

Slowing Chronic Kidney Disease Progression: The Nephrologist's Perspective

*Healthmap Solutions is on a mission to improve the lives of people living with chronic kidney disease (CKD). To achieve this goal, our NCQA-accredited Kidney Population Health Management program utilizes advanced technology, predictive analytics, and input from a team of clinical experts to recommend interventions to avoid or slow CKD disease progression. As a practicing nephrologist, Healthmap's **Corporate Medical Director, Stephanie Toth-Manikowski, MD, MHS** has a unique perspective on the challenges that providers face when treating patients with kidney disease. This article follows an interview with **Dr. Toth-Manikowski**, hosted by our **Marketing Specialist, Angela Quaglio**, as they discuss some of these challenges and how providers can better serve CKD patients and help slow their disease progression.*

Ms. Quaglio: What causes chronic kidney disease (CKD) to progress?

Dr. Toth-Manikowski: Most causes relate back to the cause of the disease itself. If someone has diabetes as the primary cause of their CKD, for example, and they don't control their diabetes or aren't on the right medications, they're going to progress more quickly. Lifestyle factors like smoking, alcohol intake, exercise, healthy eating, maintaining a healthy weight, and so on, also affect CKD progression. For example, if a person smokes or has an unhealthy weight, they are likely to experience more rapid disease progression than someone who quits smoking or is able to achieve a sustained weight loss.

Implementing medication interventions also plays a role in CKD progression. There are certain medications that slow CKD progression by decreasing the amount of protein in the urine (also called "proteinuria"). It is important that patients take these medications. When a patient has a high level of proteinuria, and they aren't taking medications to decrease that amount of protein, it can cause their CKD to progress more quickly.

Ms. Quaglio: Is that a function of how much protein is in their diet?

Dr. Toth-Manikowski: No, it's more a reflection of damage that has already occurred in the kidneys. One of the many roles of the kidneys is to filter our blood. When that filter is damaged, it allows proteins to leak through the filter into the urine. Ideally, the kidneys should be keeping all the protein in their body. If protein is showing up in their urine, it usually means there is underlying kidney damage.

Ms. Quaglio: *Does the rate of CKD progression increase at each stage?*

Dr. Toth-Manikowski: Yes and no. If a patient has uncontrolled diabetes their entire life and they are referred to me with CKD Stage 4, unfortunately, there is only so much a nephrologist can do at this point. Even if the patient begins to control their diabetes at this stage, there may already be too much damage in the kidney to slow progression of CKD. However, this doesn't mean a nephrologist wouldn't try everything to slow that progression. It also depends on that person's genetics. Some people have genes that predispose them to faster progression. There's no one-size-fits-all answer.

Ms. Quaglio: *In the Healthmap Kidney Health Management program, we place a lot of emphasis on early identification of CKD and early referrals to a nephrologist. In your experience, how soon should a patient be referred?*

Dr. Toth-Manikowski: Guidelines recommend that patients be referred to a nephrologist when their eGFR is 30. I prefer to see them sooner when they have an eGFR of 60 or less. The reason is not that PCPs can't take care of these patients, as they absolutely can and are equipped to do so. However, I think PCPs are very busy taking care of the whole patient. They may be focused on treating hypertension, heart failure, or diabetes as well, which leaves less time to talk about the kidneys. On the other hand, when people come to see me, it's a much more focused visit, and their kidneys are all we talk about. As a nephrologist, it also means we can immediately begin to talk about what we can do to manage their disease and slow its progression.

Ms. Quaglio: *I would add that there are not enough nephrologists in the country to take care of everybody. So, the sooner a PCP can get somebody in to see a nephrologist and establish a relationship, the easier it will be on an ongoing basis to get them in for follow-ups.*

Dr. Toth-Manikowski: Very true. I think it also helps maintain a patient's trust in their PCP. When I get a patient with an eGFR of 25, and it's the first time they're hearing they have CKD, they're often upset with their PCP. They're asking, "Why didn't I know about this before?" I think that's a really difficult situation to be in as a patient. Maybe the PCP knew about it (I'm sure they did), but as I said, they're focused on so many aspects of a patient's health. Personally, I prefer when this situation is avoided by an earlier referral to a nephrologist.

Ms. Quaglio: *What are the factors that must be modified or controlled in order to slow CKD progression?*

Dr. Toth-Manikowski: The most common factors are improved diabetes management and blood pressure control as well as lifestyle modification. Weight loss is actually one of the best ways to reduce blood pressure. While these factors are important, medication management is just as important. Patients should speak with their doctors to determine what medications are right for them, and then make sure they take the medications that are prescribed.

