Measure Information Form

1. Measure Name/Title (CMS Consensus-Based Entity [CBE] Measure Submission Form, Measure Specifications sp.01)

Hemodialysis Vascular Access: Standardized Fistula Rate

2. Descriptive Information

2.1 Measure Type

- ☐ process
- ☐ outcome
- ☐ PRO-PM
- ☐ cost /resource use
- ☐ efficiency
- ☐ structure
- ☒ intermediate outcome
- ☐ population health
- ☐ composite
  - ☐ process
  - ☐ outcome
  - ☐ other
- ☐ other

2.2 Brief Description of Measure (CMS CBE Measure Submission Form, Measure Specifications sp.02 and sp.06)

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

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

N/A

3. Measure Specifications

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

N/A

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

N/A

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

Attachment **:** SFR_Data_Dictionary_Code_Table.xlsx

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

N/A

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

N/A

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

The numerator is the adjusted count of adult 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 (CMS CBE Measure Submission Form, Measure Specifications sp.13)

The numerator is determined by number of patient-months using an AVF as the sole means of vascular access at a given facility, adjusted for patient-mix. An AVF is considered in use if the EQRS "Access Type~~e IDs~~" of "AVFONLY" or "AVFSINGLE"~~14, 567, 22, or 605~~ has been recorded for a given month, where "AVFONLY" represents AV fistula only (with 2 needles) and "AVFSINGLE" represents AV fistula only (with approved single needle device).~~"14" or "567" represents AVF only (with 2 needles) and "22" or "605" represents AVF only with an approved single needle device.~~ If multiple vascular access types for a patient were reported during a reporting month, the last vascular access type reported by the assigned facility is used in the calculation. If the vascular access type is missing from the assigned facility, we will substitute with the last vascular access type reported by other facilities.

3.8 Denominator Statement (CMS CBE 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) for the entire reporting month at the same facility.

When used for public reporting, the measure calculation will be restricted to facilities with at least 11 patients in the reporting month. This restriction is required to ensure patients cannot be identified due to small cell size.

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

Determination of patient assignment to the facility is derived from a combination of Medicare claims, the Medical Evidence Form (CMS-2728), and data from EQRS. Determination of patient modality is derived from a combination of Medicare-paid dialysis claims, the Medical Evidence Form (CMS-2728), and data from EQRS (Dialysis Facility Measures only). 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 EQRS "Access Type" having any of the following values: ("AVFWCATHETER", "AVGWCATHETER", "CATHETERONLY", "PORTONLY", "OTHERUNKNOWN", ""), where ACCESS_TYPE "AVFWCATHETER" represents AV Fistula combined with a Catheter, "AVGWCATHETER" represents AV Graft combined with a Catheter, "CATHETERONLY" represents Catheter only, "PORTONLY" represents Port access only, "OTHERUNKNOWN" represents other/unknown, and "" represents missing.

~~For the exclusion of catheter patients with limited life expectancy, catheter use in the reporting month is defined as the EQRS "Access Type ID" having any of the following values: (16, 569, 18, 571, 19, 572, 20, 574, 21, 573, ".."), where Access_Type_ID "16" or "569" represents AV Fistula combined with a Catheter, "18" or "571" represents AV Graft combined with a Catheter, "19" or "572" represents Catheter only, "20" or "574" represents Port access only, "21" or "573" represents other/unknown, and "." represents missing.~~

Hospice information comes from CMS institutional Medicare Claims files that contain final action claims submitted by hospice providers (CLM_TYPE_CD=50). Once a beneficiary elects hospice, all hospice-related claims will be found in this file, regardless of whether 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. Use the ICD information related to this edition of the Manual, which can be found on the Measuring Quality page on the ESRD QIP section of CMS.gov for a detailed list of ICD-10 diagnostic codes used to identify these comorbidities.

