



CHRONIC KIDNEY DISEASE

Disease Information Packets – Slide Set

Public Health Services, Community Health Statistics

08/2024



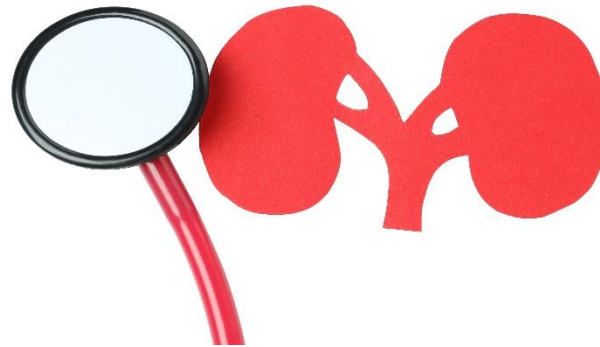
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What is Chronic Kidney Disease?



- Chronic Kidney Disease (CKD) is a condition in which kidney function is gradually lost overtime.
- The disease occurs when kidneys are unable to filter wastes and excess fluids from the body as well as they should.
- The slow loss of kidney function can eventually lead to kidney failure or end-stage kidney disease. However, not every person with CKD will develop end-stage kidney disease.
- Due to CKD symptoms being general and ill-defined, signs and symptoms may not appear until kidney damage has worsened.



Stages of Chronic Kidney Disease



- **There are 5 stages of CKD, where both kidneys lose function overtime.**
 - **Stage 1:** Mild early-stage of kidney damage with mostly normal kidney function.
 - **Stage 2:** Early-stage kidney damage, with mild decrease in kidney function.
 - **Stage 3A:** Mild to moderate loss of kidney function.
 - **Stage 3B:** Moderate to severe loss of kidney function.
 - **Stage 4:** Severe damage with minimum kidney function.
 - **Stage 5:** Most severe kidney damage (kidney failure). Will need to be on dialysis.



Demographic Risk Factors



■ Age

- Adults 65 years and older have a higher risk of developing chronic kidney disease than other age groups.

■ Sex

- Female adults have a higher risk of developing chronic kidney disease compared to males.

■ Race/Ethnicity

- Non-Hispanic African Americans, Hispanic/Latinos, and Non-Hispanic Asian Americans have the highest risk of developing chronic kidney disease.

■ Family History

- Individuals with first degree relatives (e.g., parent, sibling) who have chronic kidney disease are at greater risk for developing the disease.



Social and Behavioral Risk Factors



■ Diabetes

- Type 1 and 2 diabetes can lead to the development of CKD.
 - Approximately 1 in 3 adults with diabetes may have CKD.

■ High Blood Pressure

- High blood pressure can cause the blood vessels to weaken and reduce the volume of blood the kidneys can filter overtime.
 - Approximately 1 in 5 adults with high blood pressure may have CKD.

■ Obesity

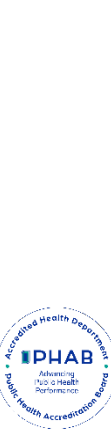
- Obesity is directly linked to the development of diabetes and high blood pressure, which are common causes of CKD.

■ Long history of pain relief medication

- Overuse and misuse of pain relief medications can cause severe damage to kidney function. Common pain relief medications include ibuprofen, naproxen, and higher dose aspirin.

■ Smoking

- Smoking can elevate blood pressure and reduce the blood flow to the kidneys.



Intermediate Outcomes



■ Anemia

- This is a common condition among people with CKD. Anemia usually develops in the early stages of CKD.

■ Mineral and Bone Disorder

- As kidney damage worsens, the body is unable to regulate hormone and mineral levels creating an imbalance in the blood.

■ Gout

- This condition is one of the most common health problems caused by CKD. In few cases, gout can be a contributor to CKD.

■ Heart Disease

- Heart disease is the leading cause of death among CKD patients on dialysis.

■ Weak Immune System

- A side effect of CKD is a fragile immune system. This makes patients of CKD more vulnerable to opportunistic infections.

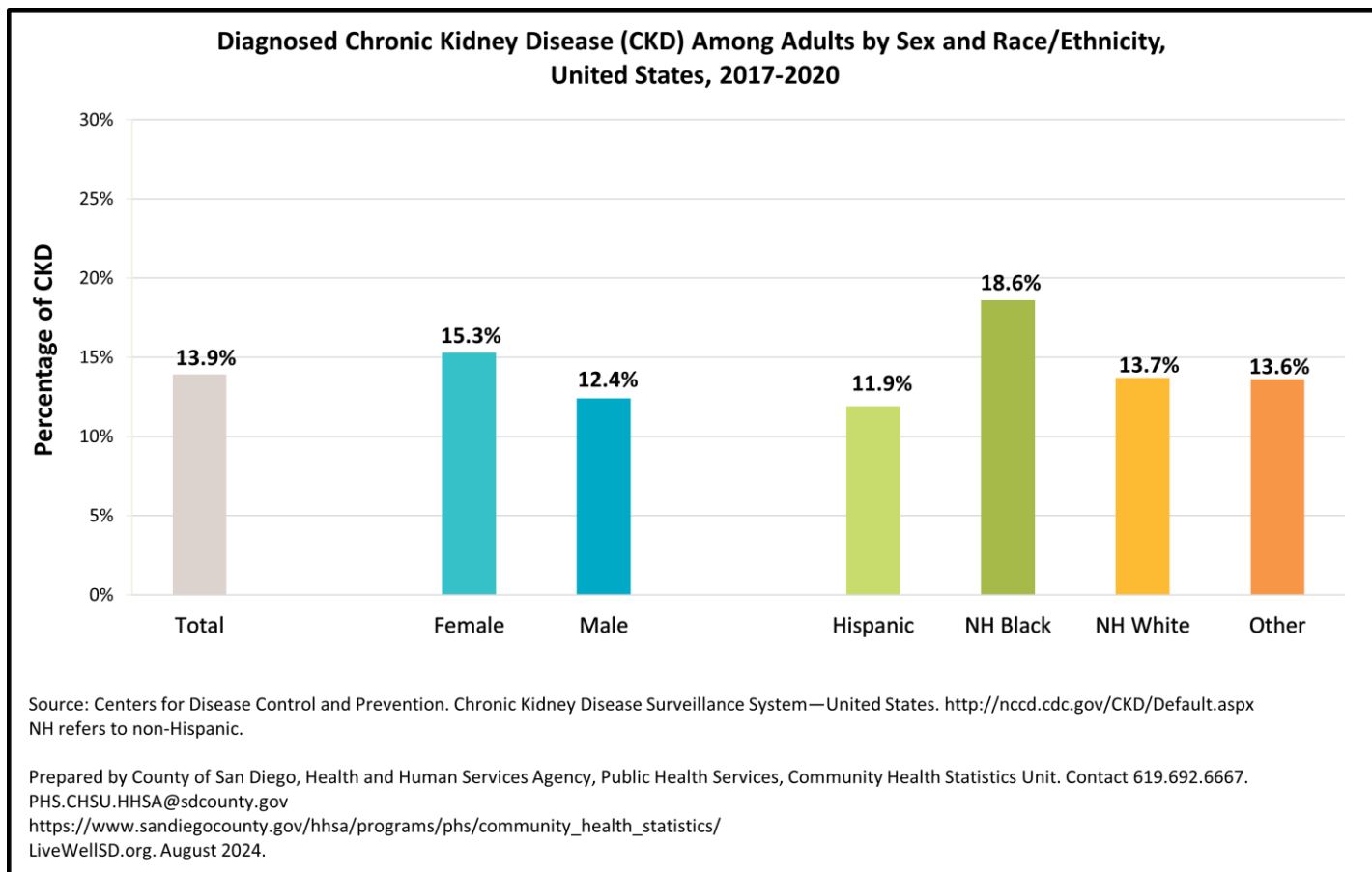
National Statistics and Disparities



- More than 1 in 7 American adults have CKD.
- Kidney diseases are a leading cause of death in the United States.
- In the United States, diabetes and high blood pressure are the leading causes of kidney failure, accounting for **2 out of 3 new cases**.



