

Coronary Heart Disease & Hypertension

Coronary heart disease is the second leading cause of death in Washington State. Coronary heart disease is usually caused by atherosclerosis which can result in decreased blood flow through the blood vessel. This results in decreased oxygen supply to the heart muscle and can cause reduced heart muscle function and destruction of heart muscle cells (myocardial infarction or 'heart attack'). Deaths from coronary heart disease can be prevented or delayed by modifying known risk factors, such as high blood pressure, high blood cholesterol, tobacco use, physical inactivity, obesity and diabetes.

In 2015, the coronary heart disease death rate in Washington State was 80 per 100,000 people.

Males, Native Hawaiian and other Pacific Islanders (NHOPI), American Indians and Alaska Natives (AIAN), blacks, people over 65 years old, and people living in areas with low incomes or less education had the highest coronary heart disease death rates compared to other Washingtonians.

DOH, along with partner agencies, is working to reduce modifiable risk factors, implementing the *Healthier Washington Plan for Improving Population Health* and the *Washington State Plan for Healthier Communities*, and working to improve emergency cardiac care.



1 in 4

Washington adults has been told by a health professional they have high blood pressure, a modifiable risk factor for coronary heart disease



Coronary heart disease is the 2nd leading cause of death in Washington

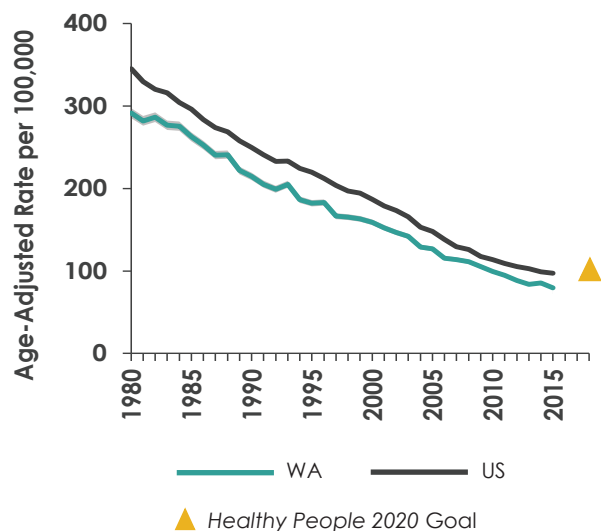


Coronary Heart Disease

Time Trends

- In 2015, the age-adjusted coronary heart disease death rate in Washington was 80 per 100,000 people.
- Washington has a lower rate of coronary heart disease deaths compared to the U.S.
- The coronary heart disease death rate in Washington has declined substantially over the past 36 years, has met the *Healthy People 2020* goal, and likely will continue to meet it.

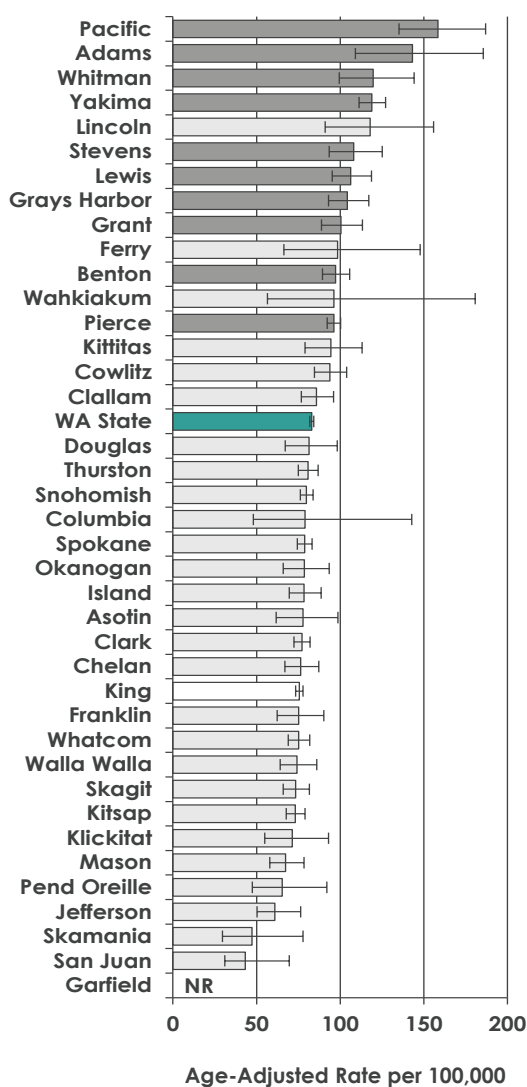
**Coronary Heart Disease Deaths
Washington State & US
Death Certificates, 1980-2015**



Geographic Variation

- In 2013-2015, coronary heart disease death rates in Adams, Benton, Grant, Grays Harbor, Lewis, Pacific, Pierce, Stevens, Whitman, and Yakima counties were higher than the state rate.
- King County had a lower rate than the state.