Ms. Quaglio: To what extent do comorbidities drive CKD progression, or vice versa?

Dr. Toth-Manikowski: It depends on the comorbidity. Diabetes is certainly a driver of CKD, although CKD does not make your diabetes worse. In fact, as you progress to CKD Stage 5 and ESRD, your diabetes control actually gets better as a result of your CKD. This is because insulin is not efficiently eliminated by the kidneys anymore, hence blood sugars tend to be better controlled. However, uncontrolled hypertension can certainly make CKD worse. Then as your CKD worsens, it makes it more difficult to control your blood pressure. Same with heart failure: if you have heart failure—that is, a heart that's not functioning as well as it should—it can affect the kidneys. And once your kidneys aren't working as well as they should, it can affect the heart as well, so it's a cyclical process.

Ms. Quaglio: And if CKD progresses, you've got potential bone problems and anemia issues, right?

Dr. Toth-Manikowski: That's right. Significant anemia can negatively affect your kidneys. However, one of the many things a kidney does is produce a hormone called erythropoietin, and that hormone tells our bone marrow to make healthy red blood cells. When your kidneys aren't functioning as well as they used to, they don't produce as much erythropoietin. Hence, they can't tell your bone marrow to make healthy red blood cells, which leads to anemia. So that's something nephrologists monitor in patients with CKD.

Another role of the kidneys is to keep our bones healthy. As CKD progresses to Stages 4 and 5, we start to see elevated markers of bone disorders. While bone disease doesn't cause CKD, CKD can certainly affect bone health.

Ms. Quaglio: Is it possible to completely stop CKD from progressing?

Dr. Toth-Manikowski: Unfortunately, no. The way I think of it, it's analogous to a heart attack. If a person has a heart attack, they lose some of their myocardium, or heart muscle. That tissue is no longer active, and there's nothing that can be done to rejuvenate it. But you can make the remaining heart cells stronger and make the heart work more effectively if you put that person on the right medications. The situation is very similar if you have an injury to a kidney. It causes part of the kidney to die, for lack of a better term. The remaining kidney tissue that hasn't been affected then has to work overtime, you might say. You can imagine that if you ask anyone to work harder for the rest of their life, 24/7, at some point they're going to get burned out and quit. If part of the kidney isn't working, it means that the rest of it is working overtime. Those kidney cells that are working extra hard all the time are going to fail. That is what causes CKD to progress, and that's the reason you can't completely stop CKD. That being said, the earlier you can treat CKD, the better for the patient as the physician can focus on ways of slowing it down and giving the patient a better health outcome and quality of life.

Ms. Quaglio: Frequently, CKD patients are also dealing with multiple comorbidities, in which case it's likely that a number of specialists will be involved, along with the PCP and nephrologist. In that environment with a lot of specialists treating the same patient, who is the quarterback?

Dr. Toth-Manikowski: A patient with advanced CKD will likely be seeing their nephrologist more frequently than their PCP, and I think it's natural for that patient to view the nephrologist as their main provider. That being said, as a nephrologist, I don't do pap smears, but I will sometimes refer patients for a colonoscopy or mammogram, although that's not my primary role. So, I don't ever think in terms of replacing the PCP or any other specialist.

Managing CKD has to be a team sport. Communication has to be good between the nephrologist and the PCP. And if the PCP says, "I need you to manage this," then absolutely I will. But there needs to be a conversation among providers to understand who's managing what throughout the disease continuum.

That's certainly one area where Healthmap's support can be helpful. In a lot of CKD cases, the patient's multiple providers don't have the opportunity to communicate effectively with one another. Our clinical team can help bridge that gap and make sure that the PCP, nephrologist, and any other specialists on a patient's care team are all collaborating and working together as a team.

Ms. Quaglio: Who should have the ongoing responsibility for monitoring the patient's progress?

Dr. Toth-Manikowski: I think once a patient establishes care with a nephrologist, it's our responsibility, as we set the cadence of the follow-up. But again, it needs to be a team effort. For example, if I note that the patient hasn't seen their PCP in a while, I'll help them make that appointment. And usually that goes both ways.

Ms. Quaglio: Are interventions to slow CKD progression always effective?