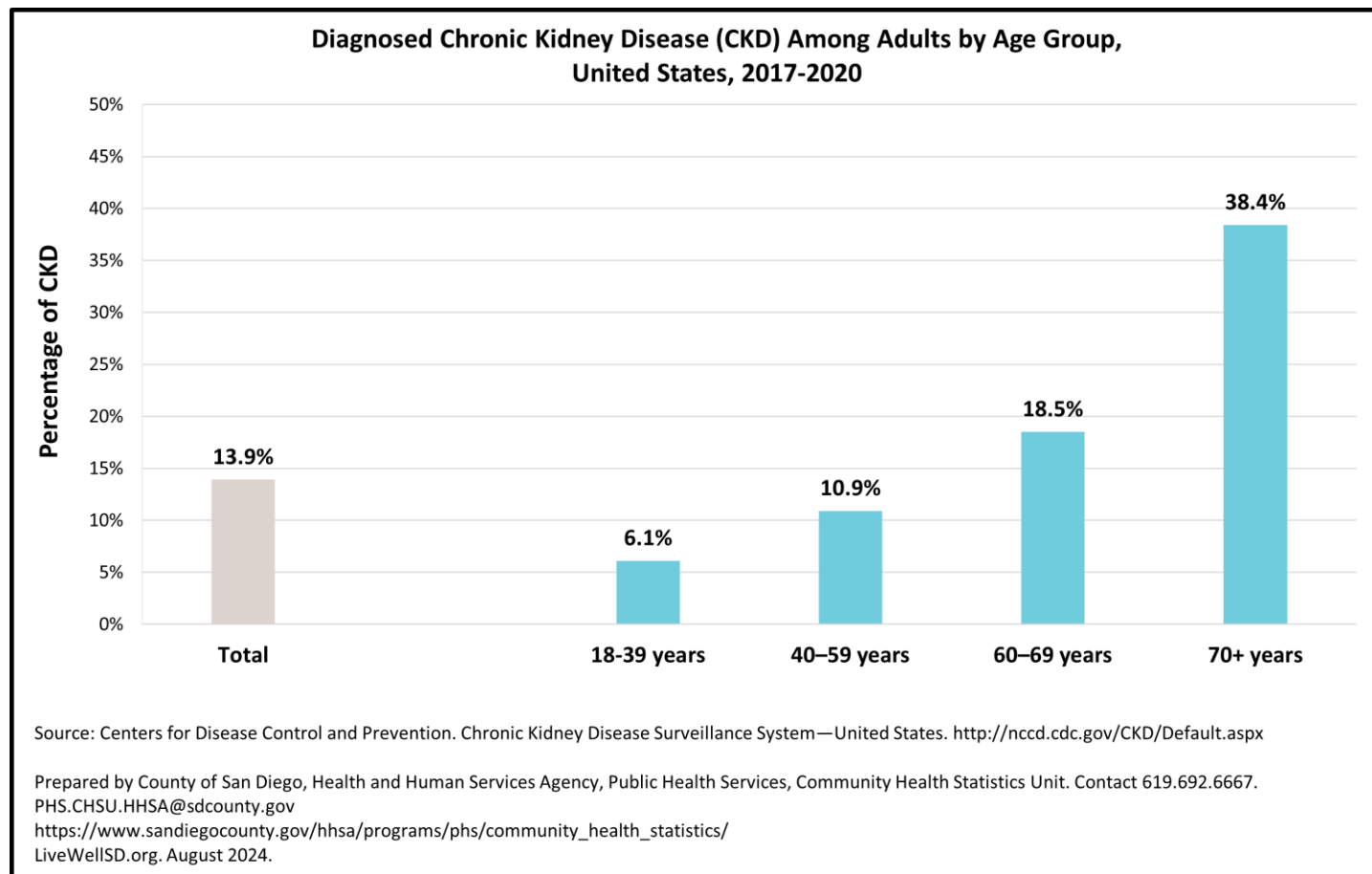
National Statistics and Disparities



- From 2017-2020, females in the United States were shown to have a higher risk of being diagnosed with CKD at 15.3 % compared to males at 12.4%.
- From 2017-2020, non-Hispanic Black Americans in the United States had the highest risk of being diagnosed with CKD at 18.6%.

