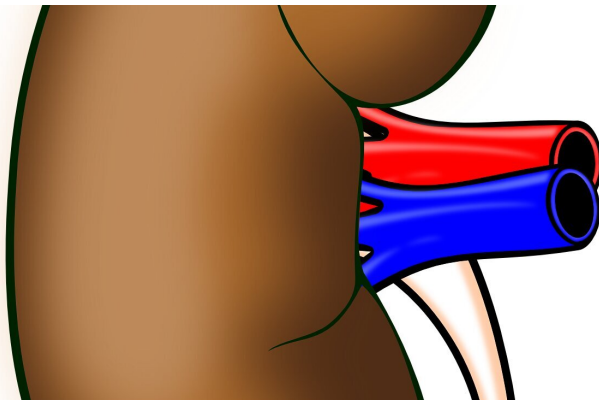


# Two studies look at COVID-19 in patients who have received kidney transplants or are undergoing dialysis

7 July 2020



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Two new studies examine the health and outcomes of patients with COVID-19 who have undergone kidney transplantation or are receiving hemodialysis. The findings appear in an upcoming issue of *CJASN*.

During the global COVID-19 pandemic, it's important to identify individuals who are at high risk of developing severe forms of the disease. Kidney transplant recipients—who take life-long immunosuppressive drugs and tend to have additional illnesses—may be especially vulnerable. Early reports indicate that [kidney](#) transplant recipients who are hospitalized for COVID-19 have similar symptoms and outcomes as other patients, but little is known about how they fare in the outpatient setting, when they are not admitted to a hospital.

To provide insights, clinicians led by Sumit Mohan, MD, MPH and S. Ali Husain, MD, MPH (Columbia University Medical Center) described their early experience with outpatient kidney transplant recipients with established or suspected COVID-19

seen at their medical center.

Of 41 patients who were included, 22 (54%) had confirmed COVID-19 and 19 (46%) were suspected cases. Patients most commonly reported fever, cough, and shortness of breath. Most patients' symptoms went away without the need for hospitalization. Thirteen (32%) patients required hospitalization, and these patients were more likely to have shortness of breath and higher levels of a blood marker for impaired kidney function. There were no differences in demographics or medical illnesses between those who were or were not admitted to the hospital.

"In the midst of the pandemic surge in New York, many transplant recipients needed to be monitored remotely. Our report underscores the fact that a comprehensive outpatient monitoring protocol could provide adequate clinical care and excellent outcomes for outpatient kidney transplant recipients with COVID-19 by allowing identification of those individuals who would benefit from inpatient care," said Dr. Husain.

Of note, the study revealed a wide variation in the amount of time it took patients to improve. Among the patients who were hospitalized, the average time between [symptom](#) onset and admission was 8 days (similar to the general US population), but one patient was admitted 16 days after symptoms started. Among the patients with outpatient management, the average time from symptom onset to improvement was 12 days, with one patient taking 23 days before symptoms improved. "These findings show that patients must be followed until improvement to watch for late worsening of symptoms requiring hospitalization," Dr. Husain said.

Another study led by Xiangyou Li, Ph.D. (Tongren

Hospital of Wuhan University) investigated the clinical features of patients with kidney failure on hemodialysis who developed COVID-19. The study included 49 hospitalized dialysis patients and 52 hospitalized patients without kidney failure (controls) with confirmed COVID-19 in Wuhan, China from January 30th to March 10th.

Fever, fatigue, and dry cough were the dominant symptoms in controls, whereas the most [common symptoms](#) in patients on dialysis were fatigue and anorexia, with fever and cough being less common.

Common complications including shock, [acute respiratory distress syndrome](#), arrhythmia, and acute cardiac injury were significantly higher in patients on dialysis. Also, 14% of patients on hemodialysis died, compared with 4% of controls.

An accompanying editorial stresses the need for more research and guidance related to COVID-19 in these patient populations. "As time passes, a treatment protocol based on patient characteristics, phase of illness, and disease severity using antivirals, anti-coagulation, immunomodulators, and immunosuppressive agents will be formulated," the authors wrote. "However, there are concrete steps that the nephrology community can take immediately to optimize the safety of our [patients](#) and ourselves."

**More information:** "Early Outcomes of Outpatient Management of Kidney Transplant Recipients with COVID-19," [cjasn.asnjournals.org/content/.../0/05/15/CJN.05170420](https://cjasn.asnjournals.org/content/0/05/15/CJN.05170420).

"Clinical Features of Maintenance Hemodialysis Patients With 2019 Novel Coronavirus-infected Pneumonia in Wuhan, China," [cjasn.asnjournals.org/content/.../0/05/21/CJN.04160320](https://cjasn.asnjournals.org/content/0/05/21/CJN.04160320).

"COVID-19 in Patients with Kidney Disease: A High Risk Population," [cjasn.asnjournals.org/content/.../0/07/06/CJN.09730620](https://cjasn.asnjournals.org/content/0/07/06/CJN.09730620).

Provided by American Society of Nephrology  
APA citation: Two studies look at COVID-19 in patients who have received kidney transplants or are

undergoing dialysis (2020, July 7) retrieved 29 April 2021 from  
<https://medicalxpress.com/news/2020-07-covid-patients-kidney-transplants-dialysis.html>

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