



The Burden of Cardiovascular Disease in California

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Sodium Conference

Sacramento, California

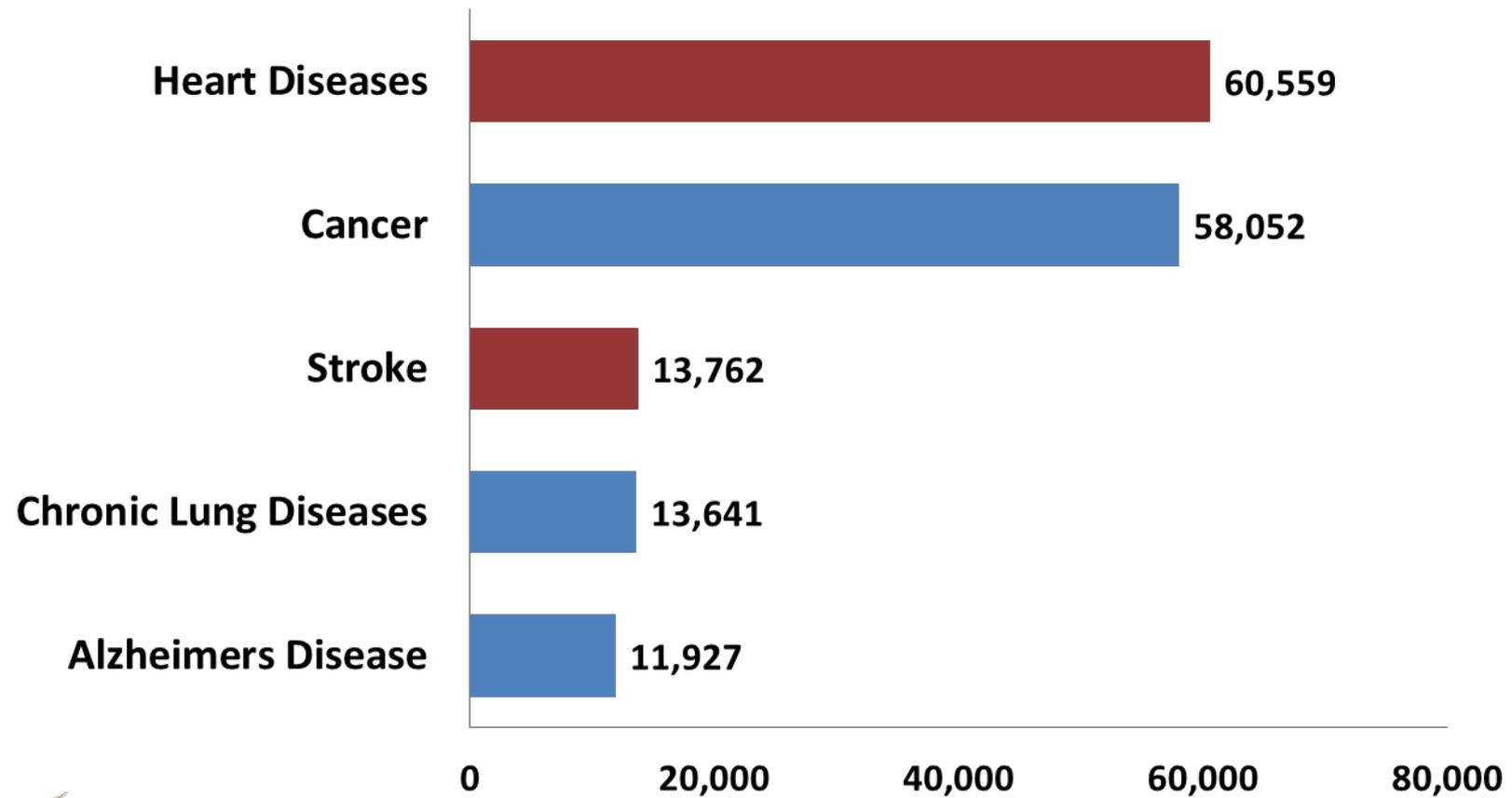
September 29, 2015



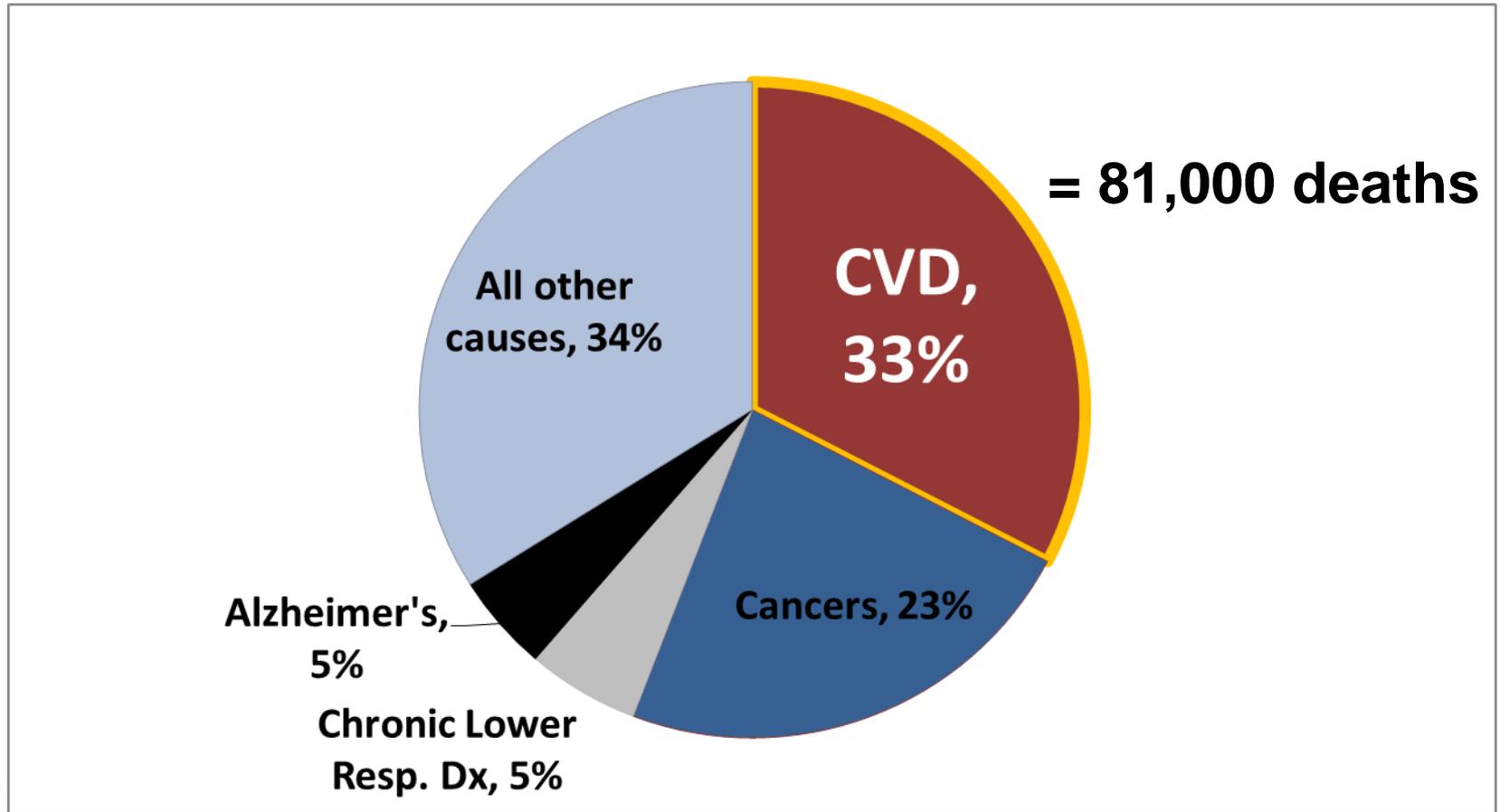
Overview

- Cardiovascular Disease – leading cause of death and health care costs
- High Blood Pressure - prevalence
- Coronary Heart Disease - mortality
- Stroke - mortality

Top Five Leading Causes of Death, California, 2013



Cardiovascular Disease (CVD) Deaths California, 2013



Cardiovascular Disease (CVD) Prevalence in California

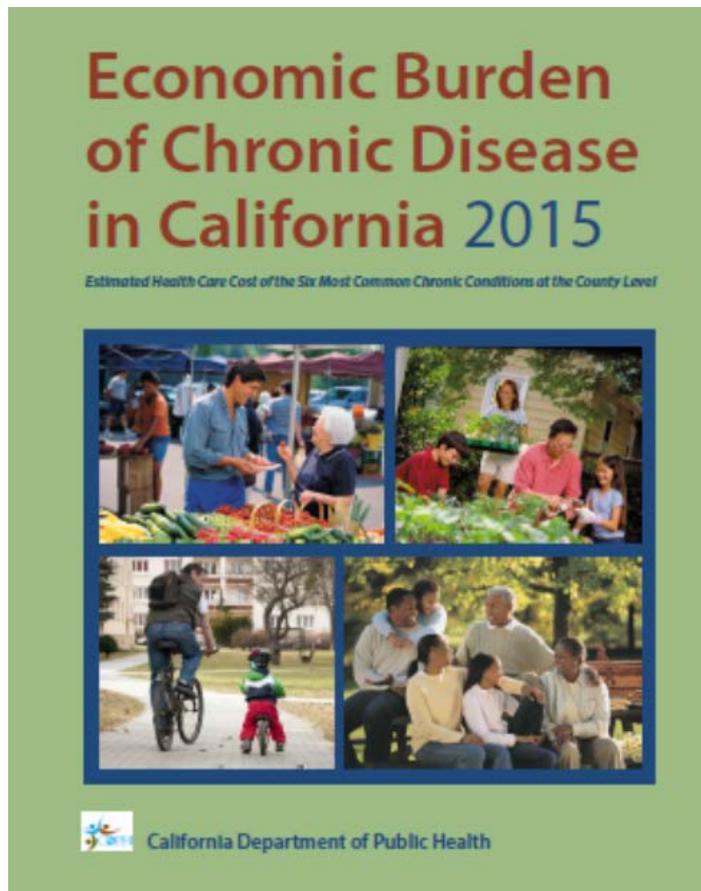
30% - nearly one out of three - of Californians report having at least one form of CVD:

- High blood pressure
- Heart Disease
- Heart Failure
- Stroke

Represents 8.3 million California adults

CHIS 2011-2012

Cardiovascular Disease in California – Economic Impact



CVD Healthcare 2010 cost
\$37.5 Billion

16% of total health care costs in the state

Nearly 3 times greater cost than all cancers
(\$13.9 billion)

<http://www.cdph.ca.gov/programs/cdcb/Documents/CDPHEconomicBurdenCD2015California.pdf>

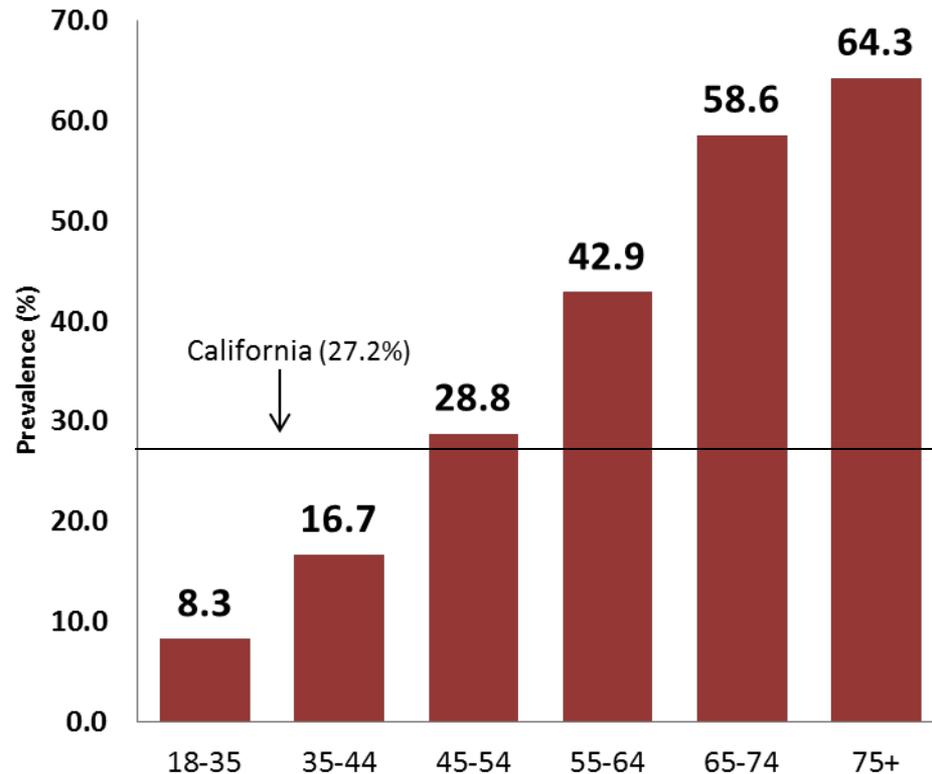
Major forms of CVD

CVD is not a single disease but a spectrum of diseases involving the heart and circulatory system

Most common forms are:

- Hypertension (high blood pressure)
- Coronary heart disease
- Stroke

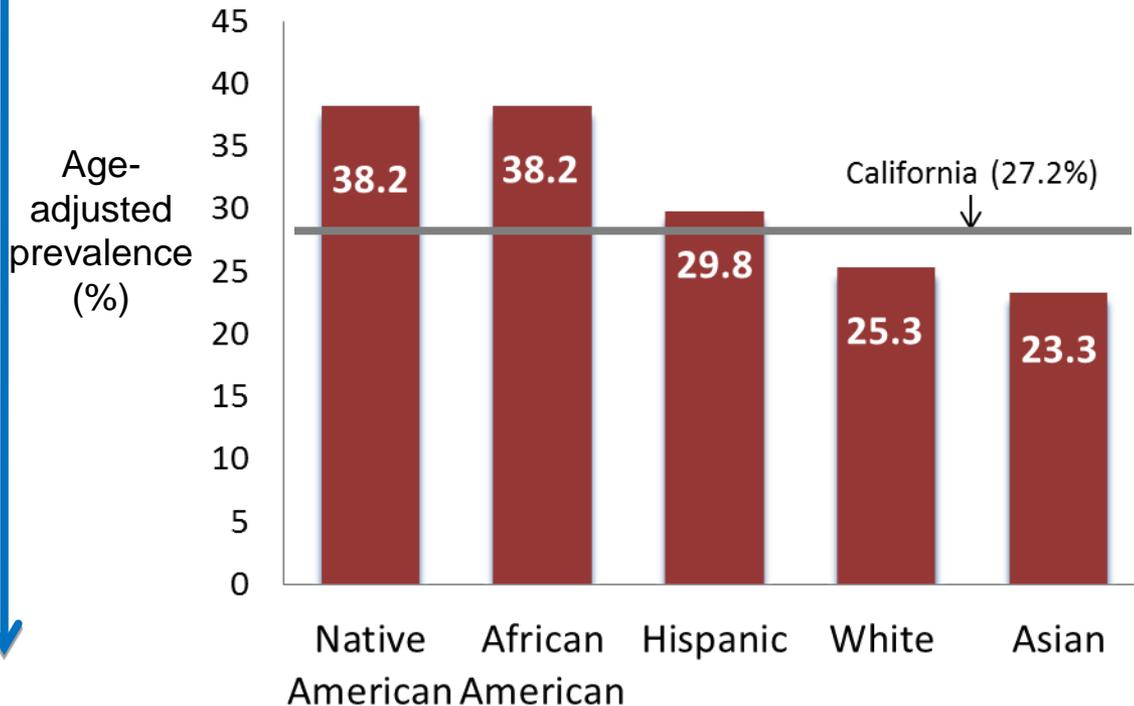
Hypertension Prevalence in California Adults, by Age Group, 2011-2012