Coronary Heart Disease Deaths Washington Counties Death Certificates, 2013-2015



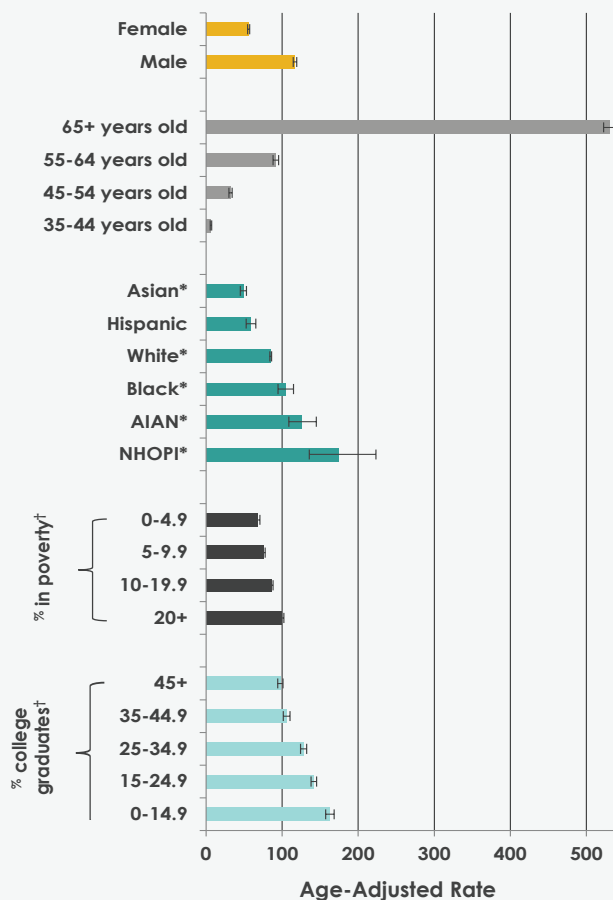
WA State
 Lower than WA State
 Same as WA State
 Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy

Disparities

- In 2013-2015, males had a higher coronary heart disease death rate compared to females.
- Coronary heart disease death rates were highest among those 65 years and older, and even higher among those 85 years and older (1,944 per 100,000 people).
- NHOPI, AIAN, and blacks had the highest coronary heart disease death rates.
- Coronary heart disease death rates increased as residential area levels of education and household income decreased.

Coronary Heart Disease Deaths Washington State Death Certificates, 2013-2015



*Non-Hispanic (all races) | AIAN: American Indian/Alaska Native | NHOPI: Native Hawaiian/Other Pacific Islander

†Among census tract residents, 2013-2015 data



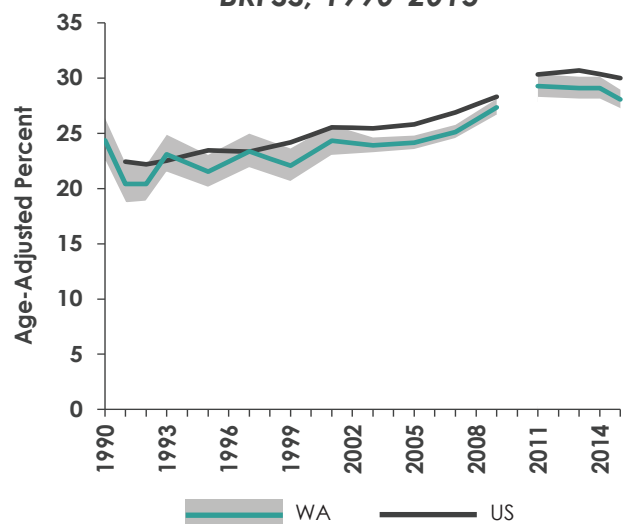
In 2015, 28% ($\pm 1\%$) of Washington adults reported they had ever been told by a health professional they had high blood pressure, also known as hypertension. Hypertension among Washington adults slightly increased from 1990 – 2010, but has recently been stable. Males, blacks, adults over 65 years old, and adults with low incomes and education are more likely to report having hypertension than other Washington adults.

