HENNEPIN COUNTY

PUBLIC HEALTH

2021-2025 Community Health Assessment

November 15, 2022

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Summary

Hennepin County Public Health (HCPH) prepares a comprehensive assessment about the health of its residents every five years. Due to the impact of the COVID-19 pandemic on HCPH's work, this report will serve as a mid-point data update. HCPH will publish a more robust assessment in 2024.

This report and related materials are available on the county website at hennepin.us/publichealthdata and hennepin.us/shape. For specific data requests, questions, or to receive this information in a different format, email publichealthdata@hennepin.us.

Hennepin County Public Health is committed to monitoring and addressing health disparities. Analysis of the recent data shows improvements and setbacks in community health indicators.

Improvements: what's getting better?

There have been significant improvements in health outcomes of county residents, reducing disparities across several health indicators.

- Cigarette use among adults and adolescents continues to decline. The smoking rate of Hennepin County adults is lower than the statewide rate. However, disparities by race/ethnicity, income, education, and sexual orientation remain.
- The birth rate of teen parents continues to decline. There was minimal improvement among other maternal and child health indicators and disparities by race/ethnicity persist.
- Alcohol use and binge drinking among adolescents is decreasing. More Hennepin County youth are protected from unintended consequences of underage drinking.
- The percentage of Hennepin County students graduating high school within four years is increasing; however, racial/ethnic disparities persist.

Setbacks: what's getting worse?

While some indicators had little to no change, a few worsened since the previous assessment in 2018. These highlight areas where significant disparities persist.

- Adolescent e-cigarette use is increasing.
- Hennepin County suicide rate is increasing but is still lower than the overall rate in Minnesota.
- Hennepin and Ramsey County are experiencing an HIV outbreak that began in December 2018 and is concentrated among people who inject drugs, most of whom are experiencing homelessness or are unstably housed.
- Opioid-related deaths continue to rise.
- The rate of obesity among Hennepin County adults and youth is increasing.

Introduction

Assessment purpose

This assessment supports Hennepin County Public Health's mission to "improve the health of all County residents by addressing social and environmental factors that impact their health and offering programs and services that help them be healthy." The assessment is used to monitor the health status of the population and to understand the root causes of community health problems.

Key priorities

This assessment demonstrates the links between social and environmental factors that influence the health of county residents. Although Minnesota typically ranks highly in overall health, there are significant disparities. Health disparities by race in Minnesota and Hennepin County are among the worst in the country. Where possible, health trends are analyzed by race/ethnicity. Identifying the populations at highest risk helps ensure we are working to reduce health disparities.

Another key priority of this assessment is to identify populations facing increased risk of poor health outcomes, and to describe the relationship between those outcomes and the social factors that influence health, such as income, education, and employment. Where possible, we examined whether differences existed among vulnerable populations, such as individuals living with a disability or individuals experiencing frequent mental distress.

We also examined differences in social determinants of health including income, poverty, housing insecurity, and education. This analysis is built on an understanding of disease causation and risk for different communities that may differ by the health concern under investigation. The ability to identify community impact is limited by the data available for certain groups.

The purpose of this assessment is to understand the impact that different health concerns have in our community and to identify health disparities. In some cases, our work focuses on specific age groups, such as infants and young children, or the elderly; for other conditions, gender differences are important. Due to persistent disparities, people of color, American Indian/Alaska Native people, and people who identify as lesbian, gay, bisexual, or transgender (LGBT), are more likely to experience negative health outcomes.

Impact of the COVID-19 pandemic

This report includes the most recent data on Hennepin County. Much of the data was collected before the beginning of the COVID-19 pandemic. Therefore, this assessment highlights areas where health disparities existed *prior* to the pandemic.

Since March 2020, COVID-19 contributed to an unprecedented number of hospitalizations and deaths, which disproportionately impacted racial and ethnic minority groups throughout the U.S. and in Hennepin County. While this assessment highlights areas where health disparities existed prior to the pandemic, COVID-19 unequivocally worsened these disparities in many communities. It is crucial that we continue monitoring these health indicators, and the impact of COVID-19 in Hennepin County for years to come.

County description and population trends

Hennepin County is the most populated county in Minnesota. Approximately 1.3 million people or about 23% of Minnesota's total population live here. The Minnesota Demographic Center's 2053 projections show Hennepin County will maintain its rank as most populous county in Minnesota, with a 30% increase in the county's population by 2053 (Dayton & Lee, 2020).

Hennepin County is located in the western portion of the Twin Cities metropolitan area and shares borders with the following counties: Anoka, Carver, Dakota, Ramsey, Scott, and Wright.