- 27% of adults in CA (7.6 million)
- Nearly 2 out of 3 adults age 75 and up have it
- Self-reported data likely underestimates prevalence as nearly 17% of adults with HTN don't know they have it

Source: CHIS

Hypertension Prevalence in California Adults by Race/Ethnicity, 2012-2013

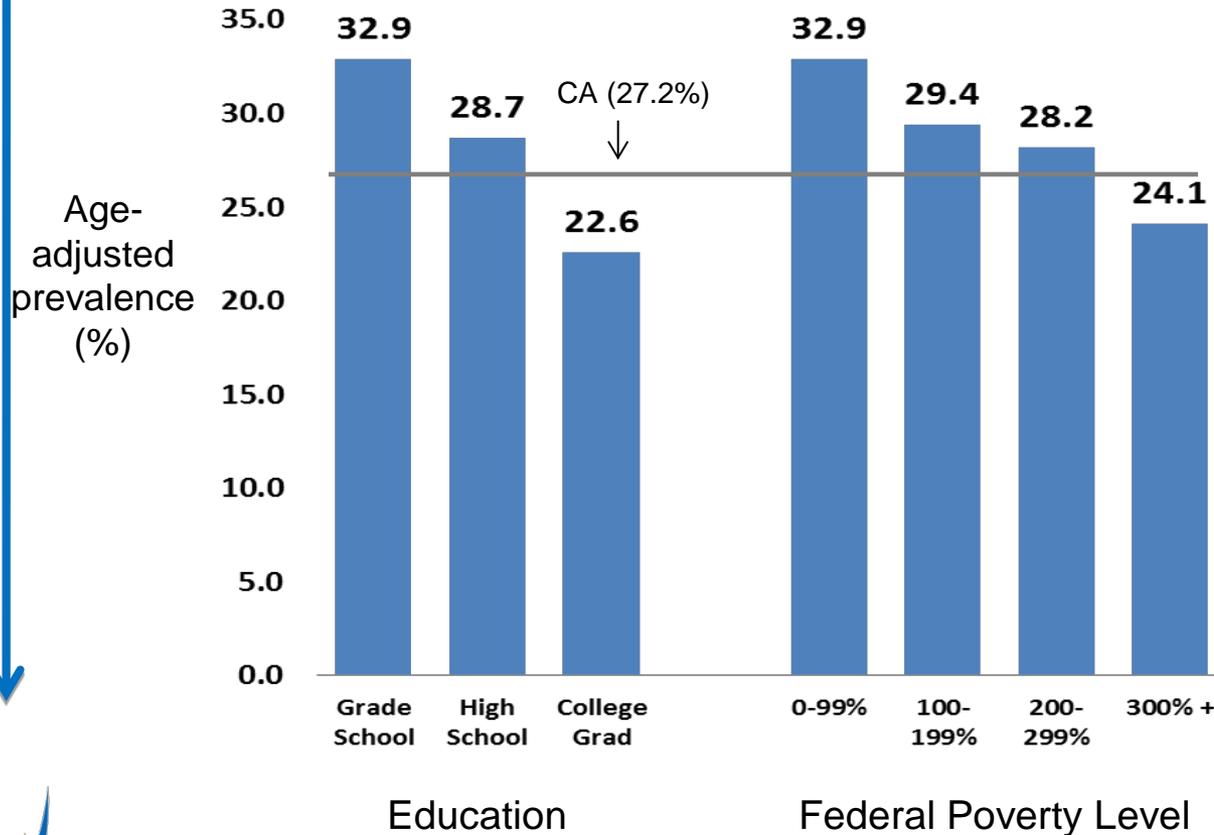


Highest prevalence among Native Americans and African Americans (both 38.2%)

Lowest among Asians (23.3%)

Source: CHIS

Hypertension Prevalence in California Adults by Education and Federal Poverty Level , 2012-2013



Higher prevalence with lower levels of education and income



Source: CHIS

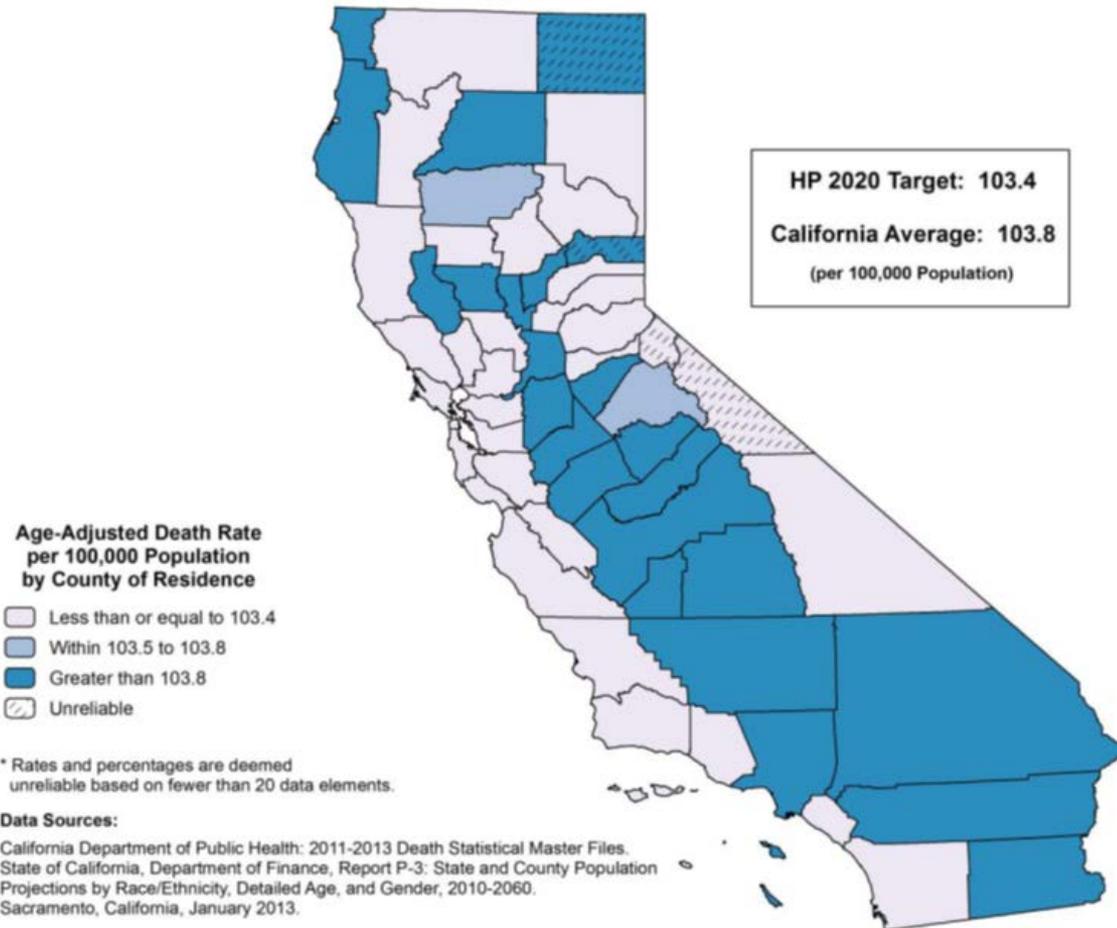
Coronary Heart Disease (CHD)

Narrowing of blood vessels in the heart due to plaque build-up restricts flow of blood and oxygen to the heart

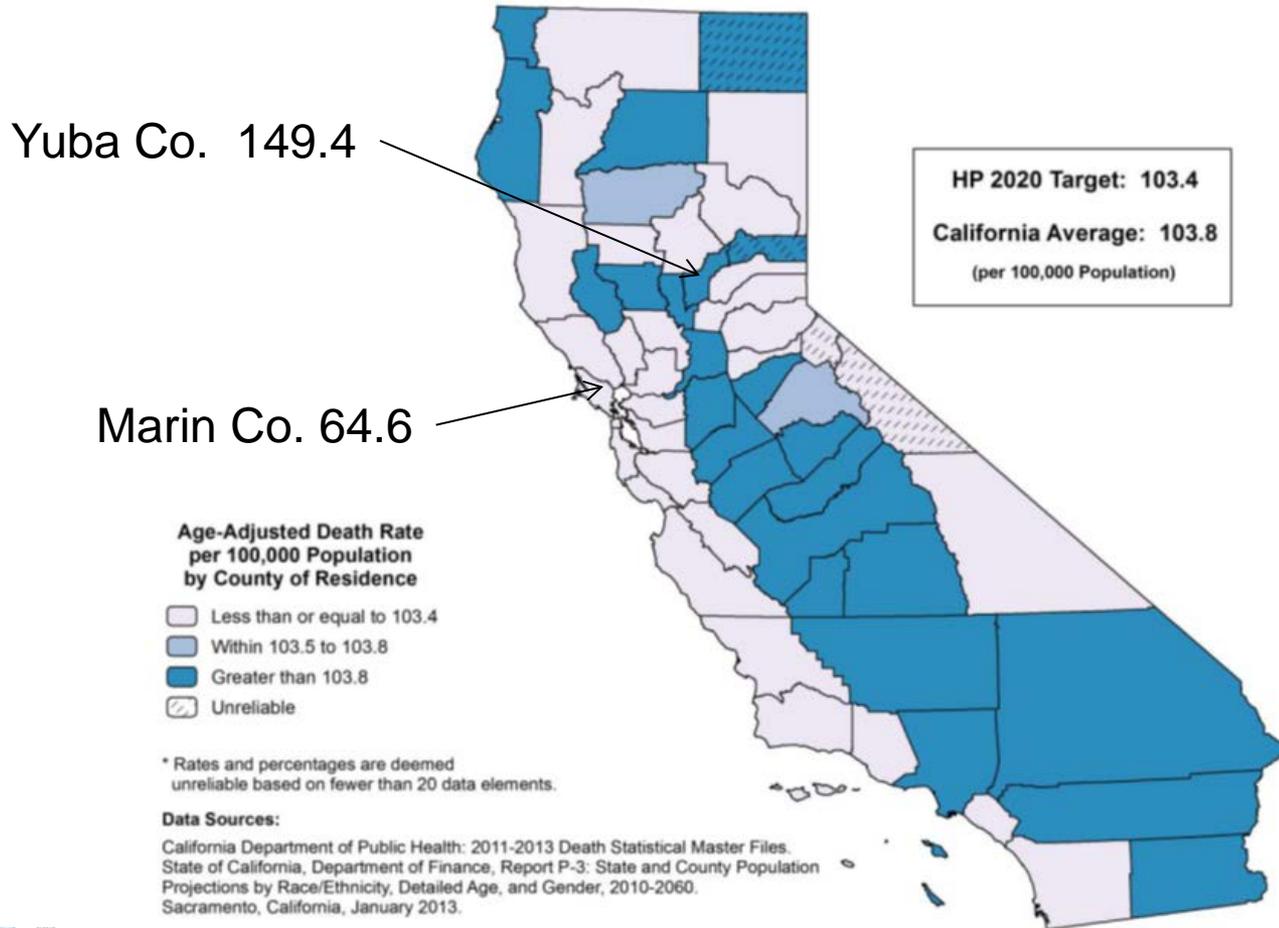
Results in angina (chest pain) and myocardial infarction (heart attack)

