Cardiovascular Disease Mortality in Michigan

MDHHS
Michigan Department of Health & Human Services

In 2019, heart disease was the leading cause of death in Michigan and the U.S., and stroke was the fifth leading cause.[1,2]

- In 2019, 25,500 Michigan residents died of heart disease, and 5,159 died of stroke.[1]

- Controllable risk factors include tobacco use, being overweight or obese, having high cholesterol, or having high blood pressure.[2]

- Heart disease cost the U.S. an estimated $230 billion and stroke an estimated $53 billion in 2017 and 2018.[2]

- This fact sheet updates Michigan and U.S. statistics for heart disease and stroke mortality including disparities among race/ethnicity and Michigan counties (See Notes).[1-6]

Heart Disease and Stroke Mortality Trends

Figure 1. Age-adjusted Heart Disease and Stroke Mortality Rates Among Michigan and U.S. Residents (All Ages), 2000-2019
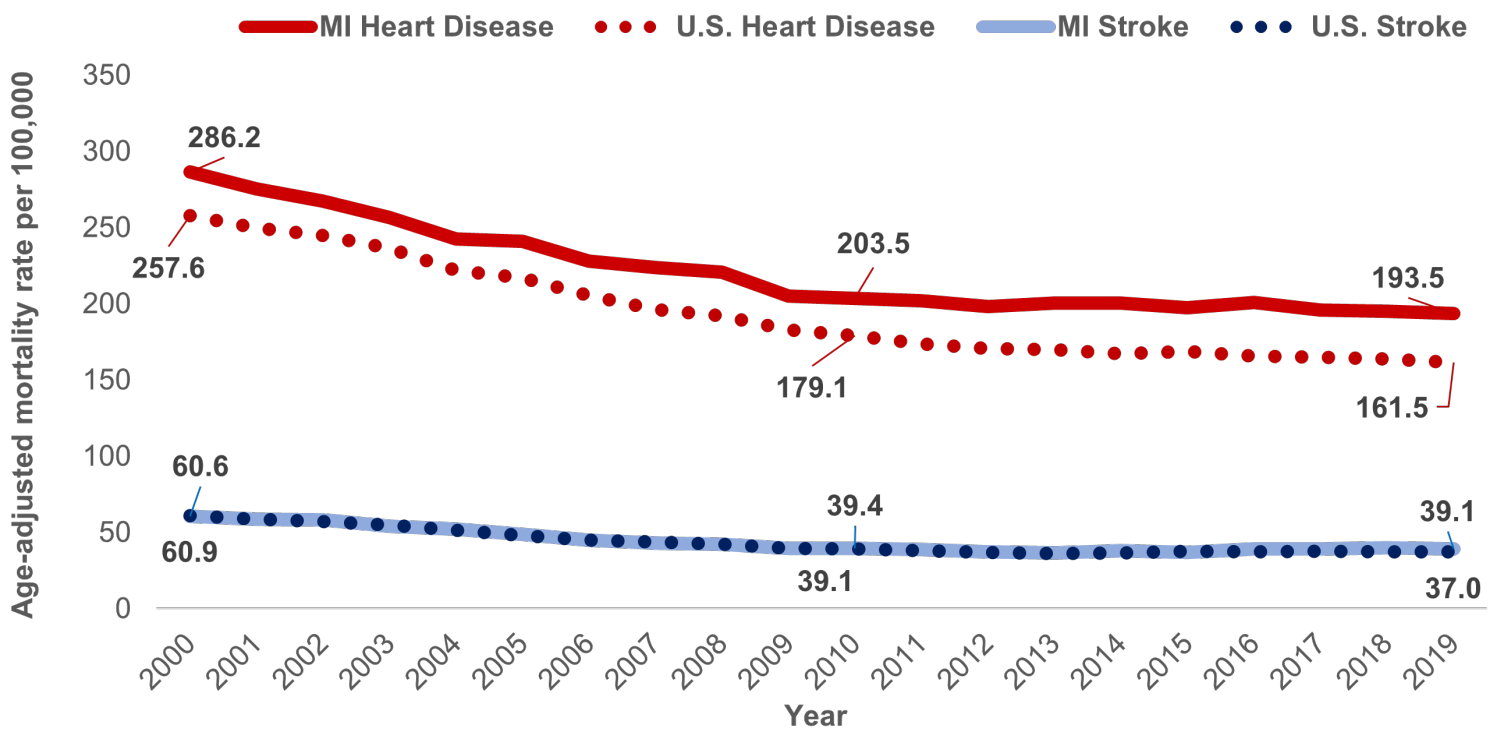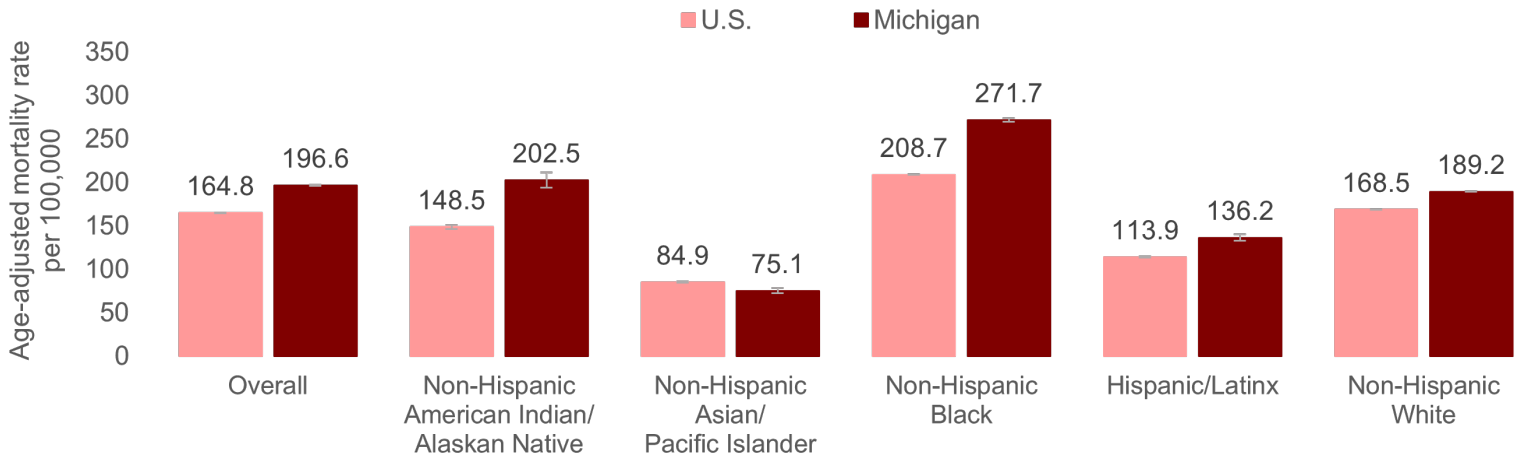

