



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 #: 1433

Corresponding Measures:

De.2. Measure Title: Use of Iron Therapy for Pediatric Patients

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

De.3. Brief Description of Measure: Percentage of all pediatric (less than 18 years old) in-center hemodialysis, home hemodialysis, and peritoneal dialysis patients with hemoglobin less than 11.0 g/dL and in whom serum ferritin concentration was less than 100 ng/ml and TSAT less than 20% who received IV iron or were prescribed oral iron within the following three months.

1b.1. Developer Rationale: End Stage Renal Disease (ESRD) leads to a deficiency in the hormone erythropoietin, resulting in anemia. The use of erythropoiesis-stimulating agents (ESAs) and iron supplementation are effective therapies for correcting anemia in children with ESRD.

S.4. Numerator Statement: Number of patients in the denominator who received IV iron or were prescribed oral iron within three months following the first occurrence of serum ferritin <100 ng/mL and transferrin saturation (TSAT) <20% during the study period.

S.7. Denominator Statement: All pediatric (less than 18 years old) in-center hemodialysis, home hemodialysis, and peritoneal dialysis patients with hemoglobin less than 11 g/dL and in whom serum ferritin was less than 100 ng/mL and TSAT less than 20% during the three month study period.

S.10. Denominator Exclusions: None.

De.1. Measure Type: Process

S.23. Data Source: Electronic Health Records

S.26. Level of Analysis: Facility

IF Endorsement Maintenance – Original Endorsement Date: Aug 16, 2011 **Most Recent Endorsement Date:** Aug 16, 2011

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 paired with Pediatric Anemia - Anemia Process 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
1433_Evidence_MSF5.0_Data.doc

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) End Stage Renal Disease (ESRD) leads to a deficiency in the hormone erythropoietin, resulting in anemia. The use of erythropoiesis-stimulating agents (ESAs) and iron supplementation are effective therapies for correcting anemia in children with ESRD.

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.

There is no current evidence demonstrating a performance gap in iron therapy for pediatric ESRD patients. However, the most commonly identified reason for poor responsiveness to ESA therapy in children is iron deficiency [1]. Furthermore, an analysis of Centers for Medicare & Medicaid Services (CMS) data suggests that hemoglobin levels in pediatric ESRD patients tended to be lower than among adult patients and that the use of IV iron therapy is less frequent in the pediatric as compared to the adult ESRD population [2].

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. Seeherunvong W, Rubio L, Abitbol CL, et al: Identification of poor responders to erythropoietin among children undergoing hemodialysis. J Pediatr 138:710-714, 2001
2. Chavers BM, et al. Prevalence of anemia in erythropoietin-treated pediatric as compared to adult chronic dialysis patients. Kidney International (2004) 65, 266–273

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.

The United States Renal Data System (USRDS) 2008 Annual Data Report (ADR) demonstrated that hemoglobin levels tended to vary by age group, and that hemoglobin levels are 0.5g/dL higher in white children as compared to African American children and other races [1].

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.

1. U.S. Renal Data System, USRDS 2008 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, 2008.

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

Frequently performed procedure, High resource use, Severity of illness, Patient/societal consequences of poor quality

1c.2. If Other:

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

List citations in 1c.4.

End Stage Renal Disease (ESRD) leads to a deficiency in the hormone erythropoietin, resulting in anemia. The use of erythropoiesis-stimulating agents (ESAs) and iron supplementation are effective therapies for correcting anemia in children with ESRD [1,2].

Anemia management requires the presence of sufficient iron stores. Iron deficiency is a leading cause of non-response to ESA

therapy [3], and several studies demonstrate the effectiveness of oral or IV iron in correcting iron deficiency in the pediatric population [4,5]. With regards to defining iron deficiency, a TSAT less than 20% was shown to be predictive of iron deficiency in at least one study in the pediatric population [4]. Furthermore, in a clinical trial evaluating the impact of iron supplementation on improving iron stores, a TSAT less than 20% was used as indication for iron therapy [4]. A ferritin level of 100 ng/ml was used even though clinical studies are mixed with regards to the level of ferritin which is predictive of iron deficiency [5,6], since this cut-off was used in the Kidney Disease Outcomes Quality Initiative (KDOQI) clinical practice guidelines for the pediatric population.

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

1. Warady BA, Mazen AY, Lerner G, Nakanishi AM, Stehman-Breen C. Darbopoetin alfa for the treatment of anemia in pediatric patients with chronic kidney disease. *Pediatr Nephrol* 21: 1144-52, 2006.
2. Warady BA, et al. Iron therapy in the pediatric hemodialysis population. *Pediatr Nephrol* 19: 655-61, 2004.
3. Seeherunvong W, Rubio L, Abitbol CL, et al. Identification of poor responders to erythropoietin among children undergoing hemodialysis. *J Pediatr* 138(5):710-714, 2001.
4. Warady BA, Zobrist RH, Wu J, Finan E. Sodium ferric gluconate complex therapy in anemic children on hemodialysis. *Pediatr Nephrol* 20: 1320-7, 2005.
5. Frankenfield DL, Neu AM, Warady BA, et al. Anemia in pediatric hemodialysis patients: results from the 2001 Clinical Performance Measures Project. *Kidney International* 64:1120-4, 2003.
6. Morris KP, Watson S, Reid MM, Hamilton PJ, Coulthard MG. Assessing iron status in children with chronic renal failure on erythropoietin: which measurements should we use? *Pediatr Nephrol*. Feb;8(1):51-6, 1994.

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 : End Stage Renal Disease (ESRD)

De.6. Non-Condition Specific (check all the areas that apply):

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

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

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)

URL Attachment:

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.

