

Practice Guidelines for the Management of End Stage Renal Disease

MVP Health Care®, as part of its continuing Quality Improvement Program, adopted guidelines for End Stage Renal Disease (ESRD) based on the National Kidney Foundation's Kidney Disease Outcome Quality Initiative (NKF KDOQI™).

Statistics – Morbidity & Mortality

According to the United States Renal Data System's (USRDS) Annual Report 2022:

Over 10% of patients with chronic kidney disease (CKD), 13% of patients with a kidney transplant, and 20% of patients on dialysis in January of 2020 were diagnosed with COVID-19 by the end of June 2021, rates that were approximately 50%, 100%, and 200% higher than that of Medicare beneficiaries without CKD, respectively.

The incidence of hospitalization after COVID-19 diagnosis among patients with CKD was more than double that of patients without CKD in 2020; patients receiving dialysis consistently had hospitalization rates higher still than those with CKD.

Mortality at 14, 30, and 90 days after diagnosis of COVID-19 was more than twice as high among beneficiaries with CKD as among those without. Nearly one-quarter of patients with CKD who were diagnosed with COVID-19 died within 90 days. Mortality after COVID-19 diagnosis was even higher for patients with ESRD, reaching 40.5% for patients on dialysis and 44.1% among kidney transplant recipients 90 days after diagnosis.

The ultimate result of the higher incidence of COVID-19 and higher mortality after diagnosis of COVID-19 among patients with CKD and ESRD was the unprecedented shrinking of the prevalence of diagnosed CKD and ESRD in 2020. As a result of fewer patients reaching diagnosed ESRD and the increase in mortality rate among patients with ESRD attributable to the pandemic and its effects, the rate of prevalent ESRD decreased by almost 2% in 2020.

As a direct result of this higher COVID-19-related mortality and possibly more limited access to non-COVID-19-related medical care, mortality increased more among Black than among White beneficiaries with stage 4 and 5 CKD in 2020. This resulted in a reversal of the longstanding observation of lower mortality among Black patients. In other words, whereas Black beneficiaries had lower mortality than White ones in 2019 and prior years, they had higher mortality than their White counterparts in 2020. A similar reversal of the Black-White mortality difference occurred in transplant recipients. The mortality difference did not reverse among patients treated with dialysis, but it did narrow from 43% higher mortality among White patients in 2019 to only 30% higher mortality in 2020.

Other direct and indirect effects of COVID-19 and the changes in availability and delivery of healthcare that occurred in 2020 can be seen throughout the Annual Data Report (ADR) and in many metrics typically tracked in the CKD and ESRD populations.

There was a particularly steep reduction in the rate of all-cause hospitalization in 2020 (14.9%) among patients with CKD; this single-year decrease was larger than the cumulative change over the previous 6-year period from 2013 to 2019.

Although the overall rate of hospitalization with acute kidney injury (AKI) decreased in 2020 (likely related to the overall reduction in hospitalization rate), AKI events worsened, as indicated by a 16% increase in the need for dialysis among those with AKI.

Outcomes after AKI requiring dialysis (AKI-D) during a COVID-19 hospitalization in 2020-2021 were substantially worse than outcomes after AKI-D without COVID-19: almost three-quarters (74.1%) of those with COVID-19 and AKI-D died during hospitalization or were discharged to hospice care compared with 35.2% of those without COVID-19 (Figure 4.4c).

Inflation-adjusted overall Medicare fee-for-service (FFS) spending for older (≥ 66 years) beneficiaries with nondialysis-dependent CKD decreased by almost 3% in 2020, or by ~\$2.2B. Inpatient spending decreased by 4%, which was a combination of a ~\$2.4B decrease in spending on non-COVID-19 hospitalization plus approximately \$1.4B in spending for COVID-19 hospitalization.

The percentage of patients initiating HD with a catheter increased in 2020 to 71.2%, and the corresponding percentage initiating with an AVF decreased to 25% overall (including AVFs that were maturing or were in use, or 14.1% for AVFs used at dialysis initiation).

The number of patients with ESRD newly added to the kidney transplant waitlist in 2020 decreased by 12%. The percentage of dialysis patients on the kidney transplant waitlist also declined in 2020.

The rate of receipt of living donor kidney transplants among patients on dialysis decreased by 27.3% in 2020.

The number of children with incident ESRD decreased in 2020, driven primarily by a reduction in the number who received a preemptive kidney transplant. The rates of kidney transplantation among children receiving dialysis decreased by 6% in 2020.

Total Medicare spending for beneficiaries with ESRD decreased by \$2.2B in 2020. Medicare FFS spending for ESRD beneficiaries as a percentage of total FFS spending decreased to 6.1% in 2020 after 10 years at 7.1-7.2%.

Among recipients of both deceased and living donor transplants, one-year survival and five-year graft survival improved. This contrasts with the frequently repeated assertion that long term outcomes after transplant have not accompanied improvements in short term outcomes.

Medical records documented pain in almost three-quarters of patients in the 6 months before and after starting dialysis.

Racial, Ethnic and Socioeconomic Disparities

In this year's report, we examined disparities in prevalence and treatment of CKD among Black and Hispanic individuals. Among younger Medicaid beneficiaries aged 18 to 64 this year, we found little disparity by race/ethnicity or by neighborhood in deprivation of medications or nephrology encounters. However, younger Medicare beneficiaries saw nephrologists less than half as often as older Medicare beneficiaries. Thus, the younger, more heavily Black, Hispanic, and lower socioeconomic status (SES) Medicaid population appeared to have considerably less access to nephrology care. In addition, there was substantial disparity among groups in receipt of a living donor kidney transplant and treatment with home dialysis.

Source:

United States Renal Data System. USRDS annual data report: Epidemiology of kidney disease in the United States. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2012. Available: [Annual Data Report | USRDS](#)

Guideline Summary

In 1997, the National Kidney Foundation began the Kidney Disease Outcome Quality Initiative (KDOQI) with a goal to create clinical management guidelines for health care professional for all stages of chronic kidney disease and related complications, from diagnosis to monitoring and management. The National Kidney Foundation has published numerous Clinical Practice Guidelines through its KDOQI process. Topics covered include:

- [Acute Kidney Injury \(AKI\)](#)
- [Anemia](#)
- [Bone Metabolism in CKD](#)
- [Cardiovascular Disease in CKD](#)
- [Classifying Chronic Kidney Disease](#)
- [Diabetes mellitus mellitus](#)
- [Glomerulonephritis](#)
- [Hemodialysis Adequacy](#)
- [Hepatitis C](#)
- [Nutrition in CKD](#)
- [Peritoneal Dialysis Adequacy](#)
- [Transplant](#)
- [Vascular Access](#)

For all KDOQI Guidelines for Chronic Kidney Disease (CKD) Care and KDOQI Guidelines for Dialysis Care please go to the National Kidney Foundation website at:

http://www.kidney.org/professionals/kdoqi/guidelines_commentaries.cfm#.

In conjunction with these guidelines, MVP Health Care offers Case Management for members with End Stage Renal Disease who are preparing for or receiving dialysis. If you would like to

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2006, 2008, 2010, 2014, 2016, 2018, 2020, 2021, 2022

refer one of your patients to the Case Management program, please call the Population Health Management Department at 866-942-7966. .

This guideline is not intended to replace the role of clinical judgment by the physician in the management of this, or any other disease entity. This is an educational guideline to assist in the delivery of good medical care. All treatment decisions are ultimately up to the patient and provider. Where medication recommendations are made, please refer to each health plan's formulary for coverage considerations.

MVP Health Care updates its clinical guidelines at least every two years. The review process is also initiated when new scientific evidence or national standards are published. Practitioners are alerted via the web site and by written notices from the plan via fax or newsletter. A hard copy of the clinical guideline can be requested by calling the MVP Quality Improvement Department at **800-777-4793**.