Nearly half of all CVD deaths are due to CHD
– over 39,000 deaths annually

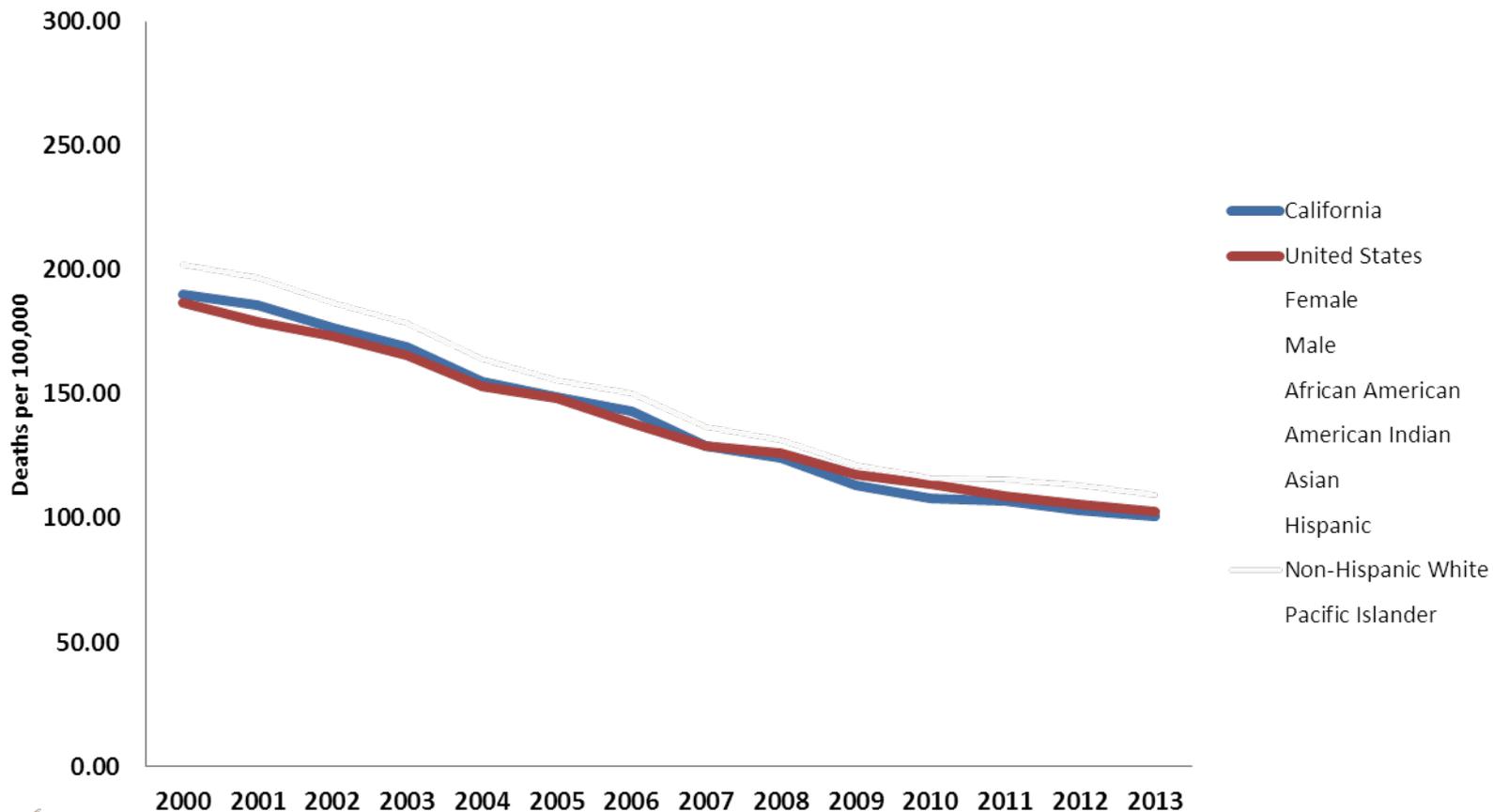
Deaths due to CHD, 2011-2013



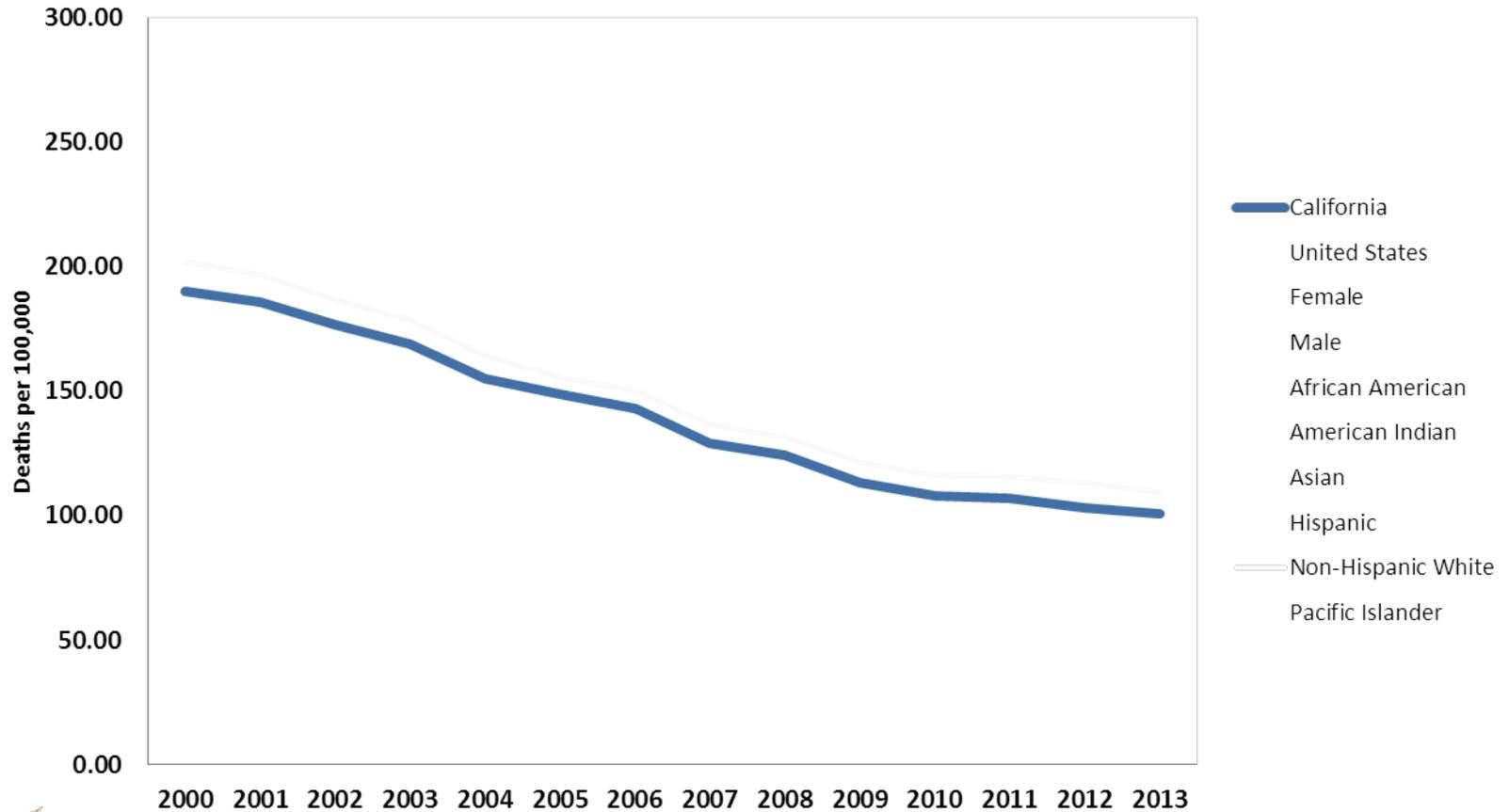
Deaths due to CHD, 2011-2013



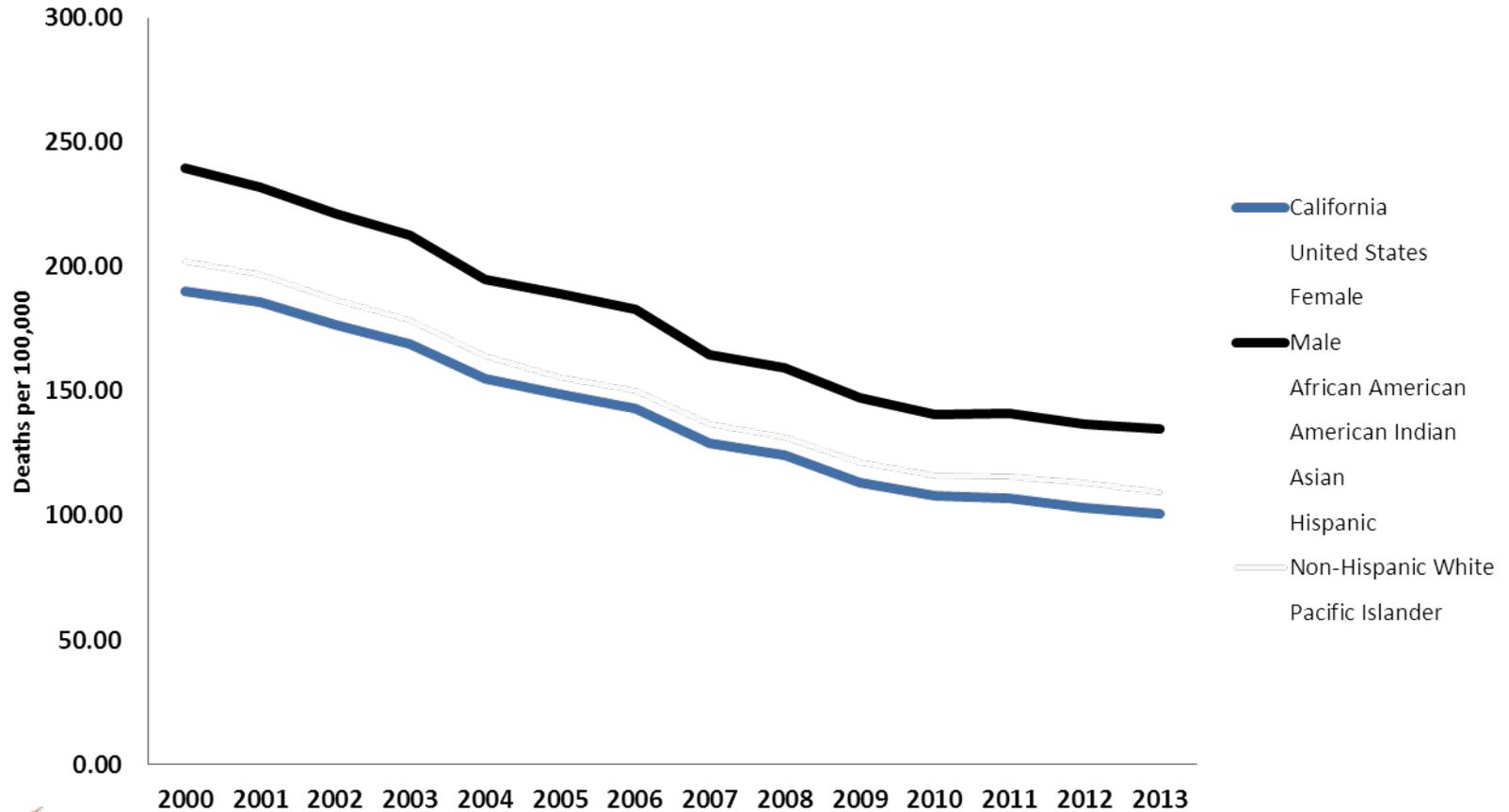
Age-adjusted CHD Mortality in California and US, 2000-2013



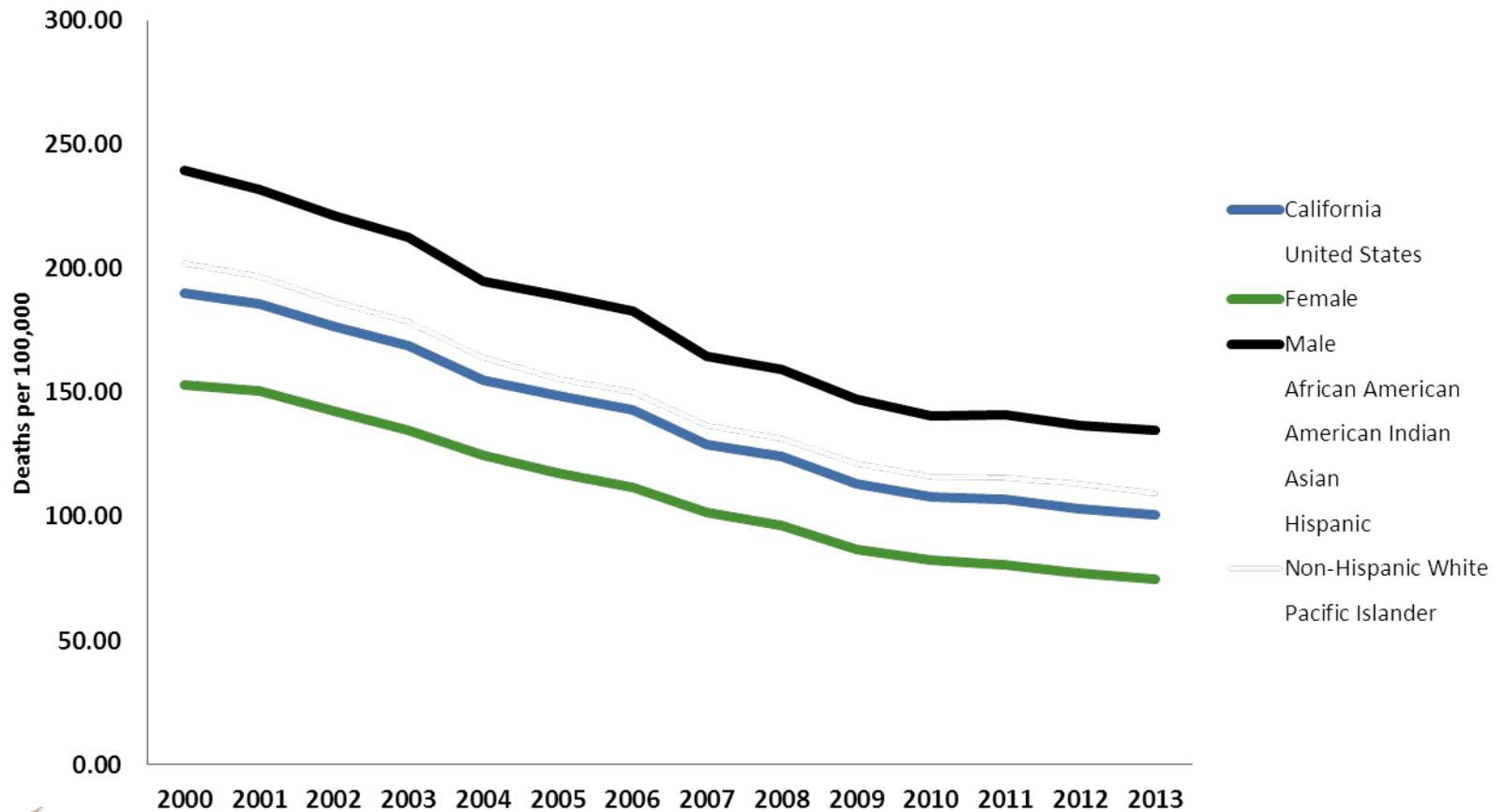
Age-adjusted CHD Mortality in California, by Gender, 2000-2013



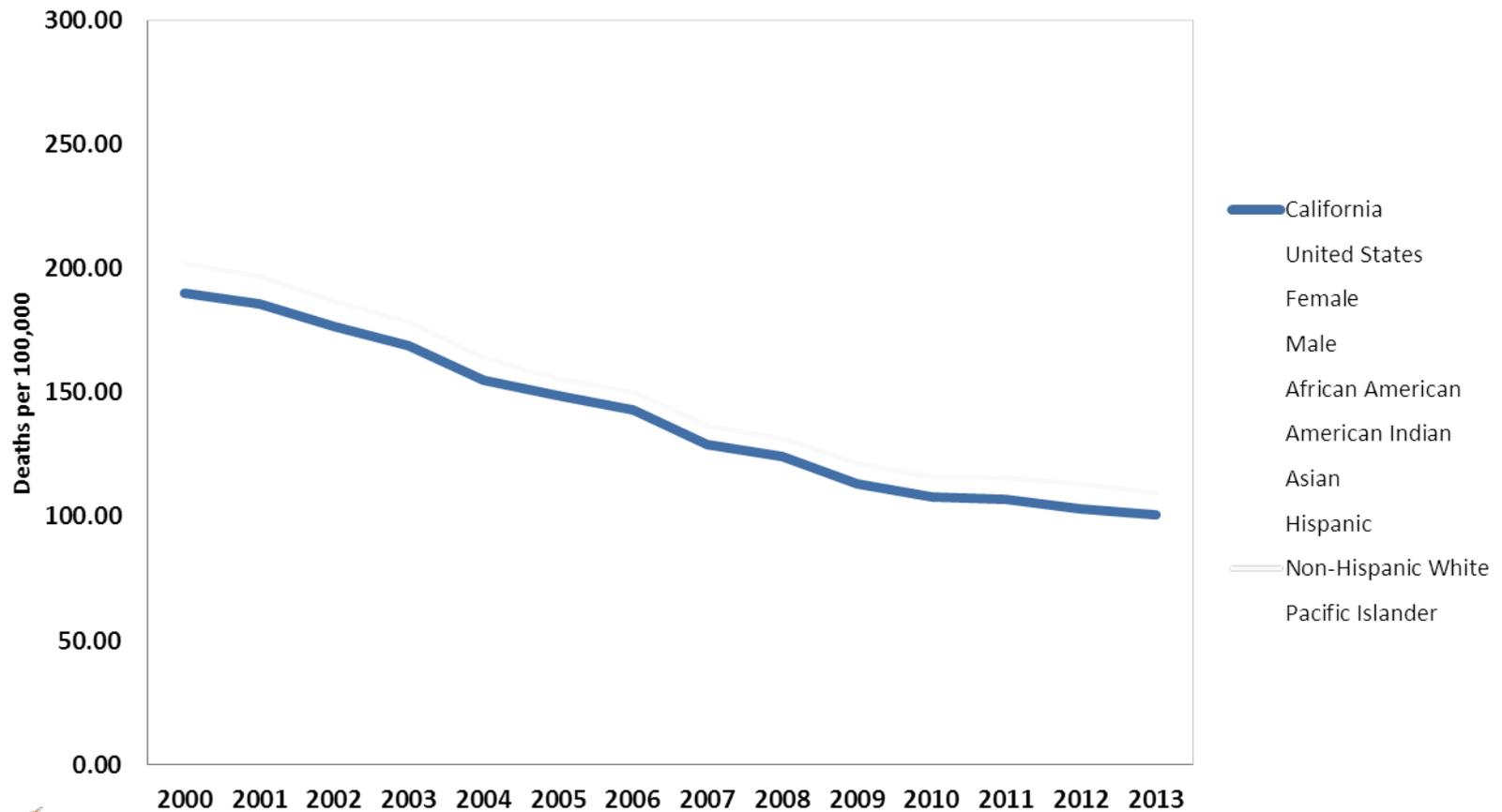
Age-adjusted CHD Mortality in California, by Gender, 2000-2013