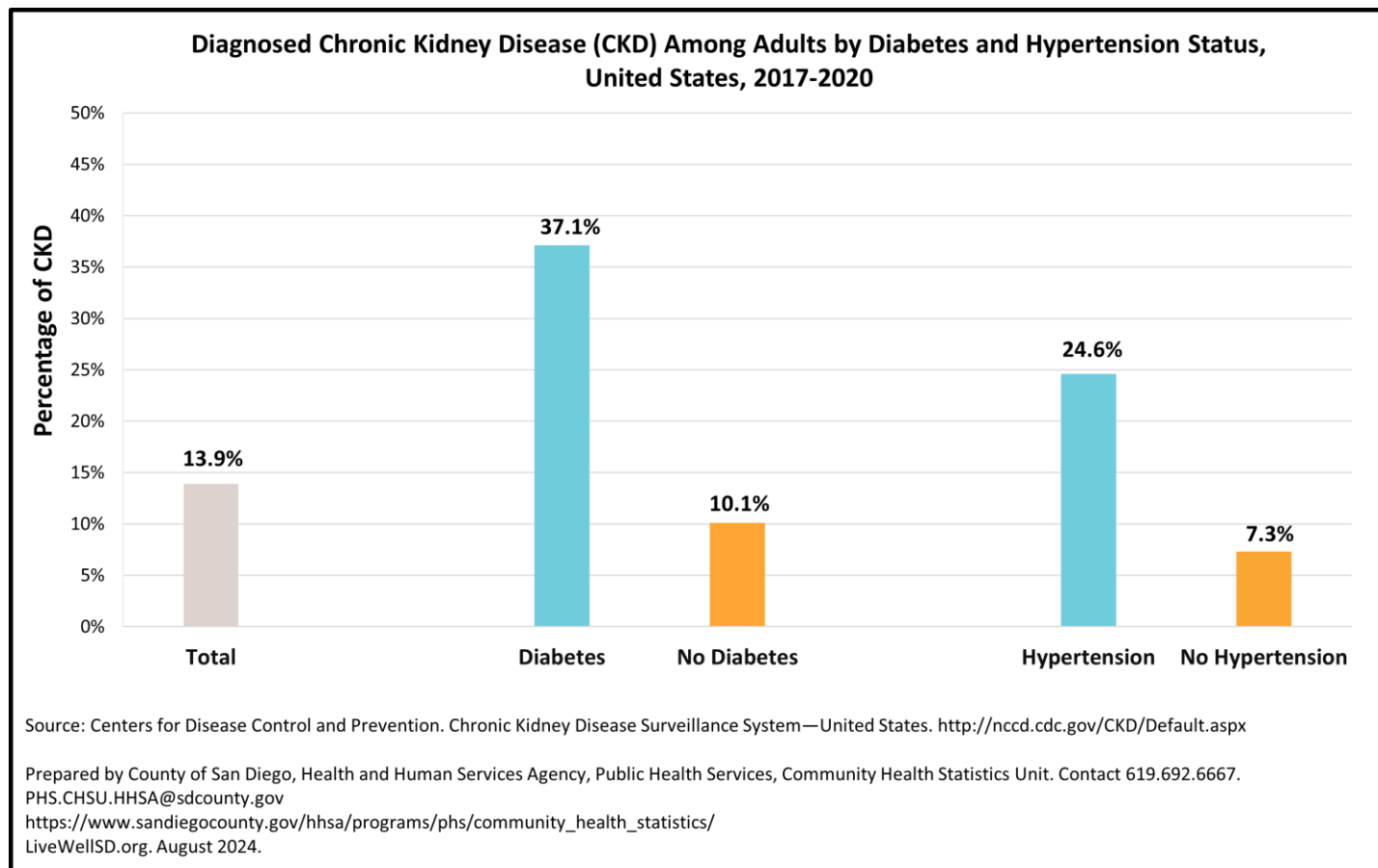


National Statistics and Disparities



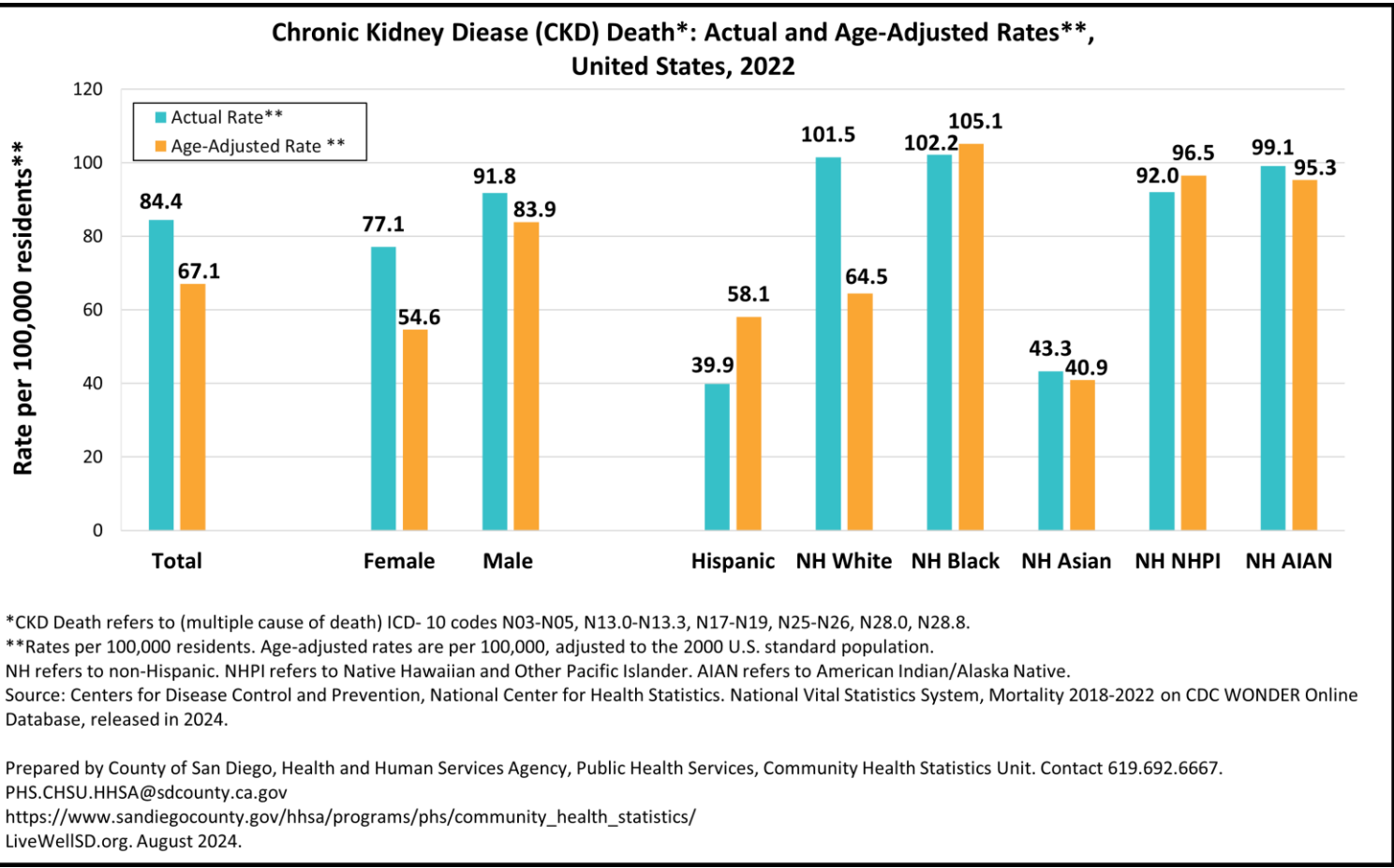
- From 2017-2020, adults aged 70 years and older in the United States had the highest risk of being diagnosed with CKD at 38.4%.
- From 2017-2020 adults aged 70 years and older are twice as likely to be diagnosed with CKD compared to adults aged 60-69 years old (18.5%).

National Statistics and Disparities



- In the United States, between 2017-2020, adults with diabetes had a higher risk of being diagnosed with CKD at 37.1%, compared to adults who did not have diabetes.
- From 2017-2020 in the United States, adults with hypertension had a higher risk of being diagnosed with CKD at 24.6%, compared to adults with no hypertension.
- Overall, adults with diabetes had a higher risk of being diagnosed with CKD compared to adults with hypertension.

