Measure Information Form and Instructions

Project Title: ***Effective Availability and Utilization of Home Dialysis Modalities***

Date:

Information included is current on *February 14th, 2022*.

Project Overview:

The Centers for Medicare & Medicaid Services (CMS) has contracted with the University of Michigan Kidney Epidemiology and Cost Center to develop facility-level measures in the area of modality education for dialysis patients. The contract name is Kidney Disease Quality Measure Development, Maintenance, and Support. The contract number is 75FCMC18D0041, task order number 75FCMC18F0001. As part of its measure development process, the University of Michigan Kidney Epidemiology and Cost Center convenes groups of stakeholders who contribute direction and thoughtful input to the measure developer during measure development and maintenance.

1. Measure Name/Title (NQF Measure Submission Form, Measure Specifications sp.01)

Hemodialysis Vascular Access: Standardized Fistula Rate

2. Descriptive Information

2.1 Measure Type

- ☐process
- ☐process: appropriate use
- ☒outcome
- ☐outcome: PRO/PRO-PM
- ☐cost /resource use
- ☐experience with care
- ☐efficiency
- ☐structure
- ☐intermediate outcome
- ☐composite

2.2 Brief Description of Measure (NQF Measure Submission Form, Measure Specifications sp.02 and sp.06

Adjusted percentage of adult incident hemodialysis patient-months using an autogenous arteriovenous fistula (AVF) as the sole means of vascular access.

The Standardized Fistula Rate (SFR) for Incident Patients is ased on the prior SFR (NQF #2977) that included both incident and prevalent patients. This measure was initially endorsed in 2016, but as part of measure maintenance review by the NQF Standing Committee in 2020, concerns were raised

about the strength of evidence supporting the prior measure. Namely, recent updates to the KDOQI guidelines downgraded the evidence supporting fistula as the preferred access type and instead focus on catheter avoidance and developing an individualized ESKD Lifeplan. However, the guidelines do suggest that under favorable circumstances an AV fistula is preferred to an AV graft in incident patients due to fewer long-term vascular access events. Given that over 80% of incident dialysis patients begin treatment with a tunneled catheter, and that 12 months after dialysis initiation AV fistula rates exceed 60%, the incident SFR was developed to focus on the subset of dialysis patients that the evidence suggests may benefit the most during a time of intense vascular access creation. Specifically, blood stream infection rates are the lowest in incident patients with AV fistula compared to long-term catheters. Therefore the goal of this new measure is to evaluate facility performance in increasing fistula use in the incident population in order to reduce the heightened risks patients face due to bacteremia and infection related hospitalizations.

2.3 If Paired or Grouped (NQF Measure Submission Form, Measure Specifications sp.03)

N/A

3. Measure Specifications

3.1 Measure-Specific Webpage (NQF Measure Submission Form, Measure Specifications sp.09)

N/A

3.2 If this is an electronic clinical quality measure (eCQM) (NQF Measure Submission Form, Measure Specifications sp.10)

N/A

3.3 Data Dictionary, Code Table, or Value Sets (NQF Measure Submission Form, Measure Specifications sp.11)

Incident SFR Data Dictionary Code Table.xlsx

3.4 For an instrument-based measure (NQF Measure Submission Form, Measure Specifications sp.23 and sp.24)

N/A

3.5 Updates since last submission (NQF Measure Submission Form, Specifications: Maintenance Update spma.01 and spma.02)

N/A

3.6 Numerator Statement (NQF Measure Submission Form, Measure Specifications sp.12)

The numerator is the adjusted count of adult incident patient-months using an AVF as the sole means of vascular access as of the last hemodialysis treatment session of the month.

3.7 Numerator Details (NQF Measure Submission Form, Measure Specifications sp.13)

An AVF is considered in use if the CROWNWeb "Access Type IDs" of 14 or 22 has been recorded for a given month, where "14" represents AV fistula only (with 2 needles) and "22" represents AV fistula only with an approved single needle device. Patients with a missing vascular access type are counted in the denominator, but not the numerator. For comorbidities, if the patient had missing comorbidity values in the Medical Evidence Form for the corresponding comorbidity, we assume this patient did not have the comorbidity at the start of chronic dialysis. The same methodology is applied to the comorbidity exclusions and the hospice exclusion in the preceding 12 months of Medicare claims.

