Measure Information Form

1.	Measure Name/Title (CMS Consensus-Based Entity [CBE] Measure Submission Form Measure Specifications sp.01)
	First Kidney Transplant Waitlist Ratio for Incident Dialysis Patients (SWR)
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) This measure tracks the number of incident patients at the dialysis facility under the age of 75 listed on the kidney or kidney-pancreas transplant waitlist or who received living donor transplants within the first year of initiating dialysis.
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)

See SWR_DataDictionary.xlsx

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)

Number of patients at the dialysis facility listed on the kidney or kidney-pancreas transplant waitlist or who received living donor transplants within the first year following initiation of dialysis.

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

The numerator for the SWR for a given facility is the observed number of patients on the waitlist (i.e., waitlisting or receipt of a living-donor transplant) within the first year following initiation of dialysis. To be included in the numerator for a particular facility, the patient must meet one of the two criteria:

- The patient is on the kidney or kidney-pancreas transplant waitlist.
- The patient has received a living donor transplant.
- 3.8 Denominator Statement (CMS CBE Measure Submission Form, Measure Specifications sp.14)

The denominator for the SWR is the expected number of waitlisting or living donor transplant events at the facility according to each patient's treatment history for patients within the first year following initiation of dialysis, adjusted for age and its functional forms, as well as incident

comorbidities, among patients under 75 years of age who were not already waitlisted and did not have first transplantation prior to the initiation of ESRD dialysis.

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

EQRS is the primary basis for placing patients at dialysis facilities and dialysis claims are used as an additional source. Information regarding first ESRD service date, death, age, and incident comorbidities adjustments, and transplant is obtained from EQRS (including the CMS Medical Evidence Form (Form CMS-2728) and the Death Notification Form (Form CMS-2746)) and Medicare claims, as well as the OPTN and the Social Security Death Master File.

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:

- Patients who were 75 years of age or older at the initiation of dialysis;
- Preemptive patients: patients at the facility who had the first transplantation prior to the start of ESRD treatment; or were listed on the kidney or kidney-pancreas transplant waitlist prior to the start of dialysis;
- Patients who were admitted to a hospice at the time of initiation of dialysis;
- Patients who were admitted to a skilled nursing facility (SNF) at incidence or previously according to Form CMS-2728.
- 3.11 Denominator Exclusion Details (CMS CBE Includes "Exception" in the "Exclusion" Field) (CMS CBE Measure Submission Form, Measure Specifications sp.17)

The CMS Medical Evidence Form and the CMS Long Term Care Minimum Data Set (MDS) were the data sources used for determining skilled nursing facility (SNF) patients. Patients who were identified in Questions 16u and 21 on the CMS Medical Evidence Form as institutionalized and SNF/Long Term Care Facility, respectively, or who had evidence of admission to a skilled nursing facility based on the MDS before their first service date and were not discharged prior to initiation of dialysis were identified as SNF patients. For hospice patients, a separate CMS file that contains final action claims submitted by Hospice providers was used to determine the hospice status.

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)
	\square no risk adjustment or risk stratification

	 □ stratification by risk category/subgroup ☑ statistical risk model □ other
	The SWR is adjusted for incident comorbidities and age, using a linear spline with knots at 12, 18, and 64. Knot placements were determined empirically based on a preliminary mode that categorized age. In addition, incident comorbidities were selected for adjustment into the SWR model based on demonstration of a higher associated mortality (hazard ratio above 1.0) and statistical significance (p-value <0.01) in first year mortality model.
	Covariates:
	• Age
	(age-12)+(age-18)+(age-64)+
	 Heart disease (atherosclerotic heart disease or congestive heart failure or other cardiac disease) Inability to ambulate Chronic obstructive pulmonary disease Inability to transfer Malignant neoplasm, Cancer Peripheral vascular disease Cerebrovascular disease, CVA, TIA Alcohol dependence Drug dependence Amputation
3.14	 Needs assistance with daily activities Type of Score (CMS CBE Measure Submission Form, Measure Specifications sp.20)
3.14	□ count □ rate/proportion □ 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 flowchart
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) EQRS (including CMS Medical Evidence Form [Form CMS-2728]) is the primary data source used for placing patients at dialysis facilities, age and incident comorbidities adjustments and exclusion of patients => 75-year-old (see information provided under "denominator details"). OPTN is the data source for waitlist or living donor transplant events. The Nursing Home MDS and the CMS Medical Evidence Form (Form CMS-2728) are used to identify SNF patients. A separate CMS file that contains final action claims submitted by hospice providers was used to determine the hospice status.
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

	\square accountable care organization
	\square geographic population
	\square other (specify) <u>Click or tap here to enter text.</u>
3.23	Care Setting (CMS CBE Measure Submission Form, Measure Specifications sp.08)
	\square ambulatory surgery center
	\square clinician office/clinic
	\square outpatient rehabilitation
	☐ urgent care – ambulatory
	\square behavioral health: inpatient
	\square behavioral health: outpatient
	□ dialysis facility
	\square emergency medical services/ambulance
	<pre> emergency department </pre>
	☐ home health
	☐ hospital
	hospital: critical care
	hospital: acute care facility
	☐ imaging facility
	☐ laboratory
	\square pharmacy
	nursing home/skilled nursing facility (SNF)
	inpatient rehabilitation facility (IRF)
	☐ long-term acute care
	☐ birthing center
	no applicable care setting
	\square other (specify) <u>Click or tap here to enter text.</u>
3.24	Composite Measure (CMS CBE Composite Measure Submission Form ☐, Measure Specifications sp.30)
	N/A