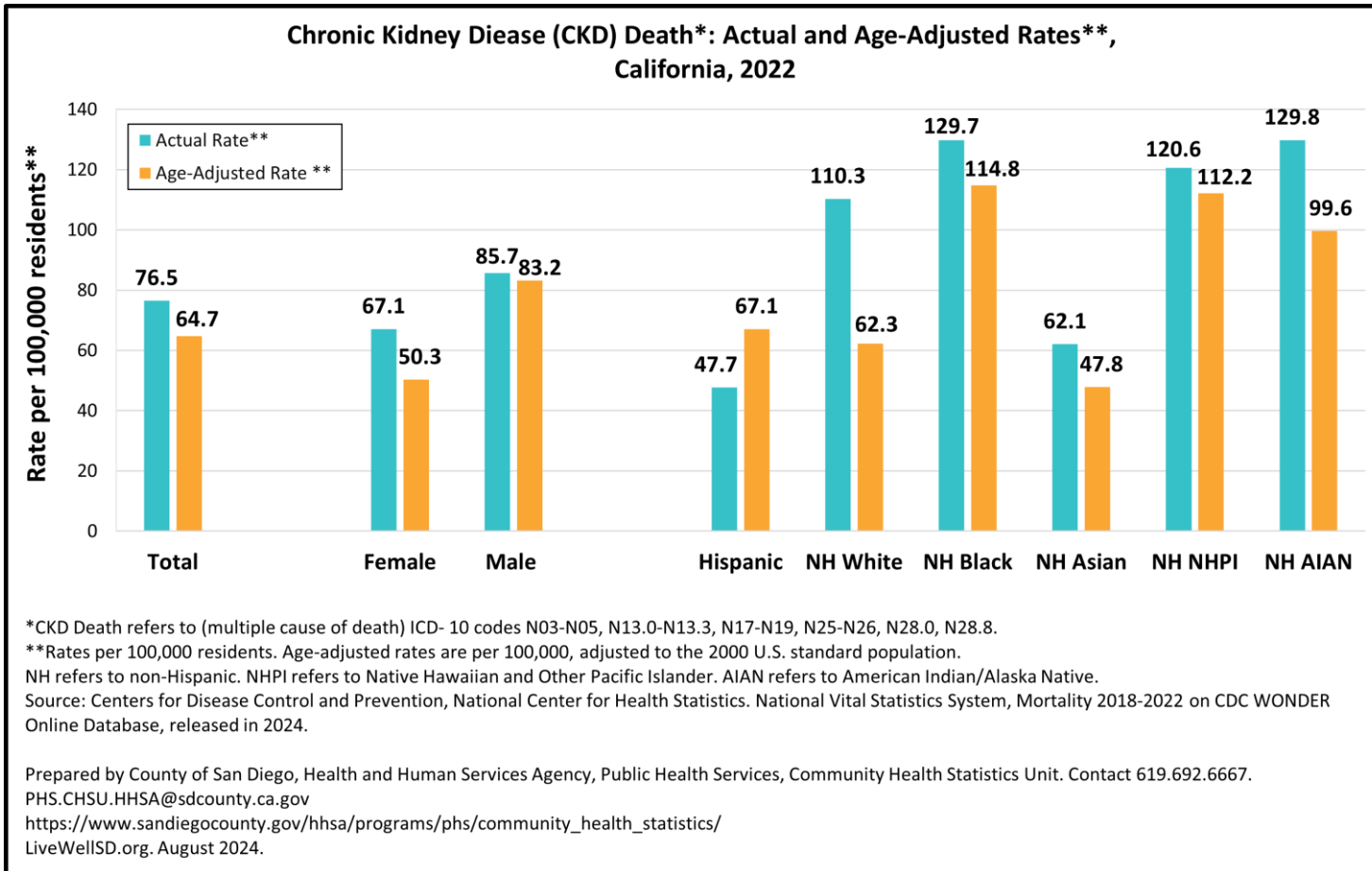
National Statistics and Disparities



- In 2022, males in the United States had a higher actual death rate (91.8 per 100,000) due to CKD compared to females (77.1 per 100,000).
- Non-Hispanic Black residents in the United States had the highest actual death rate (102.2 per 100,000) due to CKD compared to other races/ethnicities, in 2022.



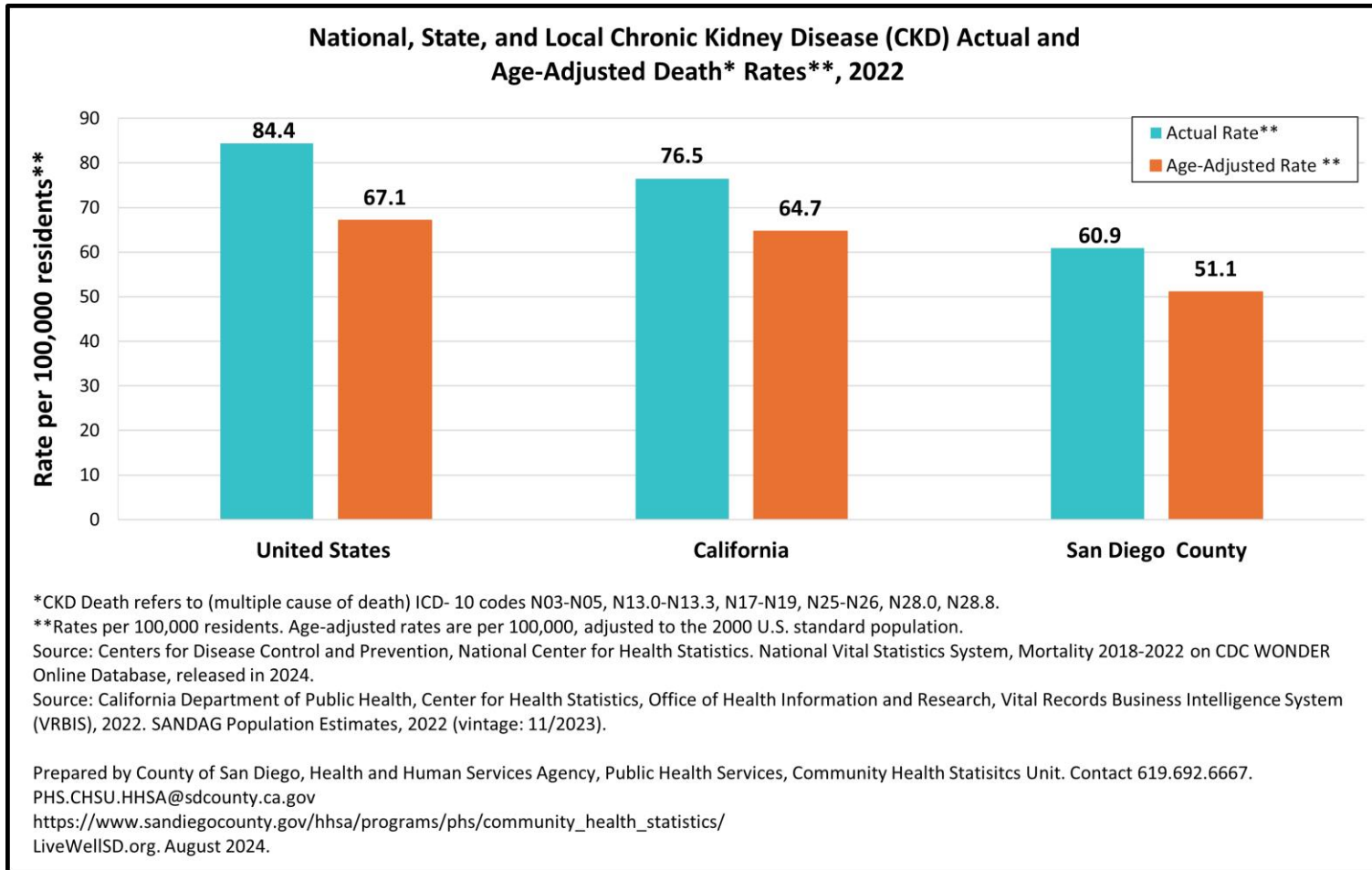
State Statistics and Disparities



- In 2022, male residents in California had a higher actual death rate (85.7 per 100,000) due to CKD compared to female residents (67.1 per 100,000).
- Non-Hispanic American Indian and Alaska Native residents in California had the highest actual death rate (129.8 per 100,000) due to CKD compared to other races/ethnicities, in 2022.
- Non-Hispanic Black residents in California had the second highest actual death rate (129.7 per 100,000) due to CKD.