3.8 Denominator Statement (NQF Measure Submission Form, Measure Specifications sp.14)

All patient-months for patients at least 18 years old as of the first day of the reporting month who are determined to be maintenance hemodialysis patients (in-center and home HD) and became ESRD within the prior 12 months for the entire reporting month at the same facility.

3.9 Denominator Details (NQF Measure Submission Form, Measure Specifications sp.15)

For each patient, we identify the dialysis provider at each month using a combination of data from CROWNWeb, Medicare-paid dialysis claims, and the Medical Evidence Form (Form CMS-2728). These sources are used to identify patients that are on in-center or home hemodialysis for the entire reporting month. Patients are required to have been treated by the same facility for the complete month in order to be assigned to that facility for the reporting month.

To be included in the denominator for a particular reporting month, the patient must be ESRD and beginning chronic dialysis (in-center hemodialysis or home hemodialysis) within the prior 12 months, for the complete reporting month at the facility, and be at least 18 years old as of the first day of the month.

The monthly patient count at a facility includes all eligible incident patients. The number of patient-months over a time period is the sum of patients reported for the months covered by the time period. An individual patient may contribute up to 12 patient-months per year.

3.10 Denominator Exclusions (NQF Includes "Exception" in the "Exclusion" Field) (NQF Measure Submission Form, Measure Specifications sp.16)

Exclusions that are implicit in the denominator definition include:

- *Patient-months after 12 months of starting ESRD*
- *Pediatric patients (<18 years old)*
- *Patients-months on Peritoneal Dialysis*

- *Patient-months with in-center or home hemodialysis for less than a complete reporting month at the same facility*

In addition, the following exclusions are applied to the denominator:

Patients with a catheter that have limited life expectancy:

- *Patients under hospice care in the current reporting month*
- *Patients with metastatic cancer in the past 12 months*
- *Patients with end stage liver disease in the past 12 months*
- *Patients with coma or anoxic brain injury in the past 12 months*

3.11 Denominator Exclusion Details (NQF Includes "Exception" in the "Exclusion" Field) (NQF Measure Submission Form, Measure Specifications sp.17)

Determination of peritoneal dialysis treatment modality is derived from a combination of Medicare-paid dialysis claims, the Medical Evidence Form (Form CMS-2728), and data from CROWNWeb. These sources also determine patient assignment to the facility. Patients not treated by the facility for the entire month are excluded for that reporting month.
The patient's age is determined by subtracting the patient's date of birth from the first day of the reporting month. Patients that are <18 years old as of the first day of the reporting month are excluded.

For the exclusion of catheter patients with limited life expectancy, catheter use in the reporting month is defined as the CROWNWeb "Access Type ID" having any of the following values: (16,18,19,20,21,"·"), where Access_Type_ID "16" represents AV Fistula combined with a Catheter, "18" represents AV Graft combined with a Catheter, "19" represents Catheter only, "20" represents Port access only, "21" represents other/unknown, and "·" represents missing.
Hospice status is determined from a separate CMS file that contains final action claims submitted by Hospice providers. Once a beneficiary elects Hospice, all Hospice related claims will be found in this file, regardless if the beneficiary is in Medicare fee-for-service or in a Medicare managed care plan. Patients are identified as receiving hospice care if they have any final action claims submitted to Medicare by hospice providers in the current month.

Diagnoses of metastatic cancer, end stage liver disease, or coma in the past 12 months were determined from Medicare claims. Medicare claim types include inpatient admissions, outpatient claims (including dialysis claims) and physician services. Claims from providers, such as laboratories that report diagnosis codes when testing for the presence of a condition are excluded. A detailed list of ICD-10 diagnostic codes used to identify these comorbidities is included in the attached data dictionary code table (excel file).