Number of patients in the denominator who received IV iron or were prescribed oral iron within three months following the first occurrence of serum ferritin <100 ng/mL and transferrin saturation (TSAT) <20% during the study period.

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.)

Three months following the first occurrence of serum ferritin less than 100 ng/mL and transferrin saturation (TSAT) less than 20%.

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.

The numerator will be determined by counting all patients in the denominator and “Intravenous IV Iron Prescribed” is populated OR “Oral Iron Prescribed” is populated.

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

All pediatric (less than 18 years old) in-center hemodialysis, home hemodialysis, and peritoneal dialysis patients with hemoglobin less than 11 g/dL and in whom serum ferritin was less than 100 ng/mL and TSAT less than 20% during the three month study period.

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

Children

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)

Patients are included in the facility calculation if “Admit Date” to the specified facility is prior or equal to the first day of the study period, AND the patient has not been discharged (“Discharge Date” is null or blank), OR “Discharge Date” from the facility is greater than or equal to the last day of the study period. The patient’s age will be determined by subtracting the patient’s date of birth from the first day of the reporting month. Patients who are under the facility’s care for the entire three-month study period with age less than 18 years will be included in the denominator if “Hemoglobin” less than 11 g/dl in any of the reporting months AND “Serum Ferritin” less than 100 ng/ml AND “TSAT” less than 20%, recorded in the same month (“Serum Ferritin Collection Date” = “Iron Saturation (TSAT) Percentage Collection Date”) in any of the reporting months.

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

None.

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)

See denominator exclusions.

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)

No stratification is required for this measure. Measure may be displayed separately for in-center hemodialysis patients, home hemodialysis patients, and peritoneal hemodialysis patients.

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

No risk adjustment or risk stratification

If other:

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

N/A

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

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

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

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 = Higher 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.)

Patients are included in the facility calculation if "Admit Date" to the specified facility is prior or equal to the first day of the study period, AND the patient has not been discharged ("Discharge Date" is null or blank), OR "Discharge Date" from the facility is greater than or equal to the last day of the study period. The patient's age will be determined by subtracting the patient's date of birth from the first day of the reporting month. Patients who are under the facility's care for the entire three-month study period with age less than 18 years will be included in the denominator if "Hemoglobin" less than 11 g/dl in any of the reporting months AND "Serum Ferritin" less than 100 ng/ml, AND "TSAT" less than 20% recorded in the same reporting month ("Serum Ferritin Collection Date" = "Iron Saturation (TSAT) Percentage Collection Date") in any of the reporting months. The numerator will be determined by counting all patients in the denominator and "Intravenous IV Iron Prescribed" is populated OR "Oral Iron Prescribed" is populated.

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

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

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

N/A

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

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

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

Required for Composites and PRO-PMs.

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

If other, please describe in S.24.

[Electronic Health Records](#)

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

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

[CROWNWeb \(Consolidated Renal Operations in a Web Enabled Network\)](#)

S.25. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

[URL](#)

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

[Facility](#)

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

[Post-Acute Care](#)

If other:

S.28. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

2a. Reliability – See attached Measure Testing Submission Form

2b. Validity – See attached Measure Testing Submission Form

[1433_MeasureTesting_MSF5.0_Data.doc](#)

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)

[Yes](#)

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 clinical TEP described the fact that oral iron is an over the counter preparation and may not necessarily be recorded as a prescription. However, the clinical TEP believes that a patient's oral iron use should still be recorded by the clinical care team. There is a possibility, however, that the use of oral iron is underdetected.

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)
Public Reporting	
Quality Improvement (Internal to the specific organization)	

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

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

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.

The clinical TEP described the fact that oral iron is an over the counter preparation and may not necessarily be recorded as a prescription. However, the clinical TEP believes that a patient's oral iron use should still be recorded by the clinical care team. There is a possibility, however, that the use of oral iron is underdetected.

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)

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?

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

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

This measure is for pediatric (<18 years) patients only. The NQF endorsed measure is for patients ≥18 years.

Related Measures: 0252 Adult ESRD- Anemia Management CPM IIa- Assessment of Iron Stores

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): Centers for Medicare & Medicaid Services

Co.2 Point of Contact: Edward Q., Garcia, III, mmsnqf@hsag.com, 410-786-6738-

Co.3 Measure Developer if different from Measure Steward: Centers for Medicare & Medicaid Services

Co.4 Point of Contact: Thomas, Dudley, Thomas.Dudley@cms.hhs.gov, 410-768-6738-

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.

Dr. Bradley Warady, panel chair (University of Missouri, Kansas City School of Medicine, Kansas City, MO)

Dr. Carolyn Abitbol (University of Miami, Holtz Children's Hospital, Miami, FL)

Dr. Eileen Brewer (Baylor College of Medicine/Texas Children's Hospital, Houston, TX)

Dr. Stuart Goldstein (Baylor College of Medicine/Texas Children's Hospital, Houston, TX)

Dr. Alicia Neu (Johns Hopkins Medical Institution, Baltimore, MD)

Dr. Irene Restaino (Children's Hospital of The King Daughters, Norfolk, VA)

Dr. Douglas Silverstein (Children's National Medical Center, Washington, D.C.)

Dr. Sylvia Ramirez, Moderator (Arbor Research Collaborative for Health)

Alissa Kapke, Analyst (Arbor Research Collaborative for Health)

Jeffrey Pearson, Analytic Manager, (Arbor Research Collaborative for Health)

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released:

Ad.3 Month and Year of most recent revision:

Ad.4 What is your frequency for review/update of this measure? Three years

Ad.5 When is the next scheduled review/update for this measure? 2013

Ad.6 Copyright statement:

Ad.7 Disclaimers:

Ad.8 Additional Information/Comments: