Measure Information Form

Project Title:
Comprehensive Reevaluation – Dialysis Adequacy

Project Overview:
The Centers for Medicare & Medicaid Services (CMS) has contracted with the University of Michigan Kidney Epidemiology and Cost Center (UM-KECC) to develop measures of dialysis adequacy in ESRD patients. The contract name is ESRD Quality Measure Development, Maintenance, and Support. The contract number is HHSM-500-2013-13017I.

Date:
Information included is current on September 25, 2015

Measure Name:
Descriptive Information:

Measure Name (Measure Title De.2.)
Measurement of nPCR for Pediatric Hemodialysis Patients

Measure Type De.1.
Process

Brief Description of Measure De.3.
Percentage of patient months of pediatric (less than 18 years old) in-center hemodialysis patients (irrespective of frequency of dialysis) with documented monthly nPCR measurements.

If Paired or Grouped De.4.
N/A

Subject/Topic Areas De.5.
Renal, Renal: End Stage Renal Disease (ESRD)

Crosscutting Areas De 6.
N/A

Measure Specifications:
Measure-specific Web Page S.1.
N/A

If This Is an eMeasure S.2a.
Data Dictionary, Code Table, or Value Sets S.2b.
N/A

For Endorsement Maintenance S.3.
N/A

Numerator Statement S.4.
Number of patient months in the denominator with monthly nPCR measurements.

Time Period for Data S.5.
The entire calendar month.

Numerator Details S.6.
The numerator will be determined by counting the patients in the denominator who meet one of the following criteria during the study month: nPCR is populated AND “Date nPCR Collected” is populated, OR “Kt/V Hemodialysis Collection Date” is populated, AND “BUN Pre-Dialysis” is populated, AND “BUN Post-Dialysis” is populated, AND “Pre-Dialysis Weight” is populated, AND “Pre-Dialysis Weight Unit of Measure” is populated, AND “Post-Dialysis Weight” is populated, AND “Post-Dialysis Weight Unit of Measure” is populated, AND “Delivered Minutes of BUN Hemodialysis Session” is populated AND “Interdialytic Time” is populated.

Denominator Statement S.7.
Number of all patient months for pediatric (less than 18 years old) in-center hemodialysis patients (irrespective of frequency of dialysis).

Target Population Category S.8.
Children's Health, Populations at Risk

Denominator Details S.9.
The duration of hemodialysis treatment will be calculated as the difference between the first “Kt/V Collection Date” and “Date Regular Chronic Dialysis Began”. The denominator will include all in-center hemodialysis patients <18 years old. The patient’s age will be determined by subtracting the patient’s date of birth from the first day of the reporting month. In-center hemodialysis patients are defined as follows: “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 AND “Treatment Dialysis Broad Start Date” is prior or equal to the first day of the study period, AND “Dialysis Broad Type of Treatment” = ‘HD’, AND “Primary Dialysis Setting” = ‘Dialysis Facility/Center’ on the last day of the study period, AND “Date Regular Chronic Dialysis Began” is prior to the first day of the study period.
Denominator Exclusion (NQF Includes “Exception” in the “Exclusion” Field) S.10.
Exclusions that are implicit in the denominator definition include pediatric patients (<18 years old), all patients who have not been in the facility for the entire reporting month, and all home hemodialysis patients. There are no additional exclusions for this measure.

Denominator Exclusion Details (NQF Includes “Exception” in the “Exclusion” Field) S.11.
N/A

Stratification Details/Variables S.12.
N/A

Risk Adjustment Type S.13.
No risk adjustment or risk stratification

N/A

Detailed Risk Model Specifications S.15.
N/A

Type of Score S.16.
Rate/proportion

Interpretation of Score S.17.
Better quality = Higher score

Calculation Algorithm/Measure Logic S.18.
The duration of hemodialysis treatment will be calculated as the difference between the first “Kt/V Collection Date” and “Date Regular Chronic Dialysis Began”. The denominator will include all in-center hemodialysis patients <18 years old. The patient’s age will be determined by subtracting the patient’s date of birth from the first day of the reporting month. In-center hemodialysis patients are defined as follows: “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 AND “Treatment Dialysis Broad Start Date” is prior or equal to the first day of the study period, AND “Dialysis Broad Type of Treatment” = ‘HD’, AND “Primary Dialysis Setting” = ‘Dialysis Facility/Center’ on the last day of the study period, AND “Date Regular Chronic Dialysis Began” is prior to the first day of the study period.

The numerator will be determined by counting the patients in the denominator who meet one of the following criteria during the study month: npCR is populated AND “Date nPCR Collected” is populated, OR “Kt/V Hemodialysis Collection Date” is populated, AND “BUN Pre-Dialysis” is populated, AND “BUN Post-Dialysis” is populated, AND “Pre-Dialysis Weight” is populated, AND “Pre-Dialysis Weight Unit of Measure” is populated, AND “Post-Dialysis Weight” is populated,
AND “Post-Dialysis Weight Unit of Measure” is populated, AND “Delivered Minutes of BUN Hemodialysis Session” is populated AND “Interdialytic Time” is populated.

**Calculation Algorithm/Measure Logic Diagram URL or Attachment S.19.**
No diagram provided

**Sampling S.20.**
N/A

**Survey/Patient-Reported Data S.21.**
N/A

**Missing Data S.22.**
N/A

**Data Source S.23.**
Electronic Clinical Data

**Data Source or Collection Instrument S.24.**
CROWNWeb

**Data Source or Collection Instrument (Reference) S.25.**
No data collection instrument provided

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

**Care Setting S.27.**
Dialysis Facility

**Composite Performance Measure S.28.**
N/A
**Measure Justification Form**

**Project Title:**
Comprehensive Reevaluation – Dialysis Adequacy

**Project Overview:**
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**Date:**
Information included is current on September 25, 2015

**Measure Name:**
Measurement of nPCR for Pediatric Hemodialysis Patients

**Type of Measure Importance:**
1a—Opportunity for Improvement

1a.1. This is a Measure of
Process: measurement of nPCR

1a.2. —Linkage
1a.2.1 Rationale
N/A

1a.3. —Linkage
1a.3.1. Source of Systematic Review
Clinical Practice Guideline recommendation – complete sections 1a.4, and 1a.7 Other – complete section 1a.8

1a.4. —Clinical Practice Guideline Recommendation
1a.4.1. Guideline Citation

1a.4.2. Specific Guideline
2006 KDOQI GUIDELINE 8. PEDIATRIC HEMODIALYSIS PRESCRIPTION AND ADEQUACY
8.2.2 Assessment of nutrition status is an essential component of HD adequacy measurement. nPCR should be measured monthly by using either formal urea kinetic modeling or algebraic
approximation. (B)

2008 KDOQI CPR RECOMMENDATION 1: EVALUATION OF GROWTH AND NUTRITIONAL STATUS
1.1 The nutritional status and growth of all children with CKD stages 2 to 5 and 5D should be
evaluated on a periodic basis.

(A) The following parameters of nutritional status and growth should be considered in combination
for evaluation in children with CKD stages 2 to 5 and 5D. (B) Dietary intake (3-day diet record or
three 24-hour dietary recalls) Length- or height-for-age percentile or standard deviation score(SDS)
Length or height velocity-for-age percentile or SDS Estimated dry weight and weight-for-age
percentile or SDS BMI-for-height age percentile or SDS Head circumference-for-age percentile or
SDS (=3 years old only). Normalized protein catabolic rate (nPCR) in hemodialyzed adolescents with
CKD stage 5D.

1a.4.3. Grade
The 2006 KDOQI Guideline 8.2.2 rating strength grade is ‘B’. The recommendation for Grade B
guidelines states ‘It is recommended that clinicians routinely follow the guideline for eligible
patients. There is moderate to strong evidence that the practice improves health outcomes.’

1a.4.4. Grades and Associated Definitions
The rating system defined in the KDOQI Guidelines was used to grade the strength of the Guideline
recommendation. KDOQI defined grades as follows:
Grade A: It is strongly recommended that clinicians routinely follow the guideline for eligible
patients. There is strong evidence that the practice improves health outcomes.
Grade B: It is recommended that clinicians routinely follow the guideline for eligible patients. There
is moderately strong evidence that the practice improves health outcomes.
Grade CPR: It is recommended that clinicians consider following the guideline for eligible patients.
This recommendation is based on either weak evidence or on the opinions of the Work Group and
reviewers that the practice might improve health outcomes.

1a.4.5. Methodology Citation
http://www.kidney.org/Professionals/kdoqi/guideline_upHD_PD_VA/index.htm

1a.4.6. Quantity, Quality, and Consistency
No report on another systematic review of the evidence in sections 1a.6 and 1a.7; if another
review does not exist, provide what is known from the guideline review of evidence in 1a.7

1a.5. —United States Preventative Services Task Force Recommendation
1a.5.1. Recommendation Citation
N/A

1a.5.2. Specific Recommendation
1a.5.3. Grade
N/A

1a.5.4. Grades and Associated Definitions
N/A

1a.5.5. Methodology Citation
N/A

1a.6. —Other Systematic Review of the Body of Evidence
1a.6.1. Review Citation
N/A

1a.6.2. Methodology Citation
N/A

1a.7. —Findings from Systematic Review of Body of the Evidence Supporting the Measure
1a.7.1. Specifics Addressed in Evidence Review
N/A

1a.7.2. Grade
N/A

1a.7.3. Grades and Associated Definitions
N/A

1a.7.4. Time Period
N/A

1a.7.5. Number and Type of Study Designs
N/A

1a.7.6. Overall Quality of Evidence
N/A

1a.7.7. Estimates of Benefit
N/A

1a.7.8. Benefits Over Harms
N/A

1a.7.9. Provide for Each New Study
1a.8. —Other Source of Evidence
1a.8.1. Process Used
In the 2006 Kidney Disease Outcomes Quality Initiative (KDOQI) Guidelines, Clinical Practice Guideline for pediatric hemodialysis adequacy (Guideline 8.2.2) specifies nPCR should be measured monthly. The 2008 KDOQI Clinical Practice Guideline Update for nutrition in children with CKD Recommendation 1.1 states that the nutritional status and growth of all children with CKD stages 2-5 be evaluated on a periodic basis.

Recommendation 1.2 states that nPCR should be evaluated in hemodialyzed adolescents. Small scale observational studies have shown an association between nPCR and nutritional status among malnourished adolescent patients who achieved target spKt/V levels [1,2]. Additionally, in adolescent patients, nPCR levels < 1 gram/kg/day were found to be an earlier and more sensitive marker than serum albumin levels in predicting malnutrition and sustained weight loss [3].

In May 2014, an additional literature search was performed. A recent comprehensive review on the subject [4] is included in the citations below as a result of that search. This review continues to be supportive of the concept of monitoring nPCR as part of evaluation of Protein Energy Wasting (PEW) in children/adolescents on dialysis.

1a.8.2. Citation


1b. Evidence to Support Measure Focus
1b.1. Rationale
nPCR provides an estimate of dietary protein intake and has been shown to provide additional information to spKt/V. Studies have shown that in adolescent patients who achieved target spKt/V levels, nPCR was associated with nutritional status. Furthermore, there is evidence that nPCR < 1 gram/kg/day is predictive of malnutrition and sustained weight loss among adolescent patients.

1b.2. Performance Scores
Among the 30 facilities that have at least 11 eligible pediatric patients, we generated the following statistics of their performance scores using the January – December 2013 (i.e., calendar year 2013) CROWNWeb clinical data: mean (SD) = 80.4% (34.0%), min = 0%, max = 100%, 25th percentile = 68.9%, 50th percentile = 99.1%, and 75th percentile = 100%.

1b.3. Summary of Data Indicating Opportunity
N/A

1b.4. and 1b.5. Disparities
Given that the number of facilities included in the calculation in 1b.2 is only 13, the sample was determined to be too small to display useful disparities data.

1c.—High Priority
1c.1. Demonstrated High-Priority Aspect of Health Care
Frequently performed procedure, Severity of illness

1c.3. Epidemiologic or Resource Use Data
In the pediatric population, the assessment of dialysis adequacy requires an evaluation of both small solute clearance and nutritional status [1, 2]. This is because both adequate solute clearance and nutrition are essential for growth and visceral weight gain. Whereas there are several potential measures of nutritional status, these are outside the scope of hemodialysis adequacy measures with the exception of nPCR (normalized protein catabolic rate), a value that is a fundamental component of and already readily available from urea kinetics. This allows the use of nPCR along with spKt/V as measures of dialysis adequacy.

