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 #: 0251
Corresponding Measures:
De.2. **Measure Title:** Vascular Access—Functional Arteriovenous Fistula (AVF) or AV Graft or Evaluation for Placement
Co.1.1. **Measure Steward:** Kidney Care Quality Alliance (KCQA)
De.3. **Brief Description of Measure:** Percentage of end stage renal disease (ESRD) patients aged 18 years and older receiving hemodialysis during the 12-month reporting period and on dialysis >90 days who:

1. have a functional autogenous AVF (defined as two needles used or a single-needle device [NOT one needle used in a two-needle device]) (computed and reported separately);

2. have a functional AV graft (computed and reported separately); or

3. have a catheter, but have been seen/evaluated by a vascular surgeon, other surgeon qualified in the area of vascular access, or interventional nephrologist trained in the primary placement of vascular access for a functional autogenous AVF or AV graft at least once during the 12-month reporting period (computed and reported separately).

Reporting should be stratified by incident versus prevalent patients, as defined by USRDS.
1b.1. **Developer Rationale:** The measure will reduce the frequency of vascular access-related complications and will improve patient survival by promoting AVF and/or AV graft placement and discouraging central venous catheter use.

S.4. **Numerator Statement:** Number of patients from the denominator who:

1. have a functional autogenous AVF (defined as two needles used or a single-needle device) (computed and reported separately); or

2. have a functional AV graft (computed and reported separately); or

3. have a catheter but have been seen/evaluated by a vascular surgeon, other surgeon qualified in the area of vascular access, or interventional nephrologist trained in the primary placement of vascular access for a functional autogenous AVF (defined as two needles used or a single needle device) or AV graft at least once during the 12-month reporting period (computed and reported separately).

Reporting should be stratified by incident versus prevalent patients, as defined by USRDS.
S.6. **Denominator Statement:** All ESRD patients aged 18 years and older receiving hemodialysis during the 12-month reporting period and on dialysis for greater than 90 days.

This measure includes both in-center and home hemodialysis patients.
S.8. **Denominator Exclusions:** None.

De.1. **Measure Type:** Process
S.17. **Data Source:** Claims, Electronic Health Records, Other, Paper Medical Records
S.20. **Level of Analysis:** Clinician : Individual

IF Endorsement Maintenance – Original Endorsement Date: Nov 15, 2007 **Most Recent Endorsement Date:** Oct 01, 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
KCQA_0251_MeasSubmEvidenceForm.docx
1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?
Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

1b. Performance Gap

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

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

1b.1. **Briefly explain the rationale for this measure** *(e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)*
If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.
The measure will reduce the frequency of vascular access-related complications and will improve patient survival by promoting AVF and/or AV graft placement and discouraging central venous catheter use.

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.*
Facility Testing:
KCQA tested its ESRD measures through a prospective cohort study on a nationally drawn sample of 53 dialysis facilities containing a mix of for-profit and not-for-profit providers; hospital-affiliated and freestanding facilities within large, small, and independent dialysis organizations; urban, suburban, and rural settings; and facilities both with and without electronic health records (EHRs). Approximately 25 patients per facility were sought, resulting in a final sample size of 1,115 patients. Both facility and patient samples were structured to be generally representative of the national industry profile as identified by the United States Renal Data Systems (USRDS) 2007 Annual Data Report. Because of the measure's intended use via CROWNWeb, facility records were used as the data source, and standardized, paper-based data collection sheets constructed from the endorsed specifications were employed during data collection.

Vascular access data were provided for the 1,057 hemodialysis patients included in the study sample. The vascular access profile for the study population on hemodialysis was as follows:
• Functional AVF = 621 patients (58.8%)
• Catheter only = 306 (28.9%)
• AV graft only = 99 (9.4%)
• AVF with catheter = 26 (2.5%)

• AV graft with catheter = 5 (0.5%)

Facilities reported that 291 (86.4%) of the 337 patients who did NOT have a permanent access at the commencement of the study (September 1, 2008) had been evaluated by a vascular or other qualified surgeon for placement of permanent access by the conclusion of the study (August 31, 2009). Of these, 20 did not have documentation of the evaluation—a requirement to receive credit for the measure. The data elements collected thus permit calculation of performance for the measure as follows:

Performance Rate =
([Patients With AVF] + [Patients With AV graft] + [Patients without AVF or AV graft seen by surgeon for permanent access] — [Patients seen but without documentation]) / ([Total patients on hemodialysis >90 days] - Patients enrolled in hospice])
= (621 + 99 + 291 – 20) / (1,057 - 1) = 93.8%

The performance for each individual facility in the pilot ranged from 41% to 100%, with a mean performance of 93.8%.

Physician Office Testing:
To test the measure in physician offices, Kidney Care Partners (KCP) contracted with the Iowa Foundation for Medical Care (IFMC). IFMC was under an existing contract with the American Medical Association Physician Consortium for Performance Improvement (AMA PCPI)/Renal Physicians Association (RPA) to perform on-site feasibility and implementation testing of several AMA PCPI/RPA measures, and both organizations generously permitted KCQA to "piggy-back" onto the AMA PCPI/RPA testing visits. At the time KCQA engaged IFMC, it had already obtained consent from four nephrology practice sites that would consist of a nephrology practice alpha site local to IFMC and three sites distributed geographically across the United States (Iowa, Nevada, Texas, and Pennsylvania) of various practice sizes (5.25 to 62 physicians) and medical record types (two EHR, one paper but by the time of visit transitioning to EHR, and one hybrid). Each site was asked to pull in advance the records of the first 35 adult hemodialysis patients seen on or after July 1, 2007; IFMC requested what it referred to as an oversample of five patients in an effort to ensure a remaining sample of 30 patients. Additionally, following the alpha site, the following were stipulated:

• Patient had two face-to-face office visits between July 1, 2007 and June 30, 2008, or if not seen in the office twice, it was determined he/she was receiving ongoing care from the office practice by looking first at the medical reviews resulting in an annual History and Physical, then supplementing using the monthly billings until the office reached the total of 35 ESRD patients. E&M service codes included: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, or 99245.

• ESRD patients can be identified with an ICD-9 code of 585.6 or an ICD-10 code of N18.0 and G-codes or CPT codes descriptive of hemodialysis.

• Hemodialysis = G0314, G0315, G0316, G0317, G0318, G0319, 90935, 90937.

Facilities were asked to pull the records in advance of the IFMC visit because IFMC and AMA PCPI/RPA had previously identified the need for both patient's physician office and dialysis organization records to collect necessary data elements. Physician offices were, therefore, requested to secure copies of the necessary facility records in advance of the IFMC visit.

The three nephrology office sites, in addition to the alpha site, were visited by a two-person IFMC abstractor team to conduct feasibility and reliability testing. Using the KCQA data collection tool, the two abstractors individually abstracted each medical record, compared the results, and evaluated the mismatches. Mismatch codes, previously developed by IFMC for reliability testing of project abstraction, were used to classify the reason determined for each mismatch.

Physician office performance measure results were calculated based on the data collected by IFMC. As with testing in facilities, a performance gap is demonstrated, with a mean performance rate of 72 percent. (NOTE: This rate reflects the measure scores giving credit only for patients with or evaluated for a functional AVF. The rate incorporating AV grafts as an acceptable alternative to AVFs cannot be calculated on the physician office data as IFMC only categorized patients according to AVF status (y/n). Data on AV graft status was not collected.)

Conclusions: The findings from both the facility and physician office testing indicate that contrary to current clinical practice guidelines and recommendations, a considerable proportion of hemodialysis patients continue to be dialyzed via access types other

than AVFs and AV grafts, and that provider performance varies widely in this aspect of care. The results identify an important gap in clinical performance.

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 above testing results, and despite the well-known statistics and the efforts of programs promoting early placement of permanent vascular access prior to initiation of ESRD therapy (e.g., Healthy People 2020 and Fistula First, Catheter Last), more than 80 percent of incident ESRD patients had a catheter at first outpatient dialysis in 2011. Only 16.8 percent had a mature, functional AVF, and 3.4 percent had a mature graft. Among prevalent hemodialysis patients, use of a catheter as the only mode of vascular access has remained relatively stable since the late 1990s at approximately 28 percent. (1)

1. U.S. Renal Dialysis System, USRDS 2013 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States. 2013.

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.*
KCQA tested its ESRD measures through a prospective cohort study on a nationally drawn sample of 53 dialysis facilities. Approximately 25 patients per facility were sought, resulting in a final sample size of 1,115 patients. Both facility and patient samples were structured to be generally representative of the national industry profile as identified by the United States Renal Data Systems (USRDS) 2007 Annual Data Report. As minimal patient data was sought to protect confidentiality and the collection of race/ethnicity information was not necessary to test the measure's data elements for reliability and validity, an examination of the data for disparities trends was not conducted. However, CMS Clinical Performance Measures (CPM) data for 2007 indicated that catheter use continues to be significantly more common in women than in men (22.9 and 13.3 percent, respectively). And while the overall AVF use increased from 50.3 to 55.0 percent between 2006 and 2007, rates were lower in patients aged 44 years and older (52.1 percent), in females (44.3 percent), and in African American patients (47.2 percent).(1)

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**
U.S. Renal Dialysis System, USRDS 2010 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States. 2010.

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):*
Access to Care, Care Coordination, Care Coordination : Transitions of Care, Safety : Complications, Safety : Healthcare Associated Infections

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.)*
http://kidneycarepartners.com/kidney-care-quality-alliance-kcqa/

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

S.2b. **Data Dictionary, Code Table, or Value Sets** *(and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)*
Attachment **Attachment:** KCQA0251_DataDictionary02-26-15-635827502018248770-636159422158397280-636452339371667189-636826285269355347.pdf

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.
There have been no changes to the measure since last endorsement.

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 who:

1. have a functional autogenous AVF (defined as two needles used or a single-needle device) (computed and reported separately); or

2. have a functional AV graft (computed and reported separately); or

3. have a catheter but have been seen/evaluated by a vascular surgeon, other surgeon qualified in the area of vascular access, or interventional nephrologist trained in the primary placement of vascular access for a functional autogenous AVF (defined as two needles used or a single needle device) or AV graft at least once during the 12-month reporting period (computed and reported separately).

Reporting should be stratified by incident versus prevalent patients, as defined by USRDS.

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).
Include in the numerator all patients from the denominator who meet the following criteria:

1. Access type = Functional autogenous AVF (defined as 2 needles used or single-needle device) (NOTE: 1 needle used in a 2-needle device is NOT acceptable)

OR

2. Access type =
• Functional AV graft OR
• AVF combined with AV graft OR
• Catheter (alone or combined with an AVF or AV graft)

AND

a. Patient seen/evaluated by a vascular surgeon, other surgeon qualified in the area of vascular access, or interventional nephrologist trained in the primary placement of vascular access for an AVF or AV graft during the 12-month reporting period

AND

b. Facility medical records contain the following types of documentation of the surgical evaluation:
• A note or letter prepared by the primary nephrologist OR
• A note or letter prepared by the vascular surgeon, other qualified surgeon, or interventional nephrologist trained in the primary placement of vascular access OR
• A note prepared by facility personnel
AND
• Date of the surgical evaluation: (MM/YYYY)
AND
• If permanent access was not placed, the reason for this decision.

S.6. Denominator Statement *(Brief, narrative description of the target population being measured)*
All ESRD patients aged 18 years and older receiving hemodialysis during the 12-month reporting period and on dialysis for greater than 90 days.

This measure includes both in-center and home hemodialysis patients.

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).
Include in the denominator all patients for a given nephrologist who meet the following criteria in the most recent month of the 12-month study period and who are not enrolled in hospice:

1. Diagnosis = ESRD

AND

2. Primary type of dialysis = hemodialysis or home hemodialysis

AND

3. Age = >/= 18 years

AND

4. Time on dialysis = >90 days

S.8. **Denominator Exclusions** *(Brief narrative description of exclusions from the target population)*
None.

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.)*
Not applicable.

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 = Higher 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.)*
The measure score is calculated by dividing the total number of patients included in the numerator by the total number of patients included in the denominator.

IDENTIFICATION OF DENOMINATOR CASES
To identify patients in the denominator, first calculate the following:

• Patient age = (Date of first day of most recent month of study period)—(Patient's Date of Birth)

• Patient time on dialysis = (Date of first day of most recent month of study period)—(Patient's Date Regular Chronic Dialysis Began)

Include in the denominator all patients for a given nephrologist who meet the following criteria in the most recent month of the 12-month study period and who are not enrolled in hospice:

1. Diagnosis = ESRD
AND

2. Primary type of dialysis = hemodialysis or home hemodialysis
AND
3. Age = >/=18 years
AND
4. Time on dialysis = >90 days

IDENTIFICATION OF NUMERATOR CASES
Include in the numerator all patients from the denominator who meet the following criteria:

1. Access type = Functional autogenous AVF (defined as 2 needles used or single-needle device) (NOTE: 1 needle used in a 2-needle device is NOT acceptable)
OR
1. Access type = Functional AV graft
OR
1. Access type = AVF combined with AV graft
OR
1. Access type (select one):
• AV fistula with a catheter
• AV graft combined with a catheter
• Catheter
• Other/unknown

AND

2. Patient referred to a vascular surgeon, other surgeon qualified in the area of vascular access, or interventional nephrologist trained in the primary placement of vascular access for an AVF or AV graft during the 12-month reporting period

AND

3. Patient seen/evaluated by a vascular surgeon, other surgeon qualified in the area of vascular access, or interventional nephrologist trained in the primary placement of vascular access for an AVF or AV graft during the 12-month reporting period

AND

4. Facility medical records contain the following types of documentation of the surgical evaluation:
• A note or letter prepared by the primary nephrologist OR
• A note or letter prepared by the vascular surgeon, other qualified surgeon, or interventional nephrologist trained in the primary placement of vascular access OR
• A note prepared by facility personnel

AND

• Date of the surgical evaluation: (MM/YYYY)

AND

• If permanent access was not placed, the reason for this decision

MEASURE SCORE CALCULATION
Performance Rate = ([Patients with a functional AVF] + [Patients with a functional AV graft] + [Patients with a catheter who have been seen/evaluated by a vascular surgeon, other surgeon qualified in the area of vascular access, or interventional nephrologist trained in the primary placement of vascular access for a functional AVF or AV graft during the 12-month reporting period WITH

documentation of the evaluation in the facility medical records]) ÷ ([Total ESRD patients >/=18 years of age receiving HD during the 12-month reporting period and on dialysis >90 days] – Patients enrolled in hospice])

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.
Claims, Electronic Health Records, Other, Paper Medical 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.
Data elements for the measure can be collected via the CROWNWeb Electronic Data Interchange, available at URL: http://www.projectcrownweb.org/crown/index.php.

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)*
Clinician : Individual

S.21. **Care Setting** *(Check ONLY the settings for which the measure is SPECIFIED AND TESTED)*
Outpatient Services, 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
KCQA_0251_MeasSubmTestingForm.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.

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.

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.

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 by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)
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**.
Some data elements are in defined fields in electronic sources

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).
Data elements for the Vascular Access—Functional AVF or AV Graft or Evaluation for Placement measure can be collected via the CMS CROWNWeb data repository. With the availability of the new G codes that are now included in the updated microspecifications, the measure could also be collected using administrative data—CPT, CPT-II, ICD-9 and -10, and G codes—which are supplied here; the measure has not been tested in this manner.

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.
As the reliability analyses indicated, the measure is specified in a manner that permits it to be reliably applied. Additionally, during the course of the pilot and during the on-site interviews, facility personnel did not report any difficulty with the measure concepts or

data elements. All data elements are derived from only the facility records and do not require a review of the nephrologist's office records. The burden of manual data collection to collect all KCQA measures ranged from 1 to 15 minutes per patient once facilities became familiar with the data collection forms after the first quarter.

We do not minimize this time commitment, but note that the CROWNWeb interface will reduce the burden and that batch electronic processing for dialysis organizations with integrated EHRs will significantly minimize burden. Nevertheless, for facilities relying on manual data entry into CROWNWeb from paper-based records, we recognize the measures are feasible, but do impose a burden to comply with the data needs.

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)

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

Not applicable.

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?*)
A modified version of the measure is currently widely used as an internal quality improvement measure. Specifically, the dialysis organizations track types of vascular access in their patients. However, the surgical evaluation component of the measure for patients without permanent access in place is has not been tracked, secondary to a previous reliance on CPT codes for this data. The availability of the new G Codes that are included in the updated microspecifications/codes should facilitate data collection and increase use of the measure in its entirety.