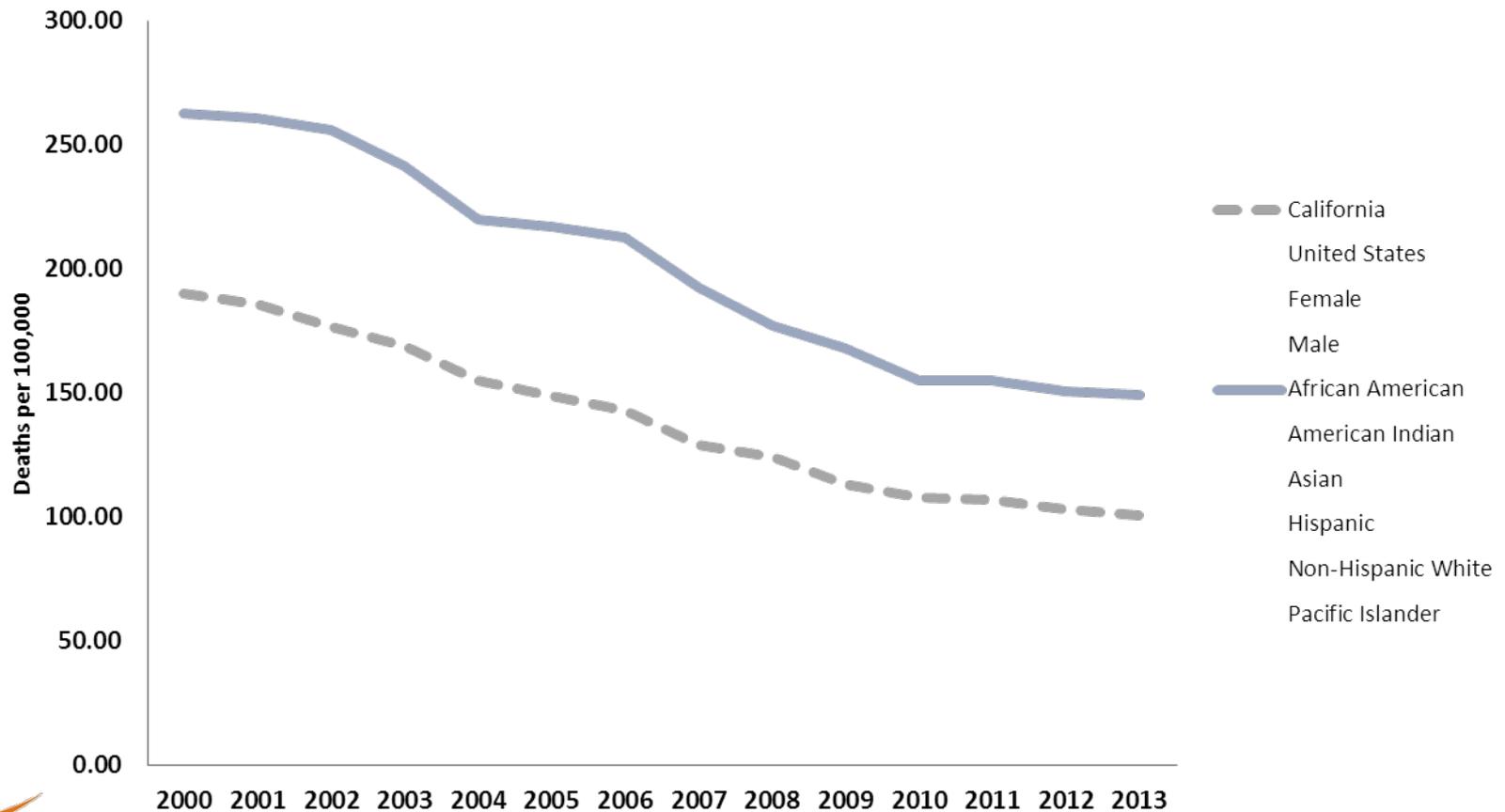
Age-adjusted CHD Mortality in California, by Gender, 2000-2013



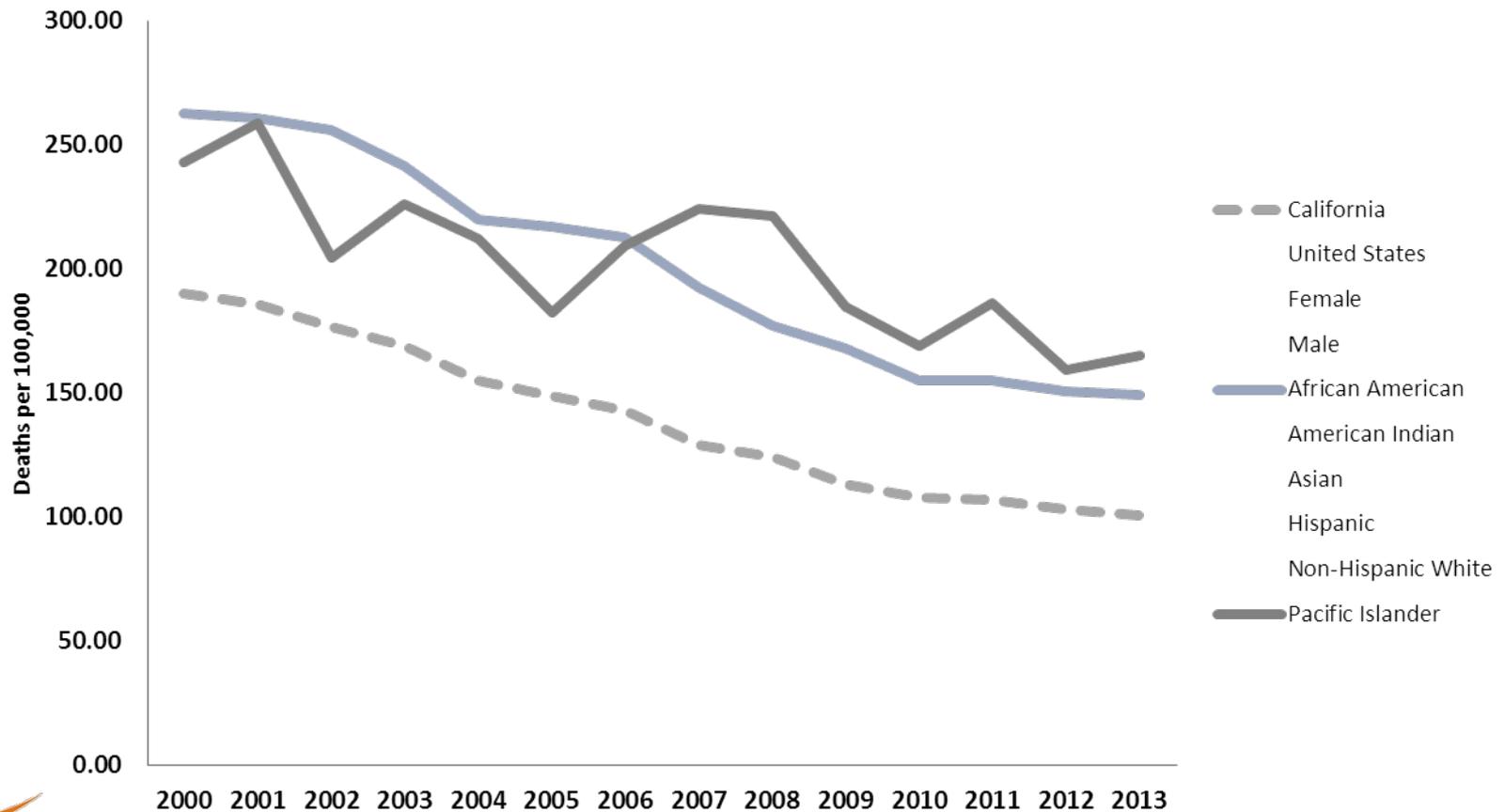
Age-adjusted CHD Mortality in California, race/ethnicity 2000-2013



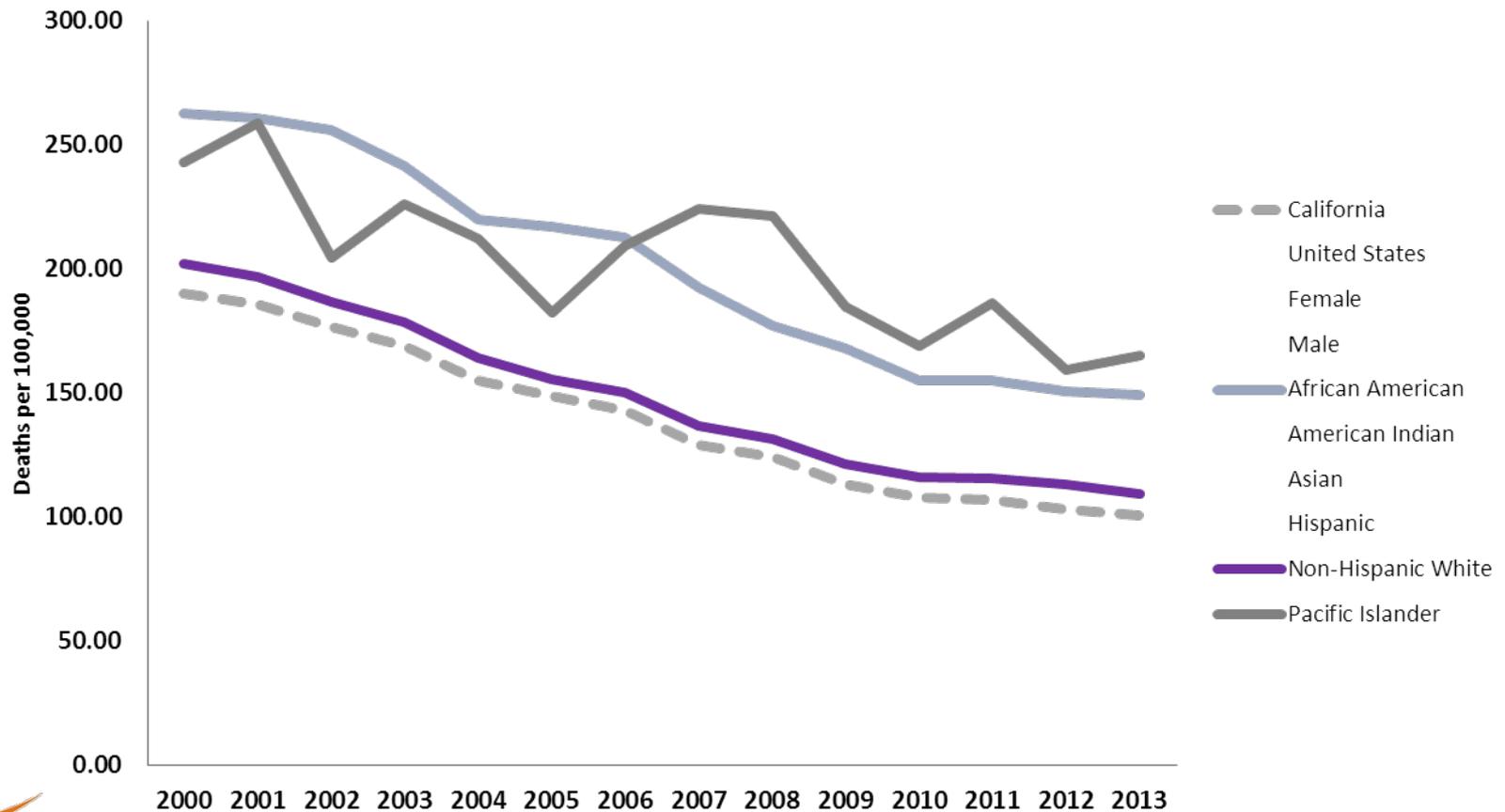
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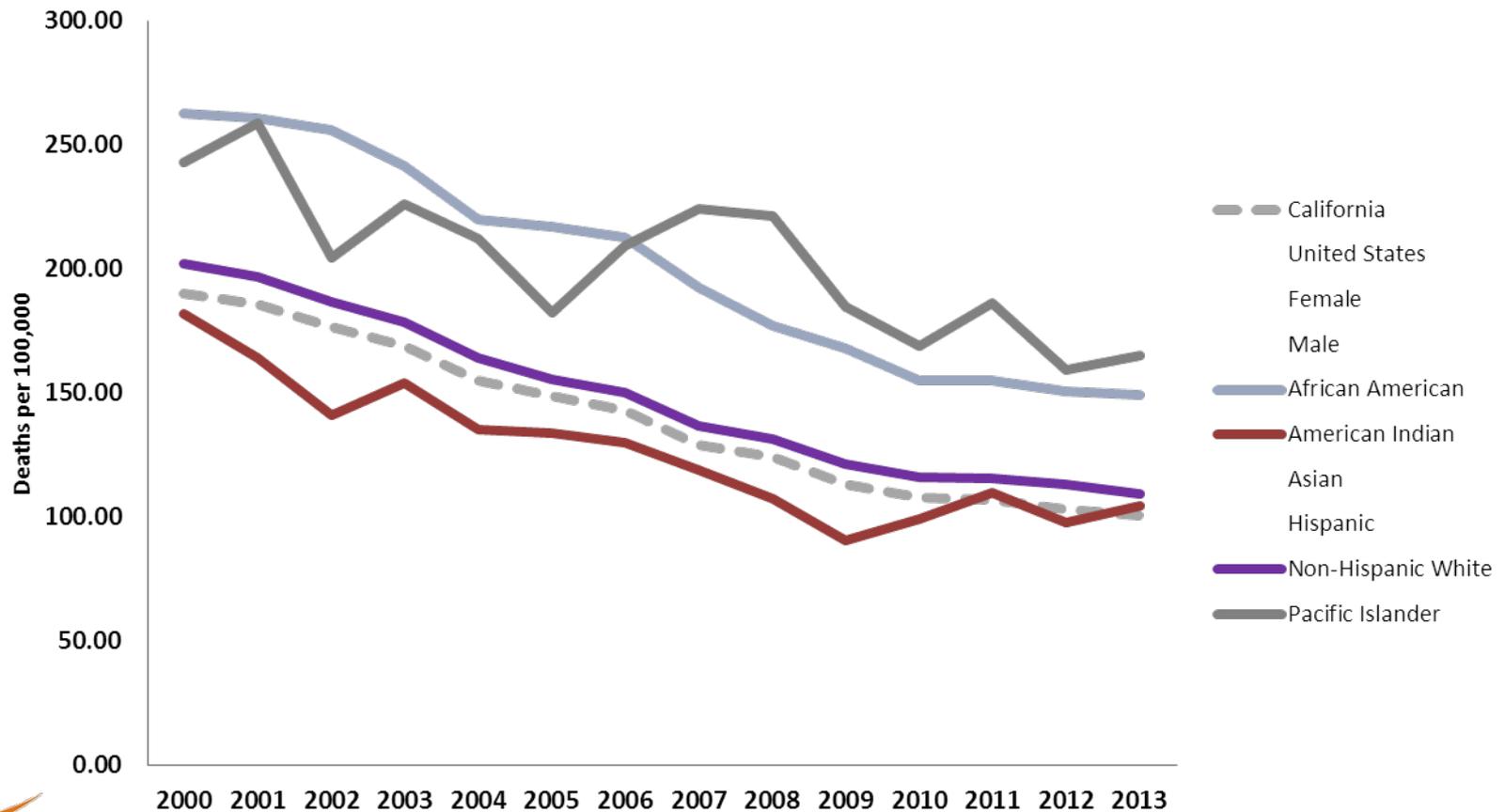
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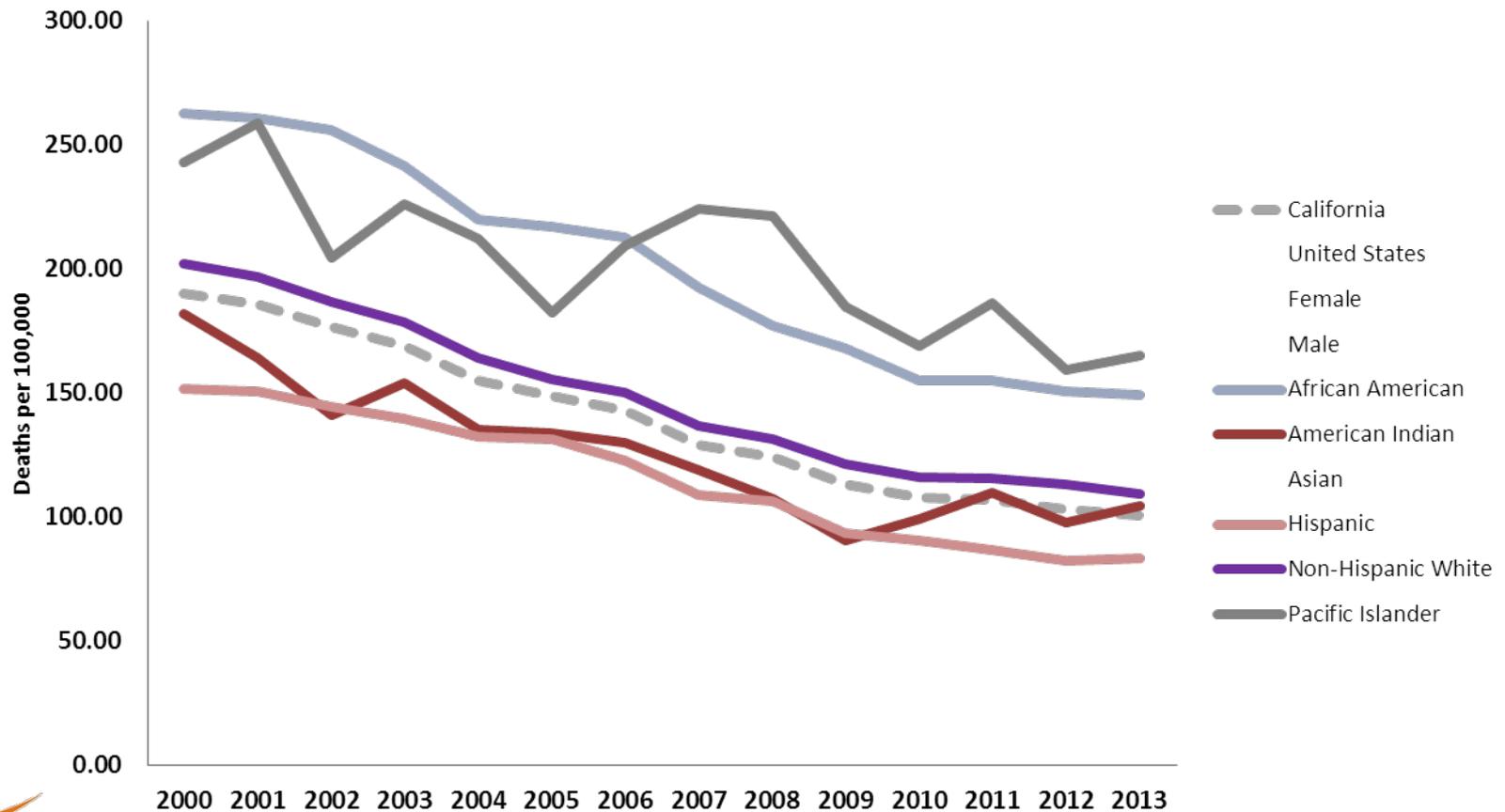
Age-adjusted CHD Mortality in California, race/ethnicity 2000-2013



