

**Guide to the
Quarterly Dialysis Facility Compare –
Preview for April 2013 Report:**

Overview, Methodology, and Interpretation

February 2013

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I. Purpose of this Guide and the Quarterly Dialysis Facility Compare Reports

This guide explains in detail the contents of the Quarterly Dialysis Facility Compare (QDFC) reports that were prepared for each dialysis facility under contract to the Centers for Medicare & Medicaid Services. Included here are the reports' objectives, discussions of methodological issues relevant to particular sections of each report and descriptions of each data summary.

These reports include information about directly actionable practice patterns such as dose of dialysis, vascular access, and anemia management, as well as patient outcomes (such as mortality and hospitalization) that can be used to inform and motivate reviews of practices. The information in the report facilitates comparisons of facility patient characteristics, treatment patterns, and outcomes to local and national averages. Such comparisons help to evaluate patient outcomes and to account for important differences in the patient mix - including age, sex, and patients' diabetic status - which in turn enhances each facility's understanding of the clinical experience relative to other facilities in the state, and nation.

The QDFC report provides facilities with advance notice of their new and updated quality measures that will be reported on the Dialysis Facility Compare website, allowing dialysis patients to review and compare characteristics and quality information on dialysis facilities in the United States.

This is the first in this series of individualized reports. We welcome your participation and feedback concerning the clarity, utility, limitations, and accuracy of this report. You will find information on how to directly provide feedback to us at the University of Michigan Kidney Epidemiology and Cost Center (UM-KECC) in Section VIII.

II. Overview

The University of Michigan Kidney Epidemiology and Cost Center has produced the Quarterly Dialysis Facility Compare reports with funding from the Centers for Medicare & Medicaid Services. Each facility's report is available to the facility on the secure Dialysis Reports website (www.dialysisreports.org).

Each report provides summary data on each facility's dialysis patients for July 1, 2011-June 30 2012, except for the mortality summaries, which are reported for the four-year period, 2008-2011 and the hospitalization summaries which are reported for 2011. We compiled these summaries using the UM-KECC ESRD patient database, which is largely derived from the CMS Program Medical Management and Information System (PMMIS/REMIS), the Standard Information Management System (SIMS) database maintained by the 18 ESRD Networks, Medicare dialysis and hospital payment records, the CMS Medical Evidence Form (Form CMS-2728), the Death Notification Form (Form CMS-2746), the Nursing Home Minimum Dataset, the Dialysis Facility Compare (DFC)

and the Social Security Death Master File. The database is comprehensive for Medicare patients. Non-Medicare patients are included in all sources except for the Medicare payment records. SIMS provides tracking by dialysis provider and treatment modality for non-Medicare patients.

This quarter we provided reports for more than 6,000 Medicare-approved dialysis facilities in the United States. We did not create reports for transplant-only facilities or Veterans Administration-only facilities. In the mortality table, the standardized ratio is only calculated if there are at least 3 expected events for the time period. Similarly, we only calculated Standardized Hospitalization Ratios based on at least 5 patient years at risk. This corresponds to approximately 10 expected hospitalizations. Statistics produced for such a small group of patients can be unstable and particularly subject to random variation, and thus difficult to interpret.

This guide discusses the meaning of the data summaries each report provides, and describes the methodology used to calculate each summary (Sections III-VII). Sections III-VII are organized according to the order of the summaries in the Quarterly Dialysis Facility Compare report, and may serve as references for their interpretation. Since in many cases, understanding a particular section's contents requires you to understand the issues presented in the previous section, we recommend that you review the sections in order.

The first page provides the purpose and overview of the report, and how to submit comments. Page 2 includes the Dialysis Facility Compare preview (formally reported on page 2 of the Dialysis Facility Report) followed by two tables which contain detailed information for your facility as well as regional averages for comparison. Table 1 provides patient mortality and hospitalization summaries for 2008-2011 and 2011, respectively. Note that for the four-year mortality summaries, individual patients typically contribute data for more than one year. Table 2 reports patient practice patterns (hemoglobin, adequacy, and vascular access) for your facility July 1, 2011-June 30, 2012 as well as for each quarter during the time period.

