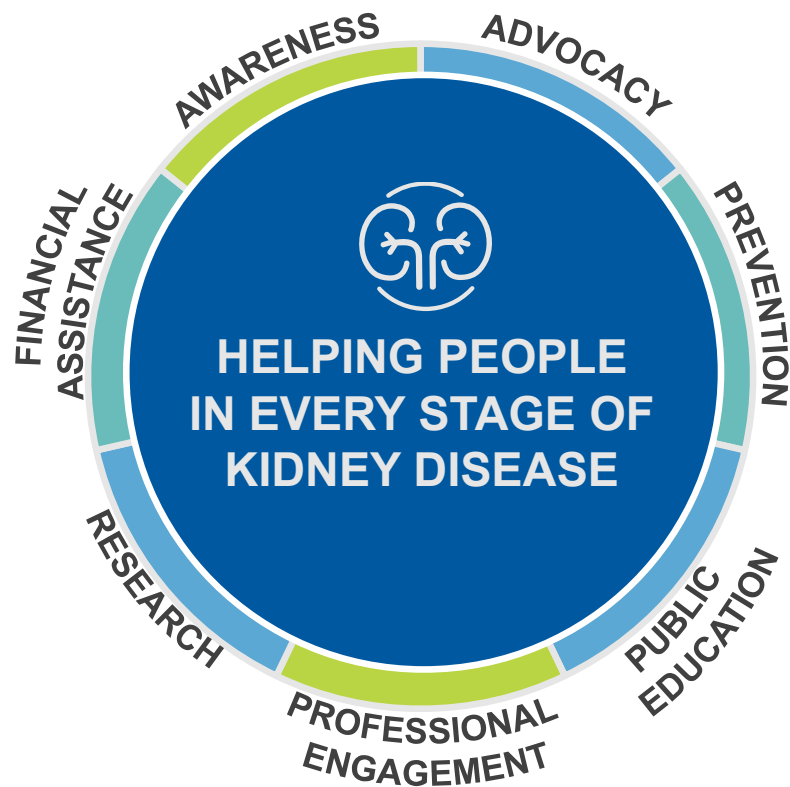




# Kidney Disease 101

March 1, 2023

# Fighting On All Fronts



 **AWARENESS**

 **ADVOCACY**

 **PREVENTION**

 **PUBLIC EDUCATION**

 **PROFESSIONAL ENGAGEMENT**

 **RESEARCH**

 **FINANCIAL ASSISTANCE**

# What do the kidneys do?

- Remove wastes and extra fluid from blood
- Make hormones that control blood pressure and produce red blood cells
- Control body's chemical balance, including:
  - Sodium
  - Potassium
  - Phosphorus