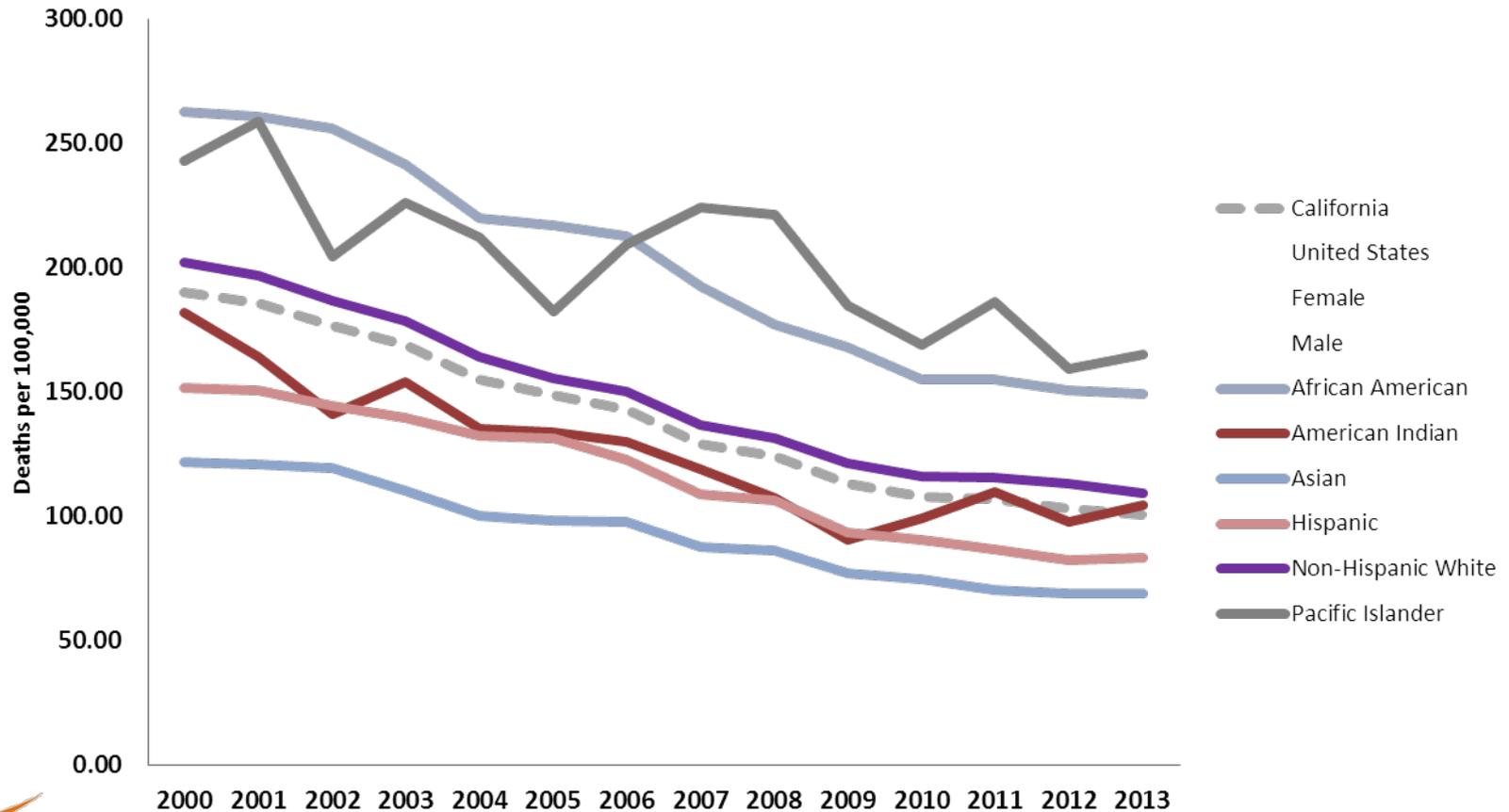
Age-adjusted CHD Mortality in California, race/ethnicity 2000-2013



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Stroke



A “brain attack” that occurs when blood flow to the brain is disrupted by a blockage (ischemic stroke) or ruptured blood vessel (hemorrhagic stroke)

Majority of strokes are ischemic (87%)

Nearly 25% of strokes are recurrent attacks

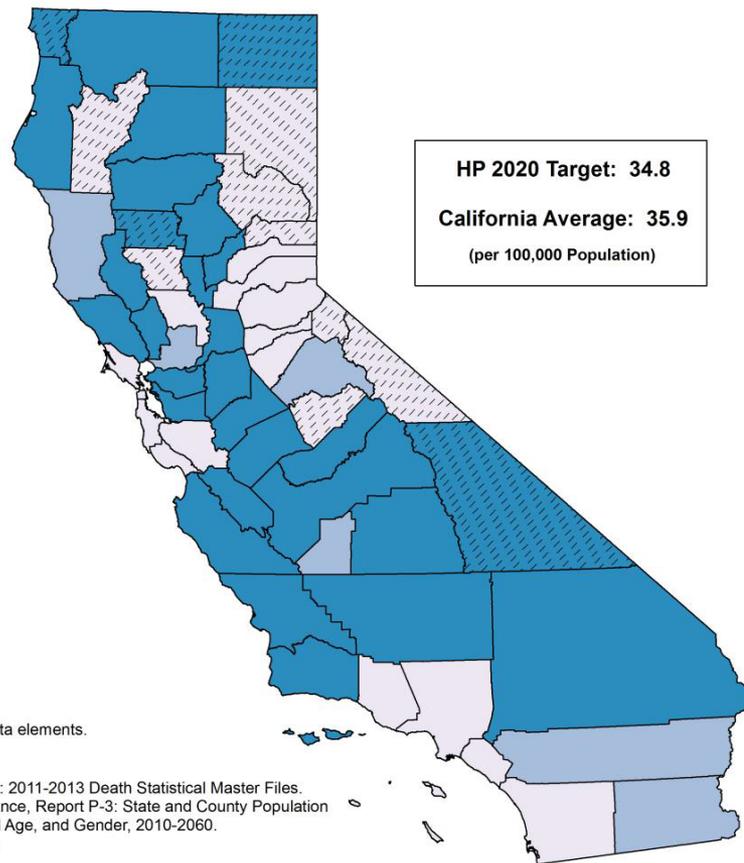
Hypertension is a strong determinant of risk

- 77% of stroke patients have BP >140/90

Stroke

- In 2013, the fifth leading cause of death nationally but third leading cause of death in California (after heart disease and cancer)
- Age-adjusted death rates are very similar
- Accounts for 1 out of every 20 deaths in California (13,700 deaths annually)

Deaths due to stroke, California, 2011-2013



Age-Adjusted Death Rate per 100,000 Population by County of Residence

- Less than or equal to 34.8
- Within 34.9 to 35.9
- Greater than 35.9
- Unreliable*

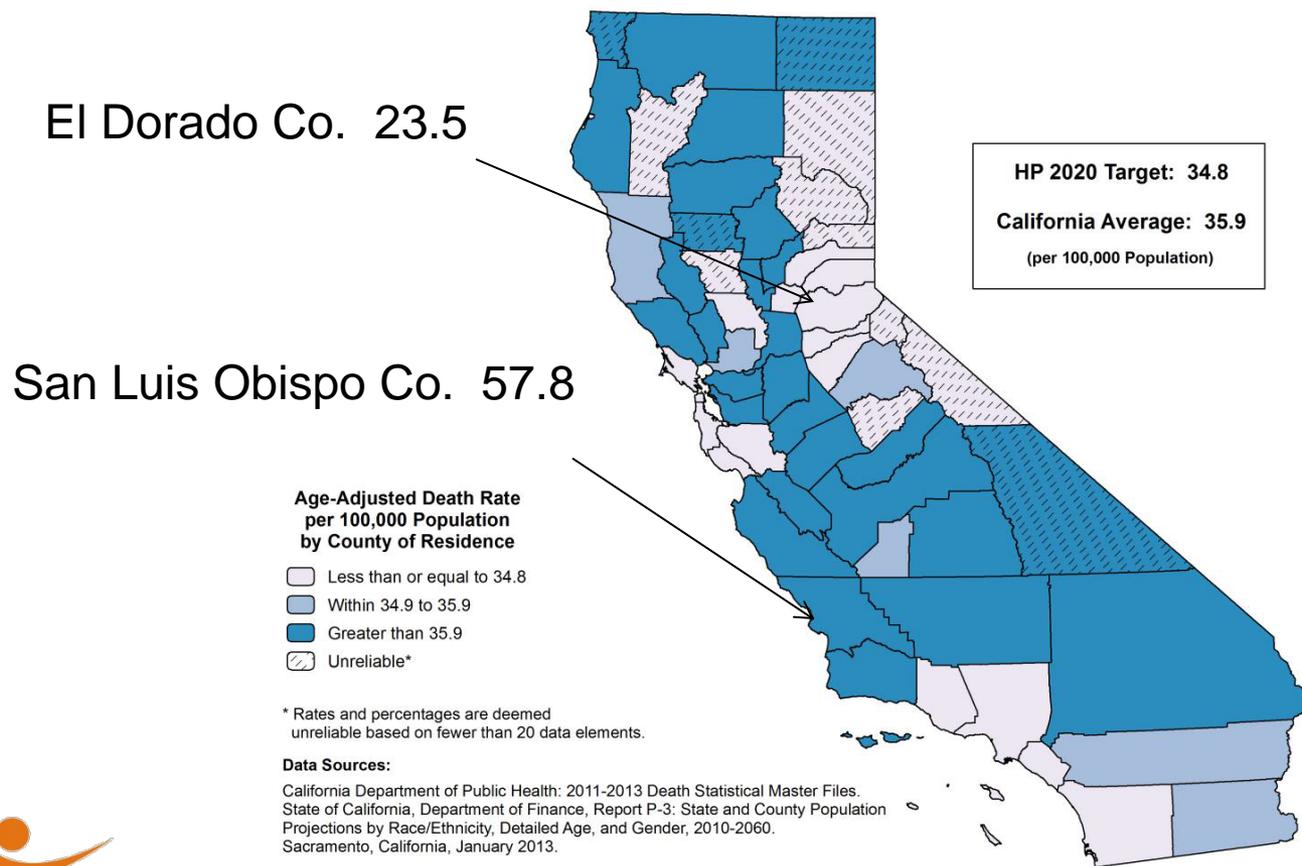
* Rates and percentages are deemed unreliable based on fewer than 20 data elements.