nPCR provides an estimate of dietary protein intake and has been shown to provide additional information to spKt/V. In malnourished adolescent patients who achieved target spKt/V levels, nPCR, but not serum albumin, was associated with nutritional status [3, 4]. In adolescent patients, nPCR levels < 1 gram/kg/day were found to be an earlier and more sensitive marker than serum albumin levels in predicting malnutrition and sustained weight loss [5]. Additionally, monitoring of nPCR continues to be recommended as part of evaluation of Protein Energy Wasting (PEW) in children on dialysis [6]. There is currently no evidence that supports specific nPCR targets, although age-specific protein intake targets exist. The same data needed for Kt/V calculation can be used for nPCR calculation. Thus, nPCR can be monitored monthly along with Kt/V to follow up protein intake for a particular patient.

1c.4. Citations


1c.5. PRO-PM
N/A

Scientific Acceptability:

1.—Data Sample Description

What Type of Data was Used for Testing?
Measure Specified to Use Data from: (must be consistent with data sources entered in S.23) clinical database/registry. Measure Tested with Data From: clinical database/registry

1.1. Identify the Specific Dataset
Clinical database/registry (CROWNWeb)

1.2. What are the Dates of the Data Used in Testing?
January – December 2013

1.3. What Levels of Analysis Were Tested?
Measure Specified to Measure Performance of: (must be consistent with levels entered in item S.26) hospital/facility/agency. Measure Tested at Level of: hospital/facility/agency

1.4. How Many and Which Measured Entities Were Included in the Testing and Analysis?
The measured entities used in testing and analysis include reported nPCR and the necessary data elements needed for calculating nPCR for 455 in-center hemodialysis (ICH) pediatric patients from 30 dialysis facilities with at least 11 eligible pediatric patients across all regions of the United States.

Public reporting of this measure on DFC or in the ESRD QIP would be restricted to facilities with at least 11 eligible patients for the measure. We have applied this restriction to all the reliability and validity testing reported here.

Facilities vary in size, and include anywhere from 11 to 28 eligible ICH pediatric patients. The data elements include “nPCR” or the combination of “Kt/V hemodialysis collection date”, “BUN pre-dialysis”, “BUN post-dialysis”, “pre-dialysis weight”, “pre-dialysis weight unit of measure”, “post-dialysis weight”, “post-dialysis weight unit of measure”, “delivered minutes of BUN hemodialysis session”, and “interdialytic time.”

1.6. How Many and Which Patients Were Included in the Testing and Analysis?
Testing was performed on all Medicare and non-Medicare pediatric, ICH patients available in CROWNWeb
from 2013. The sample included 455 patients from 225 facilities. The table below shows the number and percent of pediatric ICH patients by race, sex, and Hispanic ethnicity.

<table>
<thead>
<tr>
<th>Race/Sex/Ethnicity</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>23</td>
<td>5.05%</td>
</tr>
<tr>
<td>Black</td>
<td>147</td>
<td>32.31%</td>
</tr>
<tr>
<td>White</td>
<td>274</td>
<td>60.22%</td>
</tr>
<tr>
<td>Native American</td>
<td>5</td>
<td>1.10%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>4</td>
<td>0.88%</td>
</tr>
<tr>
<td>Mid East Arabian</td>
<td>1</td>
<td>0.22%</td>
</tr>
<tr>
<td>Other/Multi-racial</td>
<td>1</td>
<td>0.22%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>202</td>
<td>44.40%</td>
</tr>
<tr>
<td>Male</td>
<td>253</td>
<td>55.60%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>163</td>
<td>35.82%</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>292</td>
<td>64.18%</td>
</tr>
</tbody>
</table>

1.7. Sample Differences, if Applicable
N/A

2a.2—Reliability Testing
2a2.1. Level of Reliability Testing
Performance measure score (e.g., signal-to-noise analysis)

2a2.2. Method of Reliability Testing
January 2013 – December 2013 CROWNWeb data were used to calculate the inter-unit reliability (IUR) for the overall 12 months to assess the reliability of this measure. The NQF-recommended approach for determining measure reliability is a one-way analysis of variance (ANOVA), in which the between and within facility variation in the measure is determined. The inter-unit reliability (IUR) measures the proportion of the measure variability that is attributable to the between-facility variance. The yearly based IUR was estimated using a bootstrap approach, which uses a resampling scheme to estimate the within facility variation that cannot be directly estimated by ANOVA. We note that the method for calculating the IUR was developed for measures that are approximately normally distributed across facilities. Since this measure is not normally distributed, the IUR value should be interpreted with some caution.