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.*)
Despite efforts by CMS to increase permanent access through Fistula First (and more recently the Fistula First, Catheter Last

Initiative), the ESRD Quality Incentive Program (value-based purchasing), and the ESRD Five Star program (public reporting), the use of permanent access in the United States continues to be a focus for refinement and improvement. Specifically, in January 2015, CMS issued a call for nominations for the End-Stage Renal Disease Vascular Access Technical Expert Panel. This panel will evaluate the existing NQF-endorsed vascular access measures that CMS uses in its public reporting (ESRD Five Star) and payment (QIP) programs. KCQA is requesting that CMS and the TEP, to be convened by CMS contractor University of Michigan KECC, include the KCQA vascular access measure in its deliberations and any implementation from the TEP's subsequent output (Fall 2015). CMS does not indicate a timeframe for implementation of this work, but we note that the earliest implementation possible would be for PY 2017 under the QIP. (Currently facilities are being measured for PY 2016.)

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 a measure implementer and thus does not have direct access to implementation or performance data.

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.**
Not applicable; see response to 4d1.1.

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.
Not applicable; see response to 4d1.1.

4a2.2.2. **Summarize the feedback obtained from those being measured.**
Not applicable; see response to 4d1.1.

4a2.2.3. **Summarize the feedback obtained from other users**
Not applicable; see response to 4d1.1.

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.**
Not applicable; see response to 4d1.1.

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.
Use of the measure will reduce the frequency of vascular access-related complications and will improve patient survival by promoting AVF and/or AV graft placement and discouraging central venous catheter use.

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.**

Percent agreement between the auditor and facility abstractors (i.e., the reliability percentage) was assessed during the on-site audits through a direct comparison of data submitted by the facilities throughout the pilot to data reabstracted by the auditor(s). (See Table 3 [Measure Reliability Percentage and Error Type] in Attachment A.) This marker of accuracy was found to be excellent at 96.9%, indicating minimal susceptibility to inaccuracies and errors.

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

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.

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

0256 : Minimizing Use of Catheters as Chronic Dialysis Access

0257 : Maximizing Placement of Arterial Venous Fistula (AVF)

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

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

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

Are the measure specifications harmonized to the extent possible?

No

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

NQF 0256 and 0257 focus on reducing catheter use exclusively in favor of AVF use. This construct ignores and thus disincentivizes use of AV grafts, which are oftentimes the most clinically appropriate access and are selected with and in the best interest of the patient, and may ultimately have a negative clinical impact.

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.)

The KCQA measure acknowledges that AV grafts are frequently an appropriate clinical decision while continuing to disincentivize use of central venous catheters. Additionally, the measure is specified for use at the clinician, rather than the facility, level, as the clinical responsibility for vascular access decisionmaking lies primarily with the physician.

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:** KCQA_0251_CalcAlgorithmSpecsTestingData.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.
KCQA Clinical Measures Work Group Members (developed measures):
1. William Haley, MD — Mayo Clinic
2. John Burkart, MD — GatesMcDonald Health Plus
3. Al Collins, MD — University of Minnesota
4. Charlie McAllister, MD — DaVita, Inc.
5. Jerry Yee, MD — Henry Ford Hospital

KCQA Clinical Measures Task Group Members (approved measures):
1. Charlie McAllister, MD—DaVita, Inc.
2. Raymond M. Hakim, MD, PhD — Fresenius Medical Care
3. Alan Kliger — Yale University
4. Ed Jones — Renal Physicians Association
5. Allen Nissenson — DaVita, Inc.
6. William Goodman — Amgen, Inc.
7. William Haley, MD — Mayo Clinic
8. Robert Provenzano — DaVita, Inc.
9. Gail Wick — American Nephrology Nurses Association
10. Rulan Parekh — American Kidney Fund

Kidney Care Quality Alliance Steering Committee Members (oversaw testing):
• Raymond M. Hakim, MD, PhD (Co-Chair) — Fresenius Medical Care
• Gail S. Wick, BSN, RN, CNN (Co-Chair) — American Nephrology Nurses Association
• Dolph Chianchiano, JD — National Kidney Foundation
• Richard S. Goldman, MD — Renal Physicians Association
• Barbara Fivush, MD — American Society of Pediatric Nephrology
• Maureen Michael, BSN, MBA — National Renal Administrators Association
• Allen Nissenson, MD — DaVita
• Barry M. Straube, MD — Centers for Medicare and Medicaid Services (Liaison Member)

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.2 **Year the measure was first released:** 2007
Ad.3 **Month and Year of most recent revision:** 10, 2011
Ad.4 **What is your frequency for review/update of this measure?** Annually, and as needed with changes or additions to the evidence base.
Ad.5 **When is the next scheduled review/update for this measure?** 02, 2016

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:**