CORONARY HEART DISEASE

Disease Information Packets – Slide Set

Public Heath Services, Community Health Statistics

08/2022

What is Coronary Heart Disease?

- Coronary heart disease (CHD), also called coronary artery disease (CAD), is the most common type of heart disease.

- Occurs as a result of atherosclerosis – when the coronary arteries that supply blood to the heart harden and narrow due to plaque buildup.
  - Can impede blood flow to the heart and cause damage to the heart muscle (heart attack or myocardial infarction).

Source: Centers for Disease Control and Prevention. (2021). *Coronary Artery Disease*. https://www.cdc.gov/heartdisease/coronary_ad.htm.
Centers for Disease Control and Prevention. (2022). Heart Attack Symptoms, Risk and Recovery. https://www.cdc.gov/heartdisease/heart_attack.htm.

Demographic Risk Factors

- **Race/ethnicity**
  - CHD is the leading cause of death for most racial/ethnic groups in the United States.
- **Genetics/family history**
  - Having a family history of early heart disease increases risk of CHD.
- **Age**
  - People age 65 and older are more likely to develop coronary heart disease than younger people.
- **Sex**
  - The risk for CHD among men increases around age 45 while the risk among women increases around age 55.

Source: Centers for Disease Control and Prevention. (2019). *Heart Disease: Know Your Risk for Heart Disease*. https://www.cdc.gov/heartdisease/risk_factors.htm.
National Heart, Lung, and Blood Institute. (2022). *Coronary Heart Disease: Causes and Risk Factor*. https://www.nhlbi.nih.gov/health/coronary-heart-disease/causes.
National Institute on Aging. (2018). *Heart Health and Aging*. https://www.nia.nih.gov/health/heart-health-and-aging.

Behavioral and Social Risk Factors

- **Tobacco use**
  - Smoking can damage heart and blood vessels and increase blood pressure.

- **Alcohol abuse**
  - Heavy alcohol consumption can increase the risk of heart disease by raising blood pressure and triglyceride levels.

- **Environment and occupation**
  - Long exposure to toxins, radiation, secondhand smoke, or other hazards, sitting for long periods, and working long shifts or night shifts increases the risk of coronary heart disease.

Source: Centers for Disease Control and Prevention. (2019). *Heart Disease: Know Your Risk for Heart Disease*. https://www.cdc.gov/heartdisease/risk_factors.htm.
National Heart, Lung, and Blood Institute. (2022). *Coronary Heart Disease: Causes and Risk Factor*. https://www.nhlbi.nih.gov/health/coronary-heart-disease/causes.

- **Lack of physical activity**
  - Physical inactivity contributes to CHD and to other CHD risk factors such as obesity, high blood pressure, high cholesterol, and type 2 diabetes.

- **Poor nutrition**

- **Poor quality sleep**

- **Stress**

Intermediate Outcomes

- **High blood pressure (BP $\geq$ 140mm Hg/90mm Hg)**
  - 1 in 3 American adults aren't aware of their high blood pressure and are not being treated to control their blood pressure.

- **High cholesterol**
  - According to BRFSS 2019 data, 33.1% of American adults were told that they had high cholesterol.

- **Angina pectoris**
  - About 9 million Americans have symptoms of angina pectoris (chest pain or discomfort due to reduced blood supply to the heart).

Source: National Heart, Lung, and Blood Institute. (2022). *What is High Blood Pressure (Hypertension)*. https://www.nhlbi.nih.gov/health/high-blood-pressure.

Centers for Disease Control and Prevention and National Center for Chronic Disease Prevention and Health Promotion. Behavioral Risk Factor Surveillance System (BRFSS): BRFSS Prevalence & Trends Data. https://www.cdc.gov/brfss/brfssprevalence/

Hermiz, C., & Sedhai, Y. R. (2022). *Angina*. PubMed; StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK557672/?msclkid=71531257d0ed11ecb64d7f140c4cfb80.

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▪ **Diagnosis Diabetes**

- ○ People with diabetes are more likely to have conditions (high blood pressure, high cholesterol) that increases the risk of heart disease.