3.10 Denominator Exclusions (CMS CBE Includes “Exception” in the “Exclusion” Field) (CMS CBE Measure Submission Form, Measure Specifications sp.16)

Exclusions that are implicit in the denominator definition include:

- Pediatric patients (<18 years old)
- Patients-months not on HD
- Patient-months with in-center or home hemodialysis for less than a complete reporting month at the same facility
- Patients not on ERSD treatment

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 (CMS CBE Includes “Exception” in the “Exclusion” Field) (CMS CBE 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 EQRS. 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 EQRS “Access Type” having any of the following values: ("AVFWCATHETER", "AVGWCATHETER", "CATHETERONLY", "PORTONLY", "OTHERUNKNOWN", ””), where ACCESS_TYPE "AVFWCATHETER" represents AV Fistula combined with a Catheter, “AVGWCATHETER” represents AV Graft combined with a Catheter, “CATHETERONLY” represents Catheter only, “PORTONLY” represents Port access only, “OTHERUNKNOWN” represents other/unknown, and “” represents missing.

~~For the exclusion of catheter patients with limited life expectancy, catheter use in the reporting month is defined as the EQRS “Access Type ID” having any of the following values: (16, 569, 18, 571, 19, 572, 20, 574, 21, 573, ”.”), where Access_Type_ID “16” or “569” represents AV Fistula combined with a Catheter, “18” or “571” represents AV Graft combined with a Catheter, “19” or “572” represents Catheter only, “20” or “574” represents Port access only, “21” or “573” 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 (CMS CBE Measure Submission Form, Measure Specifications sp.18)

N/A

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

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

The patient characteristics included in the logistic regression model as covariates are:

- Age categories: 18-24, 25-59, 60-74, and 75+
- Body mass index (BMI) at incidence, calculated based on the height and weight provided on patient's Medical Evidence Form (CMS-2728). BMI is divided into the following categories: BMI < 18.5, 18.5 ≤ BMI < 25, 25 ≤ BMI < 30, or BMI ≥ 30. Missing and out-of-range BMIs are categorized into the mode group (i.e., ≥30).
- Nursing home status in prior 12 months
    - No nursing home care: 0 days
    - Short-term nursing home: 1-89 days
    - Long-term nursing home: >90 days
- Nephrologist's care prior to ESRD incidence reported on the Medical Evidence Form (CMS-2728).
- Duration of ESRD categories: 0-1 year, >1-5 years, >5-9 years, and >9 years.
- Inability to ambulate/transfer at ESRD incidence as reported on the Medical Evidence Form (CMS-2728) and combined into one indicator variable.
- Diabetes as primary cause of ESRD as reported on the Medical Evidence Form (CMS-2728).
- Comorbidities either at ESRD incidence as reported on the Medical Evidence Form (CMS-2728) or the Medicare eligible months (below) together with prevalent comorbidities

based on Medicare claims filed in prior 12 months. Use the ICD information related to this edition of the *Manual*, which can be found on the Measuring Quality page on the ESRD QIP section of CMS.gov for list of codes used to identify these conditions.

  - Diabetes (NOT as primary cause of ESRD)
  - Heart diseases (i.e., coronary artery disease and congestive heart failure)
  - Peripheral vascular disease
  - Cerebrovascular disease
  - Chronic obstructive pulmonary disease
  - Anemia (unrelated to ESRD/chronic kidney disease [CKD])
  - Non-Vascular Access-Related Infections
  - Drug dependence

- Indicator for having at least one of the comorbid conditions listed above.
- Indicator for missing a CMS-2728 form.
- Indicator for Medicare coverage for at least 6 months or Medicare Advantage coverage at least 1 month during the past 12 months*.

  *Medicare and Medicare Advantage coverages defined as follows:

  - The patient had $1,200+ of Medicare-paid dialysis claims or at least one Medicare inpatient claim (hospital or Skilled Nursing Facility [SNF]) during that month or one of the two prior months.
  - The Medicare EDB indicates the patient was enrolled in Medicare Advantage during the month.

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

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

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

Better quality = Higher score

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

See calculation flowchart in Appendix.

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

N/A

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

N/A

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

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

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

Multiple data sources are used for the calculation of this measure, including EQRS and Medicare claims. See attached data dictionary for more details.

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

No data collection instrument provided

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

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

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

☐ 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) Click or tap here to enter text.

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

N/A