



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 #: 1667

De.2. Measure Title: Pediatric Kidney Disease : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Co.1.1. Measure Steward: Renal Physicians Association

De.3. Brief Description of Measure: Percentage of calendar months within a 12-month period during which patients aged 17 years and younger with a diagnosis of End Stage Renal Disease (ESRD) receiving hemodialysis or peritoneal dialysis have a hemoglobin level < 10 g/dL

1b.1. Developer Rationale: Anemia is a common complication of chronic kidney disease (CKD). The prevalence of anemia varies with the degree of renal impairment in predialysis patients with CKD, but once end-stage kidney failure occurs, all patients are eventually affected. Anemia develops once renal function decreases to <50% because of a deficiency in endogenous erythropoietin (EPO) production by the kidney, decreased red cell survival, blood losses, and increased red blood cell destruction once the patient begins dialysis treatment, particular hemodialysis. Anemia reduces physical capacity, well-being, neurocognitive function, and energy level and worsens quality of life both in predialysis and dialysis patients. Anemia also induces adaptive cardiovascular mechanisms to maintain tissue oxygen supply. This leads to left ventricular hypertrophy, left ventricular dilation, and myocardial ischemia, which are risk factors for cardiovascular disease and death. It is plausible that reversing anemia may reduce this risk.

Strippoli GFM, Craig JC, Manno C, Schena FP. Hemoglobin Targets for the Anemia of Chronic Kidney Disease: A Meta-analysis of Randomized, Controlled Trials. J Am Soc Nephrol 15:3154-3165, 2004.

The clinical issues that impact achievement of the target hemoglobin in the pediatric population differ from the adult population. Normative, adult population data should not be used to assess performance in the pediatric population. Consideration(s) should be given to using age-specific normative data across the pediatric age range.

S.4. Numerator Statement: Calendar months during which patients have a hemoglobin level < 10 g/dL

S.7. Denominator Statement: All calendar months during which patients aged 17 years and younger with a diagnosis of ESRD are receiving hemodialysis or peritoneal dialysis

S.10. Denominator Exclusions: Documentation of medical reason(s) for patient having a hemoglobin level < 10 g/dL (eg, patients who have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, post-operative bleeding, active bloodstream or peritoneal infection], other medical reasons)

De.1. Measure Type: Outcome

S.23. Data Source: Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry

S.26. Level of Analysis: Clinician : Group/Practice, Clinician : Individual, Clinician : Team

IF Endorsement Maintenance – Original Endorsement Date: Apr 02, 2012 **Most Recent Endorsement Date:** Oct 02, 2015

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

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

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? This measure is not a composite or paired measure.

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 [MeasSubm_Evidence_1667-update.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) Anemia is a common complication of chronic kidney disease (CKD). The prevalence of anemia varies with the degree of renal impairment in predialysis patients with CKD, but once end-stage kidney failure occurs, all patients are eventually affected. Anemia develops once renal function decreases to <50% because of a deficiency in endogenous erythropoietin (EPO) production by the kidney, decreased red cell survival, blood losses, and increased red blood cell destruction once the patient begins dialysis treatment, particular hemodialysis. Anemia reduces physical capacity, well-being, neurocognitive function, and energy level and worsens quality of life both in predialysis and dialysis patients. Anemia also induces adaptive cardiovascular mechanisms to maintain tissue oxygen supply. This leads to left ventricular hypertrophy, left ventricular dilation, and myocardial ischemia, which are risk factors for cardiovascular disease and death. It is plausible that reversing anemia may reduce this risk.

Strippoli GFM, Craig JC, Manno C, Schena FP. Hemoglobin Targets for the Anemia of Chronic Kidney Disease: A Meta-analysis of Randomized, Controlled Trials. J Am Soc Nephrol 15:3154-3165, 2004.

The clinical issues that impact achievement of the target hemoglobin in the pediatric population differ from the adult population. Normative, adult population data should not be used to assess performance in the pediatric population. Consideration(s) should be given to using age-specific normative data across the pediatric age range.

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.