- ○ People with diabetes are also more likely to suffer from heart failure.
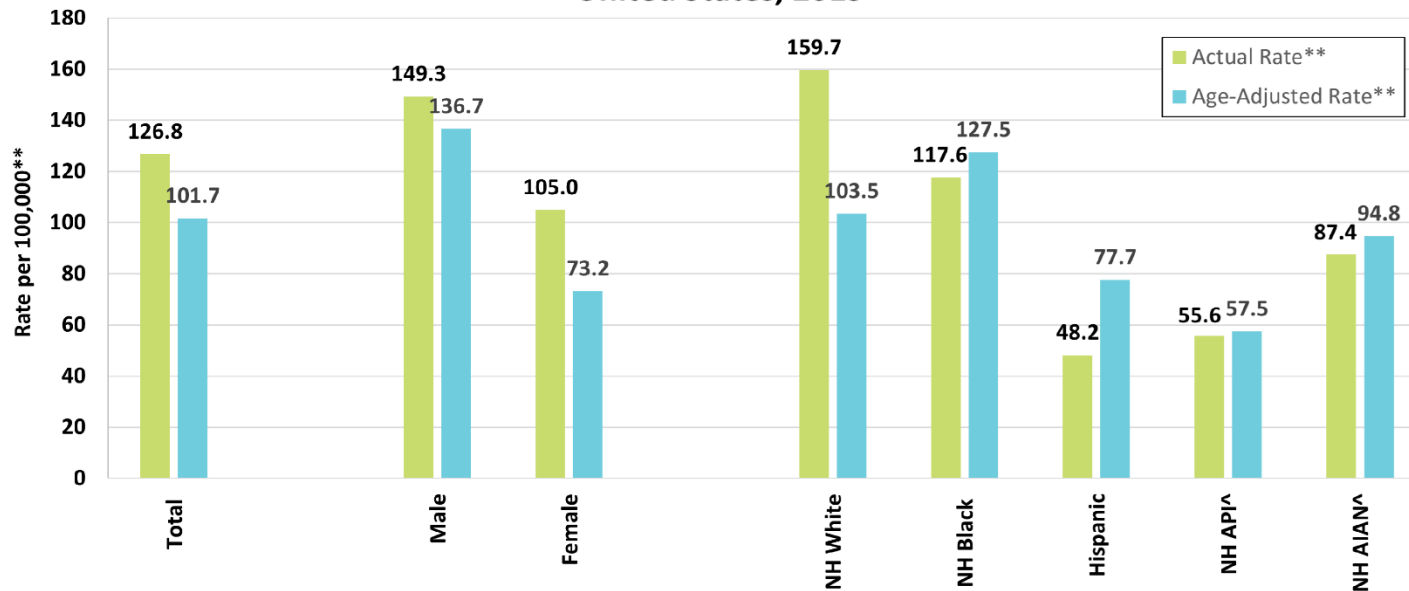
National Statistics and Disparities

- Each year, more than 805,000 Americans have a heart attack.
  - Of these, about 1 in 5 are silent heart attacks.
- Approximately 20.1 million Americans aged 20 and older had CHD from 2015 to 2018.
- In 2019, about 360,900 Americans died from CHD.

Source: Tsao, C. W., Aday, A. W., Almarzooq, Z. I., Alonso, A., Beaton, A. Z., Bittencourt, M.S., Boehme, A. K., Buxton, A. E., Carson, A. P., Commodore-Mensah, Y., Elkind, M. S.V., Evenson, K. R., Eze-Nliam, C., Ferguson, J. F., Generoso, G., Ho, J. E., Kalani, R., Khan, S. S., Kissela, B. M., & Knutson, K. L. (2022). Heart Disease and Stroke Statistics—2022 Update: A Report from the American Heart Association. *Circulation*, *145*(8). https://doi.org/10.1161/cir.0000000000001052.

National Statistics and Disparities

Coronary Heart Disease (CHD) Deaths*: Actual and Age-Adjusted Rates**
United States, 2019

Legend: Actual Rate** (green), Age-Adjusted Rate** (blue)

Category	Actual Rate**	Age-Adjusted Rate**
Total	126.8	101.7
Male	149.3	136.7
Female	105.0	73.2
NH White	159.7	103.5
NH Black	117.6	127.5
Hispanic	48.2	77.7
NH API^	55.6	57.5
NH AIAN^	87.4	94.8

Rate per 100,000** (y-axis: 0 to 180)

*CHD Death refers to underlying cause of death among United States residents (ICD-10 codes I11, I120-I25).
**Rates per 100,000 population. Age-adjusted rates per 100,000. 2000 U.S. Standard population.
^API includes Asian and Pacific Islander. AIAN includes American Indian and Alaska Native. NH refers to non-Hispanic.
Source: National Vital Statistics System, CDC, NCHS. Online database accessed 05/09/2022, http://www.wonder.cdc.gov.

Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. Contact 619.692.6667.
https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/
LiveWellSD.org. August 2022.

- In 2019, the age-adjusted CHD death rate among males was nearly 1.9 times greater than the age-adjusted CHD death rate among females.

- Non-Hispanic Blacks had the highest age-adjusted CHD death rate compared to other race/ethnicities.

National Statistics and Disparities

- In the United States, the rate of death due to heart disease in 2019 was highest in Oklahoma and lowest in Minnesota.

