who have non-missing values for data elements necessary for calculating UFR (pre and post dialysis weight and delivered time per session) during the reporting period.

**S.10. Denominator Exclusions** (Brief narrative description of exclusions from the target population)

Exclusions that are implicit in the denominator definition include 1) pediatric patients 2) PD patients, 3) patients new to ESRD (less than 90 days on chronic dialysis) and 4) patients that have not been with the same facility for the entire reporting month (transient patients). There are no additional exclusions for this measure.

**S.11. Denominator Exclusion Details** (All information required to identify and calculate exclusions from the denominator such as definitions, 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)

N/A

**S.12. Stratification Details/Variables** (All information required to stratify the measure results including the stratification variables, definitions, 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 with at S.2b)

N/A

**S.13. Risk Adjustment Type** (Select type. Provide specifications for risk stratification in S.12 and for statistical model in S.14-15)

No risk adjustment or risk stratification

If other:

**S.14. Identify the statistical risk model method and variables** (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development and testing should be addressed with measure testing under Scientific Acceptability)

N/A

**S.15. Detailed risk model specifications** (must be in attached data dictionary/code list Excel or csv file. Also indicate if available at measure-specific URL identified in S.1.)

Note: Risk model details (including coefficients, equations, codes with descriptors, definitions), should be provided on a separate worksheet in the suggested format in the Excel or csv file with data dictionary/code lists at S.2b.

**S.15a. Detailed risk model specifications** (if not provided in excel or csv file at S.2b)

N/A

**S.16. Type of score:**

Rate/proportion

If other:

**S.17. 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.18. Calculation Algorithm/Measure Logic** (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; aggregating data; risk adjustment; etc.)

1. Using CROWNWeb-reported data (data stored as SAS files), identify all adult HD patients under the care of a facility during the reporting month.

2. From this group, remove patients who were not in the facility for the entire reporting month and patients who have not been on chronic dialysis for at least 90 days.

3. To form the numerator, remove all denominator-eligible patients who do not have required elements to calculate ultrafiltration rate including pre dialysis weight (kg), post dialysis weight (kg), and delivered time on hemodialysis (mins).

4. Calculate the facility's rate of UFR>13 by dividing the number calculated in Step 3 (the numerator) by the number calculated in Step 2 (the denominator).

**S.19. Calculation Algorithm/Measure Logic Diagram URL or Attachment** (You also may provide a diagram of the Calculation Algorithm/Measure Logic described above at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No diagram provided

**S.20. Sampling** (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF a PRO-PM, identify whether (and how) proxy responses are allowed.

N/A

**S.21. Survey/Patient-reported data** (If measure is based on a survey, provide instructions for conducting the survey and guidance on minimum response rate.)

IF a PRO-PM, specify calculation of response rates to be reported with performance measure results.

N/A

**S.22. Missing data** (specify how missing data are handled, e.g., imputation, delete case.)

Required for Composites and PRO-PMs.

N/A

**S.23. Data Source** (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.24.

Electronic Health Records

**S.24. Data Source or Collection Instrument** (Identify the specific data source/data collection instrument e.g. name of database, clinical registry, collection instrument, etc.)

IF a PRO-PM, identify the specific PROM(s); and standard methods, modes, and languages of administration.

CROWNWeb



**S.25. 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.26. Level of Analysis** (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Facility

**S.27. Care Setting** (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Post-Acute Care

If other:

**S.28. 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.)

**2a. Reliability** – See attached Measure Testing Submission Form

**2b. Validity** – See attached Measure Testing Submission Form

UFR\_NQF\_Testing.docx

### 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)

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.**

**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.**

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. Describe what you have learned/modified 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 a PRO-PM, consider implications for both individuals providing PROM data (patients, service recipients, respondents) and those whose performance is being measured.**

N/A

**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.*

Planned	Current Use (for current use provide URL)
Public Reporting	
Use Unknown	

#### 4a.1. For each CURRENT use, checked above, provide:

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

N/A

**4a.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?)**

Measure is currently under development.

**4a.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.)**

CMS will consider whether to implement this measure in future public reporting programs.

### 4b. 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.

#### 4b.1. Progress on Improvement. (Not required for initial endorsement unless available.)

Performance results on this measure (current and over time) should be provided in 1b.2 and 1b.4. Discuss:

- Progress (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**

N/A

**4b.2. 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.**

The measure is not yet implemented in a public report program, so improvement could not be evaluated. Given that rapid rates of fluid removal at dialysis can precipitate events like intradialytic hypotension, or subclinical yet significantly decreased organ perfusion, and in the case of the myocardium, leading to adverse phenomena such as myocardial stunning, which over time can result in myocardial damage and heart failure, thereby resulting in higher mortality, public reporting of this measure may reduce the frequency of these adverse events. In addition, intradialytic hypotension resulting from rapid fluid removal can result in all the complications of hypotension including dizziness, syncope, falls, post-dialysis fatigue and lower quality of life, as well as death or hospitalization.

#### **4c. 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).

**4c.1. Were any unintended negative consequences to individuals or populations identified during testing; OR has evidence of unintended negative consequences to individuals or populations been reported since implementation? If so, identify the negative unintended consequences and describe how benefits outweigh them or actions taken to mitigate them.**

N/A

### **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)**

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

FM7: Avoidance of Utilization of High Ultrafiltration Rate (UFR) ( $\geq 13$  ml/kg/hour) – developed by KCQA

#### **5a. Harmonization**

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 completely harmonized?**

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

#### **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.)**

We are currently discussing the differences between our UFR measures with KCQA. The primary differences identified are the treatment time exclusion criterion, the transient patient exclusion criterion, and the use of an average of 3 treatments/week (compared to the last treatment of the month).

## 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.

**No appendix Attachment:**

## 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](mailto: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](mailto:parrotte@med.umich.edu)

## 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.**

**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?** Annually

**Ad.5 When is the next scheduled review/update for this measure?** 02, 2016

**Ad.6 Copyright statement:**

**Ad.7 Disclaimers:**

**Ad.8 Additional Information/Comments:** July 2015:

The specifications for this measure have not been revised. CMS has provided a rationale for their request for reconsideration to NQF. The evidence form was revised to include the abstracts for the evidence listed in 1a.8.2.