NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1437 **NQF Project:** End Stage Renal Disease
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Utilization of Dialysis Duration of Four Hours or Longer for Patients New to Dialysis
De.2 **Brief description of measure***:* The proportion of patients new to dialysis whose prescribed dialysis session length is at least 240 minutes
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** N/A
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Effectiveness De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Government entity and in the public domain - no agreement necessary A.4 **Measure Steward Agreement attached:**	**A** **Y**☐ **N**☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least	**B** **Y**☐

every 3 years. Yes, information provided in contact section	**N**☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** **Y**☐ **N**☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** **Y**☐ **N**☐
(for NQF staff use**)** **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** **Y**☐ **N**☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. *Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Leading cause of morbidity/mortality 1a.2 1a.3 **Summary of Evidence of High Impact:** The measure is likely to be high impact because it has been directly linked with improved patient outcomes including reduction in mortality, independent of dialysis dose as measured by Kt/V. The focus on patients new to dialysis is likely to encourage a culture of prescribing longer treatment time throughout the dialysis community. 1a.4 **Citations for Evidence of High Impact:** Brunelli SM, Chertow GM, Ankers ED, et al. "Shorter dialysis times are associated with higher mortality among incident hemodialysis patients." Kidney Int. 2010; 77(7):630-6. Marshall MR, Leonardi B, McDonald SP et al. "Both low hemodialysis dose and shorter length are associated with worse outcomes in Australian and New Zealand patient populations." J Am Soc Nephrol. 2004; 15(Suppl): 387A. Miller JE, Kovesdy CP, Nissenson AR, et al. "Association of hemodialysis treatment time and dose with mortality and the role of race and sex." Am J Kidney Dis. 2010; 55(1):100-12. Saran R, Bragg-Gresham JL, Levin NW, et al. "Longer treatment time and slower ultrafiltration in hemodialysis: associations with reduced mortality in the DOPPS." Kidney Int. 2006; 69:1222-8.	**1a** **C**☐ **P**☐ **M**☐ **N**☐

Shinzato T, Nakai S. "Do shorter hemodialyses increase the risk of death?" Int J Artif Organs. 1999; 22: 199–201.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: Prolonging treatment time is very likely to be associated with significant gains in terms of patient safety (less intradialytic hypotensive events, less need for sodium profiling to prevent such events and less post dialysis hypotension and fatigue with improved quality of life). If better fluid weight management results from prolonging treatment time, it will likely decrease hospitalization associated with volume excess thus resulting in cost savings. Superior blood pressure control is also likely to be a benefit of prolonging treatment time due to better removal of sodium and fluid over longer period. Further, a longer treatment time has the potential to allow greater clearance of middle molecules that are thought to contribute to uremic toxicity. All of the above benefits could save lives and reduce health care utilization for this high risk population.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Over the last 2-3 decades, emphasis has been given to achievement of targets of dialysis dose as measured by Kt/V. This resulted in neglect of certain fundamentals such as fluid weight management that are critical for patient care in this setting. In particular, a culture of short efficient dialysis has overtaken the field, and as long as Kt/V targets are met, the critical area of fluid management, blood pressure control and progressive cardiovascular disease including left ventricular hypertrophy, fluid overload, heart failure and sudden death, so common among dialysis patients, were being relatively neglected. In comparison with other countries, in the setting of thrice weekly HD, treatment times tend to be the shortest in the United States (Saran 2006), and the longest in Japan. Patients are unlikely to accept longer times on dialysis unless they are initiated on longer times than are currently practiced and a culture of longer treatment time is cultivated in the minds of nephrologists, dialysis facilities and providers alike, who are in general, currently focused on achieving small solute clearance targets is as short a time period as feasible.

1b.3 Citations for data on performance gap:
Saran R, Bragg-Gresham JL, Levin NW, et al. "Longer treatment time and slower ultrafiltration in hemodialysis: associations with reduced mortality in the DOPPS." Kidney Int. 2006; 69:1222-8.

1b.4 Summary of Data on disparities by population group:
Disparities for dialysis duration by population group have not been reported in the literature.

1b.5 Citations for data on Disparities:
N/A

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1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Prolonging treatment time is very likely to be associated with significant gains in terms of patient safety (less intradialytic hypotensive events, less need for sodium profiling to prevent such events and less post dialysis hypotension and fatigue with improved quality of life).