Data Sources:

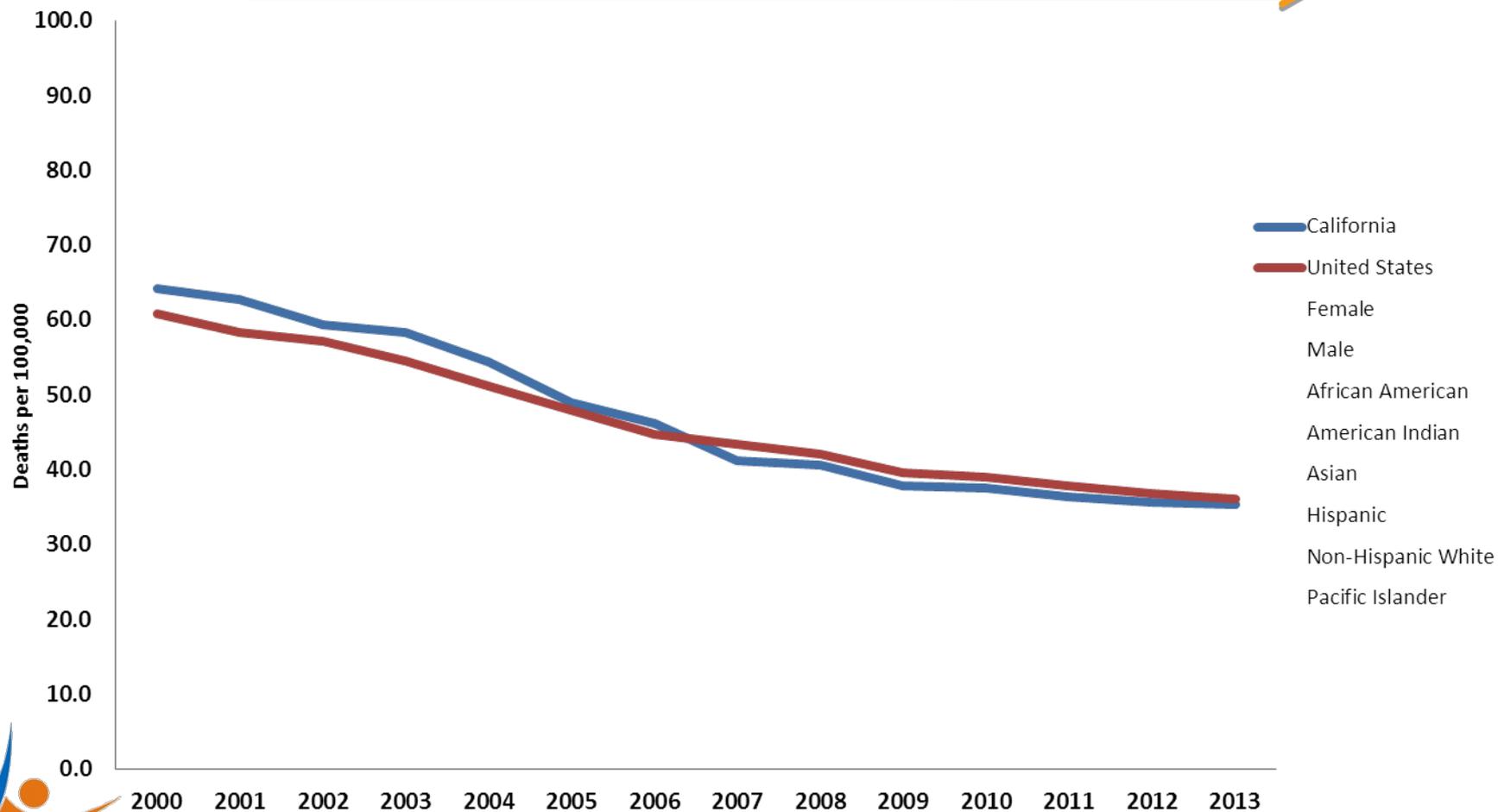
California Department of Public Health: 2011-2013 Death Statistical Master Files.
 State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060.
 Sacramento, California, January 2013.



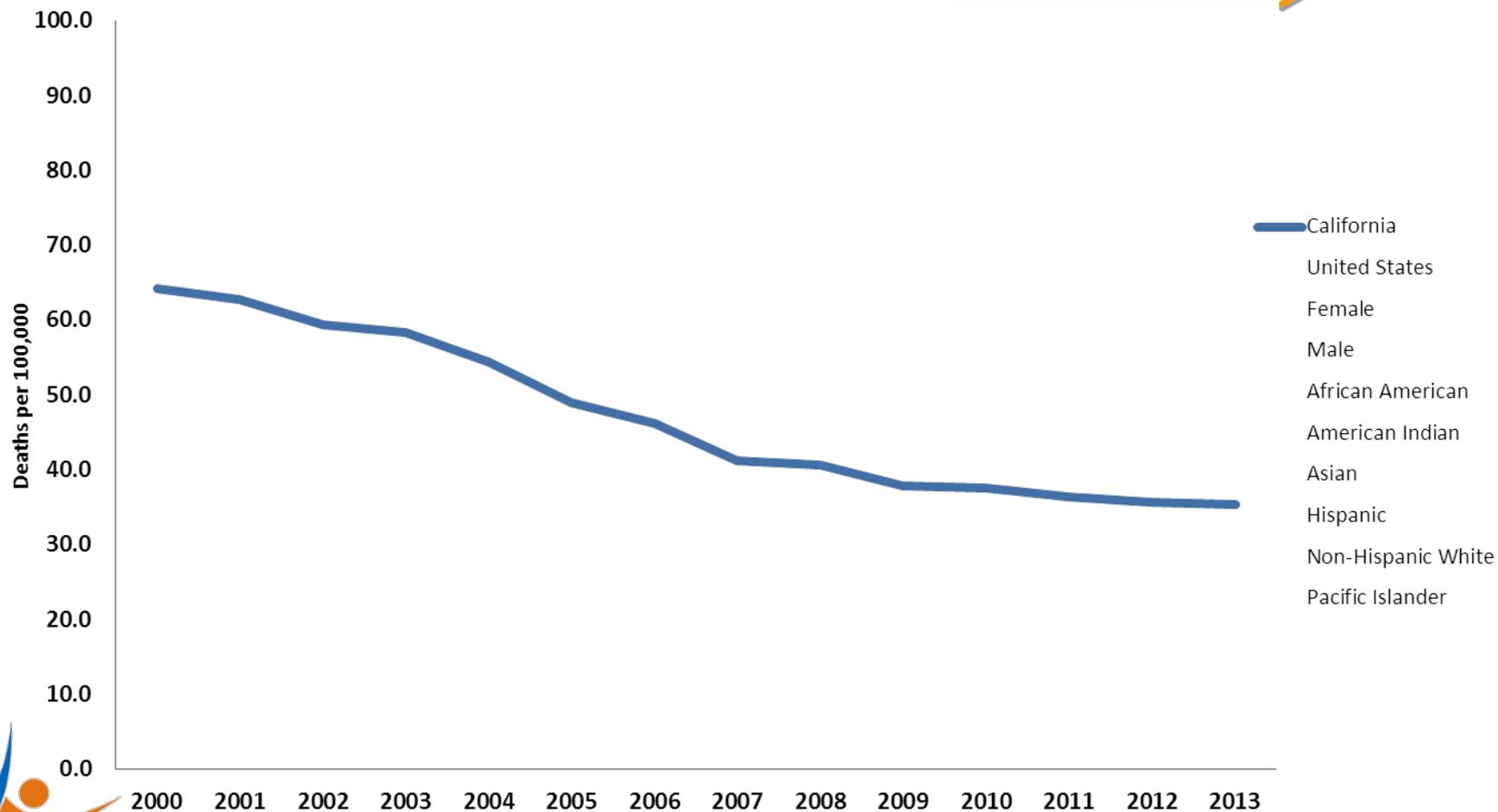
Deaths due to stroke, California, 2011-2013



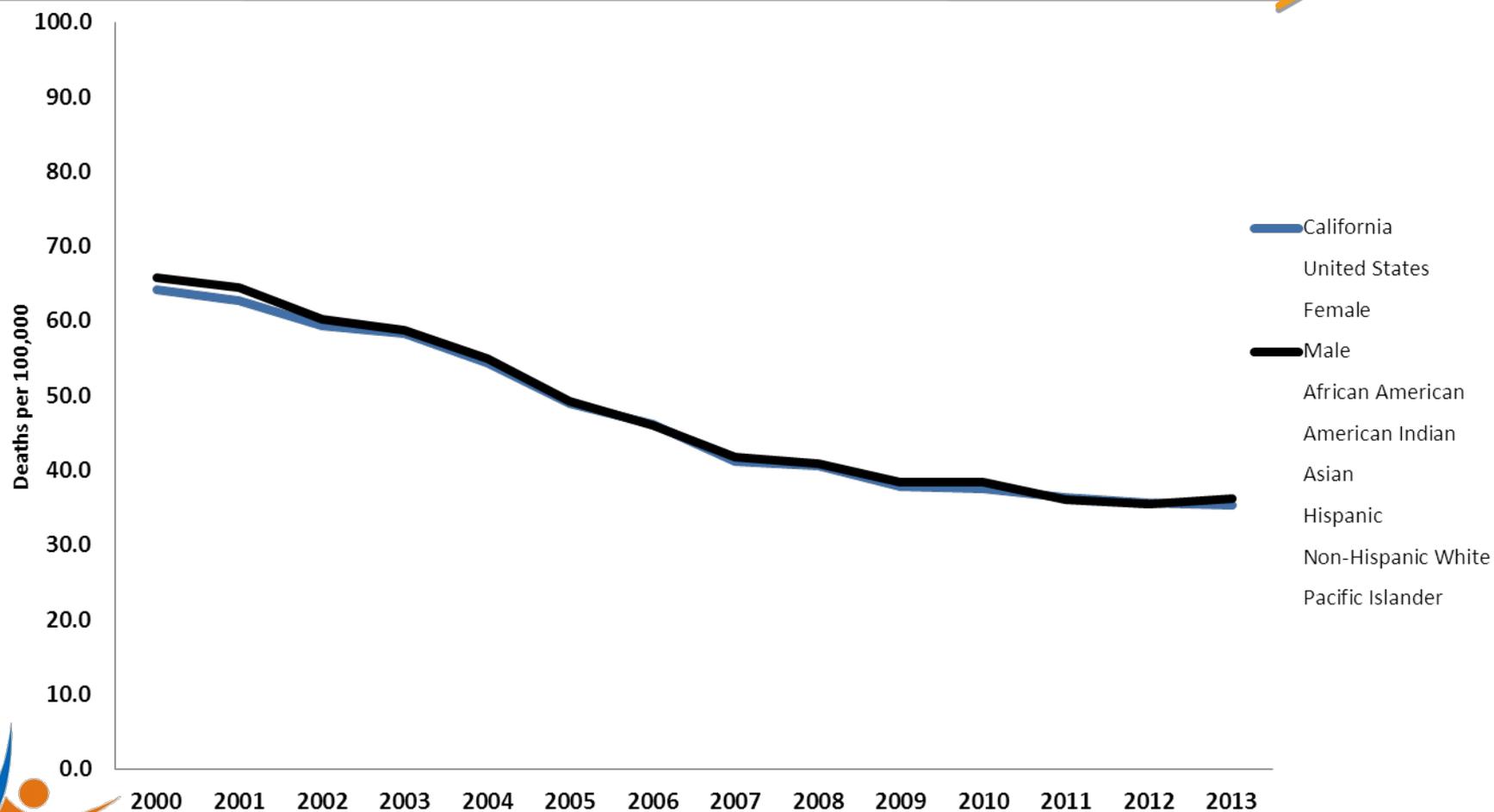
Age-Adjusted Stroke Mortality, CA vs. US, 2000-2013



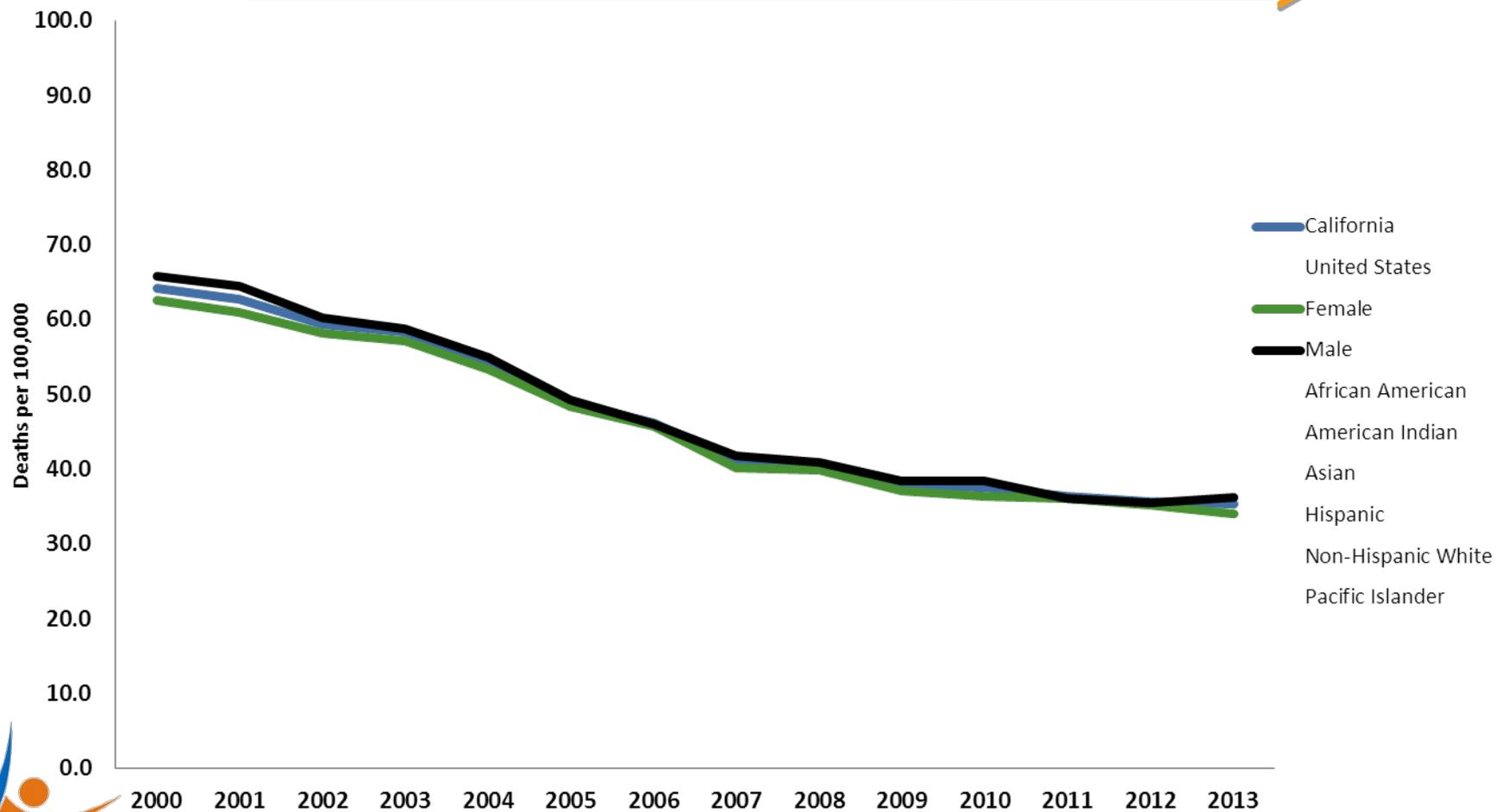
Age-Adjusted Stroke Mortality, by Gender, 2000-2013



