



37 million

Americans live with diagnosed or undiagnosed kidney disease, and 700,000 have progressed to kidney failure.



More than one-half

of Americans starting dialysis today will be dead in five years.



There are 100,000

people on the kidney transplant wait list, and nearly 4,000 people died in 2018 waiting for a transplant.

In short, the kidney disease ecosystem urgently needs disruption and innovation.

THE ECONOMIC BURDEN

The Medicare program annually spends \$114 billion to manage kidney disease, and one-third of this amount—a staggering \$35 billion, which is nearly the same amount as the budget for the entire National Institutes of Health—is allotted to treating kidney failure through the Medicare End Stage Renal Disease Program (which is guaranteed to every American regardless of age or economic status).

MARKET DYNAMICS

Advances in kidney care have been slowed due to misaligned incentives that perpetuate a reliance on dialysis, an extremely expensive, challenging therapy that keeps people alive but severely compromises quality of life and productivity. This situation has resulted in a complex environment that inhibits critically needed kidney research and a severe shortage of the private capital required to fund groundbreaking translational research.

Many other chronic conditions (heart disease, cancer, diabetes, AIDS) have seen astonishing progress that has led to new treatments, therapies, devices, and even cures. By comparison, there have been virtually no transformative advances in kidney care since dialysis emerged six decades ago.

KIDNEYX: AN INNOVATION ACCELERATOR

KidneyX is a public-private partnership between the US Department of Health and Human Services and the American Society of Nephrology (ASN). **Its goal is simple: to accelerate development and commercialization of disruptive innovations in kidney care.** KidneyX is focused on spurring innovation through prize competitions, investment in promising early stage companies, and other creative strategies.

A FOCUS ON PEOPLE WITH KIDNEY DISEASES AND THEIR FAMILIES

KidneyX is patient-focused, patient-centered, and patient-directed. People with kidney diseases and their families contribute to every aspect of KidneyX—from participating in the initiative's leadership, sharing inventive solutions through the KidneyX Patient Innovator Challenge, shaping other prize competitions, and evaluating submissions. KidneyX is harnessing the nation's leading innovators, scientists, physicians, other health professionals, and—most important—patients to ensure that we achieve new interventions that are meaningful to the millions of people with kidney diseases.

FUNDING: THE GOAL

KidneyX is a big idea. To succeed, we will need at least **\$250 million over the next five years**. ASN has already invested the first \$25 million and has committed to raising an additional \$100 million in private sector funding through 2023. To reach our goal, ASN, the rest of the kidney community, and other stakeholders are also working together to secure a matching amount of \$125 million from the federal government. In its budget for 2020, the federal government made a \$5 million down payment.

OUR ASK: HELP MATCH ASN'S \$25 MILLION COMMITMENT TODAY

Kidney X has a bold vision to accelerate innovation in three strategic areas: diagnosis, treatment, and prevention. According to the “Executive Order on Advancing Kidney Health, which US President Donald J. Trump signed in July 2019, “It is the policy of the United States to prevent kidney failure whenever possible through better diagnosis, treatment, and incentives for preventive care.”

The executive order asserts that the United States will “produce a strategy for encouraging innovation in new therapies through the Kidney Innovation Accelerator (KidneyX), a public-private partnership between the Department [of Health and Human Services] and the American Society of Nephrology.”

Diagnosis

Today, one-third of the US population is at risk for kidney diseases, and an estimated 30 million Americans have undiagnosed kidney diseases. With the right tools, we can diagnose kidney diseases much earlier and develop interventions to prevent progression to kidney failure.

For example, KidneyX will consider prize competitions to develop a risk assessment tool or app would allow everyone to easily determine if they might be at risk of kidney disease, thus triggering a dialogue with their health care providers. Such a dialogue would help people with kidney diseases get ahead of their specific disease well before it reaches late stages.

Treatment

We urgently need alternatives to dialysis for those who have progressed to kidney failure. While current dialysis keeps people alive, it does not allow many to live. KidneyX is already exploring such areas as:

- ✔ Developing innovative alternatives to the existing dialysis, such as wearable, portable, and implantable dialysis devices that are easier to use, convenient for home care, and provide better results; this will also involve new ways of vascular access to prevent infection and clots.
- ✔ Developing an implantable artificial kidney that includes cell-based components to minimize the need for regular interventions.

Prevention

Of course, the ultimate goal is preventing kidney disease entirely. KidneyX believes exciting opportunities exist to achieve this ambitious goal. These opportunities include:

- ✔ Developing tools to screen for genetic predisposition to kidney diseases, because many of these diseases run in families (we know one genetic variant that explains why African Americans experience kidney failure more often than Caucasians). Enhanced genetic testing will allow clinicians to personalize care and accelerate the development of new products to reverse the effects of the genetic mutation.
- ✔ Developing tools to monitor diabetes, cardiovascular disease, and hypertension, which are the leading causes of kidney diseases. Many people crash into kidney failure because no one explained their risk. Primary care providers and patients with diabetes, cardiovascular disease, and hypertension need tools that include more information so they can intervene earlier and stop the progression of kidney disease to kidney failure through managing their blood glucose and blood pressure.

For more information on ways to support KidneyX, please contact ASN Executive Vice President Tod Ibrahim at tibrahim@ASN-online.org or (202) 640-4676.