In 2008, 37-38 percent of prevalent dialysis patients had a hemoglobin of 11-12 g/dl, the target set by KDOQI; the mean monthly hemoglobin was 11.6 g/dl.(1)

Views of anemia treatment have evolved over the last several years, as safety concerns about targeting higher hemoglobin levels have emerged from clinical trials. The FDA's recommended target - a range of 10-12 g/dl - is achieved by 68 percent of prevalent patients.(1)

This measure was used in the CMS Physician Quality Reporting Initiative, in the claims option and the registry option (2008). (2)

There is a gap in care as shown by this 2008 data; 36.51% of patients reported on did not receive the optimal care.(2)

10th percentile: 10.42%

25th percentile: 38.17%

50th percentile: 66.23%

75th percentile: 84.04%

90th percentile: 94.93%

The KDOQI Clinical Practice Recommendation for anemia management in pediatric patients (2007 revision) recommends that the target hemoglobin for patients on ESA therapy should be 11-12.0 gm/dL, and that hemoglobin concentration greater than 13 gm/dL

should be avoided (CPM 2.1.2 and 2.1.3). For Q4 2010, 32.4% of pediatric patients had hemoglobin 11-12.0 gm/dL which is about the same as Q4 2009 and compares to 48.7% in the adult hemodialysis patient population. Pediatric patients that were diabetic, on hemodialysis, and were adequately dialyzed had the highest percent in the 11-12.0 gm/dL range (35.8% and 36.7% respectively). The lower tail (< 10 gm/dL) of the Hemoglobin distribution in pediatric dialysis patients by patient characteristics, according to the Elab Project Q4 2010, shows opportunities for improvement with 20% of patients with hemoglobin < 10 gm/dL (increased over 2009 when 18.6% were < 10 gm/dL). 24.5% of patients had hemoglobin = 12 gm/dL. The normal distribution curve shows a slight improvement over the past 4 years with mean hemoglobin of $11.10 \pm SD 1.36$. (3)

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.

1. US Renal Data System, USRDS 2010 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2010.
2. Confidential CMS PQRI 2008 Performance Information by Measure. Jan-Sept TAP file.
3. Elab 2010 and Trends Report, Renal Network of the Upper Midwest, St. Paul, MN.

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.

Anemia, a common complication of CKD, is more prevalent and severe in African-American than Caucasian patients at each stage of the disease. Currently, African-Americans with CKD are less likely than Caucasian patients to receive anemia treatment before and after the onset of dialysis. Although African-Americans often require higher doses of erythropoiesis-stimulating agents, this may result from late treatment initiation, lower hemoglobin levels, or the presence of comorbidities such as diabetes and inflammation, although racial differences in response cannot be excluded.

Healthy and iron-replete African-Americans typically have lower average hemoglobin (Hb) levels than Caucasians, reflecting, among other factors, the effects of an alpha-thalassemia deletion allele (gene frequency 0.169). Iron deficiency anemia is also frequent in African-Americans, with prevalences ranging up to 19% in premenopausal black women.

In the general population as well as in all stages of CKD, anemia has been shown to be more prevalent in African-Americans than Caucasians, perhaps reflecting low Hb prior to CKD onset and/or higher prevalence of iron deficiency.

Once dialysis is initiated, African-Americans receive higher ESA doses; however, it is difficult to distinguish the effects of nutritional deficiency, lower pretreatment Hb levels, and delayed ESA initiation from possible racial-specific biological effects on ESA responsiveness.

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.

Lea JP. The Role of Anemia Management in Improving Outcomes for African-Americans. *Am J Nephrol* 2008;28:732–743.

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

Affects large numbers, A leading cause of morbidity/mortality, Frequently performed procedure, High resource use, Patient/societal consequences of poor quality, Severity of illness

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.

Chronic kidney disease (CKD), affects approximately 13.1% of United States adults and leads to end-stage renal disease (ESRD), cardiovascular disease (CVD), and premature death. (1)

CKD affects up to 5% of the population and 25% of those aged 70 years or older. An additional 6% of the population has signs of kidney damage, which may progress to ESRD. (2)

CKD is not recognized as a major public health concern. It is estimated that approximately 26.3 million adults in the U.S. have non-dialysis dependent kidney disease and over 470,000 have ESRD, collectively representing over 13% of the US population. In the next 20 years, the burden of CKD is expected to increase, with over 2 million individuals projected to be receiving renal replacement therapy (dialysis or kidney transplant) by 2030. (3)

Costs for CKD patients are now 23 percent of Medicare expenditures in the fee-for-service sector; when added to costs for ESRD patients, it appears that 31 percent of all Medicare expenditures are incurred by patients with a diagnosis of kidney disease. (4)