Each row of a table in the report summarizes an item. Your facility has a column for each time period, and in most cases, two columns for the corresponding geographical summaries, including averages for your facility's state, and the entire nation. Whenever the statistic reported was a count (n), we calculated regional and national averages by taking the average count for all facilities in that area. When the statistic reported for a period included more than one year, we annualized regional and national values to make them comparable to a single-year period. When a statistic was a percent, rate, or ratio, we calculated regional and national summaries by pooling together all individual patients in that area to obtain an estimate for that area as if it were one large facility. We do not report state summary data for dialysis facilities in states or U.S. territories with only one or two dialysis units. We do provide summaries for the nation for facilities in these states or territories.

III. Assigning Patients to Facilities

This section describes the methods we used to assign patients to a facility in order to calculate the summaries appearing in the Preview Table and Table 1 (for all dialysis patients).

Because some patients receive dialysis treatment at more than one facility in a given year, we use standard methods based on assigning person-years to a facility, rather than on assigning a patient's entire follow-up to a facility. We developed conventions which define the group of patients assigned to a facility at any time during the particular year. This method is described below.

General Inclusion Criteria for Dialysis Patients

We only entered a patient's follow-up into the tabulations after that patient had received chronic renal replacement therapy for at least 90 days. This minimum 90-day period assures that most patients are eligible for Medicare insurance either as their primary or secondary insurer. It also excludes from analysis patients who died during the first 90 days of ESRD.

In order to exclude patients who only received temporary dialysis therapy, we assigned patients to a facility only after they had been on dialysis there for at least 60 days. This 60 day period is used both for patients starting renal replacement therapy for the first time and for those who returned to dialysis after a transplant. That is, deaths and survival during the first 60 days do not impact the SMR of that facility.

Identifying Patients Treated at Each Facility

For each patient, we identified the dialysis provider at each point in time using a combination of Medicare-paid dialysis claims, the Medical Evidence Form (Form CMS-2728), and data from the Standard Information Management System (SIMS). Starting with day 91 of ESRD, we determined facility treatment histories for each patient, and then listed each patient with a facility only once the patient had been treated there for 60 days. When a patient transferred from a facility, the patient remained assigned to it in the database for 60 days. This continued tabulation of the time at risk for 60 days after transfer from a facility attributes to a facility the sequelae of treatment there, even when a patient was transferred to another facility (such as a hospital-based facility) after his or her condition worsened.

In particular, we placed patients in their initial facility on day 91 of ESRD once that facility had treated them for at least 60 days. If on day 91 a facility had treated a patient for fewer than 60 days, we waited until the patient reached day 60 of treatment at that facility before placing him or her there. State summaries do not include patients who were not assigned to a facility; these patients are, however, included in the U.S. summaries.

Using SIMS data and paid dialysis claims to determine whether a patient has transferred to another facility, we attributed patient outcomes to the patient's original facility for 60 days after transfer out. On day 61 after transfer from a facility, we placed the patient in the new facility once the patient had been treated at the new facility for 60 days. When a

patient was not treated in a single facility for a span of 60 days (for instance, if there were two switches within 60 days of each other), we did not attribute that patient to any facility.

Patients were removed from facilities upon receiving transplants. Patients who withdrew from dialysis or recovered renal function remained assigned to their treatment facility for 60 days after withdrawal or recovery. Additionally, patients for whom the only evidence of dialysis treatment is the existence of Medicare claims were considered lost to follow-up and removed from a facility's analysis one year following the last claim, if there was no earlier evidence of transfer, recovery, or death. In other words, if a period of one year passed with neither paid Medicare dialysis claims nor SIMS information to indicate that a patient was receiving dialysis treatment, we considered the patient lost to follow-up, and did not continue to include that patient in the analysis. If evidence of dialysis re-appeared, the patient was entered into analysis after 60 days of continuous therapy at a single facility. Finally, all SIMS records noting continuing dialysis were extended until the appearance of any evidence of recovery, transfer, or death. Periods of lost to follow-up were not created in these cases since the instructions for SIMS only require checking patient data for continued accuracy, but do not have a requirement for updating if there are not any changes.