2a2.3. Statistical Results from Reliability Testing
The overall IUR was 0.985, which indicates that about 98.5% of the variation in the measure can be attributed to the between facility differences and 1.5% to within facility variation.

2a2.4. Interpretation
The IUR suggests this measure is reliable. However, since the distribution of performance scores is skewed, the IUR value should be interpreted with some caution.
2b2—Validity Testing
2b2.1. Level of Validity Testing
Performance measure score. Empirical validity testing. Systematic assessment of face validity of performance measure score as an indicator of quality or resource use (i.e., is an accurate reflection of performance on quality or resource use and can distinguish good from poor performance).

2b2.2. Method of Validity Testing
Concurrent validity was used as a method for testing the association between facility percentage of patients with nPCR data elements and mean serum albumin. Although serum albumin is not a gold standard for nutritional assessment, it is a strong indicator of patient health and mortality in dialysis patients.

Using calendar year 2013 CROWNWeb data, average facility-mean albumin was compared between the two groups using a two-sided two-sample t-test, using facility percent of patients with nPCR data elements and mean serum albumin. Facilities were then categorized into one of two groups:
1) Facilities with 100% reporting of nPCR among their pediatric patients;
2) Facilities with less than 100% reporting of nPCR among their pediatric patients
nPCR values outside the range of [0.2, 1.8] were excluded.

This measure was also reviewed and approved by a Clinical TEP in 2010.

2b2.3. Statistical Results from Validity Testing
Among facilities with at least 11 eligible pediatric patients with recorded nPCR values, facilities with 100% reporting of recorded nPCR values had a mean serum albumin of 3.77, while facilities with less than 100% reporting of recorded nPCR values had a mean serum albumin of 4.0. Using a t-test, these values were statistically significant (p-value 0.02).

2b2.4. Interpretation
These findings are somewhat unexpected, and in the opposite direction of analyses previously conducted. This difference may have resulted from a larger sample utilized for the current analyses (previous analyses were conducted over a limited timeframe). We speculate that the observed findings may have resulted if facilities are more likely to collect necessary data elements for nPCR assessment in patients for which nutritional concerns exist. These results therefore do not necessarily contradict the importance of evaluating nPCR.

2b3—Exclusion Analysis
2b3.1. Method of Testing Exclusion
N/A

2b3.2. Statistical Results from Testing Exclusion
N/A

2b3.3. Interpretation
2b4—Risk Adjustment or Stratification

2b4.1. Method of controlling for differences
No risk adjustment or stratification

2b4.2. Rationale why Risk Adjustment is not Needed
The measure evaluates the process of tracking a marker for nutrition, which is nPCR. There is no clinical basis nor evidence in the literature that suggests evaluation of nutritional status is less important in certain patient demographic or clinical profiles.

2b4.3. Conceptual, Clinical, and Statistical Methods
N/A

2b4.4. Statistical Results
N/A

2b4.5. Method Used to Develop the Statistical Model or Stratification Approach
N/A

2b4.6. Statistical Risk Model Discrimination Statistics (e.g., c-statistic, \( R^2 \))
N/A

2b4.7. Statistical Risk Model Calibration Statistics (e.g., Hosmer-Lemeshow statistic)
N/A

2b4.8. Statistical Risk Model Calibration—Risk decile plots or calibration curves
N/A

2b4.9. Results of Risk Stratification Analysis
N/A

2b4.10. Interpretation
N/A

2b4.11. Optional Additional Testing for Risk Adjustment
N/A

2b5—Identification of statistically significant and clinically meaningful differences

2b5.1. Method for determining
Differences in measure performance were evaluated separately for each facility using patient level analyses. The proportion of patients with yearly based percent of patients with reporting of nPCR was compared between one facility and the overall national distribution, and repeated for each individual facility.
Note that the monthly based measure is a simple average of binary outcomes across individuals in the facility, for which the binary outcome equals to 0 (failure) if the value is less than the threshold or if the value is missing. The differences in proportions can be compared using Fisher’s Exact tests or its normal approximation. The yearly based measure, however, is not a simple average of binary outcomes and we instead used a re-sampling based exact test, with re-sampling generated from the population distribution of the patient level outcomes. More details for the testing method are provided in Appendix. Due to non-symmetric of the measure distributions, one-sided test with significance level 0.025 is used (corresponding to cutoff=0.05 in two-sided test). To calculate the p-value, we assess the probability that the facility would experience a number of events more extreme than that observed if the null hypothesis were true.