In 2008, 37-38 percent of prevalent dialysis patients had a hemoglobin of 11-12 g/dl, the target set by KDOQI; the mean monthly hemoglobin was 11.6 g/dl.(4)

Views of anemia treatment have evolved over the last several years, as safety concerns about targeting higher hemoglobin levels have emerged from clinical trials. The FDA's recommended target - a range of 10-12 g/dl - is achieved by 68 percent of prevalent patients.(4)

Observational evidence relating Hb level to mortality is available. Children in the North American Pediatric Renal Transplant Cooperative Study (NAPRTCS) database from 1992 to 2001 with an Hb level less than 9.9 g/dL compared with those with an Hb level greater than 9.9 g/dL showed an elevated risk for mortality: adjusted RR, 1.52; 95% CI, 1.03 to 2.26; P < 0.05.306 The relationship between Hb level and mortality, when examined at other cutoff values for Hb, appeared continuous. Patients with more severe anemia also experienced increased risk for hospitalization (17.2% ± 1.8% versus 12.3% ± 2.1%, respectively; P < 0.01).(5)

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

1. Snyder JJ, Collins AJ. Association of Preventive Health Care with Atherosclerotic Heart Disease and Mortality in CKD. J Am Soc Nephrol. 2009 July; 20(7): 1614–1622.

2. Alves TP, Lewis J. Racial differences in chronic kidney disease (CKD) and end-stage renal disease (ESRD) in the United States: a social and economic dilemma. Clinical Nephrology. 2010;74(1):S72-S77.

3. Choi AI, Rodriguez RA, Bacchetti P, Bertenthal D, et al. White/Black Racial Differences in Risk of End-Stage Renal Disease and Death. Am J Med. 2009 July;122(7):672-678.

4. 1. US Renal Data System, USRDS 2010 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2010.

5. National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3 (September), 2007.

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.)

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. Cross Cutting Areas (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.)

<http://www.ama-assn.org/apps/listserv/x-check/qmeasure.cgi?submit=PCPI>

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: [AMA-PCPI_PKID-3_Hgblessthan10-635289374004906657.pdf](#)

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

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.

Calendar months during which patients have a hemoglobin level < 10 g/dL

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.)

Each calendar month during the 12 consecutive month measurement period

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.

Numerator Detail: The hemoglobin values used for this measure should be the most recent (last) hemoglobin value recorded for each calendar month

During the NQF Maintenance Process, EHR Specifications were provided for this performance measure, see attachment in field S.2b. Data Dictionary Code Table.

For Claims/Administrative:

G8973: Most recent hemoglobin (Hgb) level < 10 g/dL

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

All calendar months during which patients aged 17 years and younger with a diagnosis of ESRD are receiving hemodialysis or peritoneal dialysis

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

Children's Health

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)*

During the NQF Maintenance Process, EHR Specifications were provided for this performance measure, see attachment in field S.2b. Data Dictionary Code Table.

For Administrative/Claims:

Patients aged <= 17 years

AND

Diagnosis for ESRD (ICD-9-CM) [for use 1/1/2014-9/30/2014]: 585.6

Diagnosis for ESRD (ICD-10-CM) [for use 10/01/2014-12/31/2014]: N18.6

AND

Patient encounter during the reporting period (CPT): 90945, 90947, 90951, 90952, 90953, 90954, 90955, 90956, 90957, 90958, 90959, 90963, 90964, 90965, 90967, 90968, 90969

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

Documentation of medical reason(s) for patient having a hemoglobin level < 10 g/dL (eg, patients who have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, post-operative bleeding, active bloodstream or peritoneal infection], other medical reasons)

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)*

The PCPI exception methodology uses three categories of reasons for which a patient may be removed from the denominator of an individual measure. These measure exception categories are not uniformly relevant across all measures; for each measure, there must be a clear rationale to permit an exception for a medical, patient, or system reason. Examples are provided in the measure exception language of instances that may constitute an exception and are intended to serve as a guide to clinicians. For measure 1667, exceptions may include medical reason(s) for patient having a hemoglobin level < 10g/dL (eg, patients who have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, postoperative bleeding, active bloodstream or peritoneal infection], other medical reasons). Where examples of exceptions are included in the measure language, value sets for these examples are developed and included in the eSpecifications. Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the specific reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement. Additional details by data source are as follows:

During the NQF Maintenance Process, EHR Specifications were provided for this performance measure, see attachment in field S.2b. Data Dictionary Code Table.

