

The impact of COVID-19 on people with kidney failure

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This image shows a cross section of a kidney. Credit: Holly Fischer/Wikipedia

A new analysis reveals that individuals with kidney failure have faced especially high hospitalization and death rates during the COVID-19 pandemic. The findings, which appear in an upcoming issue of *JASN*, support prioritization of these patients in COVID-19 vaccination

programs.

Approximately 800,000 people receive treatment for [kidney failure](#) in the United States, either by undergoing [dialysis](#) or living with a kidney transplant. Many patients receive dialysis in [healthcare facilities](#) multiple times per week and thus have not been able to shelter in place during the COVID-19 pandemic. On the other hand, patients with a transplant take medications to prevent organ rejection and are therefore vulnerable to infection.

To examine the impact of COVID-19 in these patients, Eric D. Weinhandl, Ph.D., MS (Chronic Disease Research Group, a division of Hennepin Healthcare Research Institute and the Coordinating Center of the United States Renal Data System) and his colleagues analyzed data from the Centers for Medicare & Medicaid Services Renal Management Information System, before and during the COVID-19 pandemic.

The team found that among patients undergoing dialysis, the rate of COVID-19 hospitalizations peaked between March 22 and April 25. "The trajectory of the rate of COVID-19 hospitalizations among dialysis patients tracked the corresponding trajectory in the general population, but was roughly 40 times higher in magnitude," said Dr. Weinhandl. Non-Hispanic Black and Hispanic patients had especially high hospitalization rates, while patients undergoing peritoneal dialysis at home had lower rates compared with those undergoing hemodialysis in clinics.

The risks of dying from any cause were 17% and 30% higher from March 22-July 4 among patients receiving dialysis and patients with kidney transplants, respectively, compared with rates in 2017-2019. Death rates were especially high among non-Hispanic Black, Hispanic, and Asian patients. Also, during this time, patients on dialysis were hospitalized 17% less frequently than typical for reasons other than

COVID-19.

"This study suggests that the effect of the initial phase of the pandemic on both dialysis and kidney transplant patients has been profound," said Dr. Weinhandl. "With markedly higher rates of all-cause mortality in both dialysis and [kidney transplant](#) patients during the second quarter of 2020, there is now a clear rationale for prioritization of [kidney](#) failure patients in COVID-19 vaccination schedules promulgated by states."

The authors noted that the study's finding that patients undergoing peritoneal dialysis had lower rates of COVID-19 hospitalizations compared with patients undergoing hemodialysis provide additional support for the benefits of home dialysis, as the home setting offers protection from community transmission of viruses.

More information: "Initial Impact of Novel Coronavirus Disease 2019 on Patients with End Stage Kidney Disease," [DOI: 10.1681/ASN.2021010009](#)

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