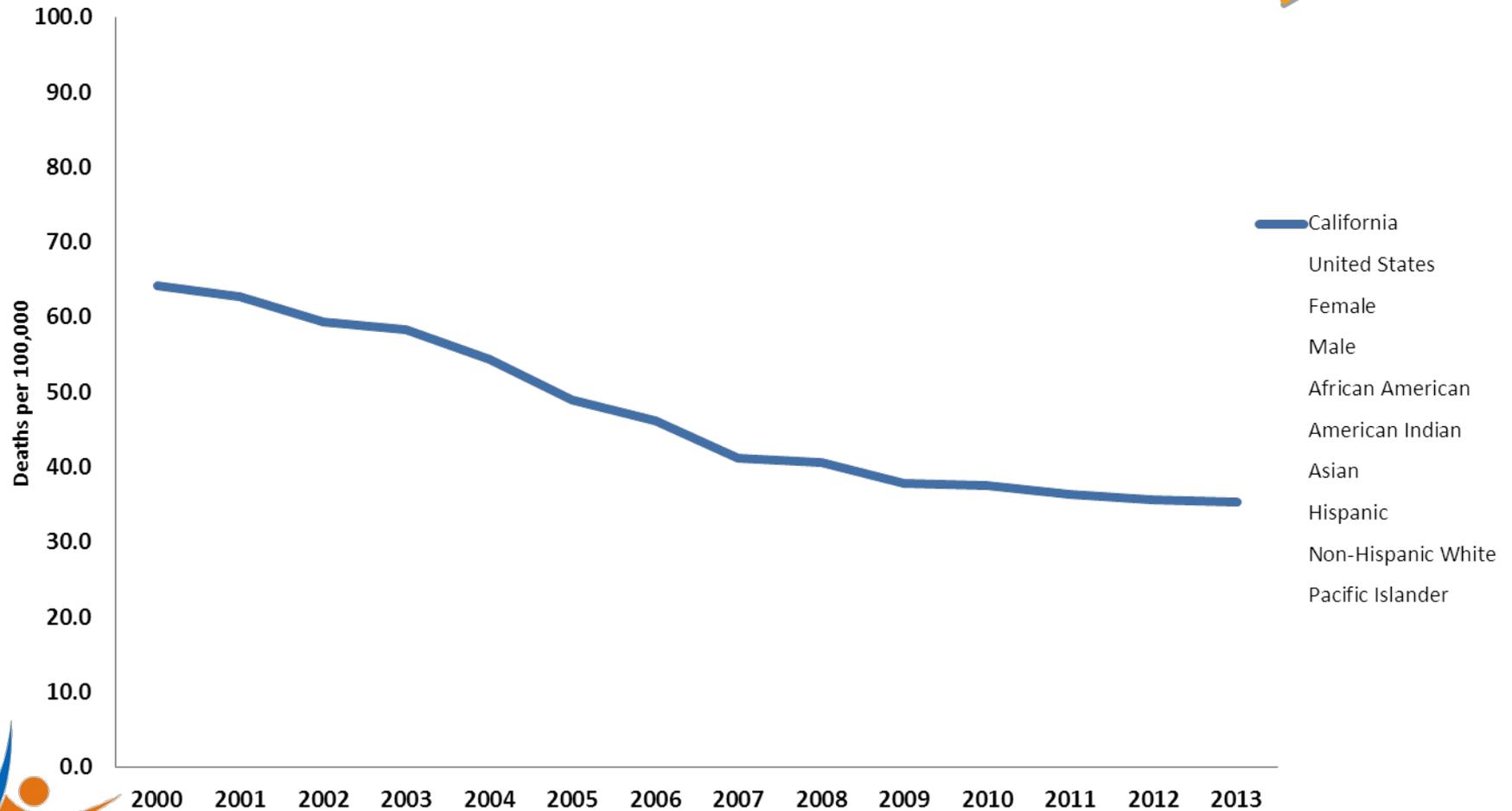
Age-Adjusted Stroke Mortality, by Gender, 2000-2013



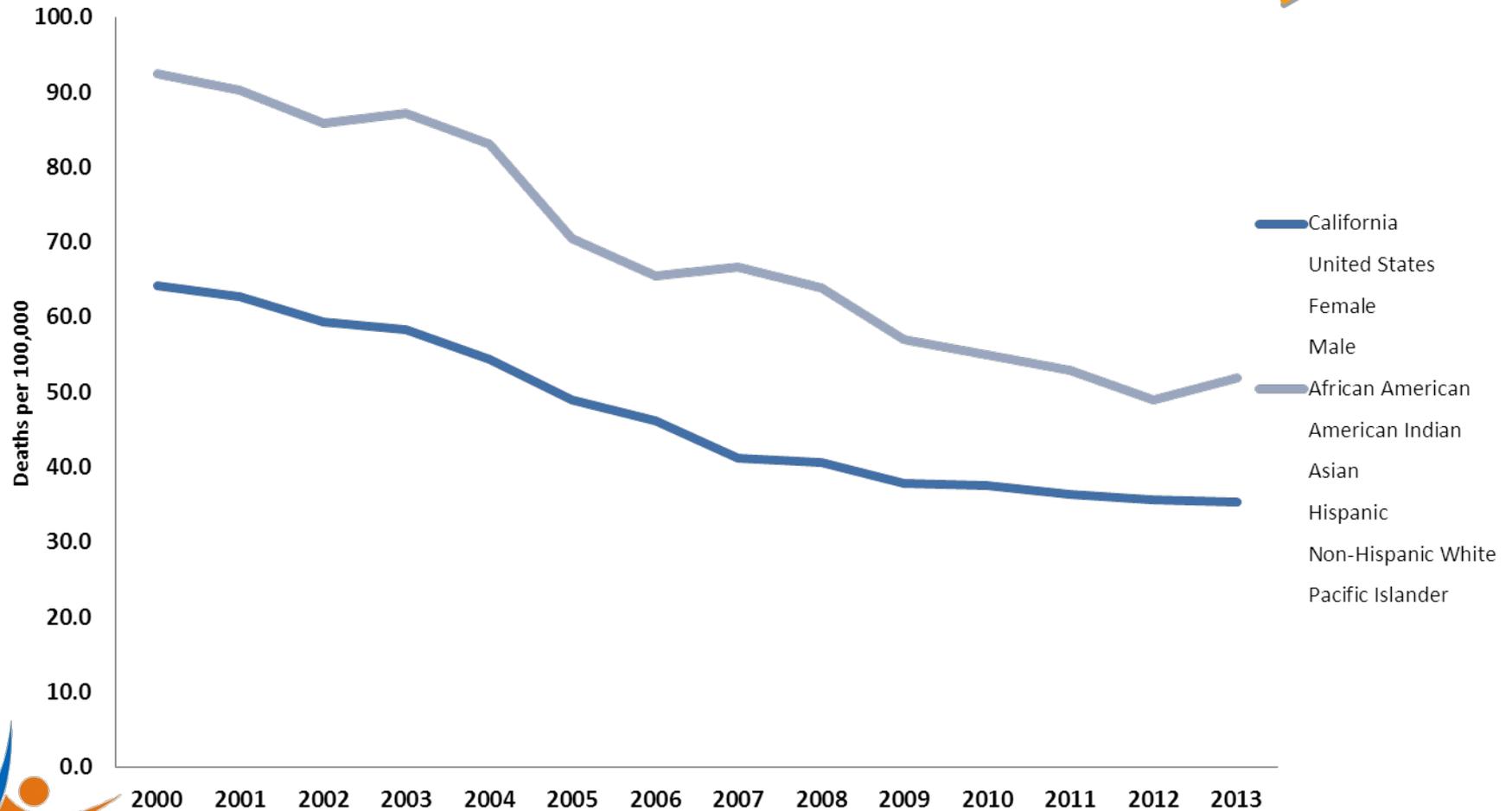
Age-Adjusted Stroke Mortality, by Gender, 2000-2013



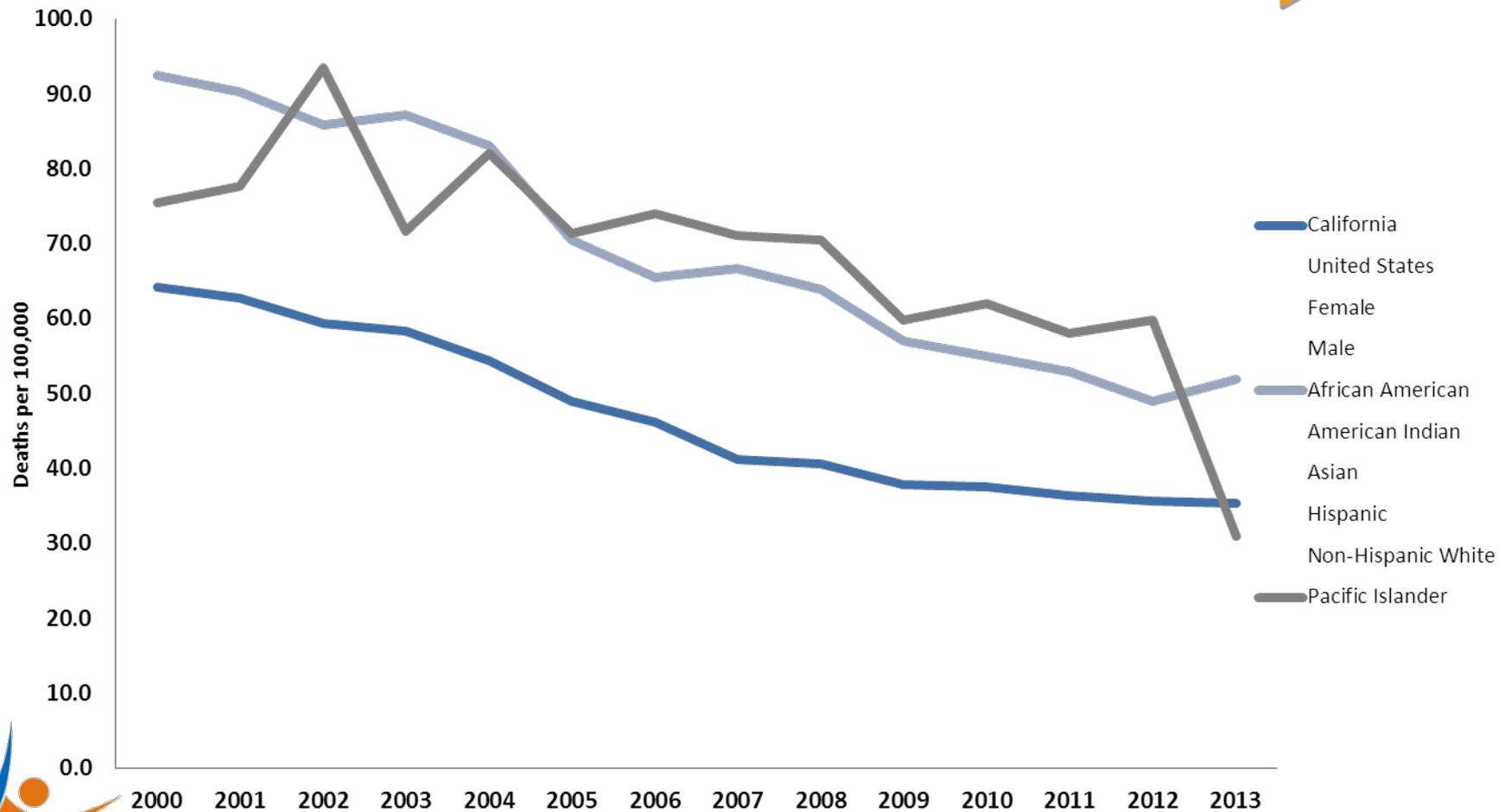
Age-Adjusted Stroke Mortality, by race/ethnicity, CA, 2000-2013



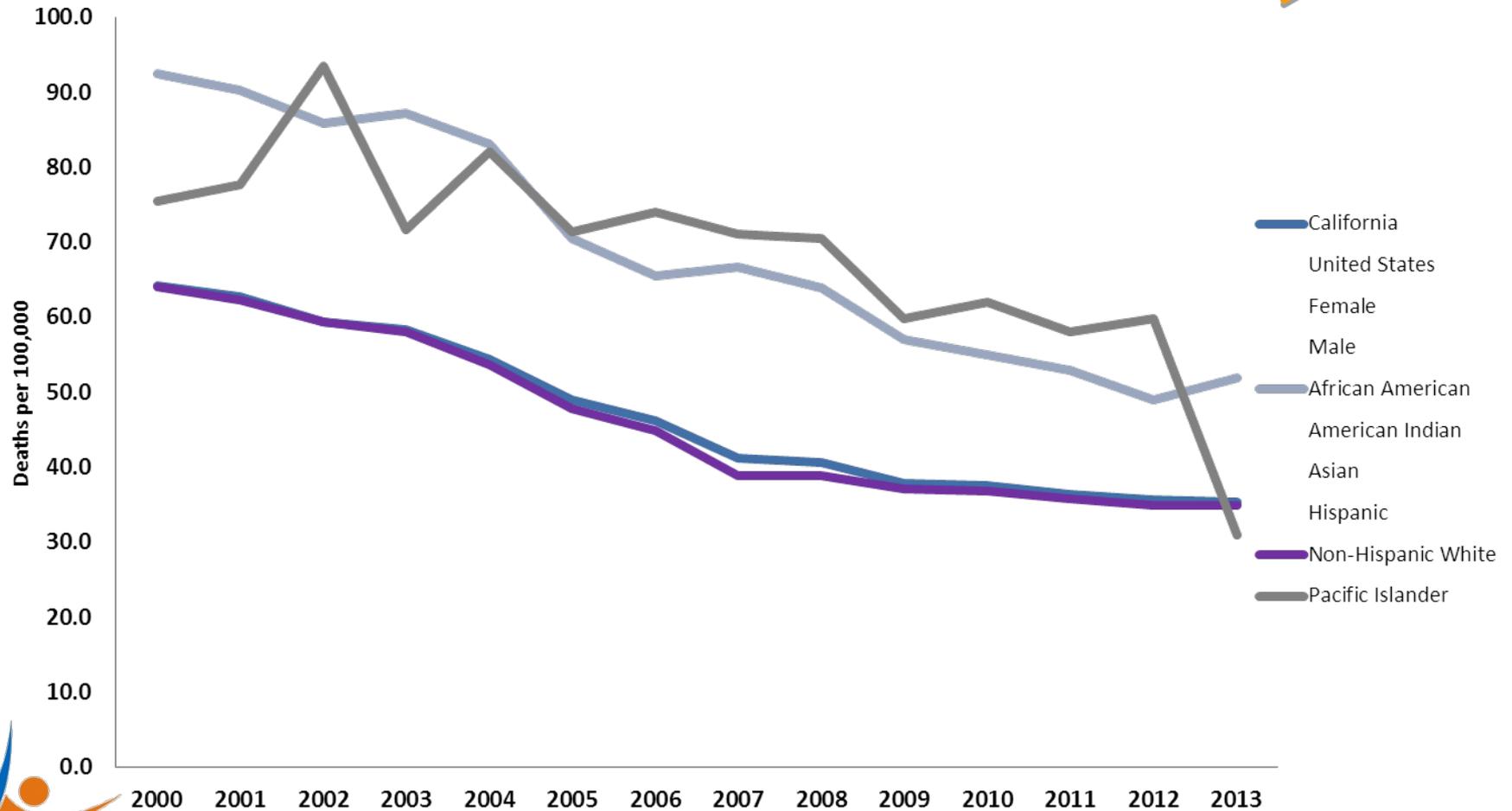
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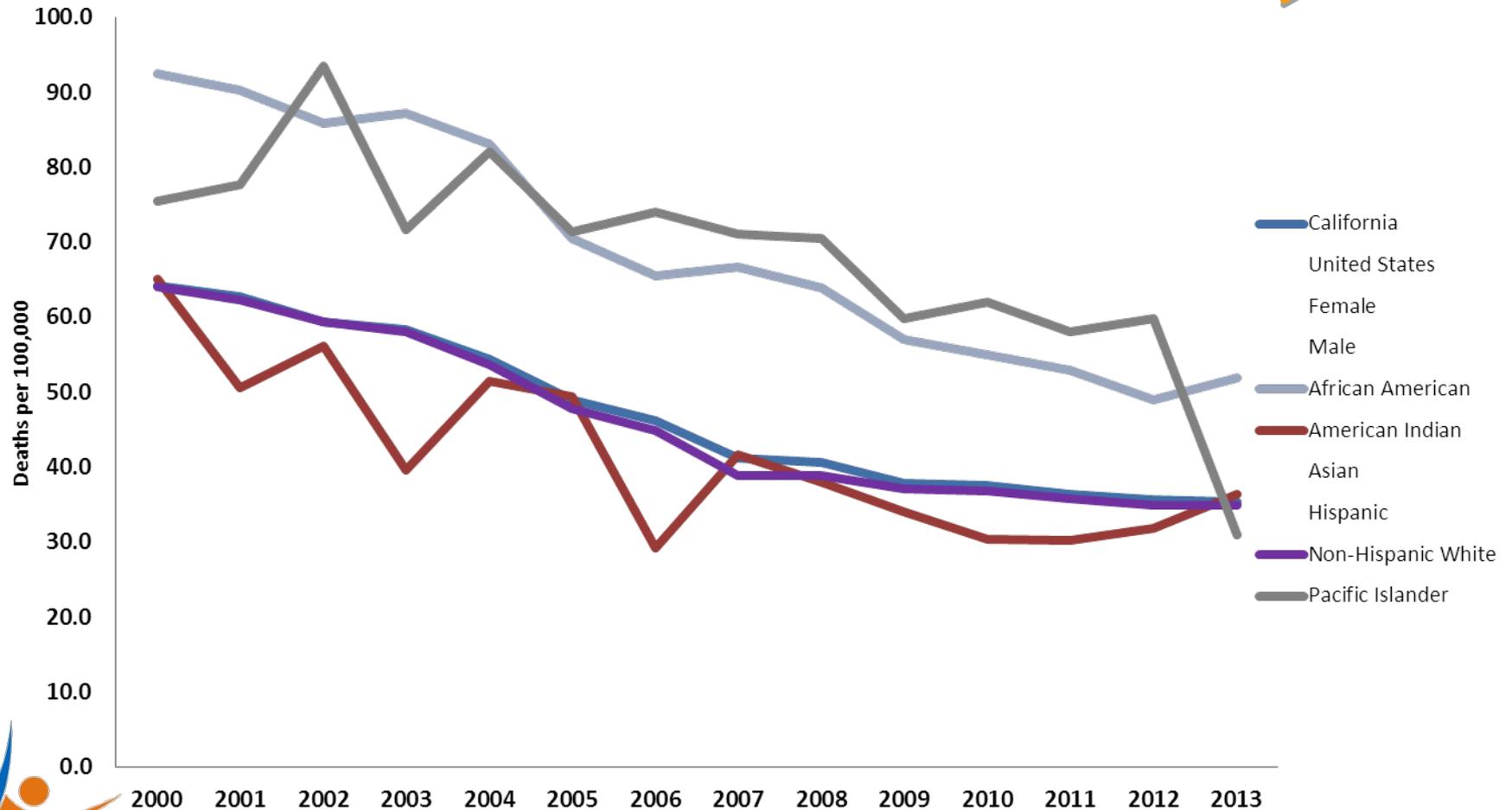
Age-Adjusted Stroke Mortality, by race/ethnicity, CA, 2000-2013