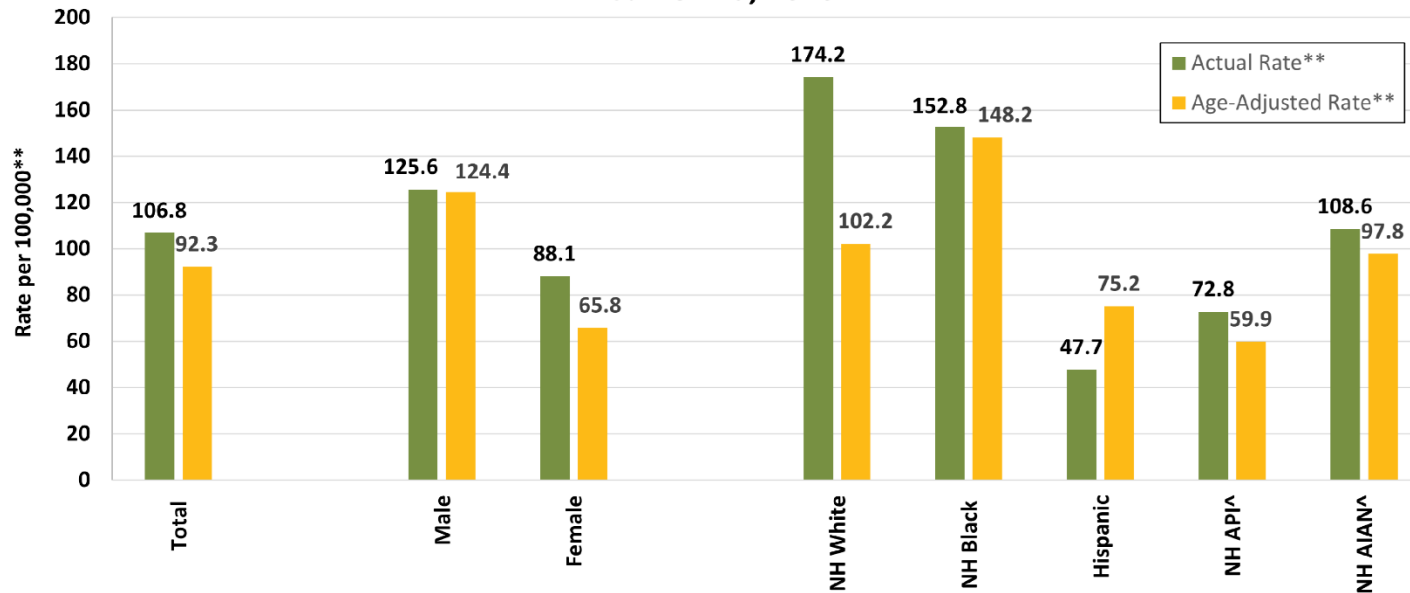- In 2019, 1 in every 4 male deaths were due to heart disease.

Top 5 States with Highest Heart Disease Death Rates, United States, 2019

1. Oklahoma
2. Mississippi
3. Arkansas
4. Alabama
5. Louisiana

Source: National Vital Statistics System, CDC, NCHS. *Heart Disease Mortality by State*. Online database accessed 06/17/2020, http://www.wonder.cdc.gov.
Centers for Disease Control and Prevention. (2019). *Heart Disease: Know Your Risk for Heart Disease*. https://www.cdc.gov/heartdisease/risk_factors.htm.
Centers for Disease Control and Prevention. (2021). *Men and Heart Disease*. https://www.cdc.gov/heartdisease/men.htm.

State Statistics and Disparities

Coronary Heart Disease (CHD) Death*: Actual and Age-Adjusted Rates
California, 2019**

Rate per 100,000**

Legend:
- Actual Rate**
- Age-Adjusted Rate**

Category	Actual Rate**	Age-Adjusted Rate**
Total	106.8	92.3
Male	125.6	124.4
Female	88.1	65.8
NH White	174.2	102.2
NH Black	152.8	148.2
Hispanic	47.7	75.2
NH API^	72.8	59.9
NH AIAN^	108.6	97.8

*CHD Death refers to underlying cause of death among United States residents (ICD-10 codes I11, I120-I25).
**Rates per 100,000 population. Age-adjusted rates per 100,000. 2000 U.S. Standard population.
^API includes Asian and Pacific Islander. AIAN includes American Indian and Alaska Native. NH refers to non-Hispanic.
Source: National Vital Statistics System, CDC, NCHS. Online database accessed 05/09/2022, http://www.wonder.cdc.gov.
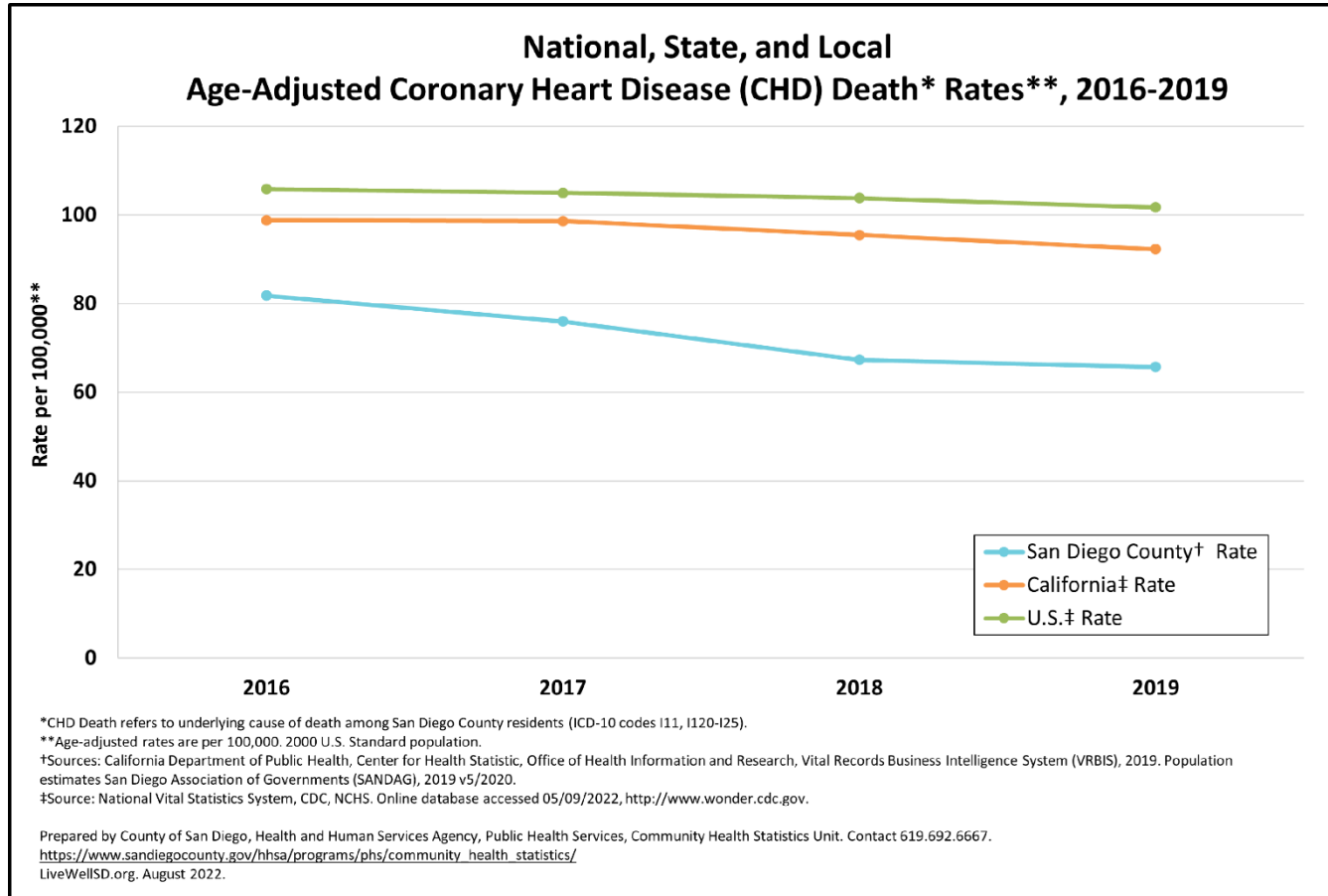
Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. Contact 619.692.6667.
https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/
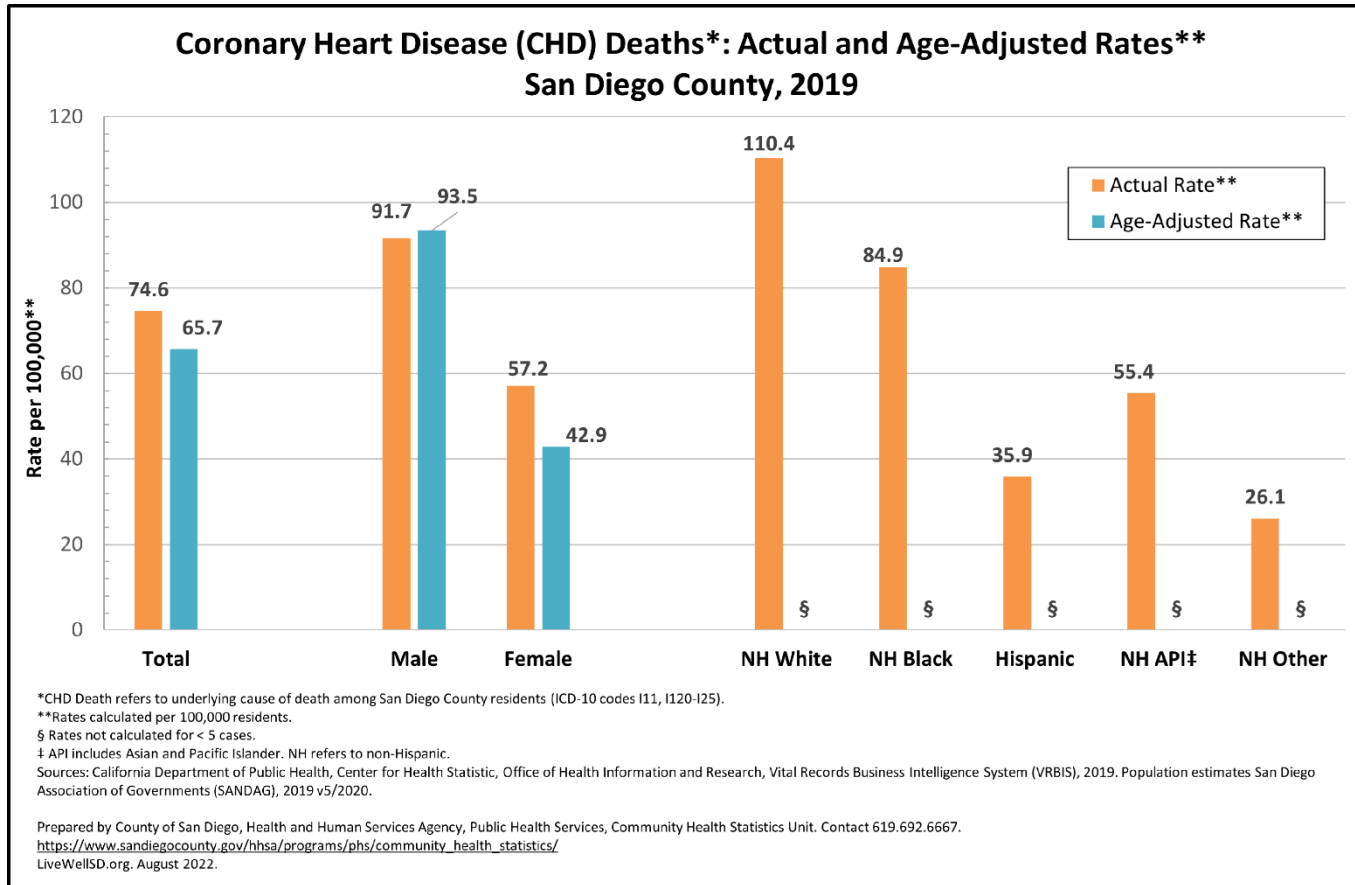LiveWellSD.org. August 2022.

- Male residents in California had higher actual and age-adjusted death rates due to CHD than female residents.
- Non-Hispanic Black residents in California had the highest age-adjusted CHD death rate followed by non-Hispanic White residents.

Local Statistics and Disparities

**National, State, and Local
Age-Adjusted Coronary Heart Disease (CHD) Death* Rates**, 2016-2019**

Legend:
- San Diego County† Rate
- California‡ Rate
- U.S.‡ Rate

Y-axis: Rate per 100,000**

*CHD Death refers to underlying cause of death among San Diego County residents (ICD-10 codes I11, I120-I25).
**Age-adjusted rates are per 100,000. 2000 U.S. Standard population.
†Sources: California Department of Public Health, Center for Health Statistic, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.
‡Source: National Vital Statistics System, CDC, NCHS. Online database accessed 05/09/2022, http://www.wonder.cdc.gov.

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LiveWellSD.org. August 2022.

- CHD death rates gradually declined from 2016 to 2019 at the national, state, and local levels.

- From 2016 to 2019, age-adjusted CHD death rates in San Diego County remained lower than state and national rates.

Local Statistics and Disparities

Coronary Heart Disease (CHD) Deaths*: Actual and Age-Adjusted Rates**
San Diego County, 2019

- Actual Rate**
- Age-Adjusted Rate**

	Total	Male	Female	NH White	NH Black	Hispanic	NH API‡	NH Other
Actual	74.6	91.7	57.2	110.4	84.9	35.9	55.4	26.1
Age-Adjusted	65.7	93.5	42.9	§	§	§	§	§

*CHD Death refers to underlying cause of death among San Diego County residents (ICD-10 codes I11, I120-I25).
**Rates calculated per 100,000 residents.
§ Rates not calculated for < 5 cases.
‡ API includes Asian and Pacific Islander. NH refers to non-Hispanic.
Sources: California Department of Public Health, Center for Health Statistic, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.

