

Kidney News

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Mapping a Path to Improved APOL1 Kidney Disease Awareness, Trial Participation, and Care

By Bridget M. Kuehn



Approximately 13% of African American individuals have two copies of variants of the gene encoding apolipoprotein L1 (APOL1), placing them at risk of developing APOL1 kidney disease (1). Yet, few people know they have these variants or the risks they pose to their health.

These APOL1 risk variants are associated with faster kidney disease progression and are more common among individuals with focal segmental glomerulosclerosis, hypertension-associated kidney disease, HIV-associated kidney disease, and lupus nephritis. Lack of awareness may be contributing to disproportionately high rates of kidney diseases and progression to dialysis among African Americans in the United States, who account for 13% of the population but 16% of those with chronic kidney disease and 35% of those on dialysis, said Susanne B. Nicholas, MD, MPH, PhD, a professor of medicine at the David Geffen School of Medicine at the University of California, Los Angeles. “If we aren’t able to get these patients with APOL1 risk variants tested early, which allows them to get treated when

treatments are available, the consequences are a more rapid progression of their kidney disease to kidney failure, as well as overall poor clinical outcomes,” Nicholas said.

To prevent such poor outcomes, Nicholas is participating in a Kidney Health Initiative steering committee that is creating a roadmap to raise APOL1 kidney disease awareness, increase testing for these disease variants, boost participation of at-risk individuals in clinical trials, and reduce barriers to clinical trial participation for individuals in affected communities (2). To achieve this, the steering committee has brought together patient advocates, clinical researchers, pharmaceutical companies, and the US Food & Drug Administration to share their perspectives. “The roadmap will allow us to see where to begin, where we want to end, and how we can maneuver through [barriers] to get to the finish line,” said steering committee member Patrick Gee, Sr., PhD, a patient advocate and chair of the Kidney Health Initiative’s Patient and Family Partnership Council.

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Government Plans Overhaul of Organ Transplant Network

“Modernization Initiative” Will Target IT Upgrade and Separate Contract Tasks

By Eric Seaborg

The kidney community welcomed the announcement by the Health Resources and Services Administration (HRSA) of a “modernization initiative” that will overhaul the national system for procuring and allocating organs for transplantation.

The changes include plans to upgrade information technology (IT) systems, open the contracting process to competitive bidding that could allow other organizations to take on some of the functions now performed by the

United Network for Organ Sharing (UNOS), and double federal spending on organ procurement and transplantation. The HRSA aims to increase “transparency and accountability in the system to better serve the needs of patients and families.”

“ASN strongly supports HRSA’s efforts to expedite reforms that will maximize transplant care,” said ASN President Michelle A. Josephson, MD, FASN, in a statement responding to the announcement. “The policy

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Raising awareness

Many people in African American communities, particularly with low income or in rural communities, may be unaware of the threat of kidney risks associated with specific APOL1 variants. In fact, 8 of 10 people with kidney diseases do not know they have kidney diseases until they are diagnosed with kidney failure, said Opeyemi Olabisi, MD, PhD, assistant professor of medicine at Duke University School of Medicine (Durham, NC), who is advising the steering committee on the roadmap. “Kidney disease[s do] not announce [themselves] early,” Olabisi said. Instead, patients do not discover the disease until they may have lost 80% of their kidney function and begin experiencing symptoms like leg swelling.

Gee said people with kidney diseases also want to know why they have them, and many African American individuals may not find out they have an APOL1 kidney disease variant until a late stage of the disease. “They find out somewhere down the road, [the disease] was caused by APOL1, and they feel like they have been deceived,” Gee said.

That can further fuel mistrust in the medical community among African American individuals who are aware of historical mistreatment of the population in clinical research, such as the US Public Health Service’s Syphilis Study at Tuskegee (3) or the use of Henrietta Lack’s cervical cancer cells for research without consent (4), noted Olabisi. Lack of trust and structural barriers, such as the unavailability of transportation to clinical trial sites or less time to participate because of employment obligations, have led to low participation in clinical trials among African American individuals, he said. African American participants comprise <10% of clinical trial participants despite being disproportionately affected by kidney diseases, according to a publication co-authored by Nicholas on behalf of the Clinical Care & Innovation Workgroup of the ASN Health Care Justice Committee (5). The committee, of which Nicholas is a member, recommends that kidney disease clinical trials increase the number of African American participants to 35% to reflect the burden of kidney diseases. Committee members have created a scorecard to help clinical trials meet that goal.