MI – Michigan; U.S. – United States
Sources: Michigan Resident Death Files (2000-2019) and CDC WONDER Online Database, U.S. (2000-2019)

- Over the past 10 years,

  - Age-adjusted heart disease mortality rates per 100,000 residents decreased by 5% in Michigan and 10% in the U.S.[1,3-5]

  - Age-adjusted stroke mortality rates decreased by 1% in Michigan and decreased by 5% in the U.S. (Figure 1).[1,3-5]

Disparities in Heart Disease and Stroke Mortality by Race/Ethnicity

Figure 2. Age-adjusted Heart Disease Mortality Rates Among Michigan and U.S. Residents (All Ages), 2015-2019 Combined
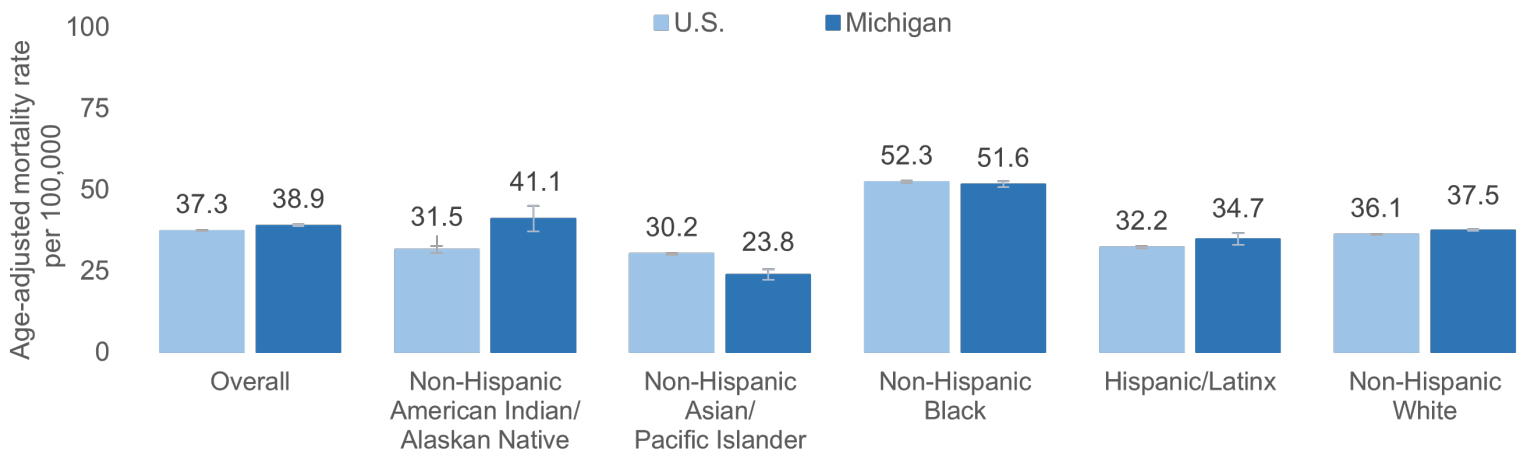