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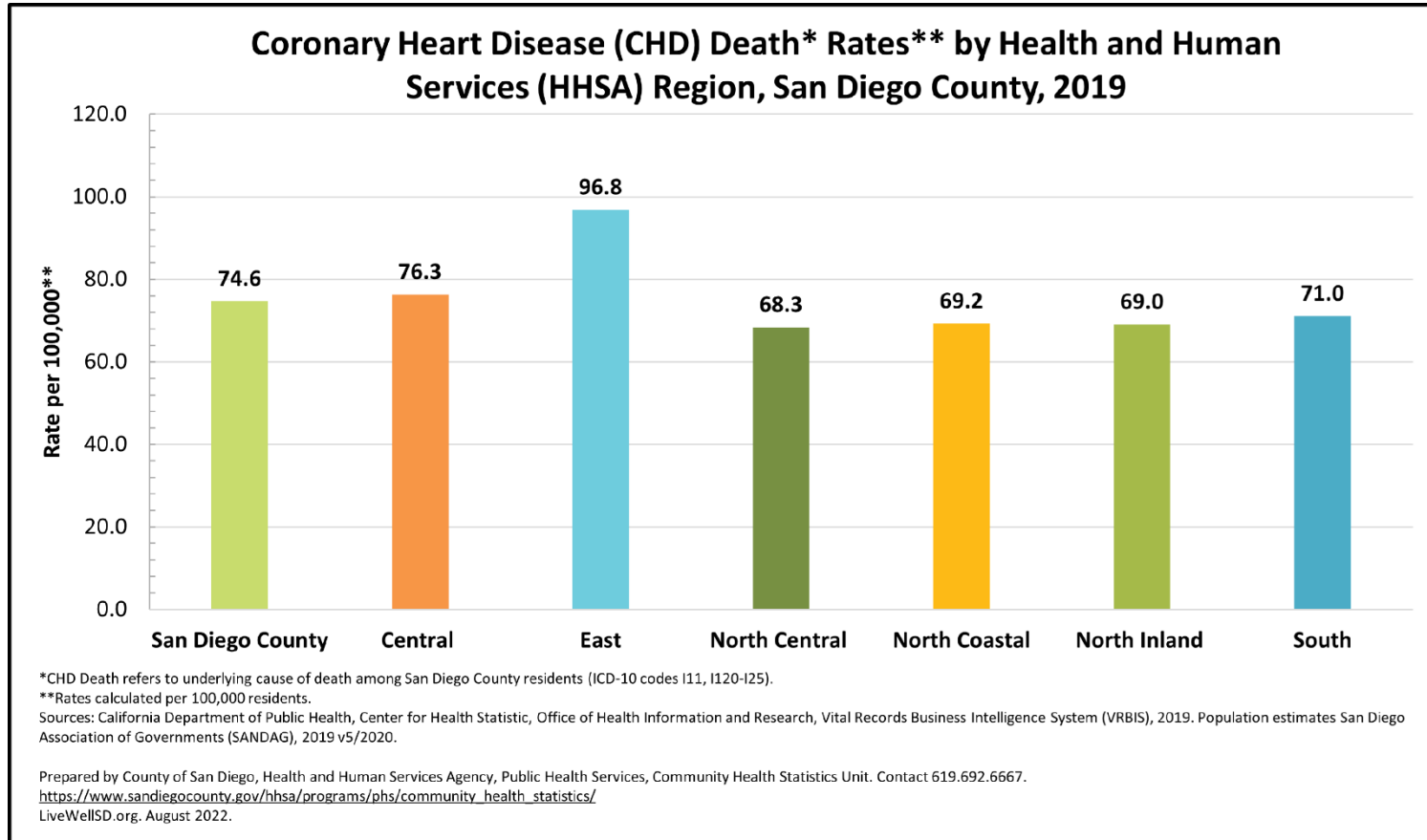LiveWellSD.org. August 2022.

- In San Diego County, men had higher actual and age-adjusted CHD death rates compared to women.
- Non-Hispanic White residents had the highest actual CHD death rate in San Diego County followed by non-Hispanic Black residents.