For Administrative/Claims:

G8975: Documentation of medical reason(s) for patient having a hemoglobin level < 10 g/dL (e.g., patients who have non-renal etiologies of anemia (e.g., sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, postoperative bleeding, active bloodstream or peritoneal infection), other medical reasons)

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)

We encourage the results of this measure to be stratified by race, ethnicity, administrative sex, and primary language.

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

Other

If other: We account for risk adjustment by inclusion of the exceptions for this measure.

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)

Exceptions for this measure are listed in field S.10. Denominator Exclusions.

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)

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.)

Calculation algorithm is included in the attachment in field S.2b. Data Dictionary Code Table.

To calculate performance rates:

- 1) Find the patients who meet the initial patient population (ie, the general group of patients that a set of performance measures is designed to address).
- 2) From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). Note: in some cases the initial patient population and denominator are identical.
- 3) From the patients within the denominator, find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator
- 4) From the patients who did not meet the numerator criteria, determine if the physician has documented that the patient meets any criteria for exception when exceptions have been specified [for this measure: medical reason(s) for patient having a hemoglobin level < 10g/dL (eg, patients who have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, postoperative bleeding, active bloodstream or peritoneal infection], other medical reasons)]. If the patient meets any exception criteria, they should be removed from the denominator for performance calculation. --Although the exception cases are removed from the denominator population for the performance calculation, the exception rate (ie, percentage with valid exceptions) should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI.

If the patient does not meet the numerator and a valid exception is not present, this case represents a quality failure.

<p>S.19. Calculation Algorithm/Measure Logic Diagram URL or Attachment <i>(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)</i></p>
<p>S.20. Sampling <i>(If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)</i> IF a PRO-PM, identify whether (and how) proxy responses are allowed. This measure does not require sampling or a survey.</p> <p>S.21. Survey/Patient-reported data <i>(If measure is based on a survey, provide instructions for conducting the survey and guidance on minimum response rate.)</i> IF a PRO-PM, specify calculation of response rates to be reported with performance measure results. N/A</p> <p>S.22. Missing data (specify how missing data are handled, e.g., imputation, delete case.) Required for Composites and PRO-PMs. N/A</p>
<p>S.23. Data Source <i>(Check ONLY the sources for which the measure is SPECIFIED AND TESTED).</i> <i>If other, please describe in S.24.</i> Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry</p> <p>S.24. Data Source or Collection Instrument <i>(Identify the specific data source/data collection instrument e.g. name of database, clinical registry, collection instrument, etc.)</i> IF a PRO-PM, identify the specific PROM(s); and standard methods, modes, and languages of administration. N/A</p> <p>S.25. Data Source or Collection Instrument <i>(available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)</i> Available at measure-specific web page URL identified in S.1</p> <p>S.26. Level of Analysis <i>(Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)</i> Clinician : Group/Practice, Clinician : Individual, Clinician : Team</p> <p>S.27. Care Setting <i>(Check ONLY the settings for which the measure is SPECIFIED AND TESTED)</i> Ambulatory Care : Clinician Office/Clinic, Dialysis Facility, Home Health, Other, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility If other: Domiciliary, Rest Home (eg, Assisted Living Facility), or Custodial Care Services</p> <p>S.28. COMPOSITE Performance Measure - Additional Specifications <i>(Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)</i></p>
<p>2a. Reliability – See attached Measure Testing Submission Form</p> <p>2b. Validity – See attached Measure Testing Submission Form</p> <p>MeasTesting_1667.docx</p>

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
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 health records (EHRs)

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.

The original measure was very similar to the updated measure. The original measure combined the outcome measure with a plan of care measure, while the updated measure split these two out. Additionally, the original measure had different hemoglobin cut-off values. There is no reason to think that a different hemoglobin cut-off value would change the measure testing results. Finally, the best practices of care is the same in both pediatric and adult populations.

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*).

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)
Professional Certification or Recognition Program	<p>Public Reporting PQRS participation reported on Physician Compare http://www.medicare.gov/physiciancompare/search.html</p> <p>Payment Program PQRS http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/MeasuresCodes.html</p> <p>Quality Improvement (Internal to the specific organization) RPA Kidney Quality Improvement Registry https://www.medconcert.com/content/medconcert/rpaqir/</p>

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

The Centers for Medicare & Medicaid Services (CMS) implemented the Physician Quality Reporting System (PQRS) (formerly, Physician Quality Reporting Initiative or PQRI), authorized under Section 101(b) of division B of the Tax Relief and Health Care Act (TRHCA) of 2006 (Public Law 109423; 120 Stat. 2975), in 2007. PQRS is a national CMS reporting program that uses a combination of incentive payments and negative payment adjustments to promote reporting of quality information by eligible professionals (EPs). A total of \$167,815,193 in Physician Quality Reporting System incentive payments were paid by CMS for the 2012 program year (most recent data available), which reflects successful participation of 29,254 practices that included 367,228 eligible professionals nationwide.

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?)

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.)

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

The KDOQI Clinical Practice Recommendation for anemia management in pediatric patients (2007 revision) recommends that the target hemoglobin for patients on ESA therapy should be 11-12.0 gm/dL, and that hemoglobin concentration greater than 13 gm/dL should be avoided (CPM 2.1.2 and 2.1.3). For Q4 2010, 32.4% of pediatric patients had hemoglobin 11-12.0 gm/dL which is about the same as Q4 2009 and compares to 48.7% in the adult hemodialysis patient population. Pediatric patients that were diabetic, on hemodialysis, and were adequately dialyzed had the highest percent in the 11-12.0 gm/dL range (35.8% and 36.7% respectively). The lower tail (< 10 gm/dL) of the Hemoglobin distribution in pediatric dialysis patients by patient characteristics, according to the

Elab Project Q4 2010, shows opportunities for improvement with 20% of patients with hemoglobin < 10 gm/dL (increased over 2009 when 18.6% were < 10 gm/dL.). 24.5% of patients had hemoglobin = 12 gm/dL. The normal distribution curve shows a slight improvement over the past 4 years with mean hemoglobin of $11.10 \pm SD 1.36$. (Elab 2010 and Trends Report, Renal Network of the Upper Midwest, St. Paul, MN.)

Normative, adult population data should not be used to assess performance in the pediatric population. Consideration(s) should be given to using age-specific normative data across the pediatric age range. Pediatric patients with lower Hb levels tended to have less residual urine production, more fluid overload by clinical judgment, lower serum albumin, higher serum ferritin and parathyroid hormone (PTH), and higher BP; received higher ESA doses; and were more often treated with intravenous iron. It is expected that improved performance results will reflect high quality care and reduced hospitalizations.

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.

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.

We are not aware of any unintended consequences related to this measurement.

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)

1424 : Monthly Hemoglobin Measurement for Pediatric Patients

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

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?

No

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

Our measure is specified at the clinician level, but measure results can be aggregated at a higher level of measurement. We have developed and will maintain specifications for multiple data sources, including Electronic Health Records (EHRs) and Claims-Based Reporting. Our specifications for EHRs are developed in accordance with the terminology standards (eg, SNOMED, RxNorm, LOINC) named in the Meaningful Use Program (CMS EHR Incentive Program).

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.)

Our measure is specified at the clinician level, but measure results can be aggregated at a higher level of measurement.

We have developed and will maintain specifications for multiple data sources, including Electronic Health Records (EHRs) and Claims-Based Reporting. Our specifications for EHRs are developed in accordance with the terminology standards (eg, SNOMED, RxNorm, LOINC) named in the Meaningful Use Program (CMS EHR Incentive Program).

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:

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): Renal Physicians Association

Co.2 Point of Contact: Dale, Singer, dsinger@renalmd.org, 301-468-3515-

Co.3 Measure Developer if different from Measure Steward: Renal Physicians Association

Co.4 Point of Contact: Amy, Beckrich, abeckrich@renalmd.org, 301-468-3515-

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.

Louis H. Diamond, MBChB, FCP (SA), FACP, FHIMSS (Work Group Co-Chair) (Nephrology, Methodology) President, Quality Healthcare Consultants, Rockville, MD

Barbara Fivush, MD (Work Group Co-Chair) (Nephrology - Pediatrics) Professor of Pediatrics, Division Chief of Pediatric Nephrology, Johns Hopkins University, Baltimore, MD

Paul M. Palevsky, MD, FACP, FCCD, FASN (Work Group Co-Chair) (Nephrology - Adult) Professor of Medicine, University of Pittsburgh School of Medicine, Chief, Renal Section, VA Pittsburgh Healthcare System, Pittsburgh, PA

Eileen D. Brewer, MD (Nephrology - Pediatrics) Professor and Head, Pediatric Renal Section, Baylor College of Medicine Chief, Renal Service, Texas Children's Hospital, Houston, TX