U.S. – United States
Sources: Michigan Resident Death Files (2015-2019 Combined) and CDC WONDER Online Database, U.S. (2015-2019 Combined)

- In Michigan, non-Hispanic Black residents had the highest heart disease mortality rate followed by non-Hispanic American Indian/Alaska Native, non-Hispanic white, Hispanic/Latinx, and non-Hispanic Asian/Pacific Islander residents.[1,3-5]

- In Michigan, the mortality rate per 100,000 non-Hispanic Black residents was 3.6 times the mortality rate per 100,000 non-Hispanic Asian/Pacific Islander residents. [1,3-5]

- In the U.S., non-Hispanic Black residents had the highest heart disease mortality rate followed by non-Hispanic white, non-Hispanic American Indian/Alaska Native, non-Hispanic white, Hispanic/Latinx, and non-Hispanic Asian/Pacific Islander residents.[1,3-5]

- In the U.S., the mortality rate among non-Hispanic Black residents was nearly 2.5 times that of non-Hispanic Asian/Pacific Islander residents (Figure 2). [1,3-5]

- The mortality rate among Michigan non-Hispanic Black adults was 1.3 times that of the rate in the U.S.

Figure 3. Age-adjusted Stroke Mortality Rates Among Michigan and U.S. Residents (All Ages), 2015-2019 Combined


U.S. – United States
Sources: Michigan Resident Death Files (2015-2019 Combined) and CDC WONDER Online Database, U.S. (2015-2019 Combined)

- In Michigan and the U.S., non-Hispanic Black residents had the highest stroke mortality rate. [1,3-5]

- In Michigan, the greatest disparity in the mortality rate was between non-Hispanic Black and Asian/Pacific Islander residents. [1,3-5]

- In Michigan, the stroke mortality rate per 100,000 non-Hispanic Black residents was 2.2 times the mortality rate per 100,000 Asian/Pacific Islander residents. [1,3-5]

- In the U.S., the stroke mortality rate per 100,000 non-Hispanic Black residents was 73% higher than the mortality rate per 100,000 non-Hispanic Asian/Pacific Islander residents (Figure 3). [1,3-5]

Disparities in Heart Disease and Stroke Mortality by Michigan County

Figure 4. Age-adjusted Heart Disease Mortality Rate by Michigan County (All ages), 2015-2019 Combined

- Twenty counties had heart disease mortality rates above the state rate (196.3 per 100,000 residents). [1,3-5]

- These counties were mostly in the eastern part of the Lower peninsula. [1,3-5]

- Counties in the Upper peninsula were either comparable or were below the state average (Figure 4). [1,3-5]
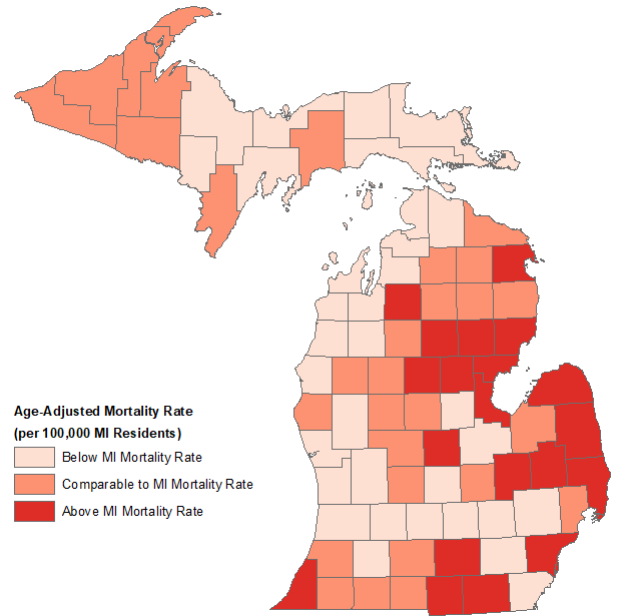
MI - Michigan
Source: Michigan Resident Death Files (2015-2019 Combined)

Figure 5. Age-adjusted Stroke Mortality Rate by Michigan County (All ages), 2015-2019 Combined

