

COVID-19 Placed Kidney Disease in the Limelight.

Will That Attract More Physicians to the Specialty?

By Nicole Fauteux



Nephrologists have been challenged in recent years to attract young physicians to the specialty. Many attribute this difficulty to the field's complexity, the younger generation's focus on work-life balance, the vulnerability of the patients nephrologists serve, and limited exposure to the field during medical school and residency. Now that kidney disease has been thrust into the limelight by COVID-19, some observers are asking whether the specialty might be more attractive to young physicians in the future.

Such a change would be welcome. In 2019, only 62% of nephrology resident positions were filled during the annual match. That's a slight increase from the lowest point in 2016 but a major drop from 94% a decade earlier.

"The fact that all slots are unfilled during the match clearly highlights the need for better recruitment," said Stephen Sozio, MD, MHS, MEHP, associate professor at Johns Hopkins School of Medicine and associate director of the school's nephrology fellowship program. "How can we care for patients that are critically ill from COVID-19 and other conditions without a stronger pipeline of nephrologists?"

This shortage is part of a larger trend in medicine generally. According to Michael Dill, director of workforce studies at the Association of American Medical Colleges, the growing physician shortage is largely a matter of demographics. As a significant portion of the population enters older adulthood, their need for medical care increases

at the same time many physicians are aging out of the workforce.

"We cannot yet know what impact COVID-19 is going to have on physician retirement patterns," Dill said. "Although the numbers are very small, some physicians are coming out of retirement to help out during the pandemic. At the same time, the burnout of caring for COVID-19 patients could result in more early retirements." If it does, this could be problematic, with COVID-19 adding to the disease burden generally and, in some cases, increasing the need for physicians who can treat acute kidney injury.

The somewhat better news?

"The number of folks going into internal medicine and then subspecializing continues to run high," Dill said, "but we're still expecting future shortages because demand is growing even faster."

"One of the things we've seen over the past several years is the emergence of subspecialization in nephrology," Sozio said. "Critical care nephrology is one field that's been blossoming, and we may see even more interest now with COVID-19."

According to Sozio, nephrologists have proved invaluable in some hospitals hard hit during the pandemic. He has heard from colleagues who have been asked to spend more time in general internal medicine wards or intensive care units. "We see patients across the hospital, and we know how to care for patients with complex diseases," he said. "That really does allow us to be flexible when it comes

to internal medicine and critical care needs."

A call to arms: "Yes, I belong in this field"

How does Sozio think COVID-19 may affect the future nephrology workforce?

"COVID-19 highlights some of the vulnerabilities that our population has in regard to infectious disease," he said. "Our trainees have seen the COVID era as a call to arms to say, 'Yes, I belong in this field to provide care to everyone that's vulnerable.' At the same time, we are seeing the exhaustion that comes with COVID-19 care, so I am unsure which way our trainees will go."

To encourage more physicians to enter the specialty, ASN has instituted two programs to expose students and residents to nephrology early on: Kidney STARS, which funds participation by students and residents in the ASN annual meeting, and Kidney TREKS, which provides students with a mentored nephrology experience. Sozio said he believes these programs are effective in getting beyond students' preconceptions of kidney care. "They see how one can be effective as a patient advocate and communicator," he said, "and they see the value of research and using data. That's the bright side of nephrology. Making a difference for your patient, and also making a difference for many patients with kidney disease." ■

Nicole Fauteux is the founder of Propensity LLC and a member of the Association of Health Care Journalists.

Bringing Kidney Failure Patients Home

By Nicole Fauteux

To mitigate the risk of COVID-19 infection, a recent white paper released by the Kidney Health Initiative (KHI) Board of Directors urges KHI stakeholders to accelerate the development of home-based technologies for people with kidney failure (1).

"The COVID-19 pandemic is unmasking the shortcomings of in-center hemodialysis for people with kidney failure," the paper states, noting that people who rely on in-center dialysis do not have "the luxury of social distancing during a pandemic," exposing them and those working in dialysis centers to potential infection.

"The global medical device development community needs to collaborate and overcome barriers to bringing more people with kidney failure home for treatment," Raymond C. Harris, MD, FASN, co-chair of KHI, told the press when the paper was released.

The white paper describes the benefits of home therapies and lays out a long list of challenges that are ripe for technological innovation. These include the efficient use of water, point-of-care infection detection, pump and filter miniaturization, vascular access, clotting avoidance,

toxin removal, fluid regulation, filtrate transport, and the use of sensors and remote monitoring.

"It's very exciting to see that people are interested and motivated in finding technological solutions to be able to facilitate more dialysis at home, but we have to make sure that we are prepared for the education and support that go along with those advances," said Jeffrey Perl, MD, SM FRCP, an associate professor of medicine at the University of Toronto and staff nephrologist at St. Michael's Hospital UnityHealth. "Technology will be one piece of a whole strategy to empower patients to be able to do dialysis at home."

The white paper's authors also emphasize the need to remain focused on the patient experience as technologies evolve. One current KHI project aims to build the capacity of innovators to incorporate patient perspectives and preferences as they iterate new designs and approaches to kidney replacement therapy (2). The paper states, "KHI has provided tools that innovators can use to integrate patient preferences and patient-reported outcomes throughout their product's lifecycles so that the innovative solutions match what people with kidney disease need."

The paper also stresses that vulnerable and underserved populations must receive equal access to any new technologies that are developed. "Now is the time to bring technologies to market that have the potential to reduce disparities and improve the lives of all individuals with kidney failure," the authors conclude.

The Kidney Health Initiative is a collaborative partnership with the U.S. Food and Drug Administration and more than 100 organizations and companies. The ASN Alliance for Kidney Health created KHI in 2012 to realize ASN's vision of a world without kidney diseases. ■

References

1. Kidney Health Initiative. Accelerating Technology Development During a Pandemic to Bring More People with Kidney Failure Home. May 9, 2020. https://khi.asn-online.org/uploads/AcceleratingHomeDialysisTechnology_KHIPositionPaper_May2020.pdf
2. Building Capacity to Incorporate Patient Preferences into the Development of Innovative Alternatives to Renal Replacement Therapy (RRT). KHI website. <https://khi.asn-online.org/projects/project.aspx?ID=6>