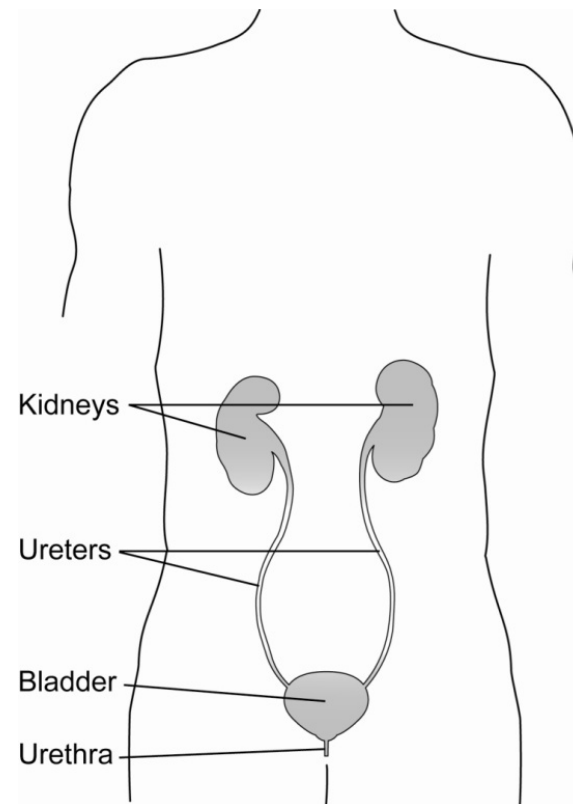
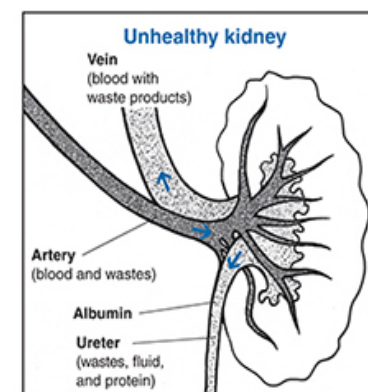
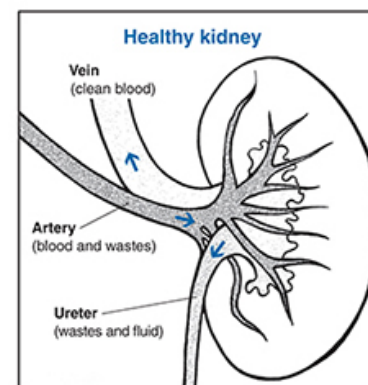
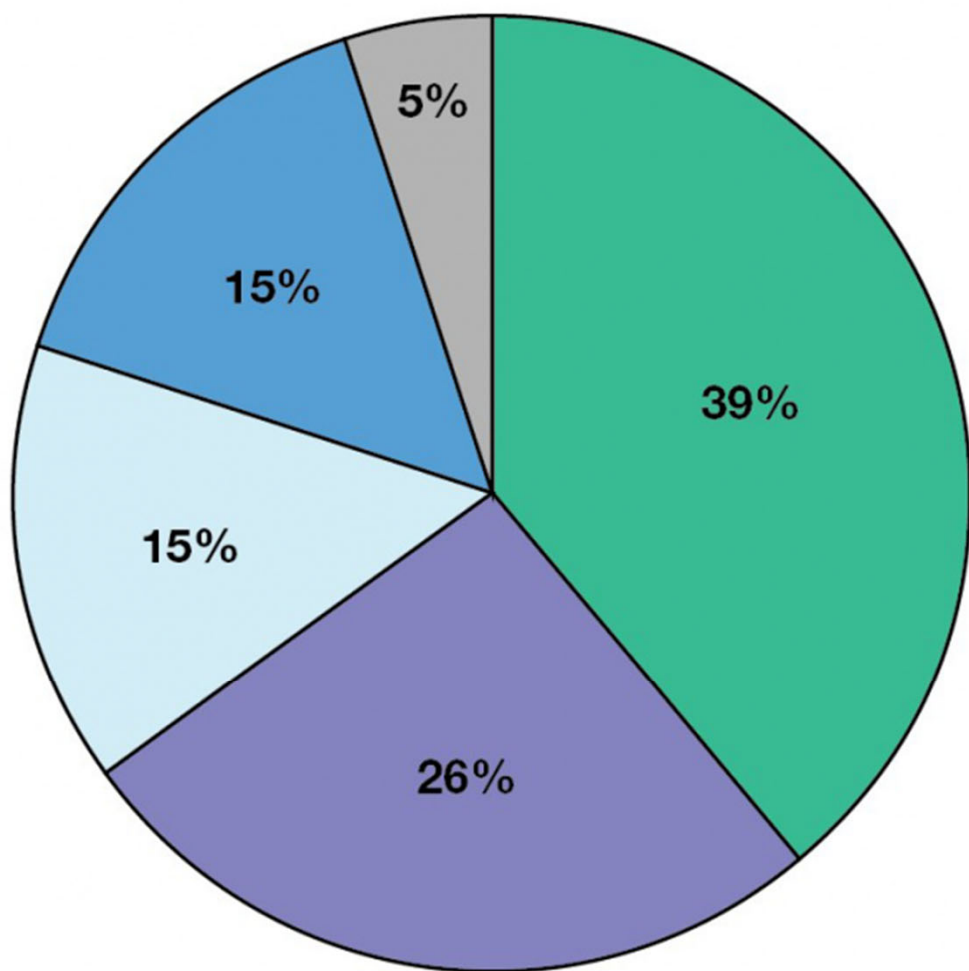


Image courtesy of the National Institute of Diabetes and Digestive and Kidney Diseases.