Raising awareness of APOL1 kidney disease and its impact on African American communities can help empower individuals at risk and encourage more people to participate in clinical research. “People will be more willing to come forward because they understand that this does not just impact them, but it impacts family members, friends, and everybody in their community,” Gee said. “This roadmap has the potential to break down institutional biases and systemic roadblocks that have been in place for decades.”

Community engagement

The initiative is already helping to support community engagement and stakeholder partnerships. For example, through the initiative, Olabisi connected with representatives from Labcorp, who allow him to use a mobile clinic for his community engagement and clinical trial enrollment efforts. Olabisi and his team took the mobile clinic to the General Baptist State Convention of North Carolina in Wilmington. They used it to screen 60 participating church elders and leaders for APOL1 risk variants and protein in their urine. “We returned the results to them for free,” Olabisi said. “We were able to identify some people with high-risk APOL1 and some people who did not know they had protein in their urine.”

The participants are also given the information that they can share with their physicians and are alerted about ongoing clinical trials enrolling patients, including Olabisi’s Janus Kinase-STAT Inhibition to Reduce APOL1 Associated Kidney Disease (JUSTICE) trial (6). “We can engage the community productively,” he said. “It helps to bridge some of those historical, structural barriers that prevent African Americans from participating in research.”

Olabisi and his team have also collaborated with The River Church in Durham, NC. Bishop Ronald L. Godbee invited the group to a Sunday service to share information about APOL1 kidney disease and later held a screening event at the church during a Tuesday Bible study. Bishop Godbee and his wife volunteered to be the first people screened, and 80 individuals participated in that screening event, including some who have registered to participate in the JUSTICE trial. “When we meet people where they are, and we provide information that is accessible, African Americans are just as willing to participate in clinical trials as any other group,” Olabisi said.

Resource mapping

In addition to connecting stakeholders, the steering committee is building an online, interactive roadmap and a print version that should be available in August 2023. The roadmap will bring together existing resources for physicians, patients, researchers, drug makers, and other stakeholders. “We are not going to reinvent the wheel because there is a

lot of information already out there,” Nicholas said. “The steering committee wants to engage more physicians in sharing information about APOL1 kidney disease with their colleagues and patients,” Nicholas continued. “Physicians can spread the word and recommend genetic testing for at-risk patients,” she said. “They can also become more knowledgeable about interpreting the testing and know which patients they should refer for genetic counseling.”

There will also be resources to help encourage more community engagement efforts like those of Olabisi’s and information crafted by patient advocates like Gee for individuals with APOL1 kidney disease and those at risk.

“We would like patients to understand their risk factors for developing APOL1 kidney disease and to become empowered to incorporate disease-prevention strategies within their lifestyle, to seek out genetic testing, and to get actively involved in clinical trials, which is very, very important,” Nicholas said.

Participation and collaboration among all stakeholders are essential to developing new prevention and treatment strategies for patients with APOL1. “Our ultimate goal, through our trial and trials like it, will be to come up with treatments that prevent [kidney function] from being drained down to zero,” Gee said. “Can we stop the disease that APOL1 causes in the kidney?” ■

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Government Plans Overhaul of Organ Transplant Network

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changes announced today are a positive step in the right direction.”

ASN has been advocating for these changes for many years, according to ASN Strategic Policy Advisor Rachel Nell Meyer.

Kevin Longino, chief executive officer of the National Kidney Foundation (NKF), also welcomed the “long overdue” HRSA announcement and said that the NKF has long advocated the “common-sense changes” vital to creating “a patient-centric organ donation and transplantation system.”

Nephrologists and patients alike have long voiced

dissatisfaction with a system that many consider opaque and inefficient. Approximately 20% of kidneys procured for transplant in the United States go unused, which is roughly double the discard rate in France, the United Kingdom, and other European countries. The waste of organs occurs even though approximately 6000 Americans die each year while waiting for organ transplants, with people of color and people in rural communities being disproportionately affected, according to the HRSA.

The HRSA announced that its Organ Procurement and Transplantation Network (OPTN) modernization initiative will “strengthen accountability, equity, and performance in the organ donation and transplantation system through a focus on five key areas: technology, data transparency, governance, operations, and quality improvement and innovation.” The OPTN was established by the National Organ Transplant Act of 1984 and coordinates a network that has grown to include 56 organ procurement organizations and approximately 250 transplant centers.