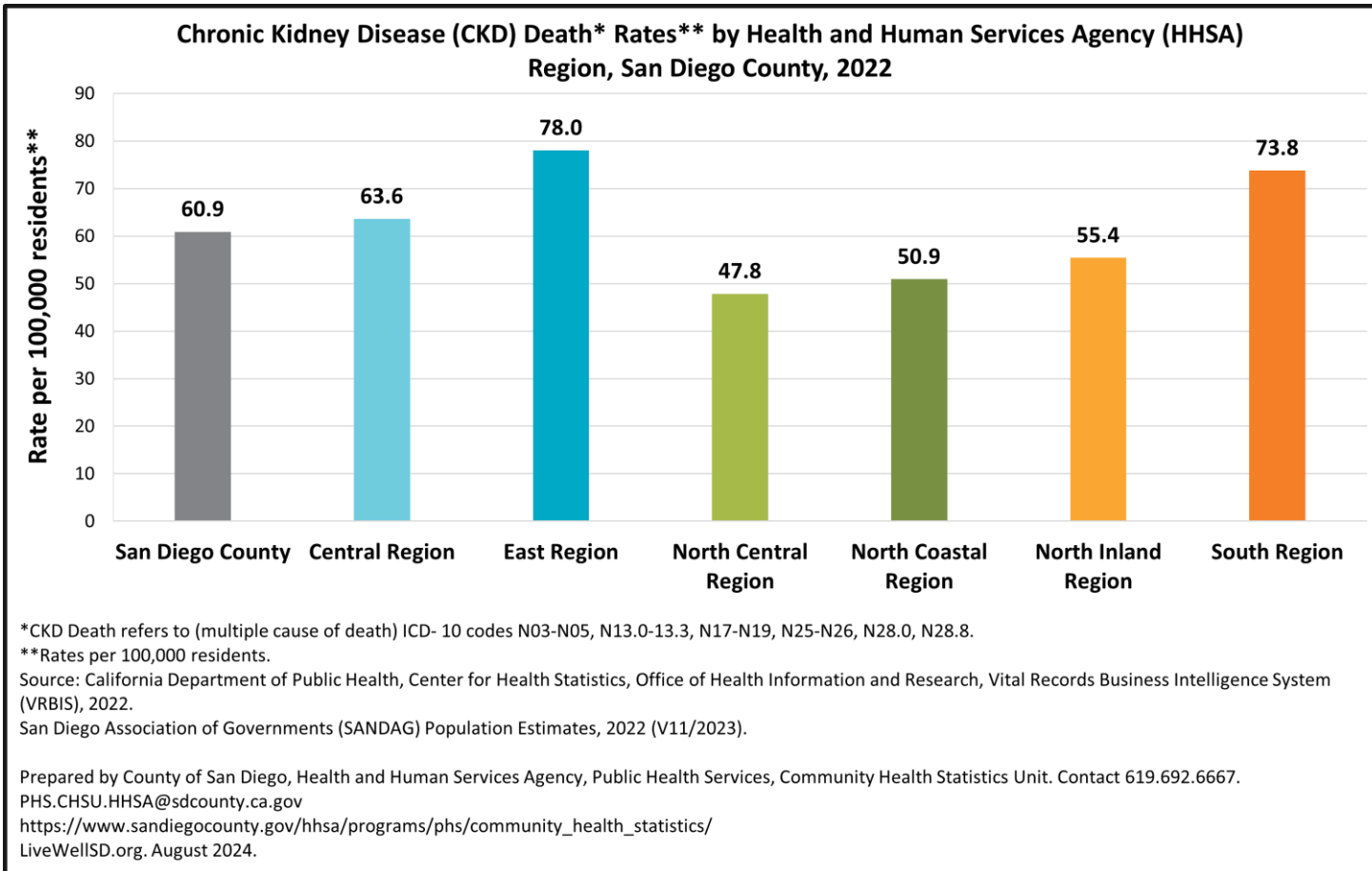
National, State, and Local Statistics and Disparities



- In 2022, San Diego County had a lower actual death rate (60.9 per 100,000) due to CKD, when compared to California and the United States.



