Measure Information Form

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

Hemodialysis Vascular Access: Long-term Catheter 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)

The number of adult patient-months in the denominator who were on maintenance HD using a catheter continuously for three months or longer as of the last HD session of the reporting month.

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 **:** 2978_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 number of adult patient-months in the denominator who were on maintenance HD using a catheter continuously for three months or longer as of the last HD session of the reporting month.

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

The numerator is determined by calculating the facility-level number of patient-months with a long-term catheter in use. Long-term catheter use is defined as using a catheter, at the same facility, for at least three consecutive complete months as of the last hemodialysis session of the reporting month.

For a given month, if any of the following “Access Types” in EQRS are reported as "AVFWCATHETER", "AVGWCATHETER", "CATHETERONLY", "PORTONLY", "OTHERUNKNOWN", ”” (missing), a catheter is considered in use. If a catheter has been recorded for three consecutive months (i.e., in the reporting month and the immediate two preceding months) at the same facility, the reporting month is counted in the numerator. 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. Therefore, a Catheter combined with any other access type, missing, unknown, or port access are treated as Catheter if reported in current and prior two months. 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.

If a patient changes dialysis facilities, the counting of the three consecutive complete months restarts at the new facility. Patients have to be treated with HD using a catheter for at least three complete months at the same facility to be included in the numerator. If a patient's first and second months fall into the reporting period, it is possible that these two months are included in the denominator (if eligible) but not in the numerator.

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

All patient-months where the patient is at least 18 years old (see Section 3.1.3) as of the first day of the reporting month who are determined to be maintenance HD patients (in-center HD and home HD) for the complete reporting month at the same facility.

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 the ESRD Quality Reporting System (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 .

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 from the reporting month. Months with vascular access type changes (e.g., fistula or graft to catheter) are not excluded from the denominator as long as patients are on HD and in the assigned facility for the entire month. In other words, if the patient was on HD and assigned to the facility the entire month, the patient-month would be included in the denominator regardless of their vascular access type during the month. In the month a patient changes modality or transfers, the patient-month is excluded from the denominator.

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.

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.

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 on Peritoneal Dialysis
- Patient-months on 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 (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.

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. If the

patient did not have Hospice claims in the preceding 12 months of Hospice claims data, we assume this patient was not receiving hospice care in that reporting month.

Diagnoses of metastatic cancer, end stage liver disease, or coma in the past 12 months were determined from Medicare claim types. Medicare claims include inpatient hospitalizations, outpatient claims (including dialysis claims), and physician supplier claims. 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). If the patient had missing comorbidity values in the preceding 12 months of Medicare claims, we assume this patient did not have the comorbidity in that reporting month.

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

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 = Lower 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)

Data are derived from an extensive national ESRD patient database, which is primarily based on EQRS 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 Renal Management Information System (REMIS), 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.

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

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

N/A

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

REFERENCES