1c.2-3. Type of Evidence: Observational study, Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Current clinical practice guidelines related to HD adequacy recommend a minimum duration of 3 hours for all patients on thrice weekly dialysis. However, several large observational studies suggest that longer treatment time, even in the setting of thrice weekly HD, is associated with improved patient outcomes, independent of current measures of dialysis adequacy such as Kt/V (Brunelli, Chertow, & Ankers et al. 2010; Marshall, Leonardi, & McDonald et al. 2004; Miller, Kovesdy, & Nissenson et al. 2010; Saran, Bragg-Gresham, & Levin, et. al 2006; Shinzato & Nakai 1999). The possible mechanisms of the benefits of longer treatment time include the opportunity for slower ultrafiltration with less intradialytic hypotension (with attendant adverse consequences such as myocardial stunning), greater opportunity for achievement of optimal volume

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status and greater clearance of middle molecules. In short, with longer treatment time, dialysis is closer to mimicking true replacement of normal renal function which is continuous by nature. While powerful randomized studies have not yet been performed in the setting of thrice weekly HD, the weight of evidence has incrementally accumulated in favor of prolonging time on dialysis. Limitations are primarily logistic or related to cost of providing such treatment to all patients on dialysis.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
Repeatedly, large observational studies have shown improved patient outcomes in multivariable analyses, strongly suggesting causality. However, randomized trials are lacking. In summary, this topic has been the subject of high quality, (Level B evidence, as rated by the Fluid Weight Management Clinical Technical Expert Panel using an assessment scale similar to KDOQI).

1c.6 Method for rating evidence: The C-TEP followed similar methods of evidence assessment as that used by the KDOQI clinical practice guidelines.

1c.7 Summary of Controversy/Contradictory Evidence: No large-scale randomized trials examining prolonged treatment time in the setting of thrice-weekly hemodialysis have been conducted.

1c.8 Citations for Evidence (*other than guidelines***):** Brunelli SM, Chertow GM, Ankers ED, et al. "Shorter dialysis times are associated with higher mortality among incident hemodialysis patients." Kidney Int. 2010; 77(7):630-6.

Marshall MR, Leonardi B, McDonald SP et al. "Both low hemodialysis dose and shorter length are associated with worse outcomes in Australian and New Zealand patient populations." J Am Soc Nephrol. 2004; 15(Suppl): 387A.

Miller JE, Kovesdy CP, Nissenson AR, et al. "Association of hemodialysis treatment time and dose with mortality and the role of race and sex." Am J Kidney Dis. 2010; 55(1):100-12.

Saran R, Bragg-Gresham JL, Levin NW, et al. "Longer treatment time and slower ultrafiltration in hemodialysis: associations with reduced mortality in the DOPPS." Kidney Int. 2006; 69:1222-8.

Shinzato T, Nakai S. "Do shorter hemodialyses increase the risk of death?" Int J Artif Organs. 1999; 22: 199–201.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
Under the 2006 KDOQI guidelines for hemodialysis adequacy, the following guideline are relevant:
4.9 - The minimum HD treatment time for thrice-weekly dialysis in patients with Kr less than 2 mL/min should be at least 3 hours.

1c.10 Clinical Practice Guideline Citation: KDOQI. Clinical practice guidelines for hemodialysis adequacy. Am J Kidney Dis. 2006; Jul;48(1 Suppl 1):S13-97.
1c.11 National Guideline Clearinghouse or other URL: N/A

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
The 2006 KDOQI guidelines were based on Work Group consensus.

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)***:**
N/A

1c.14 Rationale for using this guideline over others:
There are no other known guidelines pertaining to session length in dialysis patients.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**

Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, **met?** **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Number of patients in denominator whose prescribed dialysis session length is at least 240 minutes. **2a.2 Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** The entire calendar month. **2a.3 Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** CROWNWeb includes delivered hemodialysis session length data for each hemodialysis (HD) patient for a single session per month (typically the last session of the month). CROWNWeb also includes a "time per session" variable, which indicates "the time delivered per session for hemodialysis patients (in minutes)." The "session length" referred to in the numerator statement is from the latter data element.	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):** Number of patients in an outpatient dialysis facility undergoing chronic maintenance hemodialysis. **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** Adults 18 years or older. **2a.7 Denominator Time Window (***The time period in which cases are eligible for inclusion in the denominator***):** The entire calendar month. **2a.8 Denominator Details (***All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):** Denominator includes only in-center HD patients.	
2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** Patients not receiving dialysis treatment three times per week. **2a.10 Denominator Exclusion Details (***All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):** None.	
2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):** No stratification is required for this measure.	
2a.12-13 Risk Adjustment Type: No risk adjustment necessary **2a.14 Risk Adjustment Methodology/Variables (***List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):** N/A	**2a-specs** **C☐** **P☐** **M☐** **N☐**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
A patient's age is determined as of the start of the reporting month. Patients are counted as being in the facility for the entire reporting month if "Admit Date" to the specified facility is prior or equal to the first day of the reporting month, AND the patient has not been discharged ("Discharge Date" is null or blank), OR "Discharge Date" from the facility is greater than or equal to the last day of the reporting month. Patients are counted as in-center HD patients "new to dialysis" if their in-center HD start date is less than or equal 90 days prior to the end of the reporting month and their in-center HD end date is greater than or equal to the last day of the reporting month (or blank/null in the case the patient has not ended in-center HD).
Patients are included in the denominator if they are at least 18 years old and were continuously enrolled in the dialysis facility as an in-center HD patient for the entire reporting month. Patients are excluded from the denominator if the prescribed number of HD sessions per week is not equal to three.
Patients are included in the numerator if they are in the denominator and the reported prescribed dialysis session length is greater than or equal to 240 minutes as measured by the CROWNWeb variable "time per session" (see numerator details).
The measure is calculated by dividing the numerator by the denominator.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
The performance of the facility will be compared to state, Network and national performance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
N/A

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic clinical data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
CROWNWeb

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
http://www.projectcrownweb.org/crown/index.php

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://www.projectcrownweb.org/crown/index.php?page=Public_Documents&subPage=Release_Documents

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Facility/Agency

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Dialysis Facility

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Dialysis

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)***:** Phase 1 and 2 CROWNWeb Beta Testing Data: Data are based on the 18 facilities participating in Phase 1 and the 180 facilities participating in Phase 2 plus about 3000 additional batch-submission facilities in CROWNWeb. These data include about 60% of dialysis facilities and 75% of dialysis patients and are heavily weighted towards large dialysis organization facilities.

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2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
If the data were highly unreliable and subject to frequent random variation, we would expect to see unusually high month-to-month disagreement. As it is unlikely that clinicians will frequently change the treatment time prescription for patients new to dialysis, a reliable measure should exhibit nearly perfect agreement throughout the first 90 days.

As a simple test of reliability, we examined attainment of the measure on the 3,977 patients who were new to in-center thrice-weekly HD during the months of May 2010 and June 2010. In May 2010, 1,883 patients (47.4%) were prescribed at least four hours of HD and in June 2010, 1,861 of these patients (46.8%) were prescribed at least four hours. The Kappa statistic, a measure of agreement, was 0.9283, which suggests almost perfect agreement between the two months.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
It is likely that the measure is very reliable, as the dialysis session length prescription is required to be accurately documented in the patient's treatment record. The simple reliability test above demonstrated nearly perfect agreement (Kappa = 0.93) in a two-month sample of CROWNWeb data. While this demonstrates that the measure is unlikely to be subject to random variation, further reliability testing using re-abstraction of the treatment record is necessary to determine whether changes in the treatment prescription are recorded accurately in the CROWNWeb data.

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: Phase 1 and 2 CROWNWeb Beta Testing Data: Data are based on the 18 facilities participating in Phase 1 and the 180 facilities participating in Phase 2 plus about 3000 additional batch-submission facilities in CROWNWeb. These data include about 60% of dialysis facilities and 75% of dialysis patients and are heavily weighted towards large dialysis organization facilities.

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:
Face validity was assessed by a vote by the C-TEP and confirmed by support from the data technical expert panel (D-TEP).