Hypertension

Time Trends

- In the 2015 BRFSS, the age-adjusted percent of Washington adults reporting ever having hypertension was 28% ($\pm 1\%$).
- Washington has a lower percent of adults reporting hypertension than the U.S.
- Self-reported hypertension among Washington adults slightly increased from 1990-2010. These data are not directly comparable with more recent data due to a change in survey methods. Data since 2011 show the percent to be relatively stable.

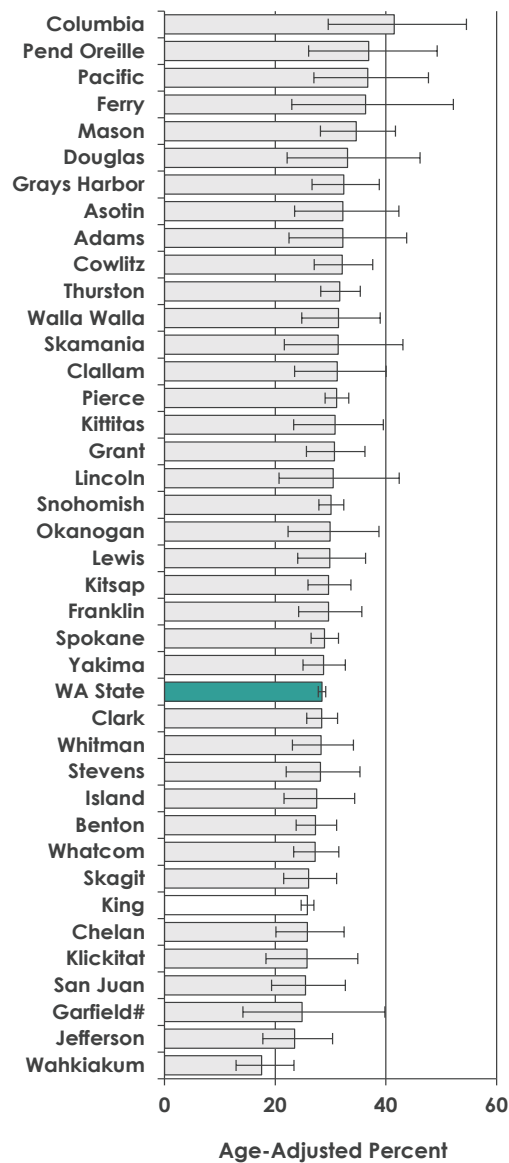
**Self-Reported Hypertension
Washington State & US
BRFSS, 1990-2015**



Geographic Variation

- In the 2013 and 2015 BRFSS combined, self-reported hypertension was lower in King County compared to the state.
- No county had a higher prevalence than the state.

Self-Reported Hypertension Washington Counties BRFSS, 2013 & 2015



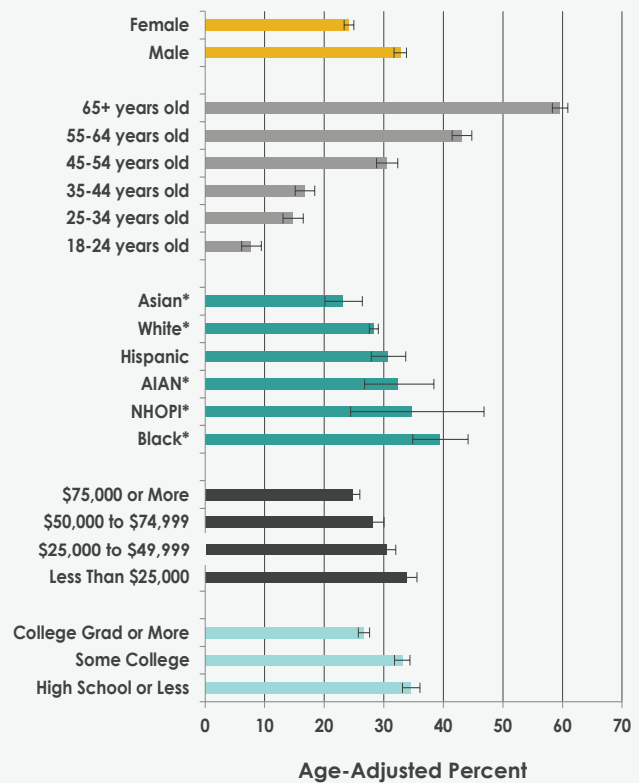
WA State
 Lower than WA State
 Same as WA State
 Higher than WA State

#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2013 and 2015 BRFSS combined, more males reported having hypertension than females.
- Self-reported hypertension was highest among adults 65 years and older.
- A higher percent of black adults reported hypertension than whites.
- Self-reported hypertension increased as levels of income and education decreased.

