



# VA/DoD Clinical Practice Guideline

## Management of Chronic Kidney Disease Patient Summary

### What is Chronic Kidney Disease?

Chronic kidney disease (CKD) is a condition in which your kidneys are damaged and cannot filter blood as well as healthy kidneys. Because of this, wastes from the blood remain in the body and may cause other health problems.[3] CKD is one of the most common serious medical conditions affecting adults in the United States. Your illness may be mild without symptoms or can range to a severe illness associated with worsening kidney disease which may require dialysis or kidney transplantation.

### Did You Know?

The CDC estimates that more than 15% of adults in the United States—more than 37 million people—may have CKD.[3]

The prevalence of CKD in the Veteran population is estimated to be a third higher than in the general population.

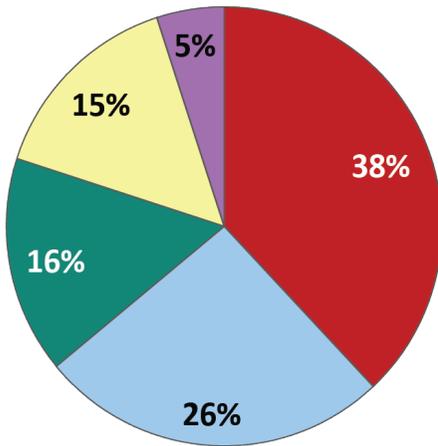
The Veteran's Health Administration currently cares for over 200,000 Veterans with moderate to severe kidney disease.

### What Causes Chronic Kidney Disease?

In many patients in the United States, CKD is caused by other conditions such as diabetes or high blood pressure. Figure 1 below shows the percentage of new cases of CKD due to some of these conditions. Early treatment is important to stop, or at least slow down, kidney damage. The risk of developing CKD increases among people over 50 years of age and peaks after 70 years of age.[4] Some other risk factors for CKD include:

- A personal or family history of kidney disease
- Diabetes, high blood pressure, or other disease (e.g., chronic heart failure)
- Systemic illness (e.g., infection with human immunodeficiency virus [HIV])
- Race and ethnicity (e.g., African Americans, Hispanics, Native Americans)

Figure 1. Reported Causes of End-stage Kidney Disease in the United States [3]



- Diabetes (38%)
  - High blood pressure (26%)
  - Glomerulonephritis (16%)
  - Other cause (15%)
  - Unknown cause (5%)
- N=726,331 (all ages, 2016)

Note: Includes polycystic kidney disease, among other causes

Source: US Renal Data System: [https://www.cdc.gov/kidneydisease/pdf/2019\\_National-Chronic-Kidney-Disease-Fact-Sheet.pdf](https://www.cdc.gov/kidneydisease/pdf/2019_National-Chronic-Kidney-Disease-Fact-Sheet.pdf)

## How is Chronic Kidney Disease Diagnosed?

CKD is diagnosed based on your estimated glomerular filtration rate (eGFR), or the presence of another abnormal kidney condition.

Although ultrasound and other technologies are not required, your health care provider may use them to confirm the diagnosis, rule out other conditions, or guide your overall treatment plan.

## **What is an estimated glomerular filtration rate (eGFR)?**

This value estimates your level of kidney function and determines your stage of kidney disease. Your health care provider can calculate it from the results of your blood creatinine test, your age, race, and gender.[1]

## **What is proteinuria and albuminuria?**

Albumin is a protein normally found in the blood that can pass into the urine when the kidneys are damaged. When you have albumin (protein) in your urine, it is called “albuminuria” or “proteinuria.” This could mean that you have kidney disease.[2]

## **How is Chronic Kidney Disease Treated?**

While there is no cure, CKD can be managed through a combination of provider-recommended treatments and self-management strategies.

Talk to your doctor, nurse practitioner, pharmacist or other health care provider about appropriate medications and other approaches to preventing worsening of CKD. Refer to Table 1 for the role each provider plays in treating your CKD. Self-management strategies such as diet modifications and other lifestyle changes such as weight loss, exercise, health education, and smoking cessation should be discussed with your health care provider. Most people with CKD do not end up needing dialysis or transplant, but you should talk to your provider about your risk of worsening kidney disease. You should know, however, that patients with any level of kidney disease are at increased risk of heart disease. You and your provider should discuss heart disease prevention.

CKD is a chronic condition, but effective treatments and support are available from the Veterans Health Administration and Department of Defense. A comprehensive care and management plan can help you improve your quality of life.