To determine whether the HD treatment time prescription is a valid indicator of delivered treatment time, we examined the agreement between the prescribed and delivered time for patients new to standard thrice-weekly in-center HD in the months of May 2010 and June 2010. Among the 3,196 patients in May 2010 with data for both prescribed and delivered HD duration, there was 88% agreement (Kappa = 0.76). Similarly, among the 3,069 patients in June 2010 with data for both prescribed and delivered HD duration, there was 88% agreement (Kappa = 0.76). A Kappa statistic greater than 0.70 was considered "substantial agreement."

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:
The measure was ratified by the C-TEP as a valid measure. Based on available evidence, the potential benefits of prolonging treatment time are generally accepted by the nephrology community worldwide. Recent endorsement of this practice by the European Best Practices Guidelines is testimony to this measure.

Validity testing based on analysis of CROWNWeb data suggested that the prescribed HD session length closely agrees with the delivered session length. Therefore, changes in prescription practices are likely to be closely related to changes in the actual treatment time for HD patients.

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2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):
The measure is limited to traditional, thrice-weekly HD as large randomized trials are in progress for more frequent dialysis as well as frequent slow nocturnal dialysis, and the majority of dialysis patients in the United States receive thrice-weekly HD.
The measure is limited to new patients to HD (the first 90 days). The imposition of this restriction for this measure was added for logistic and feasibility reasons based upon feedback from the C-TEP. Concerns were

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raised about the impact of widespread application of this measure, particularly with respect to the unintended consequences of increased burden and cost to dialysis facilities. The bulk of the evidence does not specifically identify the first 90 days as the only time where longer treatment time would be beneficial.

2d.2 Citations for Evidence:
The exclusions are not based on published evidence; however they are limited to those with a compelling clinical rationale and precisely defined.

2d.3 Data/sample *(description of data/sample and size)*: N/A

2d.4 Analytic Method *(type analysis & rationale)*:
N/A

2d.5 Testing Results *(e.g., frequency, variability, sensitivity analyses)*:
N/A

2e. Risk Adjustment for Outcomes/ Resource Use Measures

2e.1 Data/sample *(description of data/sample and size)*: Risk adjustment is not necessary for this measure.

2e.2 Analytic Method *(type of risk adjustment, analysis, & rationale)*:
N/A

2e.3 Testing Results *(risk model performance metrics)*:
N/A

2e.4 If outcome or resource use measure is not risk adjusted, provide rationale: N/A

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2f. Identification of Meaningful Differences in Performance

2f.1 Data/sample from Testing or Current Use *(description of data/sample and size)*: Phase 1 and 2 CROWNWeb Beta Testing Data: Data are based on the 18 facilities participating in Phase 1 and the 180 facilities participating in Phase 2 plus about 3000 additional batch-submission facilities in CROWNWeb. These data include about 60% of dialysis facilities and 75% of dialysis patients and are heavily weighted towards large dialysis organization facilities.

For this analysis, we utilized the subset of CROWNWeb Phase 2 facilities (N = 180) with at least one patient new to HD (within the first 90 days) in September 2009 (N = 145).

2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance *(type of analysis & rationale)*:
To examine differences in HD treatment time prescription practices at the facility level, we examined the 145 CROWNWeb Phase 2 facilities with at least one patient new to HD (i.e., within the first 90 days of initiating dialysis) in September 2009. Among these facilities, the mean number of patients eligible for the measure was 3.9, the median was 3.0, the minimum was one, and the maximum was 18 patients. Due to the small number of new patients in these facilities, measure achievement was divided into four categories: (1) zero patients; (2) 1% to 49%; (3) 50% to 99%; (4) 100%.

2f.3 Provide Measure Scores from Testing or Current Use *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:
There was considerable variation in the facility-level prescription patterns of HD treatment time. About 36% of facilities prescribed no new patients at least four hours HD (N = 52), while 19% of facilities prescribed every new patient at least four hours treatment time (N = 28). A plurality of facilities prescribed some, but less than half of new patients at least four hours treatment (N = 37 or 26%) and 19% of facilities prescribed more than half but fewer than all patients at least four hours (N = 28).