Local Statistics and Disparities

Coronary Heart Disease (CHD) Death* Rates** by Age Group, San Diego County, 2019
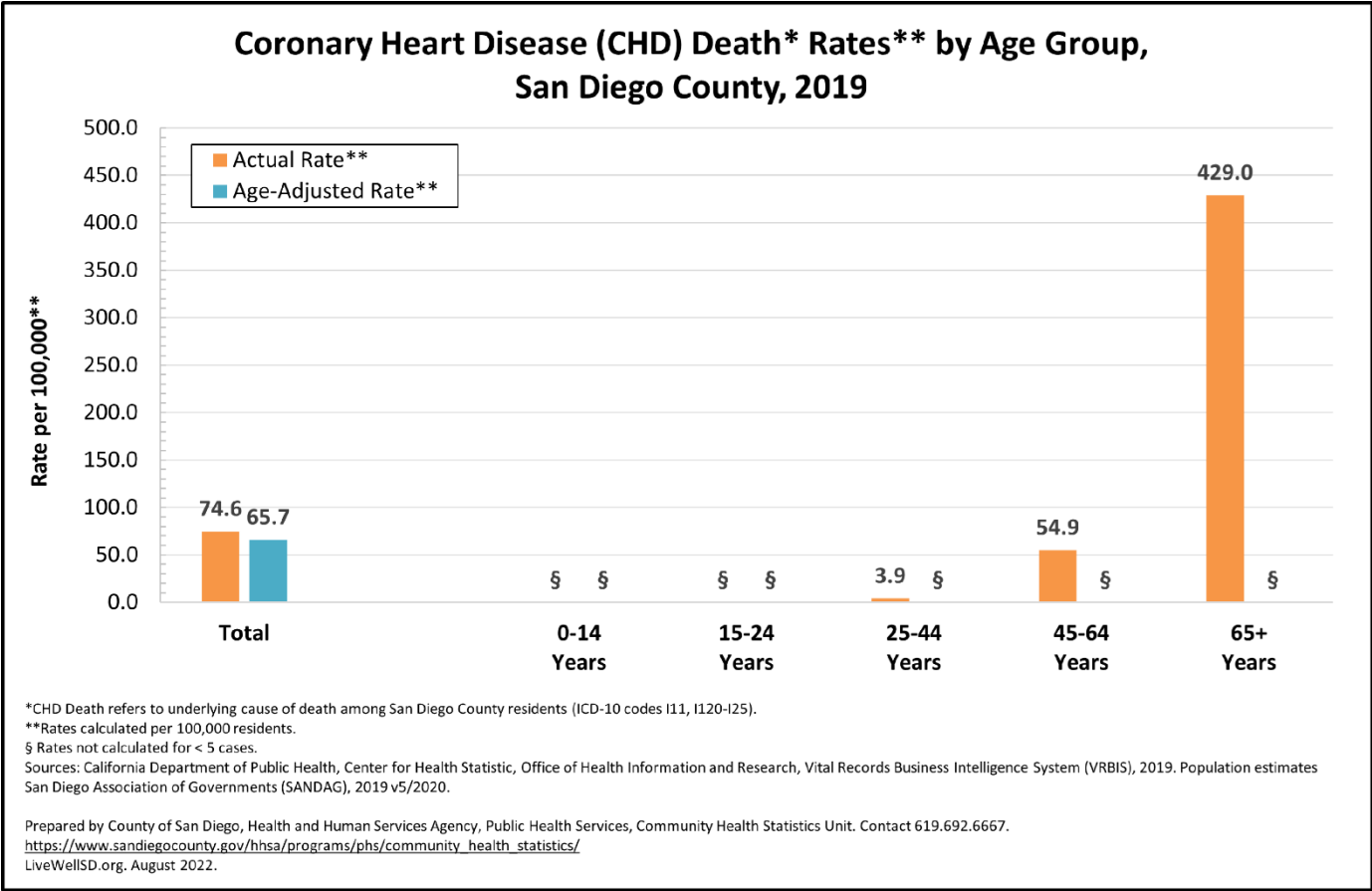
- In 2019, the CHD death rate among San Diego County residents aged 65+ was approximately 6 times higher than the total San Diego County CHD death rate.
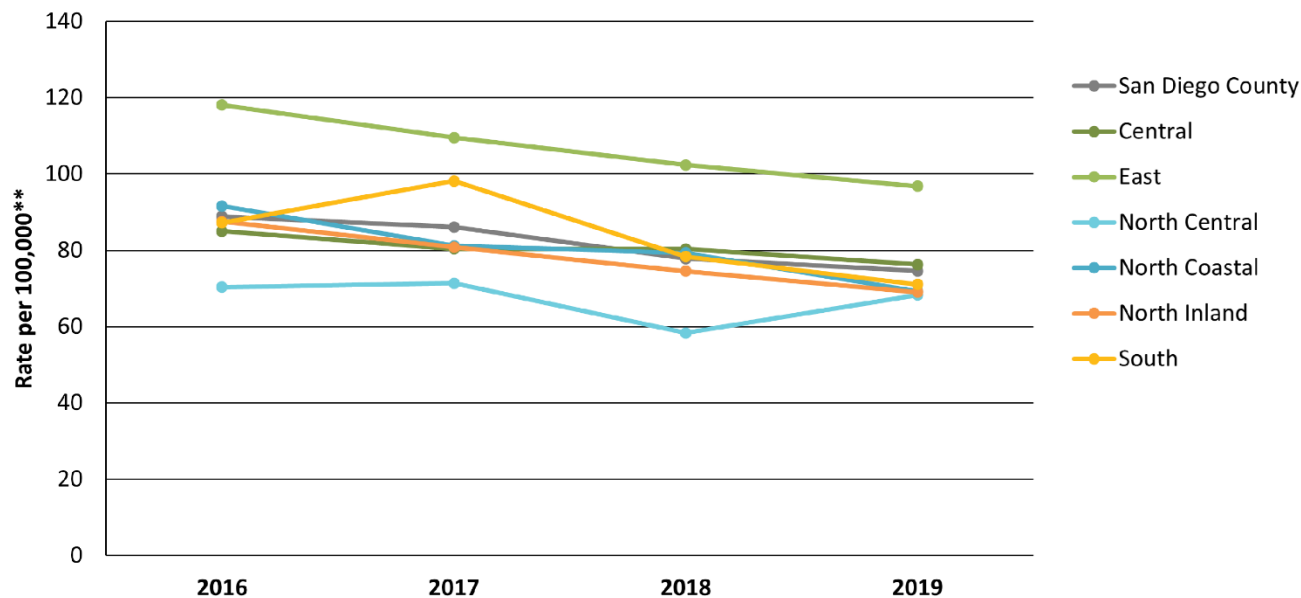
Local Statistics and Disparities

Coronary Heart Disease (CHD) Death* Rates** by Health and Human Services (HHSA) Region, San Diego County, 2019

- San Diego County: 74.6
- Central: 76.3
- East: 96.8
- North Central: 68.3
- North Coastal: 69.2
- North Inland: 69.0
- South: 71.0

*CHD Death refers to underlying cause of death among San Diego County residents (ICD-10 codes I11, I120-I25).
**Rates calculated per 100,000 residents.
Sources: California Department of Public Health, Center for Health Statistic, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.