IV. Dialysis Facility Compare Preview

The measures included in this table will appear on the Dialysis Facility Compare website for this facility. Please refer to sections V-VI for more information on these measures. February 1-15, 2013, dialysis facilities may submit comments to CMS on the measures included in this report by logging on to the secure section of www.DialysisReports.org.

V. Mortality Summary for All Dialysis Patients (2008-11) and Hospitalization Summary for Medicare Dialysis Patients (2011)

The first half of Table 1 (lines 1a-1e) provides information about patient mortality for all dialysis patients treated at your facility between 2008 and 2011. We also reported the averages in your state, and the nation for this combined four-year period. The second half of Table 1 (lines 1f-1k) provides information about hospitalization admissions among all Medicare dialysis patients treated at your facility in 2011, along with regional comparisons for 2011.

Mortality Summary for All Dialysis Patients (1a-1e)

In the first section of the table, we have calculated a relative mortality rate, or Standardized Mortality Ratio (SMR), for patients in your facility. The SMR compares the observed death rate in your facility to the death rate that was expected based on national death rates during that year for patients with the same characteristics as those in your facility (Wolfe, 1992). The SMR uses expected mortality calculated from a Cox model (SAS Institute Inc., 2000; Andersen, 1993; Collett, 1994), adjusting for calendar year, patient age, race, ethnicity, sex, diabetes, duration of ESRD, nursing home status, patient

comorbidities at incidence, body mass index (BMI) at incidence, and population death rates.

The SMR accounts for many patient characteristics known to be associated with mortality, but cannot account for all factors that may explain differences in mortality between facilities. For example, since the SMR accounts for age and diabetes, an older average age or large percentage of diabetic patients at a facility would not elevate the SMR. Other factors, such as nutritional status, factors relating to the process of care, or comorbid conditions that developed after incidence, are not accounted for. Therefore, if the SMR statistic indicates potential differences in mortality for your facility compared to regional or national averages, please consider the role other important factors play within your facility. As with the hospitalization summaries which are described below, you will find the mortality summaries most informative if you use them as part of an integrated quality assurance process.

Patients (1a)

We based the mortality summaries in the first half of the table (lines 1a-1e) on the dialysis patients who received treatment in your facility according to the conventions described in Section III.

Deaths (1b)

We reported the number of deaths that occurred among dialysis patients during the four years. This count does not include deaths from street drugs or accidents unrelated to treatment. Deaths from these causes varied by facility, with certain facilities (in particular, urban facilities that treated large numbers of male and young patients) reporting large numbers of deaths from these causes and others reporting extremely low numbers (Turenne, 1996). Since these deaths are unlikely to have been due to treatment facility characteristics, we excluded them from the calculations.

Expected Deaths (1c)

We used a Cox model to calculate the expected deaths for each patient based on the characteristics of that patient, the amount of follow-up time (patient years at risk) for that patient during the year, and the calendar year (SAS Institute Inc., 2000; Andersen, 1993; Collett, 1994). We adjusted the Cox model for calendar year, age, race, ethnicity, sex, diabetes, years since start of ESRD, nursing home status, patient comorbidities at incidence, and patient BMI at incidence ($BMI = \text{weight (kg)} / \text{height}^2 \text{ (m}^2\text{)}$). In cases where the comorbidities or BMI were missing for a patient, we used the average values of the group of patients with similar characteristics (age, race, ethnicity, sex, diabetes). We also controlled for age-adjusted population death rates by state and race, based on the U.S. population in 2006-2008 (National Center for Health Statistics, 2011). As with the deaths in 1b, we then summed these expected deaths in order to obtain the total number of deaths expected for each year at your facility, and we summed the annual values to yield the expected number of deaths over the four-year period for each facility.