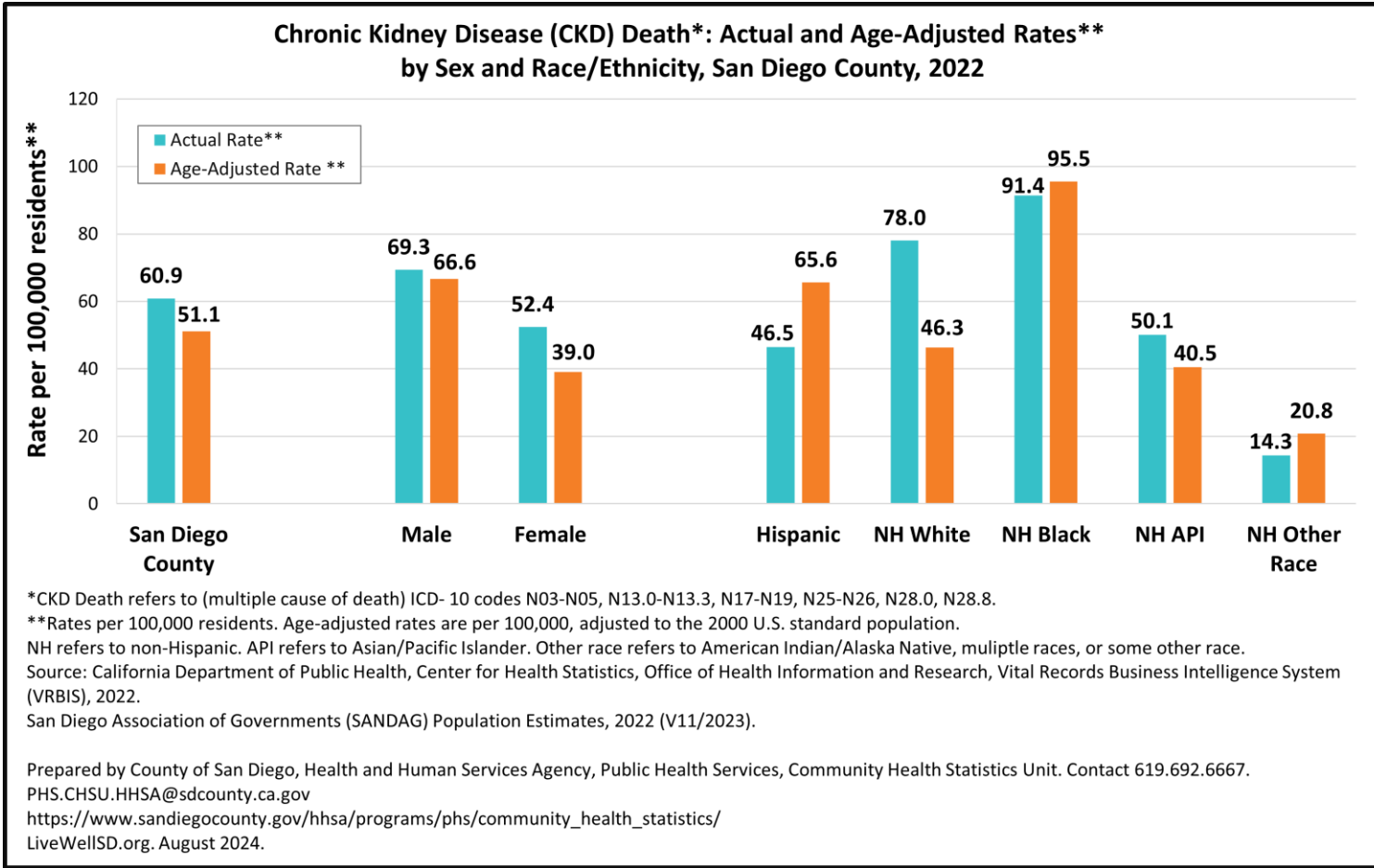
Local Statistics and Disparities



- In 2022, East Region had the highest death rate due to CKD (78.0 per 100,000), followed by South Region (73.8 per 100,000) compared to all other HHSA regions and San Diego County overall (60.9 per 100,000).
- In 2022, among all HHSA regions, North Central Region had the lowest death rate due to CKD (47.8 per 100,000), followed by North Coastal Region (50.9 per 100,000) in San Diego County.



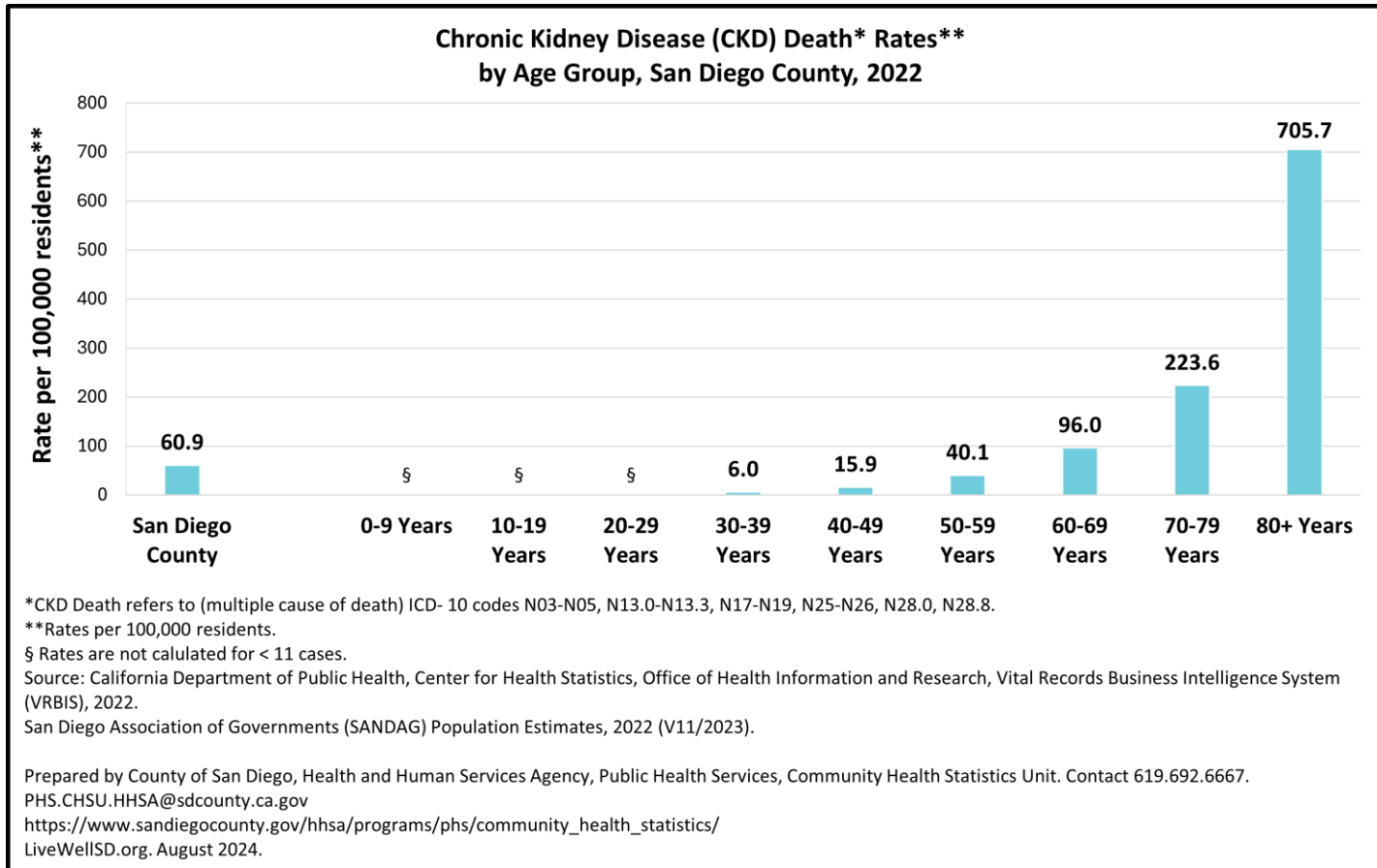
Local Statistics and Disparities



- In 2022, male residents had a higher actual death rate due to CKD (69.3 per 100,000) compared to female residents (52.4 per 100,000) in San Diego County.
- Non-Hispanic Black residents in San Diego County had the highest death rate (95.5 per 100,000) due to CKD than all other races/ethnicities, in 2022.



