

# Long-Term Hemodialysis during the COVID-19 Pandemic

Nieltje Gedney

CJASN 15: ●●●–●●●, 2020. doi: <https://doi.org/10.2215/CJN.09100620>

We are living in extraordinary times. Basic activities of daily living have altered to incorporate new safety measures to prevent infection from a highly contagious and deadly virus. For those with CKD, on dialysis, or with a transplanted kidney, the world has become terrifying.

Most patients dealing with a chronic illness, such as CKD, and dialysis often become research oriented out of necessity. If not, I encourage patients to become knowledgeable by reading scientific journal articles directed at the medical community. By doing this, one can increase knowledge, help manage the disease and treatment, and even update clinicians, who rarely have the time to read newly published studies.

When reading journal articles, I suggest that patients digest the abstract and conclusion first. This helps to “translate the data” into a meaningful format. For example, in the article “Clinical Features of Maintenance Hemodialysis Patients with 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China” (1), one might wonder how this small research study from China could possibly interest me, a patient on hemodialysis trying to survive a pandemic in the United States.

I learned a lot reading this article. Understanding that coronavirus disease 2019 (COVID-19) is in the same virus family as severe acute respiratory syndrome and Middle East respiratory syndrome was important to me because I suffered from severe acute respiratory syndrome in 2003. Although I was not on dialysis at the time, I rank that experience as one of the worst times of my life.

I learned from this article that, as a dialyzer, I am even more vulnerable to the devastating effects of COVID-19, and that frightens me. I want to understand everything I can about the disease because patients with kidney disease are at higher risks of infection, complications, and death. An article with research like that done in Wuhan can answer important questions, like what the typical symptoms of COVID-19 in patients on hemodialysis are and if outcomes are poorer. Patients need to obtain factual information. This study, although small and perhaps not a representative sample, is a good place to start.

What I found interesting is that patients on hemodialysis who are hospitalized for COVID-19 did not

necessarily present with the same clinical symptoms as patients not on dialysis. Those on dialysis had fatigue and cough as some of the most prevalent symptoms at diagnosis, whereas the patients not on dialysis presented with fever, fatigue, and cough. Presence of fever has been the primary screening mechanism for isolating the virus. This research tells us that the dialysis community needs to be more aware of symptoms because many do not present with the customary fever. It would also be interesting to see data that suggest that physicians may be more likely to admit patients on hemodialysis with COVID-19 than patients without CKD with COVID-19, fearing that patients on dialysis would decline at a higher rate.

So how effective is it to take everyone’s temperature upon entering a dialysis clinic, when lack of fever does not necessarily mean absence of COVID-19 in patients on dialysis? Relying on the presence of fever during screening might make early diagnosis of COVID-19 more difficult in some patients on hemodialysis.

In fact, early symptoms of COVID-19 are often easily confused with symptoms of uremia. The study highlighted that it was not until further tests were administered that many COVID-19–positive patients on dialysis were diagnosed—too late to protect those around them from infection.

What this article tells me, in laymen’s terms, is that COVID-19 in the dialysis population does not necessarily manifest itself in the traditional manner, thereby delaying diagnosis and treatment and increasing the risk of hospitalization and death. Add to this the fact that patients on dialysis often present with preexisting conditions such as volume overload and cardiac hypertrophy/heart failure that can lead to poor clinical outcomes, and the mortality rate triples. Although the control group for this study had a 4% mortality rate, fatality rates for patients on dialysis with COVID-19 can be as high as 30% (2).

As a patient advocate, I would use the data in this and other studies to campaign for regular mandatory testing of all patients on dialysis presenting for in-center treatments. This study demonstrates that merely testing for fever in the dialysis population is inadequate. Fatigue presents as the most common symptom of COVID-19 in patients on dialysis, not to be confused with the fatigue experienced with uremia. To protect

Vice President, Home Dialyzors United, Shepherdstown, West Virginia

**Correspondence:**  
Nieltje Gedney, P.O. Box 281, Kearneysville, WV 25430. Email: [ngedney@homedialyzorsunited.org](mailto:ngedney@homedialyzorsunited.org)

dialyzers, regular testing for COVID-19 in the clinic setting needs to be required.

I can advocate strongly for mandatory testing for in-center dialyzers because I sit in the comfort of my home, doing my own dialysis treatments, without fear of infection. My concern is for the dialyzers transporting themselves to a clinic three days per week for a treatment that they must undergo to stay alive, yet knowing that going to that clinic may expose them to a virus that could kill them.

#### Acknowledgment

The content of this article reflects the personal experience and views of the author(s) and should not be considered medical advice or recommendation. The content does not reflect the views or opinions of the American Society of Nephrology (ASN) or *CJASN*. Responsibility for the information and views expressed herein lies entirely with the author(s).

#### Disclosures

The author has nothing to disclose.

#### Funding

None.

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Published online ahead of print. Publication date available at [www.cjasn.org](http://www.cjasn.org).