Standardized Mortality Ratio (SMR) (1d)

The SMR equals the ratio of the actual number of deaths (1b) divided by the expected number of deaths (1c). The SMR estimates the relative death rate ratio for your facility, as compared to the national death rate in the same year. Qualitatively, the degree to which your facility's four-year SMR varies from 1.00 is the degree to which it exceeds (>1.00) or is under (<1.00) the 2008-2011 national death rates for patients with the same characteristics as those in your facility.

Detailed statistical methodology for the SMR is included in a separate document titled Technical Notes on the Standardized Mortality Ratio for the Dialysis Facility Reports. This document and an accompanying Microsoft Excel spreadsheet are available on the Dialysis Reports website (www.dialysisreports.org) under the Methodology heading.

Quantitatively, if your facility's death rates equal the national death rates (in deaths per patient year or per year at risk) times a multiplicative constant, then the SMR estimates that multiplicative constant. If the multiplicative constant varies for different subgroups of patients, then the SMR estimates a weighted average of those constants according to your facility's patient mix. For example, an SMR=1.10 would indicate that your facility's death rates typically exceed national death rates by 10% (e.g., 22 deaths observed where 20 were expected, according to your facility's patient mix). Similarly, an SMR=0.95 would indicate that your facility's death rates are typically 5% below the national death rates (e.g., 19 versus 20 deaths). An SMR=1.00 would indicate that your facility's death rates equal the national death rates.

We calculated the regional and national summaries as the ratio of the total number of observed deaths among patients from each region to the number of expected deaths among patients from each region (1b/1c).

Why the national SMR may not be exactly equal to 1.00

The reported 2008-2011 SMR for the U.S. as a whole may not be precisely equal to 1.00. The SMR value for the U.S. given in the Dialysis Facility Reports does not include all U.S. dialysis facilities in its calculation. In particular, as discussed in the Overview, transplant-only, Veteran's Administration, and non-Medicare facilities are not included in the geographic summaries.

Random variation

The SMR estimates the true ratio of death rates at your facility relative to the national death rates. An SMR value that differs from 1.00 indicates that your facility's death rates differ from the national death rates. However, the SMR's value varies from year to year above and below the true ratio, due to random variation. Thus, your facility's SMR could differ from 1.00 due to random variation rather than to a fundamental difference between your facility's death rates and the nation's. Both the p-value and the confidence interval, discussed below, will help you interpret your facility's SMR in the face of such random fluctuations. We based our calculations of both items on an assumed Poisson distribution for the number of deaths at your facility.

Confidence Interval (Range of Uncertainty) for SMR (1d)

The 95% confidence interval (or range of uncertainty) gives a range of plausible values for the true ratio of facility-to-national death rates, in light of the observed SMR. The upper and lower limits enclose the true ratio between them approximately 95% of the time. Statistically significant confidence intervals do not contain 1.00.

P-value for SMR (1e)

The p-value measures the statistical significance (or evidence) for testing the two-sided hypothesis that the true ratio of death rates for your facility versus the nation is different (higher or lower) from 1.00. The p-value is the probability that the SMR would, just by chance, deviate from 1.00 as much as does the observed SMR, and is sometimes naively interpreted as the probability that the true SMR equals 1.00. A smaller p-value tends to occur when the ratio differs more greatly from 1.00 and when one uses more patient data to calculate the SMR value. A p-value of less than 0.05 is usually taken as evidence that the ratio of death rates truly does differ from 1.00. For instance, a p-value of less than 0.05 would indicate that the difference between your facility's death rates and the nation's is unlikely to have arisen from random fluctuations alone. The smaller the p-value, the more statistically significant the difference between national and individual facility death rates is. A small p-value helps rule out the possibility that an SMR's variance from 1.00 could have arisen by chance. However, a small p-value does not indicate the degree of importance of the difference between your facility's death rates and the nation's.