3.12 Stratification Details/Variables (NQF Measure Submission Form, Measure Specifications sp.18)

N/A

3.13 Risk Adjustment Type (NQF Measure Submission Form, Measure Specifications sp.19)

☐no risk adjustment or risk stratification
☐stratification by risk category/subgroup
☒statistical risk model
☐other

3.14 Type of Score (NQF Measure Submission Form, Measure Specifications sp.20)

☐count
☒rate/proportion
☐ratio
☐categorical (e.g., yes or no)
☐continuous variable (CV) (e.g., an average)
☐other (specify) Click or tap here to enter text.

3.15 Interpretation of Score (NQF Measure Submission Form, Measure Specifications sp.21)

Better quality = Higher score

3.16 Calculation Algorithm/Measure Logic (NQF Measure Submission Form, Measure Specifications sp.22)

Incident SFR Flow Chart-Copy.pdf

3.17 Sampling (NQF Measure Submission Form, Measure Specifications sp.25 and sp.26)

N/A

3.18 Survey/Patient-Reported Data (NQF Measure Submission Form, Measure Specifications sp.27)

N/A

3.19 Data Source (NQF Measure Submission Form, Measure Specifications sp.28)

Indicate all sources for which the measure is specified and tested.

☐administrative data
☒claims data
☐patient medical records (i.e., paper-based or electronic)
☐electronic clinical data
☒registries
☐standardized patient assessments
☐patient-reported data and surveys
☐non-medical data
☐other—describe in 3.20 (NQF Measure Submission Form, Measure Specifications sp.29)

3.20 Data Source or Collection Instrument (NQF Measure Submission Form, Measure Specifications sp.29)

Data are derived from an extensive national ESRD patient database, which is primarily based on the Renal Management Information System (REMIS), CROWNWeb facility-reported clinical and administrative data (including CMS-2728 Medical Evidence Form, CMS-2746 Death Notification Form, and CMS-2744 Annual Facility Survey Form and patient tracking data), the Medicare Enrollment Database (EDB), and Medicare claims data. In addition the database includes transplant data from the Scientific Registry of Transplant Recipients (SRTR), and data from the Nursing Home Minimum Dataset, the Quality Improvement Evaluation System (QIES) Business Intelligence Center (QBIC) (which includes Provider and Survey and Certification data from Automated Survey Processing Environment (ASPEN)), and the Dialysis Facility Compare (DFC).

The database is comprehensive for Medicare patients not enrolled in Medicare Advantage. Medicare Advantage patients are included in all sources but their Medicare payment records are limited to inpatient claims. Non-Medicare patients are included in all sources except for the Medicare payment records. Tracking by dialysis provider and treatment modality is available for all patients including those with only partial or no Medicare coverage. Past-year comorbidity data are obtained from multiple claim types (inpatient, outpatient, home health, hospice, skilled nursing facility claims).

CROWNWeb is the data source for establishing the vascular access type used to determine the numerator.

3.21 Data Source or Collection Instrument (Reference) (NQF Measure Submission Form, Measure Specifications sp.30)

No data collection instrument provided.

3.22 Level of Analysis (NQF Measure Submission Form, Measure Specifications sp.07)

- ☐individual clinician
- ☐group/practice
- ☒hospital/facility/agency
- ☐health plan
- ☐other (specify) Click or tap here to enter text.

3.23 Care Setting (NQF Measure Submission Form, Measure Specifications sp.08)

Indicate only the settings for which the measure is specified and tested.

- ☐ambulatory surgery center
- ☐clinician office/clinic
- ☐outpatient rehabilitation
- ☐urgent care – ambulatory
- ☐behavioral health: inpatient
- ☐behavioral health: outpatient

☐dialysis facility
☐emergency medical services/ambulance
☐emergency department
☐home health
☐hospice
☐hospital
☐hospital: critical care
☐hospital: acute care facility
☐imaging facility
☐laboratory
☐pharmacy
☐nursing home/skilled nursing facility (SNF)
☐inpatient rehabilitation facility (IRF)
☐long-term acute care
☐birthing center
☐no applicable care setting
☒other (specify) Outpatient Services

3.24 Composite Measure (NQF Composite Measure Submission Form, Measure Specifications sp.30)

No data collection instrument provided.

REFERENCES

N/A