The OPTN has contracted out the work of managing

the network to UNOS, which is so closely identified with OPTN that many nephrologists think they are the same organization, according to Sumit Mohan, MD, MPH, FASN, a member of the ASN Quality Committee and a nephrologist at Columbia University Irving Medical Center (NY): “The vast majority of people don’t realize that UNOS is not the OPTN. It is just the contractor for the OPTN.”

That confusion is easy to understand—the boards of directors of the two organizations are the same, including the same president and other officers—but the arrangement sets up a system in which the OPTN is essentially granting itself a multi-million-dollar contract to manage the system.

Several years ago, the HRSA began an effort to separate the two organizations, but UNOS objected and filed a complaint with the U.S. Government Accountability Office (GAO) claiming that the attempt violated the National Organ Transplant Act. The GAO ruled in favor of the HRSA, and now the HRSA intends to continue its work to separate the two organizations with independent governance boards, by splitting contracts for managing the

system—now managed by UNOS on a single contract—into multiple contracts covering different tasks within the system, and by offering competitive bids.

Restructuring an archaic system

The IT portion is the function mentioned most that could be separated between UNOS and the OPTN. Separating IT would be in agreement with a recommendation from a National Academies of Sciences, Engineering, and Medicine study, “Realizing the Promise of Equity in the Organ Transplantation System” (1), published last year, as well as a recommendation from the U.S. Digital Service, a government agency dedicated to improving government services through technology modernization and data science. In July 2022, *The Washington Post* reported that a confidential assessment by the U.S. Digital Service designated the UNOS technological system archaic and recommended it be “vastly restructured” (2).

Kidney community leaders have been making this point for years, with the ASN statement noting that separating the OPTN contract into distinct pieces that can be bid on by multiple entities would align the contract with federal contracting protocols, increase competition, and drive innovation. “There is a sense in the community that the existing information technology is outdated, and it could better serve patients if it were operated by a contracting entity with a more specific focus on technology and IT expertise,” Meyer said.

“UNOS has not invested adequately in the resources,” said Mohan, who also chairs the UNOS Data Advisory Committee. “If you don’t invest in the resources, you end up with an archaic system that has not moved much in the last 20 years.” He said the UNOS systems are based on a programming language that is “years and years old and hasn’t really progressed.”

Mohan explained that one example of the difficulty in improving UNOS’s system was the long, drawn-out process of introducing new codes to transplant centers to specify why they declined to use a kidney for transplant. That process—which involved creating a single, pull-down menu—took nearly 5 years.

Another oft-cited source of frustration is the difficulty in tracking kidneys procured for transplant. “You have the ability to track any package that you have ordered on Amazon and know approximately where it is at any given point in time,” Mohan said. “The fact that UNOS has never looked at creating a GPS [global positioning system] tracking system for organs underscores the lack of desire to make progress.”

UNOS’ management of transplant waiting lists is another common target of complaint. “The waitlists are often poorly curated and maintained due to insufficient communication among transplant centers, dialysis facilities, and patients or their care partners. As a result, nearly one in five kidneys is now offered to a deceased person still on the waitlist because the transplant center is unaware that the patient is deceased,” ASN’s Past President Susan E. Quaggin, MD, FASN, wrote in a letter to the HRSA in response to a request for information on improving the OPTN (3).

ASN Quality Committee Chair Scott Bieber, DO, told *ASN Kidney News* that as a general nephrologist practicing in rural, northern Idaho, he and his patients “struggle with the lack of transparency in the transplant program. It has been opaque to us as to what the transplant programs expect from patients. They are not consistent or clear about what it takes for a patient to get onto the transplant list. Certain patients are able to navigate the system fairly easily, and others really struggle or don’t have the resources to make it happen.”

Even for patients who make it onto the list, “as a referring nephrologist and as a patient, you are kept in the dark. You don’t have any clue where you are on the list and you are never told if an organ is offered or if the transplant system has bypassed you,” Bieber said. Mohan noted that in most health systems, patients can access current information through a program like MyChart, but nothing like

that exists for transplant patients.

The HRSA announcement promised to increase transparency through the introduction of “data dashboards detailing individual transplant center and organ procurement organization data on organ retrieval, waitlist outcomes, and transplants, and demographic data on organ donation and transplant.” Representatives of the agency said that it started the process of upgrading OPTN IT last year by engaging the U.S. Digital Service to leverage its expertise and advice in implementing the modernization initiative.