Self-Reported Hypertension Washington State BRFSS, 2013 & 2015



*Non-Hispanic (all races) | AIAN: American Indian/Alaska Native | NHOPI: Native Hawaiian/Other Pacific Islander

How is Washington addressing coronary heart disease & hypertension?

DOH and its partners are working to prevent heart disease by addressing many of the modifiable risk factors including high blood pressure; using tobacco or being exposed to secondhand smoke; diabetes, prediabetes, or metabolic syndrome; high cholesterol; being overweight or obese; and lack of physical activity. This is being achieved by implementing the [Plan for Improving Population Health](#) based on the [Prevention Framework](#); aligning with the federal public-private [Million Hearts](#) partnership to prevent one million cardiovascular events by 2022; and efforts to implement the [2014 Washington State Plan for Healthy Communities](#). The overarching goals of the plan are:

- Increasing the number of Washingtonians who are healthy at every stage of life

Strategies include:

- Increasing access to safe and affordable physical activity where people learn, live, play, work and worship.
- Reducing tobacco and alcohol advertising, reducing promotions and product placement, and enforcing youth access laws for these products.
- Increasing the number of places that protect employees, customers, patrons and others from secondhand smoke.
- Increasing access to healthy foods and beverages where people learn, live, play, work and worship.

- Achieving health equity by eliminating health disparities

Strategies include:

- Developing new assessments and systems, so DOH can determine the need for systems to track progress of healthy communities' activities, with a focus on data needed to identify health disparities as well as successful efforts to achieve health equity.

- Using data to monitor population health.
 - Evaluating interventions, programs, and activities for their impact on health equity.
 - Obtaining and prioritizing sustainable funding.
 - Increasing the number of community-based organizations—including local health jurisdictions, tribal health services, nongovernmental organizations and state agencies—providing population-based primary prevention services.
 - Supporting linkage of clinical and community prevention efforts to mobilize services, resources, and self-management programs in community-based organizations that serve economically and socially disadvantaged populations.
 - Investing resources to build strong and trusting relationships with communities.
- Working to improve emergency cardiac care by increasing the number of people who obtain the correct treatment after a cardiac event.

To achieve this goal, some important strategies were identified to improve the effective delivery and use of clinical and other preventive services to prevent disease, detect disease early, reduce or eliminate risk factors, and mitigate or manage complications.

- Enhance and maintain health systems to increase timely access to preventive care, screening and treatment.
- Increase public and health professional awareness of the importance of screening and follow-up.
- Promote and provide support to build capacity and availability of healthcare, education, resources and services.

- Offering in-person blood pressure training to individuals representing a variety of organizations (i.e., community-based organizations, Community Health Workers, Health Ministers, and Community Health Representatives), who work within diverse communities, through funding from federal cooperative agreements. This 2.5-hour interactive hands-on, in-person blood pressure training uses automated monitoring devices. This training provides key health messaging about measuring blood pressure accurately, and the importance of sharing the measurements with primary care using paper or electronic tracking methods. Training participants increases their health literacy regarding the meaning of blood pressure readings, and their relationship to heart disease and stroke risk. Participants who complete the training promote control and management of blood pressure in their communities.
- Making a suite of materials available to health systems, clinics and clinical team members to support accurate and consistent blood pressure self-management in English and five additional languages.

See also [Tobacco & Vapor Product Use](#), [Binge Drinking & Excess Alcohol Use](#), [Physical Activity, Fruit & Vegetable Intake](#), and [Diabetes & Prediabetes](#)

Evidence-based interventions to address coronary heart disease and hypertension are available in the [CDC Community Guide](#).

Technical Notes

Confidence Intervals: Definition and examples are described in [Appendix C](#)

Percent Living in Poverty and Percent College Graduates: Definition and use is described in [Appendix C](#)

Race and Ethnicity: Classification described in [Appendix C](#)

Relative Standard Error: Definition and how it was used is described in [Appendix C](#)