Dr. Toth-Manikowski: In terms of medications, I would say yes. If patients are started on the right medications early on, then absolutely, we will slow CKD progression. It's when we don't start them early enough that they can't be useful. Certain medications can't or shouldn't be started if the CKD is too advanced. So that gets back to the earlier question of how soon a patient should see a nephrologist. The sooner, the better.

Ms. Quaglio: What are the indicators of successful treatment?

Dr. Toth-Manikowski: When a patient starts off with a rapidly declining eGFR, and then we see that rate of eGFR loss start to slow down, that shows me that the treatment has been effective. A decrease in proteinuria is also a good indicator. When I see that a patient's A1C is controlled, and they've worked with their PCP and endocrinologist to make that happen, I sleep a bit more easily. If their blood pressure is controlled, that's the highlight of my day.

Ms. Quaglio: *You said earlier that even though we can slow CKD progression, we can't completely stop or reverse it. Which means you'll have patients reaching end-stage renal disease. How do you work with them?*

Dr. Toth-Manikowski: When a patient has advanced disease, you need to make sure they are educated and prepared to start dialysis. You want to have conversations with the patient, and perhaps their care partners, about what dialysis entails and the different types available. Many people are not aware that you can successfully do dialysis in the comfort of your own home, as opposed to coming to a clinic three times a week. When I get someone to choose home dialysis (if I think that's the best option for them), that's a win for everyone. It also means we have averted the situation of the patient having to go to the emergency room and choose dialysis in an urgent setting. Anytime we can avoid that, I feel pretty good.

If appropriate, kidney transplant may be another option for patients with advanced disease. I recommend getting these patients set up with a transplant clinic sooner rather than later, because the evaluation process takes many months to complete.

Ms. Quaglio: *Dr. Toth-Manikowski, thanks for taking the time to talk about this. Just to wrap up, based on what you've seen thus far, do you think Healthmap's approach to kidney disease management plays a meaningful role in slowing CKD progression in our managed populations?*

Dr. Toth-Manikowski: I would say yes, tremendously. Since working with the Healthmap team, I have been astounded at how much our entire organization does to help individuals all over the country. We take a holistic approach that involves social workers, dieticians, and other resources. We have Care Navigators who are kidney nurses, who work one-on-one with patients, much like a health coach, to improve not only their kidney disease management but the management of all the diseases they might have, whether or not they contribute to CKD progression. I'm very honored to be working with a company that is so focused on the whole patient, and so dedicated to making an important difference in their lives.

Stephanie Toth-Manikowski, MD, MHS is a double board-certified physician in internal medicine and nephrology. Dr. Toth-Manikowski serves as Healthmap's Corporate Medical Director and is a practicing nephrologist at the University of Illinois Chicago (UIC). Prior to joining Healthmap, she was an Assistant Professor of Medicine at the University of Illinois Chicago, where she was responsible for educating and supervising medical trainees, conducting clinical research focused on CKD, and managing patients with a full spectrum of kidney disease. She earned her bachelor's degree in Biology with honors from Harvard College, her Doctor of Medicine from UIC College of Medicine, and her Master of Health Science from the Johns Hopkins Bloomberg School of Public Health. She completed her nephrology fellowship at Johns Hopkins. She is a member of the American Society of Nephrology and the National Kidney Foundation. Dr. Toth-Manikowski has served on numerous medical committees and is an Editorial Fellow for the *Journal of the American Society of Nephrology*.

ABOUT HEALTHMAP SOLUTIONS

Healthmap Solutions is an NCQA-accredited kidney population health management company serving health plans, health systems, accountable care organizations (ACOs), and provider groups seeking a value-based solution to improve the lives of millions of Americans living with kidney disease. Using its advanced technology, predictive analytics, and clinical expertise, Healthmap emphasizes early identification of patients with kidney disease and recommends clinically proven interventions to delay or slow disease progression. Healthmap's Care Navigation team works with patients and a full spectrum of providers (primary care, nephrologists, cardiologists, endocrinologists, and dialysis providers), to deliver personalized whole-person care. Healthmap's approach is to proactively plan care transitions and optimize renal replacement therapy, with a focus on in-home dialysis treatment and transplant. This approach results in improved care, outcomes, and experience for the person living with kidney disease, while lowering total medical costs for health plans and provider groups.

To learn more about Healthmap's NCQA-accredited kidney health management program, visit our website at **www.healthmapsolutions.com**, or contact Tom Gaffney, *Chief Growth Officer*, at **tom.gaffney@healthmapsolutions.com** for a detailed personal briefing.



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