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LiveWellSD.org. August 2022.

- In 2019, East Region of San Diego County had the highest CHD death rate, while North Central Region had the lowest.

- East Region and Central Region had CHD death rates that were higher than the county CHD death rate.

Local Statistics and Disparities

Coronary Heart Disease (CHD) Death* Rates** by Health and Human Services (HHSA) Region, San Diego County, 2016-2019

*CHD Death refers to underlying cause of death among San Diego County residents (ICD-10 codes I11, I120-I25).
**Rates calculated per 100,000 residents.
Sources: California Department of Public Health, Center for Health Statistic, Office of Health Information and Research, Vital Records Business Intelligence System (VRBIS), 2019. Population estimates San Diego Association of Governments (SANDAG), 2019 v5/2020.

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LiveWellSD.org. August 2022.

- From 2016 to 2019, East Region of San Diego County had the highest CHD death rates while North Central Region had the lowest CHD death rates.

Disease Prevention

- Quit smoking or avoid smoking.

- Be physically active.

- Eat healthy foods.

- Maintain a healthy weight.

- Avoid excessive alcohol consumption.

- Have regular doctor checkups.

- Monitor blood pressure and cholesterol levels.

- Control diabetes.

Know the 5 Major Symptoms of a Heart Attack

- Pain or discomfort in the jaw, neck, or back

- Feeling weak, light-headed, or faint

- Chest pain or discomfort

- Pain or discomfort in arms or shoulder

- Shortness of breath

- Women may also experience: pain or discomfort in one or both arms, back, neck, jaw or stomach, shortness of breath with or without chest discomfort, breaking out in cold sweat, nausea or vomiting and/or lightheadedness.

- If you think that you or someone you know is having a heart attack, **call 9-1-1 immediately.**

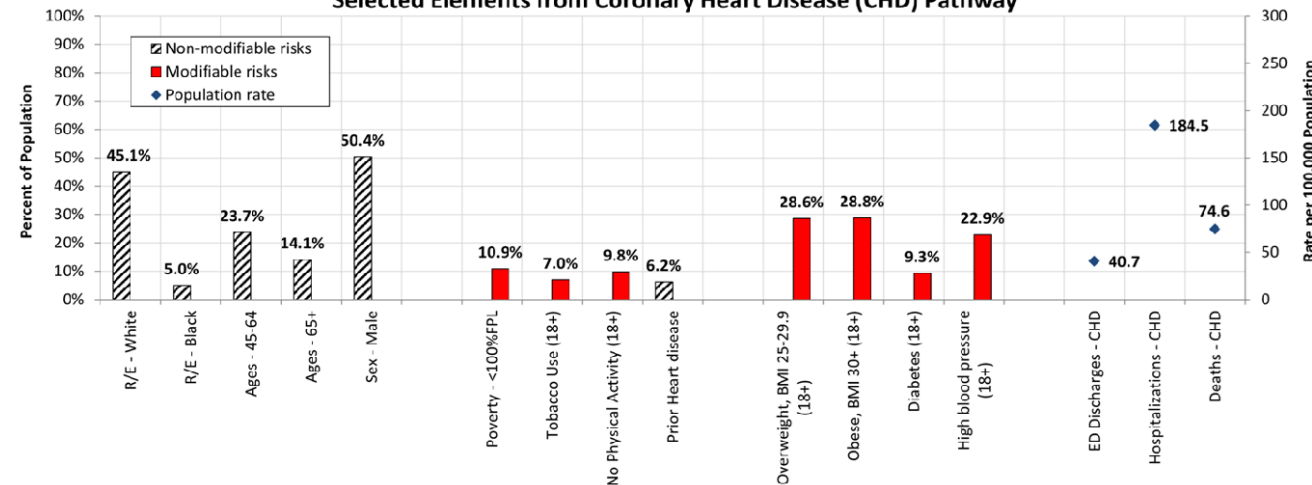Source: American Heart Association. *Warning Signs of a Heart Attack*. https://www.heart.org/en/health-topics/heart-attack/warning-signs-of-a-heart-attack.
American Heart Association. *Heart Attack Symptoms in Women*. https://www.heart.org/en/health-topics/heart-attack/warning-signs-of-a-heart-attack/heart-attack-symptoms-in-women.

COUNTY OF SAN DIEGO
HHSA
HEALTH AND HUMAN SERVICES AGENCY

Critical Pathway for Coronary Heart Disease

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