# What is chronic kidney disease (CKD)?

- Permanent damage to the kidneys that puts you into Stage 1-5 of CKD
- Usually there are no signs or symptoms in early stages
  - 9 out of 10 people don't know they have CKD
- Cannot be reversed, however it can often be slowed
- Can lead to kidney failure, also known as end-stage kidney disease (ESKD) or end-stage renal disease (ESRD)
- Patients in kidney failure need dialysis or a kidney transplant to live





- Diabetes
- High Blood Pressure
- Glomerulonephritis
- Other Cause\*
- Unknown Cause

N=785,883 (all ages, 2018)  
Source: US Renal Data System  
\*Includes polycystic kidney disease, among other causes.

# The Impact of Kidney Disease

---

- At least 37 million Americans have chronic kidney disease
- 9th leading cause of death in America
- Over 800,000 Americans are on dialysis or living with a kidney transplant
- More than 90,000 people on the waiting list for a kidney transplant
  - Wait time average is 3-5 years
  - There are far more people waiting for kidneys than there are available donor kidneys
- Healthcare cost impact
  - CKD patients alone represented 23.5% of total Medicare FFS spends in 2020 (\$85.4B)

# Complications of CKD/Kidney Failure

---

- Anemia
- Hyperkalemia (too much potassium in the blood)
- Hyperphosphatemia (too much phosphorous in the blood)
  - CKD-Mineral Bone Disorder (CKD-MBD)
- Gout
- Cardiovascular disease
- Compromised immune system
  - COVID-19 ravaged the kidney patient community, with higher rates of infection, hospitalization and death

# Racial Disparities in Kidney Disease

---

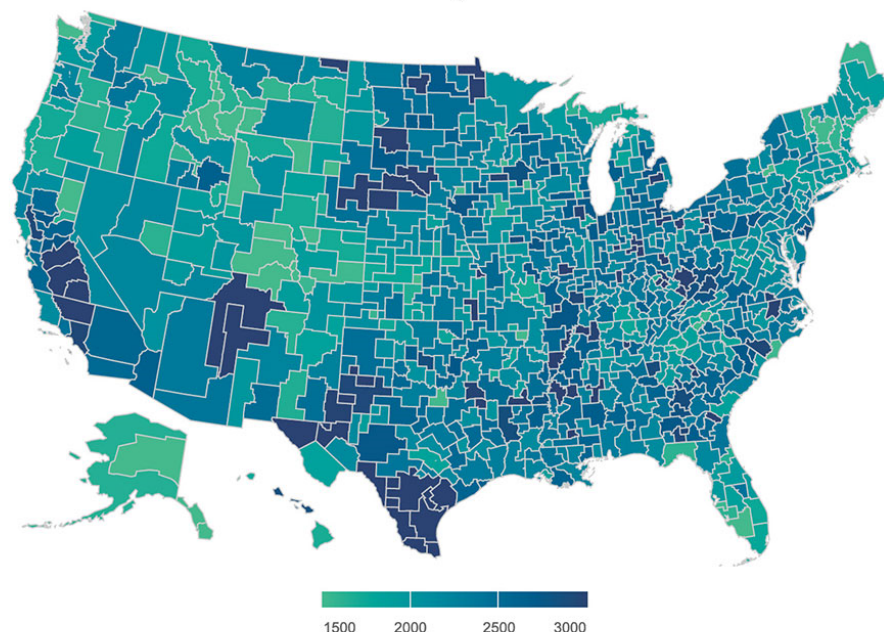
- Black, Hispanic and Native American people are more likely to have diabetes and high blood pressure, the top two causes of kidney disease.
- People of all races and backgrounds get kidney disease, but Black, Hispanic, and Native American people, as well as Asian American/Pacific Islanders are more likely than White people to need dialysis or a kidney transplant due to kidney failure.
- Compared to White people, Black and Hispanic people are less likely to be referred to a kidney doctor (nephrologist) in earlier stages of kidney disease, when interventions are most effective at delaying the need for dialysis or a transplant.
- Black and Hispanic patients are also less likely to be educated about their home dialysis and kidney transplant options.



# Challenges in Rural Settings

- Growing diversity in rural communities brings the same challenges as the previous slide
- More likely to be uninsured and to not have reliable broadband services
- Less access to preventive health services, nephrologists (kidney doctors), diagnostic facilities, transplant centers and dialysis centers
- Overall, there is a need for more research on the impact of CKD on rural communities

Prevalence of ESRD by Health Service Area



# Questions?