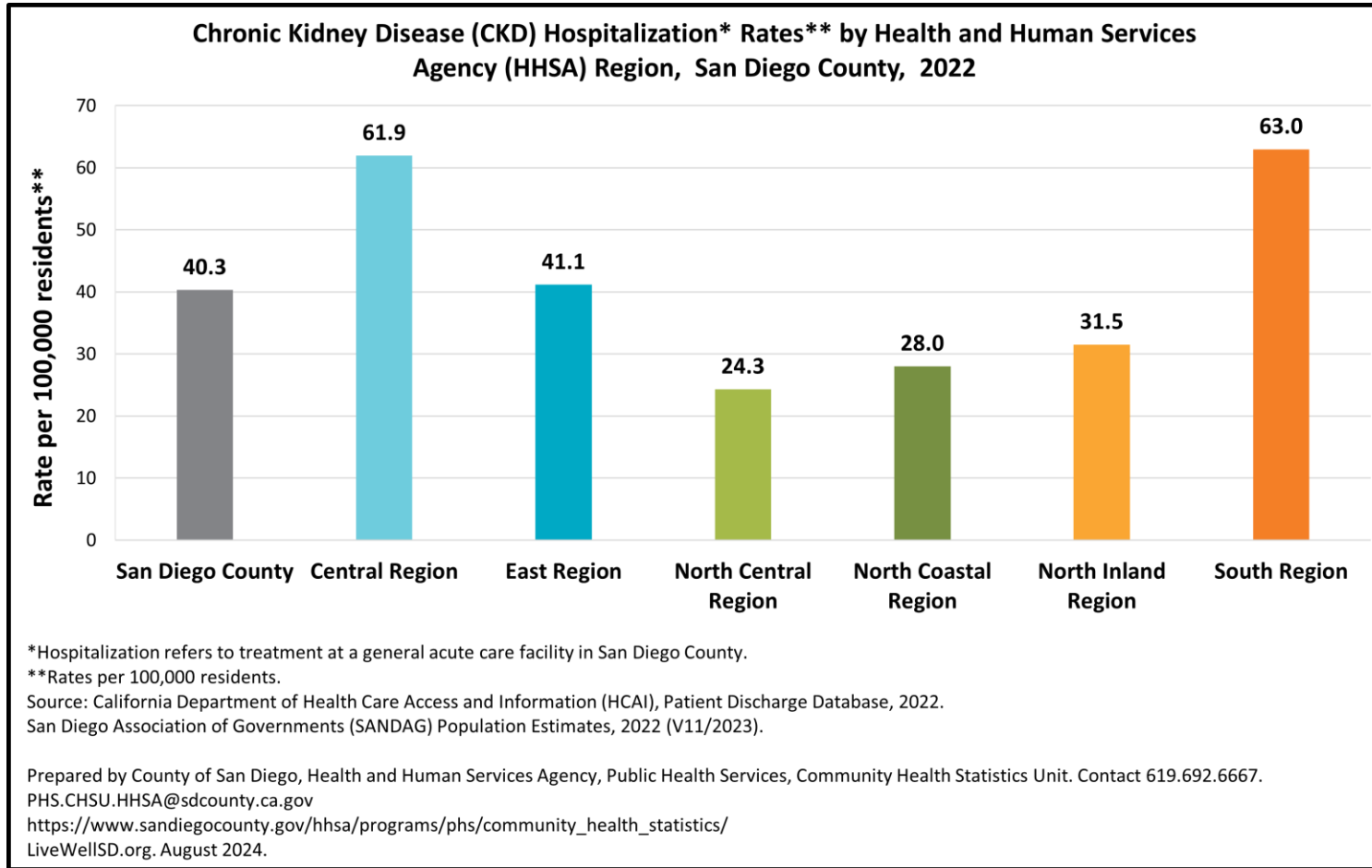
Local Statistics and Disparities



- In 2022, San Diego County residents aged 60 years and older had higher rates of death due to CKD compared to the younger age groups.
- San Diego County residents aged 80 and older had the highest rate of death due to CKD (705.7 per 100,000) than all other age groups in 2022.



Local Statistics and Disparities

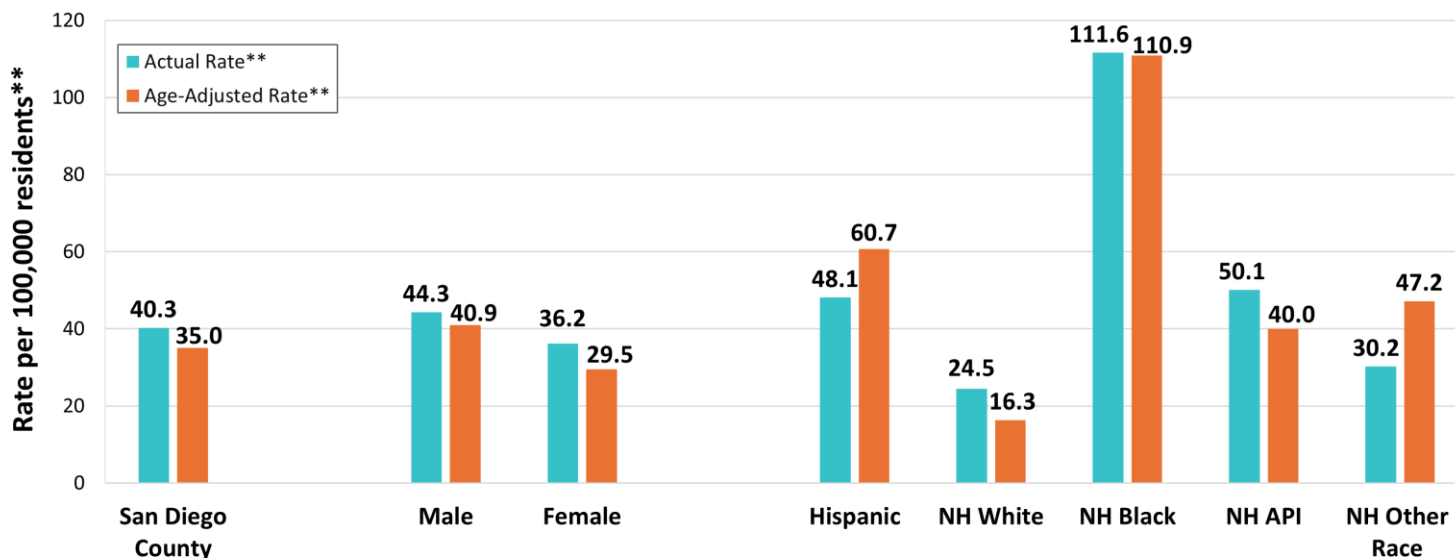


- In 2022, the total CKD hospitalization rate in San Diego County was 40.3 per 100,000 residents.
- The CKD hospitalization rate in 2022 was the highest in South Region (63.0 per 100,000) and Central Region (61.9 per 100,000) compared to other HHS regions.



Local Statistics and Disparities

Chronic Kidney Disease (CKD) Hospitalization* Rates : Actual and Age-Adjusted Rates** by Sex and Race/Ethnicity, San Diego County, 2022**