- Fifteen counties had stroke mortality rates above the state rate (37.3 per 100,000). [1,3-5]

- One county was in the Upper peninsula. [1,3-5]

- The remaining counties were in the Lower peninsula (Figure 5). [1,3-5]
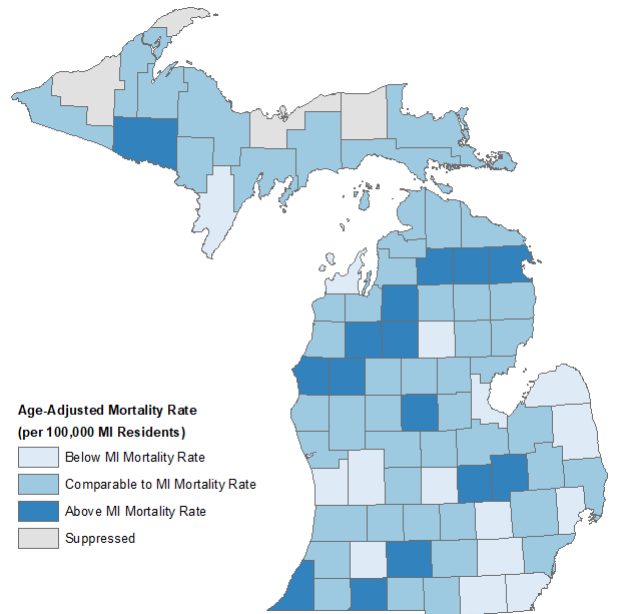
MI - Michigan
Source Michigan Resident Death Files (2015-2019 Combined)

What We Do in Michigan

- Facilitate linkages to evidence-based lifestyle change programs such as the Diabetes Prevention Program, the Healthy Heart Ambassador Blood Pressure Self-Monitoring Program, and the YMCA's Blood Pressure Self-Monitoring Program.

- Forge strong partnerships with health systems, community groups, and public health entities to increase awareness of risk factors for heart disease and stroke and implement strategies aimed at detection, management, and control of cardiovascular disease.

- Co-lead the Michigan Million Hearts® Initiative with the American Heart Association of Michigan southeast Michigan chapter, which is committed to the effective use of clinical and community strategies to diagnose and treat people with heart disease and its risk factors.

- Improve identification, reporting, management, and treatment of risk factors related to heart disease and stroke in federally qualified health centers.

- Collaborate with health systems on workflow changes and electronic medical record use to reduce high blood pressure and cholesterol disparities in populations most at risk for death and disability due to cardiovascular disease.

For More Information

- Learn more about stroke prevention efforts in Michigan at the MDHHS Stroke Website.

- Learn more about cardiovascular health efforts in Michigan at the MDHHS Cardiovascular Disease website.

- Access tools to enhance cardiovascular prevention and treatment efforts and support Million Hearts® goals in your everyday work at the Michigan Million Hearts® website.

Notes

A. The Michigan resident estimates (denominator) were bridged-race population estimates located on the CDC Wonder on-line database. Using the direct method, age-adjusted rates were rates adjusted to the 2000 U.S. Standard Population.

B. Latinx is person of Latin American origin or descent (used as a gender-neutral or nonbinary alternative to Latino or Latina).

C. Statistically significant difference was based on z-test and whether the 95% confidence interval (CI) overlapped when comparing between years and with racial/ethnic groups. Note that the method of comparing confidence intervals is a conservative method for statistical significance; caution should be observed when interpreting a no evidence of a statistically significant difference when the Lower and Upper limits being compared overlap only slightly. Additionally, the confidence interval narrows as the numerator count increases so there is increased chance of statistically significant difference where there is none.

D. County's classification as different from the state was based on whether the 95% CI overlapped the state 95% CI. Because the counties are inclusive, the classification only designates on whether the county's point estimate fell above or below the state mean. This is not a traditional statistical significance test.

References

1. Division for Vital Records and Health Statistics, Michigan Department of Health and Human Services.

2. Heart disease and stroke statistics-2022 update: A report from the American Heart Association. Circulation. 2022.

3. Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2020 on CDC WONDER Online Database, released in 2020 as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at http://wonder.cdc.gov/ucd-icd10.html on Mar 1, 2022.

4. United States Department of Health and Human Services (U.S. DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Bridged-Race Population Estimates, United States July 1st resident population by state, county, age, sex, bridged-race, and Hispanic origin, on CDC WONDER On-line Database (2015-2019).

5. Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Healthy People Statistical Notes, no. 20. Hyattsville, Maryland: National Center for Health Statistics. January 2001.

To learn more about cardiovascular disease and intervention programs, visit
www.michigan.gov/cvh