The SMR's actual quantitative value reflects the clinical importance of the difference between your facility's and the nation's death rates. An SMR that differs greatly from 1.00 is more important than an SMR in the range of 0.95 to 1.05.

Hospitalization Summary for Medicare Dialysis Patients (1f-1j)

Hospitalization rates are an important indicator of patient morbidity and quality of life. On average, dialysis patients are admitted to the hospital approximately twice a year and spend an average of 12 days in the hospital per year (USRDS, 2011). Measures of the frequency of hospitalization and diagnoses associated with hospitalization help efforts to control escalating medical costs, and play an important role in providing cost-effective health care. Hospitalization summaries for Medicare dialysis patients are reported in the second half of Table 1.

This report includes summaries of the hospitalization rates among dialysis patients in your facility, along with comparative regional and national data. However, the reasons for differences in hospitalization rates by facility are complex. In some cases, a hospitalization may result from deteriorated patient health caused, for example, by inadequate dialysis. In other cases, a hospitalization to treat a pre-existing comorbid condition may effectively prevent additional or more serious hospitalizations. Thus, we provide hospitalization summaries in this report as indicators of the process of care, rather than as measures of patient outcomes in a facility.

Hospitalization rates are more difficult to summarize than are mortality rates. For example, a patient can be hospitalized more than once during a year. Further, hospitalization data are not always as complete as mortality data. Ideally, this half of the table includes only patients whose Medicare billing records include all hospitalizations for the period. To achieve this goal, we require that patients reach a certain level of Medicare-paid dialysis bills to be included in hospitalization statistics, or that patients have Medicare-paid inpatient claims during the period. For the purpose of analysis, each patient's follow-up time is broken into periods defined by time since dialysis initiation. For each patient, months within a given period are included if that month in the period is considered 'eligible'; a month is deemed eligible if it is within two months of a month having at least \$900 of Medicare-paid dialysis claims or at least one Medicare-paid inpatient claim. In setting this criterion, our aim is to achieve completeness of information on hospitalizations for all patients included in the years at risk.

Like the SMR, the Standardized Hospitalization Ratio (Admissions) is intended to compare your facility's observed number of admissions to the number that would be expected if patients at your facility were instead subject to the 2008-2011 national average admission rates. The expected national rates are calculated from Cox models (SAS Institute Inc., 2000; Andersen, 1993; Collett, 1994) which make adjustments for patient age, sex, diabetes, duration of ESRD, nursing home status, patient comorbidities at incidence, body mass index (BMI) at incidence, and calendar year. We report the hospitalization summaries for 2011 only.

Medicare Dialysis Patients (1f)

The number of Medicare dialysis patients included in the hospitalization summaries (2a) is generally smaller than the number of patients included in the mortality summaries (1a). We calculated hospitalization rates based only on periods in which dialysis patients had satisfied the Medicare payment criterion (described above).

Patient Years at Risk (1g)

The number of patient years at risk indicates the total amount of time we followed patients in this table's analyses. For all patients, time at risk began at the start of the facility treatment period (see Section III) and continued until the earliest occurrence of the following: three days prior to a transplant; date of death; end of facility treatment; or December 31 of the year. Since a facility may have treated a patient for multiple periods during the same year, patient years at risk includes time at risk for all periods of treatment at your facility.

Total Admissions (1h)

This is the total number of inpatient hospital admissions among the Medicare dialysis patients assigned to this facility. The total number of admissions includes multiple admissions (i.e., second, third, etc. hospitalizations for the same patient). If a patient was admitted near the end of one year and not discharged until the following calendar year (e.g., admitted on 12/28/2009 and discharged on 1/6/2010), the admission would count only in the first year (one admission in 2009 and zero admissions in 2010).