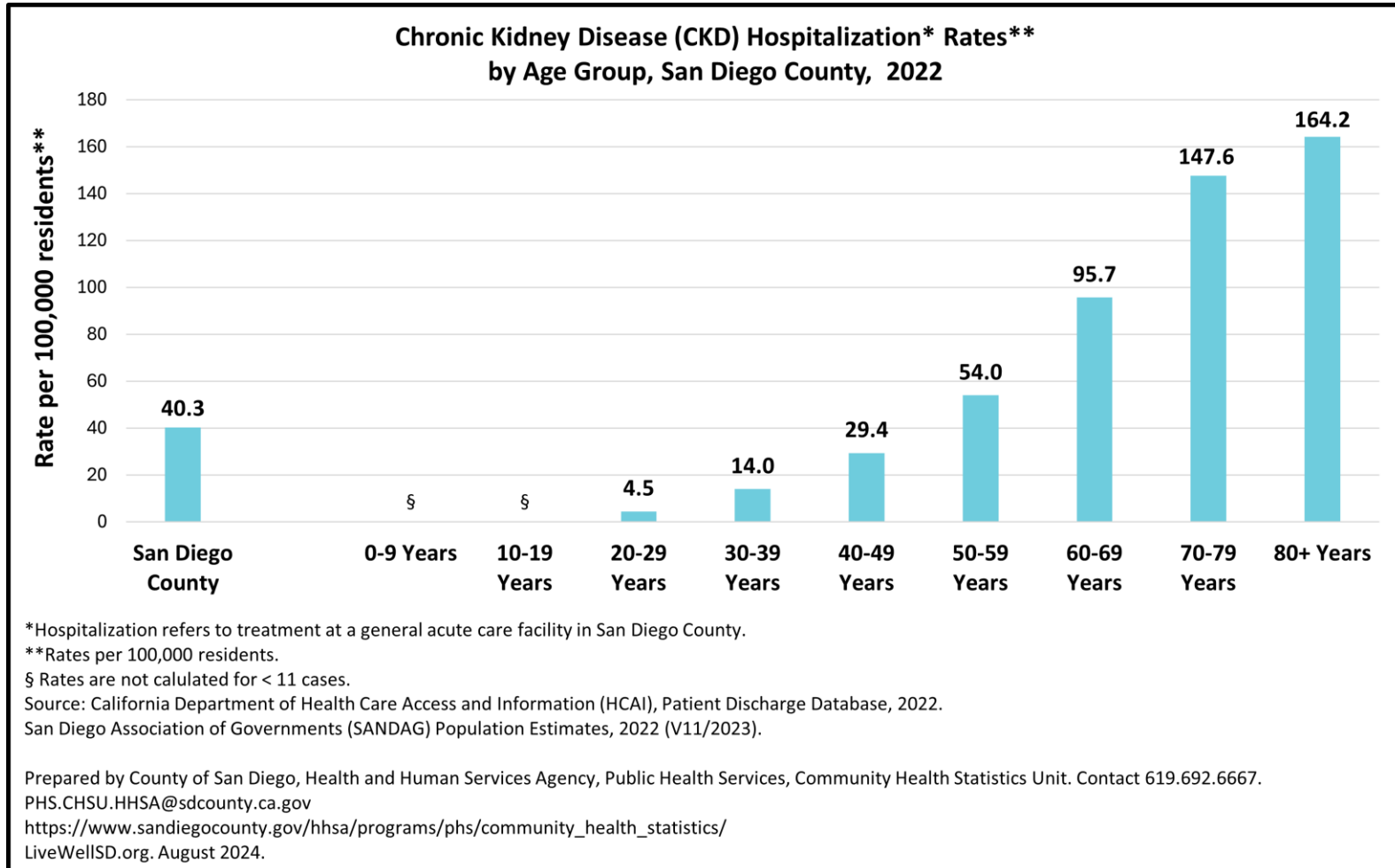


*Hospitalization refers to treatment at a general acute care facility in San Diego County.
 **Rates per 100,000 residents. Age-adjusted rates are per 100,000, adjusted to the 2000 U.S. standard population.
 NH refers to non-Hispanic. API refers to Asian/Pacific Islander. Other race refers to American Indian/Alaska Native, multiple races, or some other race.
 Source: California Department of Health Care Access and Information (HCAI), Patient Discharge Database, 2022.
 San Diego Association of Governments (SANDAG) Population Estimates, 2022 (V11/2023).

Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. Contact 619.692.6667.
 PHS.CHSU.HHSA@sdcounty.ca.gov
https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/
 LiveWellSD.org. August 2024.

- In 2022, the CKD actual hospitalization rate was 40.3 per 100,000 residents and age-adjusted rate was 35.0 per 100,000 residents in San Diego County overall.
- In 2022, the CKD actual hospitalization rate in San Diego County was highest among non-Hispanic Black residents (111.6 per 100,000) than all other races/ethnicities.
- The CKD actual hospitalization rate in San Diego County was higher among male residents (44.3 per 100,000) than female residents (36.2 per 100,000), in 2022.

Local Statistics and Disparities



- In 2022, San Diego residents aged 80 years and older had the highest CKD hospitalization rate (164.2 per 100,000) than all other age groups.



Disease Prevention



■ ***Get check-ups regularly***

- Often CKD has no symptoms until the later stages of the disease. Therefore, it is important to visit your physician for regular check-ups.

■ ***Maintain blood pressure***

- Please connect with your physician to be given your target range and best practices to lower blood pressure.

■ ***Eat a well balanced diet***

- Eating a healthy diet can help lower blood pressure and maintain a healthy weight.

■ ***Be active at least 30 minutes a day***

- Regular exercise can help reduce blood pressure, lower cholesterol, maintain blood sugar, and maintain a healthy weight.



Disease Prevention



■ ***No smoking / Quit smoking***

- Smoking can increase your blood pressure and interfere with blood pressure medications.

■ ***Limit alcohol intake***

- Excessive drinking can lead to increased blood pressure. Limit yourself to one drink per day if you are a woman, and two drinks per day if you are a man.

■ ***Take pain relief medication only as directed***

- Long-term misuse of pain medication can cause severe kidney damage. Always follow the instructions on labels and use only as recommended.



Critical Pathway for Chronic Kidney Disease

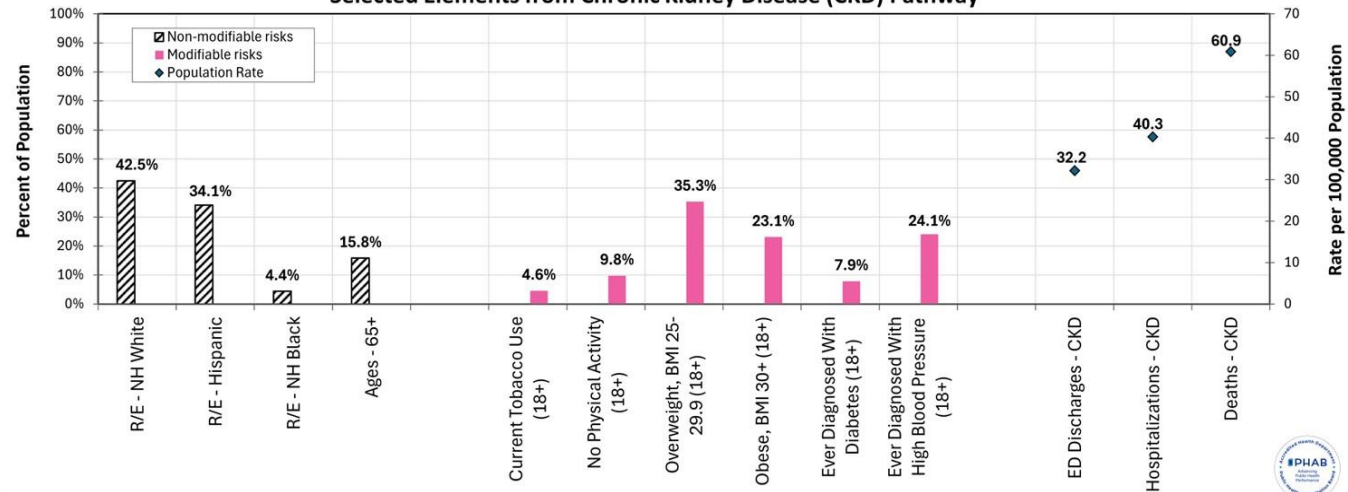


Critical Pathway

Chronic Kidney Disease



Characteristics of Residents, San Diego County
Selected Elements from Chronic Kidney Disease (CKD) Pathway



CDC Chronic Kidney Disease:
www.cdc.gov/kidney-disease/index.html

National Kidney Foundation:
www.kidney.org

Contact Us



For more information, including data, resources and reports from the County of San Diego's Community Health Statistics Unit:

www.SDHealthStatistics.com

(619)692-6667



The Public Health Services department, County of San Diego Health and Human Services Agency, has maintained national public health accreditation, since May 17, 2016, and was re-accredited by the Public Health Accreditation Board on August 21, 2023.