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2g. Comparability of Multiple Data Sources/Methods

2g.1 Data/sample *(description of data/sample and size)*: CROWNWeb. Phase 1 and 2 CROWNWeb Beta

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Testing Data: Data are based on the 18 facilities participating in Phase 1 and the 180 facilities participating in Phase 2 plus about 3000 additional batch-submission facilities in CROWNWeb. These data include about 60% of dialysis facilities and 75% of dialysis patients and are heavily weighted towards large dialysis organization facilities. 2g.2 **Analytic Method** *(type of analysis & rationale)*: Multiple data sources are not allowed for this measure and therefore testing is not applicable. 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: N/A	**M**☐ **N**☐ **NA**☐
2h. Disparities in Care 2h.**1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: N/A 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** N/A	**2h** **C**☐ **P**☐ **M**☐ **N**☐ **NA**☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, **met?** **Rationale:**	*2* **C**☐ **P**☐ **M**☐ **N**☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Testing not yet completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is currently not publically reported. This measure could be considered for public reporting on Medicare's Dialysis Facility Compare website in the future. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** None. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: Testing of interpretability has not been performed. 3a.5 **Methods** *(e.g., focus group, survey, QI project)*: N/A 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*: N/A	**3a** **C**☐ **P**☐ **M**☐ **N**☐
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	

(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** N/A	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability*?	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, **met?** **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** The requested information should be available in patient medical records as standard practice guidelines require documentation of patients' prescribed treatment time.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation	**4e**

4e.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/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: The data are already collected in CROWNWeb, and will not be an undue data collection burden for the facility. It is possible that implementation of a measure related to treatment time may be met with resistance by providers and patients alike. From the providers' perspective it may be due to the potential for higher costs of implementing longer treatment times for large numbers of their patients. Additionally some providers may not feel the necessity for prolonging treatment time in patients if small solute (Kt/V) targets are being met or significant residual renal function is present. For patients, it may be perceived as an inconvenience. Based on this reasoning, this measure is initially being proposed only for the first 90 days of hemodialysis. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** The data are already collected in CROWNWeb, and therefore will not result in additional data collection costs for the facility. The estimated data collection burden and associated cost estimates for the measures are presented in Tables 1-3 in the Federal Register. Vol. 73, No. 73 page 20469. URL: http://www.cms.gov/CFCsAndCoPs/downloads/ESRDfinalrule0415.pdf **4e.3 Evidence for costs:** See above reference to Federal Register. **4e.4 Business case documentation:** If better fluid weight management results from prolonging treatment time, it will likely decrease hospitalization associated with volume excess thus resulting in cost savings. Superior blood pressure control is also likely to be a benefit of prolonging treatment time due to better removal of sodium and fluid over longer period. All of the above benefits could save lives and reduce health care utilization for this high risk population. At the present time, advocating longer treatment times for all dialysis patients (and not just those new to dialysis), might pose unforeseeable logistic problems for dialysis facilities and might result in unacceptably higher cost of treatment.	**C☐ P☐ M☐ N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility*?	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, **met?** **Rationale:**	**4** **C☐ P☐ M☐ N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐ N☐ A☐**
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** Centers for Medicare & Medicaid Services, 7500 Security Boulevard, Baltimore, Maryland, 21244 **Co.2 Point of Contact** Thomas, Dudley, Thomas.Dudley@cms.hhs.gov, 410-786-1442-	
Measure Developer If different from Measure Steward	

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Co.5 Submitter If different from Measure Steward POC
Thomas, Dudley, Thomas.Dudley@cms.hhs.gov, 410-786-1442-, Centers for Medicare & Medicaid Services

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Dr. Rajiv Agarwal, panel chair (University of Indiana, School of Medicine, Indianapolis, IN)
Dr. Nathan Levin (Renal Research Institute, New York, NY)
Dr. John Daugirdas (University of Chicago, Chicago, IL)
William Peckham (http://www.billpeckham.com)
Dr. Raymond Hakim (Fresenius Medical Care NA, Brentwood, TN)
Dr. Thomas Parker III (Renal Ventures Management, Lakewood, CO)
Dr. Allen Nissenson (DaVita, El Segundo, CA)
Dr. Rajiv Saran, Moderator (University of Michigan – Kidney Epidemiology and Cost Center, Ann Arbor, MI)
Brett Lantz, Analyst (Arbor Research Collaborative for Health, Ann Arbor, MI)

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released:
Ad.7 Month and Year of most recent revision:
Ad.8 What is your frequency for review/update of this measure? Three years
Ad.9 When is the next scheduled review/update for this measure? 2013

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 12/09/2010