Expected Total Admissions (1i)

We calculated the expected number of hospital admissions among Medicare dialysis patients in a facility based on national rates for hospital admissions in the same year. The expected number of admissions is calculated from a Cox model, adjusting for patient age, sex, diabetes, duration of ESRD, nursing home status, patient comorbidities at incidence, body mass index (BMI) at incidence, and calendar year. Duration of ESRD is divided into six intervals with cut points at 6 months, 1 year, 2 years, 3 years and 5 years and hospitalization rates are estimated separately within each interval. For each patient, the time at risk in each ESRD interval is multiplied by the (adjusted) national admissions rate for that interval, and a sum over the intervals gives the expected number of admissions for each patient. For each patient, the expected number is adjusted for the characteristics of that patient and summing over all patients gives the result reported in 2h.

Standardized Hospitalization Ratio (SHR) for Admissions (1j)

The SHR (Admissions) is calculated by dividing the observed total admissions in 1g by the expected total admissions in 1h. As with the SMR, it enables a comparison of your facility's experience to the national average. A value of less than 1.0 indicates that your facility's total number of admissions was less than expected, based on national rates; whereas a value of greater than 1.0 indicates that your facility had a rate of total admissions higher than the national average. Note that this measure is adjusted for the actual patient characteristics of age, sex, diabetes, duration of ESRD, nursing home status, comorbidities at incidence, and BMI in your facility. Additionally, the estimate is compared to the US hospitalization rates for the same year.

Confidence Interval (Range of Uncertainty) for SHR (1j)

The 95% confidence interval (or range of uncertainty) gives a range of plausible values for the true ratio of facility-to-national hospitalization rates, in light of the observed SHR. The upper and lower limits enclose the true ratio between them approximately 95% of the time. Statistically significant confidence intervals do not contain 1.00.

P-value for SHR (1k)

The p-value measures the statistical significance (or evidence) for testing the two-sided hypothesis that the true ratio of hospitalization rates for your facility versus the nation is different (higher or lower) from 1.00. The p-value is the probability that the SHR would, just by chance, deviate from 1.00 as much as does the observed SHR, and is sometimes naively interpreted as the probability that the true SHR equals 1.00. A smaller p-value tends to occur when the ratio differs more greatly from 1.00 and when one uses more patient data to calculate the SHR value. A p-value of less than 0.05 is usually taken as evidence that the ratio of hospitalization rates truly does differ from 1.00. For instance, a p-value of less than 0.05 would indicate that the difference between your facility's hospitalization rates and the nation's is unlikely to have arisen from random fluctuations alone. The smaller the p-value, the more statistically significant the difference between national and individual facility hospitalization rates is. A small p-value helps rule out the possibility that an SHR's variance from 1.00 could have arisen by chance. However, a small p-value does not indicate the degree of importance of the difference between your facility's hospitalization rates and the nation's.

The SHR's actual quantitative value reflects the clinical importance of the difference between your facility's and the nation's hospitalization rates. An SHR that differs greatly from 1.00 is more important than an SHR in the range of 0.95 to 1.05.

VI. Facility Hemoglobin, Adequacy, and Vascular Access for Medicare Dialysis Patients based on Medicare Dialysis Claims, 7/1/2011-6/30/2012

Table 2 reports information on facility practice patterns. Each section of the table includes a slightly different group of patients. We restricted hemoglobin, Kt/V, and vascular access information to patients who have had ESRD for at least 90 days. Information on urea reduction ratio is restricted to patients who have had ESRD for at least 183 days. The weekly Kt/V information reported in lines 2f-2n is based on the value code D5: Result of last Kt/V (K-dialyzer clearance of urea; t-dialysis time; V-patient's total body water). The inclusion criteria are described in more detail below. For the definition of the value code, occurrence code and V modifier codes, please see the list of diagnostic codes included in a separate document available at www.DialysisReports.org under the Methodology heading. The statistics are reported for each quarter July 1, 2011-June 30, 2012 and the entire year along with comparative regional and national data for the year. Note that State and U.S. averages may differ from values in the DFR due to the difference in number of facilities receiving a report and difference in time periods.

Hemoglobin (2a-2c)

We based the hemoglobin information reported in lines 2a to 2c on all Medicare dialysis claims submitted by your facility that indicated the use of an erythropoiesis stimulating agent (ESA), specifically, the use of epoetin alfa or darbepoetin alfa. We calculated hemoglobin as hematocrit divided by three for claims that report hematocrit but not hemoglobin, rounding to the nearest tenth of a g/dL. We included neither patient claims starting before day 90 of ESRD nor claims with hemoglobin values less than 5 or greater than 20. The rolling year summary in line 2a reports the number of patients for whom at least four claims fulfilling these criteria were submitted by your facility for the year. The quarterly summaries report the number of patients with at least one claim fulfilling these criteria. A patient treated at more than one facility during the year was included in the report for each.

For each patient in line 2a, we calculated the average hemoglobin reported on claims submitted by your facility. Rows 2b and 2c presents the percentage of patients from 2a with an average hemoglobin less than 10g/dl, and greater than 12 g/dl, respectively. In calculating the percent of patients that have an average hemoglobin greater than 12 we use a slightly different group of patients than the corresponding measure in the QIP. The QIP calculations are restricted to adult patients.

Dialysis Adequacy: Urea Reduction Ratio (2d-2e)

We base the urea reduction ratio (URR) information reported in lines 2d-2e on all Medicare dialysis claims submitted by your facility, with the following four exclusions:

(1) claims which started before day 183 of ESRD for a patient; (2) claims with missing URR category; (3) claims listing a patient's modality as peritoneal dialysis (PD); and (4) claims indicating the occurrence of frequent dialysis, defined as four or more sessions per week. A claim is determined to indicate frequent dialysis if the claim covered seven or fewer days and had four or more sessions, if the claim covered more than seven days and had a rate of four or more sessions per week, or if the patient was identified in the Standard Information Management System (SIMS) as having dialyzed five or more times per week during the month of the claim start date.

The rolling year summary in line 2d reports the number of patients for whom at least four claims fulfilling the above criteria had been submitted for your facility. The quarterly summaries report the number of patients with at least one claim fulfilling these criteria. A patient who had been treated at more than one facility during the year was included at both facilities in line 2d. We assigned each patient in 2d to the median URR. For patients treated at more than one facility during the year, we calculated separately the URR category for them for each facility based on the claims from each facility only. The KDOQI guidelines recommend that all patients with treatment times less than 5 hours have a URR of 65% or more (NKF-KDOQI, 2006). Line 2e reports the percentage of patients in row 2d with URR that meets KDOQI guidelines (i.e., 65% or more). In calculating the percent of patients that have a URR of 65% or more we use a slightly different group of patients than the corresponding measure in the QIP. The QIP calculations are restricted to adult patients obtaining in-center hemodialysis.

Dialysis Adequacy: Kt/V (K-dialyzer clearance of urea; t-dialysis time; V-patient's total body water) (2f-2n)

This section of the table includes summaries of dialysis adequacy as reported in Medicare claims using value codes and occurrence codes collected beginning July 2010. A patient who had been treated at more than one facility during the month was included at both facilities in lines 2f-2n when the patient had a claim at each facility. A patient who had switched modalities during the month was included in both the HD and PD eligible patient counts.

Eligible adult hemodialysis (HD) patients and patient-months (2f-2g)

The number of patients who had at least one valid Medicare hemodialysis claim submitted by the facility in a month during the summary period is reported in line 2f. The number of patient-months with at least one valid Medicare hemodialysis claim submitted by the facility during the summary period is reported in line 2g. A claim was defined as valid if it was from a hemodialysis patient who received dialysis greater than two and less than four times a week, had been on dialysis for at least 90 days, and was at least 18 years old.

The Kt/V value for a patient-month is characterized into five mutually exclusive categories: missing (no Kt/V reported); not performed (Kt/V reported as 9.99); expired (in-center HD with Kt/V reported from a previous claim, or home HD with Kt/V reported from more than four months prior); in range (Kt/V value between 0.5 and 2.5 and not

expired); and out of range (Kt/V value less than 0.5 or greater than 2.5, and not missing or 9.99).

Adult HD: Kt/V \geq 1.2 (2h)

The percentage of all patient-months with in range claims greater than or equal to 1.2, for hemodialysis patients, is reported in 2h.

Eligible adult peritoneal dialysis (PD) patients and patient-months (2i-2j)

The number of patients who had at least one valid Medicare peritoneal dialysis claim submitted by the facility in a month during the summary period is reported in line 2i. The number of patient-months with at least one valid Medicare peritoneal dialysis claim submitted by the facility during the summary period is reported in line 2j. A claim was defined as valid if it came from a peritoneal dialysis patient who had been on dialysis for at least 90 days and was at least 18 years old.

The Kt/V value for a patient-month is characterized into five mutually exclusive categories; missing (no Kt/V reported); not performed (Kt/V reported as 9.99); expired (Kt/V reported from more than four months prior); in range (Kt/V value between 0.5 and 5.0 and not expired); and out of range (Kt/V value less than 0.5 or greater than 5.0, but not missing or 9.99).

Adult PD: Kt/V \geq 1.7 (2k)

The percentage of all patient-months with in range claims greater than or equal to 1.7, for peritoneal dialysis patients, is reported in 2k.

Eligible HD pediatric patients and patient-months (2l-2m)

The number of pediatric patients who had at least one valid Medicare hemodialysis claim submitted by the facility in a month during the summary period is reported in line 2l. The number of pediatric patient-months with at least one valid Medicare hemodialysis claim submitted by the facility during the summary period is reported in line 2m. A claim was defined as valid if it was from an in center hemodialysis patient who received dialysis greater than two and less than five times a week, had been on dialysis for at least 90 days, and was younger than 18 years old.

The Kt/V value for a patient-month is characterized into five mutually exclusive categories: missing (no Kt/V reported); not performed (Kt/V reported as 9.99); expired (Kt/V reported from a previous claim); in range (Kt/V value between 0.5 and 2.5 and not expired); and out of range (Kt/V value less than 0.5 or greater than 2.5, and not missing or 9.99).

Pediatric HD: Kt/V \geq 1.2 (2n)

The percentage of all patient-months with in range claims greater than or equal to 1.2, for pediatric hemodialysis patients, is reported in 2n.

Hemodialysis Vascular Access Type (2o-2r)

This section of the table includes summaries of facility vascular access type as reported in Medicare claims using V modifiers collected beginning July 2010.

Vascular Access: Eligible patients and patient-months (2o-2p)

The number of adult Medicare hemodialysis patients treated at the facility during at least one month during the quarter or year period is reported in 2o. The total number of months during which each adult patient is treated with hemodialysis at the facility are summed and reported in 2p. Modality and vascular access type are determined based on the last claim of the month from the facility for the patient reported. A patient-month is counted in the denominator if the last dialysis claim submitted for the patient by the facility that month was an adult hemodialysis claim. An individual patient may contribute up to 3 patient-months per quarter and up to 12 patient-months per year. If dialysis claims are submitted from more than one facility in a month for a patient, the patient is counted in each facility's denominator.

Arteriovenous fistulae in place (2q)

Row 2q reports the percentage of patient-months in 2p in which an arteriovenous fistula was reported as the access type in use for all claims. These data are reported using V modifier V7 in Medicare claims.

Vascular catheter reported >90 days (2r)

Row 2r reports the percentage of patient-months in 2p in which a vascular catheter was reported as the access type in use for all claims for at least three consecutive months. These data are reported using V modifier V5 in Medicare claims.

VII. Please Give Us Your Comments

We welcome questions or comments about this report's content, or any suggestions you might have for future reports of this type. Improvements in the content of future reports will depend on feedback from the nephrology community. Comments can be submitted on www.DialysisReports.org February 1-15, 2013. If you have questions after the comment period is over, please contact The University of Michigan Kidney Epidemiology and Cost Center (UM-KECC) directly using the contact information provided below. Please note "Dialysis Facility Compare Reports- Preview for April 2013" as the topic of your correspondence, and include your contact information and facility's CMS certification number.

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