2b5.2. Statistical Results
Proportion of facilities with significant p-values (0-as expected; 1-worse than expected; cutoff=0.025) is shown as follows:

<table>
<thead>
<tr>
<th># of Facilities</th>
<th>Percent of facilities</th>
<th>Median Performance Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Expected/Better than Expected</td>
<td>23</td>
<td>76.67%</td>
</tr>
<tr>
<td>Worse than Expected</td>
<td>7</td>
<td>23.33%</td>
</tr>
</tbody>
</table>

2b5.3. Interpretation
Significance testing identifies 7 facilities (23.3%) with worse than expected performance at a median of 24.5% of patients with reporting of nPCR data elements. The clear separation in measure performance between facilities identified with worse than expected performance versus those with as expected or better than expected performance provides support for the ability to identify clinically important differences in performance on this measure through significance testing.

2b6—Comparability of performance scores
2b6.1. Method of testing conducted to demonstrate comparability
N/A

2b6.2. Statistical Results
N/A

2b6.3. Interpretation
N/A

Feasibility:
3a.1. How are the data elements needed to compute measure scores generated
generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition

3b.1. Are the data elements needed for the measure as specified available electronically
ALL data elements are in defined fields in electronic clinical data (e.g., clinical registry, nursing
3b.3. If this is an eMeasure, provide a summary of the feasibility assessment
N/A

3c.1. Describe what you have learned or modified as a result of testing
N/A

3c.2. Describe any fees, licensing, or other requirements
N/A

Usability and Use:

4.1—Current and Planned Use
4a.1. Program, sponsor, purpose, geographic area, accountable entities, patients
N/A

4a.2. If not publicly reported or used for accountability, reasons
This measure was originally time-limited endorsed due to lack of testing data. The measure received full endorsement on April 9, 2014.

4a.3. If not, provide a credible plan for implementation
CMS will consider whether to implement this measure in future public reporting programs.

4b.1. Progress on improvement
N/A

4b.2. If no improvement was demonstrated, what are the reasons
This measure is not currently publically reported, so data on performance improvement is not currently available. Given that small scale observational studies have shown an association between nPCR and nutritional status among malnourished adolescent patients who achieved target spKt/V levels, we would expect that public reporting of this measure would encourage facilities to better monitor the nutrition status of their pediatric patients.

Related and Competing Measures:

5—Relation to Other NQF-Endorsed Measures
5.1a. The measure titles and NQF numbers are listed here
N/A

5.1b. If the measures are not NQF-endorsed, indicate the measure title
5a—Harmonization
5a.1. Are the measure specifications completely harmonized
N/A

5a.2. If not completely harmonized, identify the differences rationale, and impact
5b—Competing measures
5b.1 Describe why this measure is superior to competing measures
N/A

Additional Information:
Co.1. —Measure Steward Point of Contact
Co.1.1. Organization
Centers for Medicare & Medicaid Services

Co.1.2. First Name
Corette

Co.1.3. Last Name
Byrd

Co.1.4. Email Address
corette.byrd@cms.hhs.gov

Co.1.5. Phone Number
410-786-1158

Co.2. —Developer Point of Contact (indicate if same as Measure Steward Point of Contact)
Co.2.1. Organization
University of Michigan Kidney Epidemiology and Cost Center

Co.2.2. First Name
Casey

Co.2.3. Last Name
Parrotte

Co.2.4. Email Address
parrotte@med.umich.edu

Co.2.5. Phone Number
734-763-6611

Ad.1. Workgroup/Expert Panel Involved in Measure Development
N/A

Ad.2. Year the Measure Was First Released
N/A

Ad.3. Month and Year of Most Recent Revision
02, 2015

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

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

Ad.6. Copyright Statement
N/A

Ad.7. Disclaimers
N/A

Ad.8. Additional Information/Comments
N/A