As part of its announcement, HRSA unveiled “a new data dashboard to share de-identified information on organ donors, organ procurement, transplant waitlists, and transplant recipients. Patients, families, clinicians, researchers, and others can use [these] data to inform decision-making. Today’s launch is an initial data set, which HRSA intends to refine over time and update regularly.” The dashboard can be found at <https://data.hrsa.gov/topics/health-systems/organ-donation>.

Increased funding

Upgrading IT will cost money, and the HRSA announcement also noted that the Biden administration’s fiscal year 2024 budget request would more than double federal investment in organ procurement and transplantation. The \$36 million increase over the previous year would bring the total to \$67 million. The administration is also requesting Congress to update the National Organ Transplant Act of 1984 to remove the appropriations cap on OPTN contracts and to expand the pool of eligible contractors to increase competition. The National Organ Transplant Act currently places constraints on HRSA, but in an interview with *The Washington Post*, HRSA Administrator Carole Johnson said that HRSA has the legal authority to move forward even without congressional action. She said that bid solicitations could go out as soon as this fall (4).

Congress has already begun to move to support HRSA’s efforts. On April 10, Rep. Larry Bucshon, MD (R-Ind.), and Rep. Robin Kelly (D-Ill.) said they had introduced legislation that would allow HRSA to “run a competitive process to choose the best contractors for different national OPTN functions (e.g., health IT and logistics).”

Whether Congress will agree to such an increase in spending is anyone’s guess at a time when the Republican leaders in the House of Representatives say they will not increase the debt ceiling without as-yet unspecified budget cuts. “We know that this is going to be a very challenging year for appropriations,” said ASN’s Meyer. “It remains to be seen how much of the \$67 million request will be granted by Congress and the extent to which the funding will allow HRSA to fully realize the promise of the reforms it announced. ASN will be working with Congress on a bipartisan basis to ensure that [lawmakers] understand how important these changes are, and kidney transplantation has enjoyed a lot of bipartisan support in recent years.”

Bipartisan support

That bipartisan support was evident in statements praising the HRSA announcement from Sen. Ron Wyden (D-Ore.) and Sen. Chuck Grassley (R-Iowa), the chair and past chair, respectively, of the Senate Finance Committee, who have collaborated on hearings on and investigations into the OPTN.

“[HRSA’s] announcement is a big victory for families across the country who have been fighting for a more effective organ procurement and transplantation system,” Wyden said. “For too long it’s been clear that UNOS has fallen short of the requirements for this contract and the expectations of Americans waiting for a transplant.” Wyden’s statement said HRSA’s “intent to issue multiple contracts for the OPTN contract” is “an important step towards breaking up a longstanding monopoly contract held by UNOS.” Grassley added that “The U.S. transplant network has failed at all levels, putting lives at risk, wasting valuable life-saving organs, and [disproportionately] affecting people of color and those living in rural America. Today’s

announcement is welcome news after years of uncovering troubling trends in our nation’s organ procurement programs.”

The drive for more funding could receive a boost from a 2020 report from the Senate Finance Committee that said: “Experts also project that improvements to the OPTN could save the federal government and taxpayers up to \$40 billion over the next decade, particularly through reductions in dialysis and treatment of End Stage Renal Disease, which accounts for \$36 billion in Medicare spending each year.”

UNOS response

For its part, UNOS responded that it “supports HRSA’s plan to introduce additional reforms into the nation’s organ donation and transplantation system. We also stand united with HRSA in our shared goal to get as many donor organs as possible to patients in need while increasing accountability, transparency, and oversight. We welcome a competitive and open bidding process for the next OPTN contract. . . . We believe we have the experience and expertise required to best serve the nation’s patients and to help implement HRSA’s proposed initiatives.”

As previously noted, the NKF joined ASN in welcoming the initiative. “Our current transplant system still relies on antiquated technology and inefficient systems that create life-threatening bureaucracy and delays,” Longino said. “HRSA’s move to redesign the OPTN contract will allow leaders in technology, artificial intelligence, supply chain management, and other critical business operations to bring their ideas and talent to a system that is in desperate need of reform.” He noted that the NKF has advocated for several years on the need to modernize the IT infrastructure, install an OPTN board of directors independent of UNOS, and develop a public dashboard of key measures.

ASN President Josephson said: “Ensuring OPTN’s technology systems are fully modernized and leveraging their capabilities is a foundational step to improving the transparency and efficiency of the kidney health ecosystem and is a prerequisite to achieving ASN’s goal of maximizing access to kidney transplantation. I applaud HRSA’s public commitment to building that capacity and ensuring future systems better serve the needs of patients and their families.” ■

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