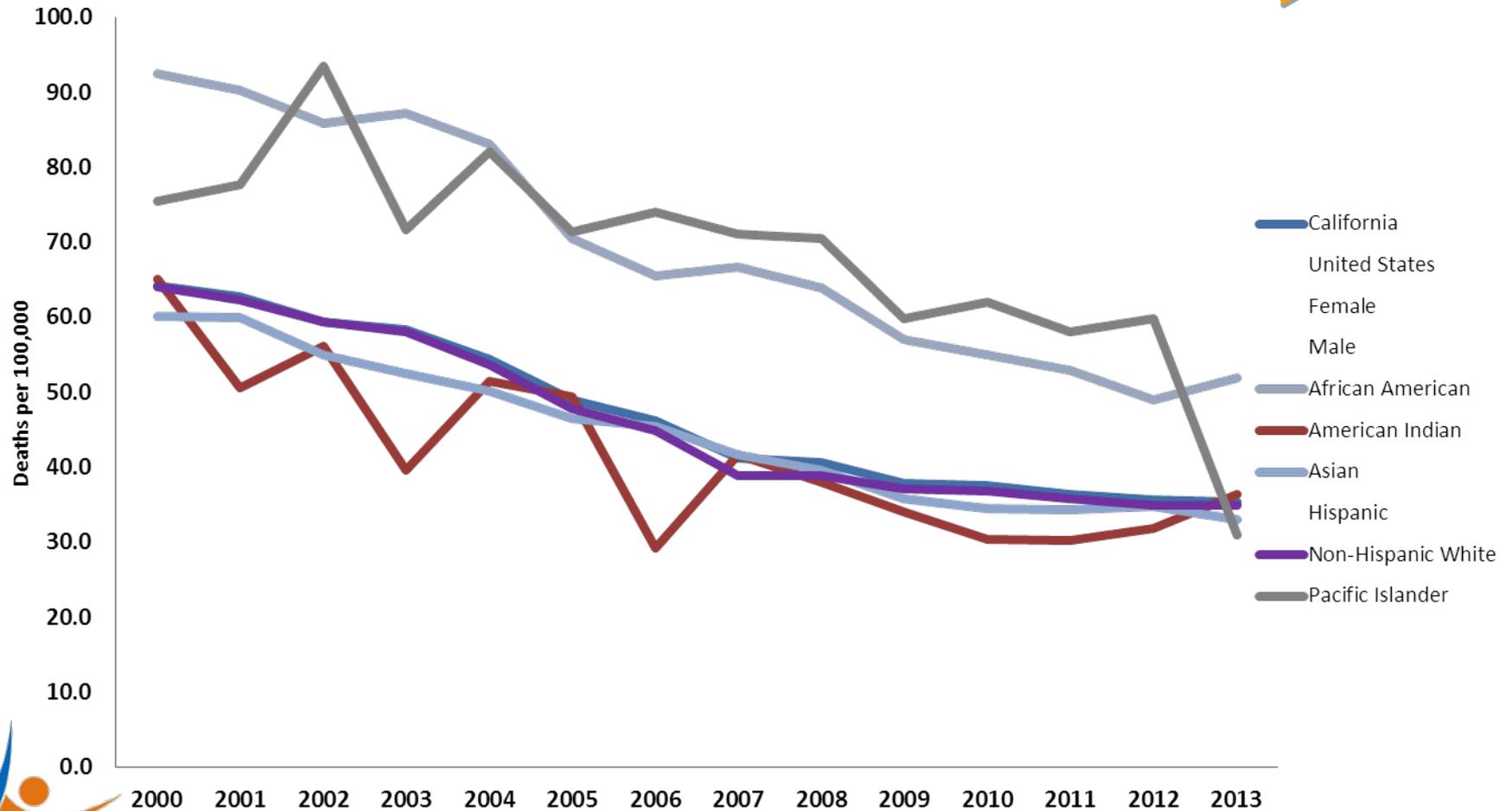
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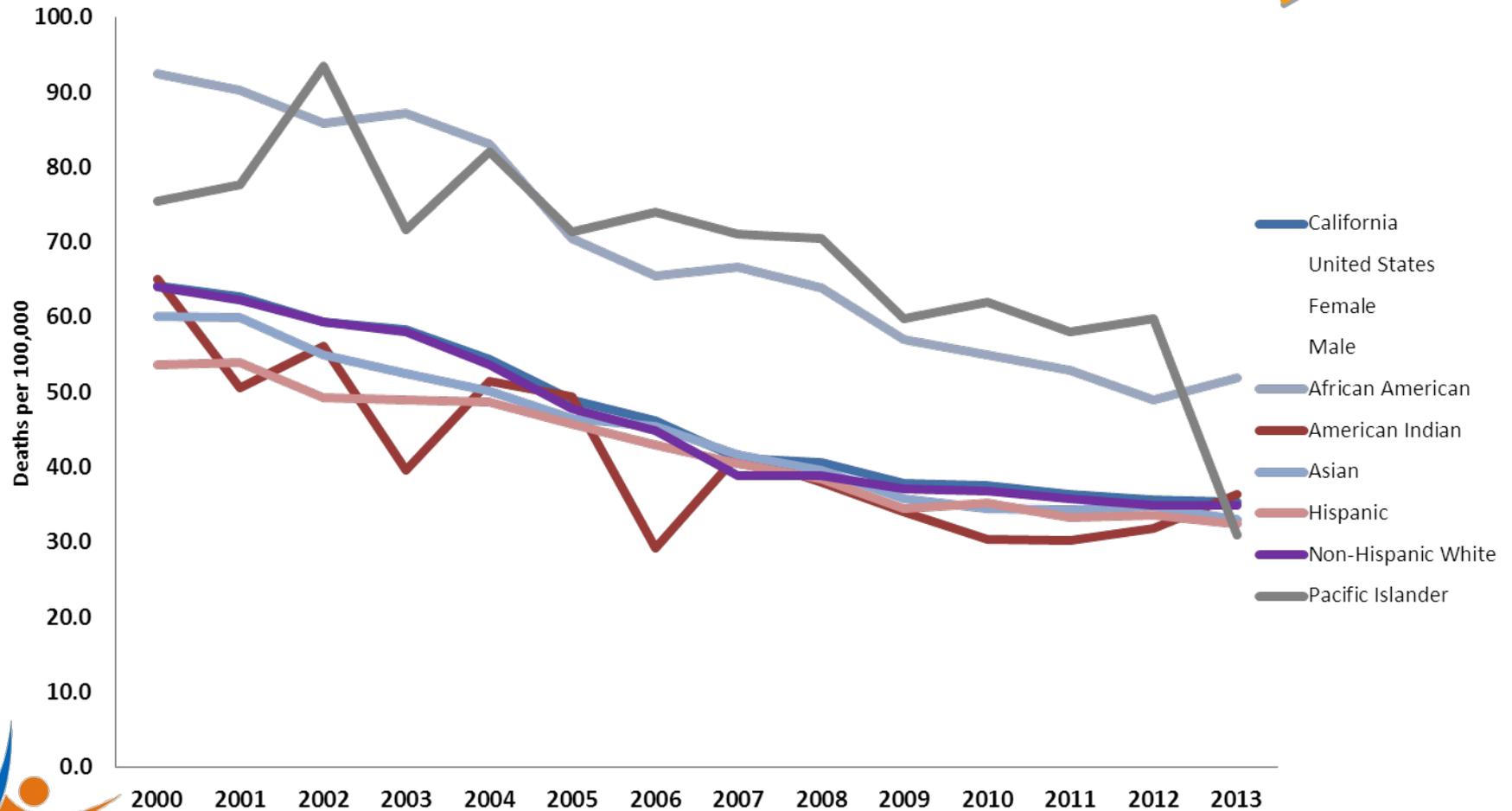
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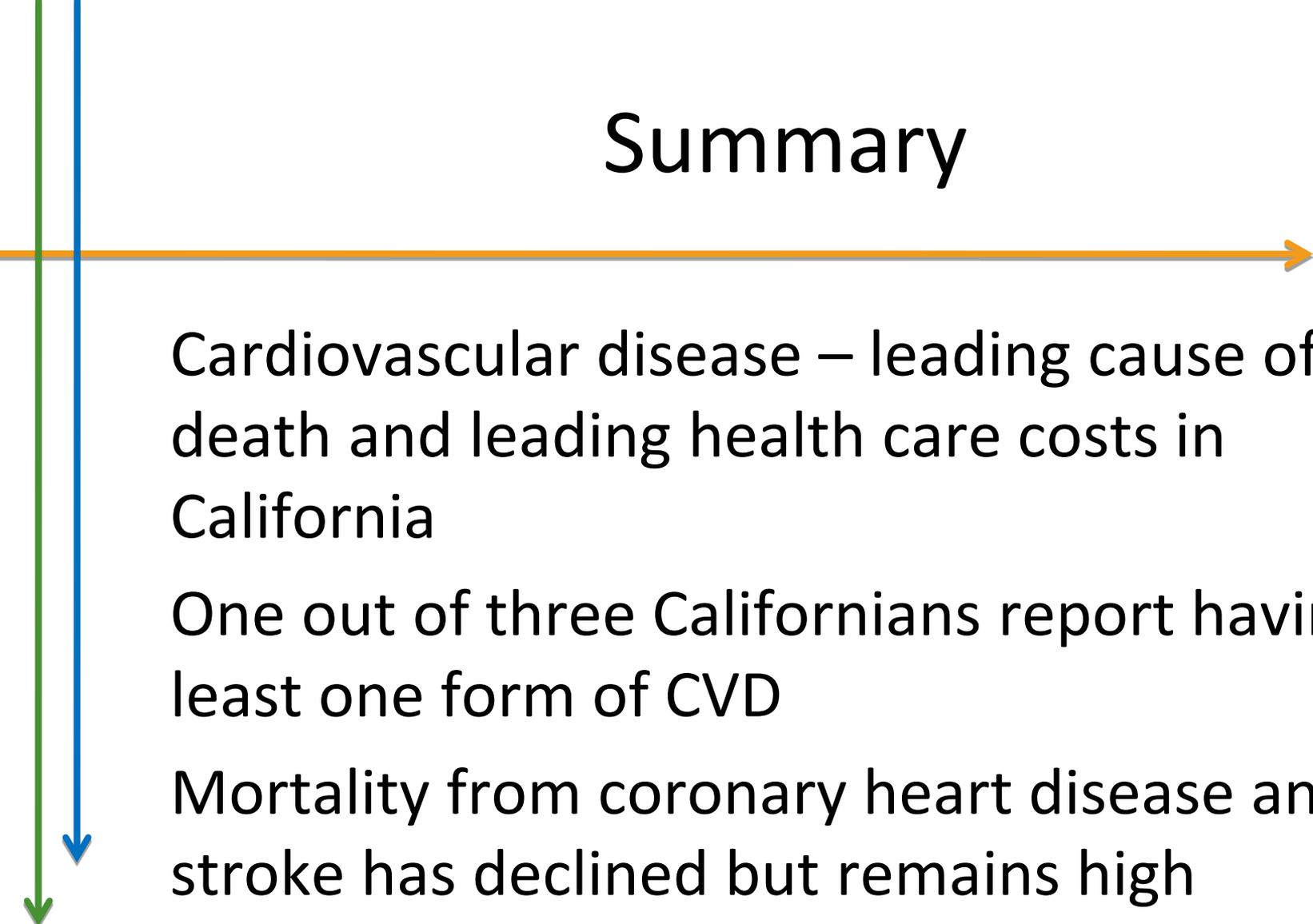
Age-Adjusted Stroke Mortality, by race/ethnicity, CA, 2000-2013



Age-Adjusted Stroke Mortality, by race/ethnicity, CA, 2000-2013



Summary



Cardiovascular disease – leading cause of death and leading health care costs in California

One out of three Californians report having at least one form of CVD

Mortality from coronary heart disease and stroke has declined but remains high

Wide variation by county and race/ethnicity

Acknowledgements

- Brendan Darsie
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