## Providers Involved in CKD Treatment

Provider	Role
Case Manager	A registered nurse (RN) or social worker who helps coordinate your treatment and health care experience. Your case manager will help you navigate the health care system and facilitate your interactions with medical providers, administrative staff members, and insurance companies.
Clinical Psychologist	A health care professional licensed to assess, diagnose, and treat mental, emotional, and behavioral disorders.
Dietitian	A health care professional licensed to assess, diagnose, and treat dietary and nutritional problems.
Interventional Radiologist	A medical doctor who specializes in utilizing minimally invasive imaging procedures to diagnose and treat a variety of disease.
Nephrologist	A physician who specializes in the diagnosis and treatment of diseases of the kidney; also known as a “kidney doctor.”
Nephrology Nurse	An RN who has specialized experience in the care of patients with CKD.
Nurse Practitioner (NP)	An advanced practice RN who has completed additional training, allowing them to diagnose and treat patients independently of a physician. NPs collaborate with doctors in caring for patients with kidney disease.
Pharmacist	A health professional with extensive knowledge of prescription and over-the-counter medications. Pharmacists collaborate with you and your healthcare team to manage your medications.
Physician Assistant (PA)	An advanced practice provider who practices medicine in collaboration with or under the supervision of a doctor. PAs collaborate with the doctors and NPs in caring for kidney patients both in medical offices and in the dialysis unit.

Provider	Role
Primary Care Provider	A physician, NP, or PA who cares for your non-emergency medical problems and chronic conditions. Your primary care provider is who you see for your yearly physical and can refer you to specialty providers. They will typically serve as your primary point of contact for any medical need.
Social Worker	A patient counselor who helps patients and their families cope with kidney disease and changes in the family, home, workplace, and community. Social workers help patients plan treatment to fit their lifestyle and activities, identify sources of emotional support, and identify government and community services to meet patients' needs. They also help patients and their families improve their quality of life.
Transplant Nephrologist	A physician who specializes in the medical management of people who have received an organ transplant. If you require a kidney transplant, transplant nephrologists will evaluate you prior to the transplant and follow you after the operation and answer any questions you may have about your kidney function and medications.
Transplant Coordinator	An RN or PA who has specialized experience in the care of kidney transplant recipients. Clinical transplant coordinators assist patients with all the details of care involved in preparing for and recovering from transplantation and serve as the patient's "link" to the transplant hospital.
Transplant Surgeon	A physician who specializes in the transplantation of tissues and organs. If you require a kidney transplant, your transplant surgeon will perform the operation and answer any questions you may have about the surgery or follow-up care.
Urologist	A physician who specializes in the diagnosis and surgical treatment of diseases of the urinary system.
Vascular Surgeon	A physician who specializes in the diagnosis and surgical treatment of diseases of the vascular system (i.e., arteries, veins, and lymph vessels). Vascular surgeons place vascular access for hemodialysis.

## Where can I find more information?

VA Kidney Program Website:

<https://www.va.gov/health/services/renal/learn.asp>

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), part of the National Institutes of Health (NIH):

<https://www.niddk.nih.gov/>

The National Kidney Foundation (NKF):

<http://www.kidney.org/patients>

The Centers for Disease Control and Prevention (CDC):

[https://www.cdc.gov/kidneydisease/pdf/2019\\_National-Chronic-Kidney-Disease-Fact-Sheet.pdf](https://www.cdc.gov/kidneydisease/pdf/2019_National-Chronic-Kidney-Disease-Fact-Sheet.pdf)

The National Kidney Disease Education Program (NKDDEP):

<http://nkdep.nih.gov/>

### References:

1. National Kidney Foundation. Glomerular filtration rate. 2013; <http://www.kidney.org/atoz/content/gfr>. Accessed September 15, 2019.
2. U.S. Department of Veterans Affairs. Learn about kidney disease. 2018; <https://www.va.gov/health/services/renal/learn.asp>. Updated September 4, 2018. Accessed September 15, 2019.
3. Centers for Disease Control and Prevention. Chronic kidney disease in the United States, 2019. 2019; [https://www.cdc.gov/kidneydisease/pdf/2019\\_National-Chronic-Kidney-Disease-Fact-Sheet.pdf](https://www.cdc.gov/kidneydisease/pdf/2019_National-Chronic-Kidney-Disease-Fact-Sheet.pdf). Updated March 5, 2019. Accessed September 15, 2019.
4. Centers for Disease Control and Prevention. National chronic kidney disease fact sheet. 2017; [http://www.cdc.gov/diabetes/pubs/pdf/kidney\\_factsheet.pdf](http://www.cdc.gov/diabetes/pubs/pdf/kidney_factsheet.pdf). Accessed September 15, 2019.
5. National Kidney Foundation. Health care team. 2019; <https://www.kidney.org/atoz/content/healthcareteam>. Accessed June 26, 2019.

*Access to the full guideline and additional resources are available at the following link: <https://www.healthquality.va.gov/guidelines/CD/ckd/VADoDCKDCPGFinal5082142020.pdf>*