John W. Foreman, MD (Nephrology - Pediatrics) Department of Pediatrics, Professor of Pediatrics, Duke University, Durham, NC

Richard S. Goldman, MD (Nephrology - Adult, Methodology) Nephrology and Internal Medicine, Albuquerque, NM

Stuart L. Goldstein, MD (Nephrology - Pediatrics) Director, Center for Acute Care Nephrology, Cincinnati Children's Hospital Medical

Center; Medical Director, Pheresis Service, Professor of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, OH
John Hartman, MD (Nephrology - Adult) CEO, Visonex, LLC, Treasurer, Wisconsin Medical Society, Green Bay, WI
Richard Hellman, MD, FACP, FACE (Endocrinology, Methodology) Clinical Professor of Medicine, University of Missouri-Kansas City School of Medicine, Private Practice, Diabetes & Endocrinology, North Kansas City, MO
Jean L. Holley, MD, FACP (Nephrology - Adult) Clinical Professor of Medicine, University of Illinois, Urban-Champaign and Carle Physician Group, Urbana, IL
Edward R. Jones, MD (Nephrology - Adult) Self-Employed, Delaware Valley Nephrology Associates, Philadelphia, PA
Karen M. Kolbusz, RN, BSN, MBA, (Nursing, Joint Commission Liaison) Associate Project Director, The Joint Commission, Oakbrook Terrace, IL
Craig B. Langman, MD (Nephrology - Pediatrics) The Isaac A. Abt MD Professor of Kidney Diseases and Head, Kidney Diseases, Feinberg School of Medicine, Northwestern University, and Children's Memorial Hospital, Chicago, IL
Rajnish Mehrotra, MD (Nephrology - Adult) Professor of Medicine at David Geffen School of Medicine at UCLA and Associate Chief, Div of Nephrology and Hypertension, Harbor-UCLA Medical Center, Torrance, CA
Alvin H. Moss, MD (Nephrology - Adult) Professor of Medicine, West Virginia University, Morgantown, WV
Sharon A. Perlman, MD (Nephrology - Pediatrics) USF Pediatric Nephrology, All Children's Hospital, St. Petersburg, FL
Paul D. Rockswold, MD, MPH (Preventive Medicine and Family Medicine) Physician Epidemiologist, Head of Health Analysis, Navy and Marine Corps Public Health Center, Suffolk, VA
Candace C. Walworth, MD (Nephrology - Adult) Nephrology and Internal Medicine, Lewiston, ME
Bradley Warady, MD (Nephrology - Pediatrics) Chief, Pediatric Nephrology, Children's Mercy Hospitals and Clinics, Kansas City, MO
Steven J. Wassner, MD, FAAP (Nephrology - Pediatrics) Professor of Pediatrics, Vice-Chair for Education, Chief, Division of Nephrology & Hypertension, Hershey, PA
Jerry Yee, MD (Nephrology - Adult) Division Head, Nephrology and Hypertension, Henry Ford Hospital, Detroit, MI

PCPI measures are developed through cross-specialty, multi-disciplinary work groups. All medical specialties and other health care professional disciplines participating in patient care for the clinical condition or topic under study are invited to participate as equal contributors to the measure development process. In addition, the PCPI strives to include on its work groups individuals representing the perspectives of patients, consumers, private health plans, and employers. This broad-based approach to measure development ensures buy-in on the measures from all stakeholders and minimizes bias toward any individual specialty or stakeholder group. All work groups have at least two co-chairs who have relevant clinical and/or measure development expertise and who are responsible for ensuring that consensus is achieved and that all perspectives are voiced.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2011

Ad.3 Month and Year of most recent revision: 01, 2015

Ad.4 What is your frequency for review/update of this measure? Every 3 years or as new evidence becomes available that materially affects the measures.

Ad.5 When is the next scheduled review/update for this measure?

Ad.6 Copyright statement: Physician Performance Measures (Measures) and related data specifications have been developed by the American Medical Association (AMA) convened Physician Consortium for Performance Improvement® (PCPI™).

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Ad.7 Disclaimers:

Ad.8 Additional Information/Comments: The following updates were made on 11/09/11:

Specifications:

2a1.35 "Other" care settings added

Importance:

1b.2 Added pediatric performance gap data

1b.3 Added citation for pediatric performance gap data