Race and ethnicity

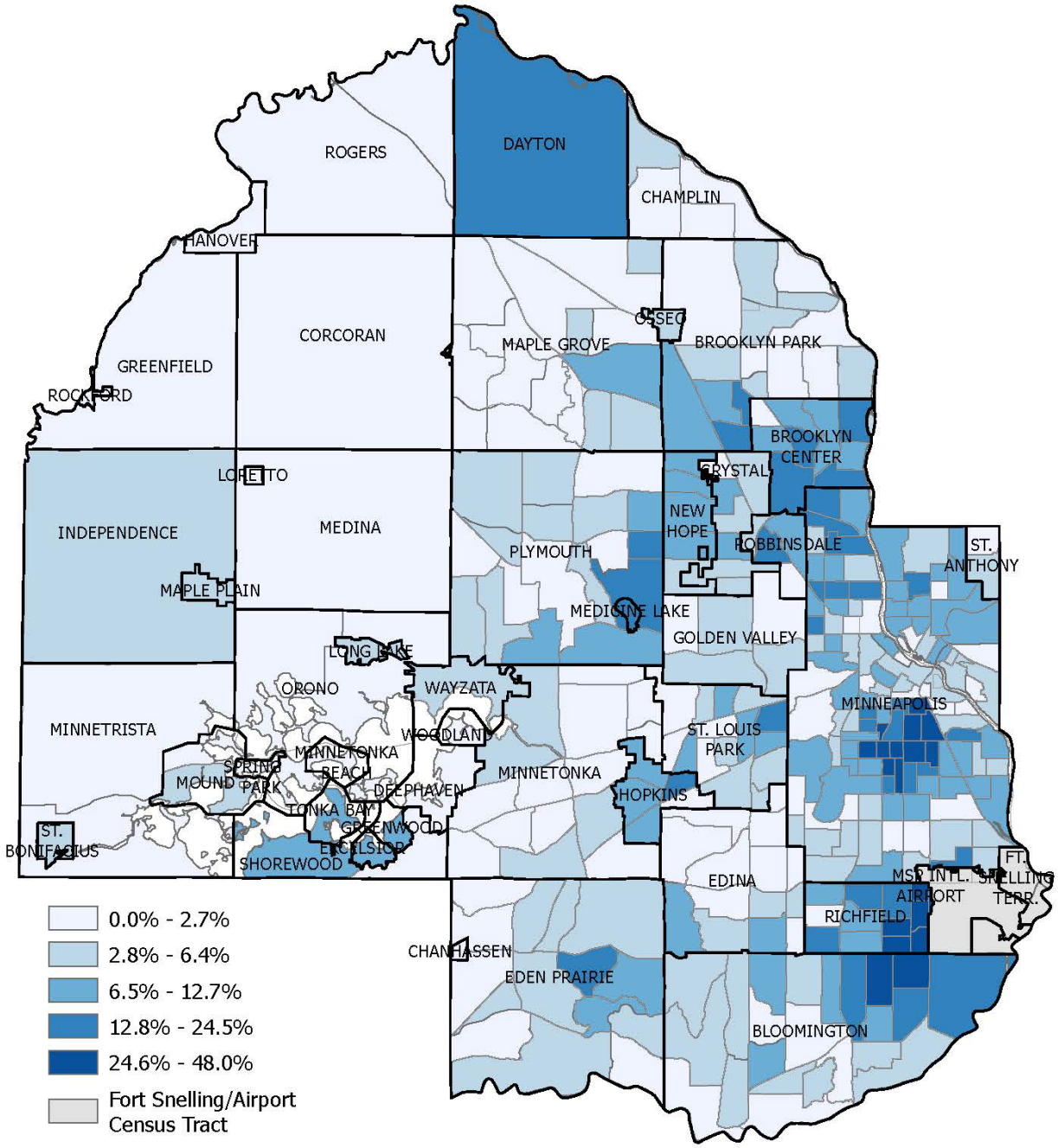
Hennepin County is the most racially diverse county in Minnesota and has large populations of refugee, immigrant, and migrant people. The county's population is 1% American Indian/Alaska Native, 3% two or more races, 7% Hispanic/Latino, 8% Asian, and 14% Black/African American.

Minnesota State Demographic Center projections show the the county's racial diversity continuing to increase, with the 2053 projections showing:

- Portion of the county's population that is White decreasing to 21%.
- Number of Black/African American residents in the county increasing by over 50%.
- Largest increase in Hispanic/Latino residents in the state to occur in Hennepin County.
- Majority of new Asian Minnesotans (70%) to make Hennepin or Ramsey County their home (Dayton & Lee, 2020).

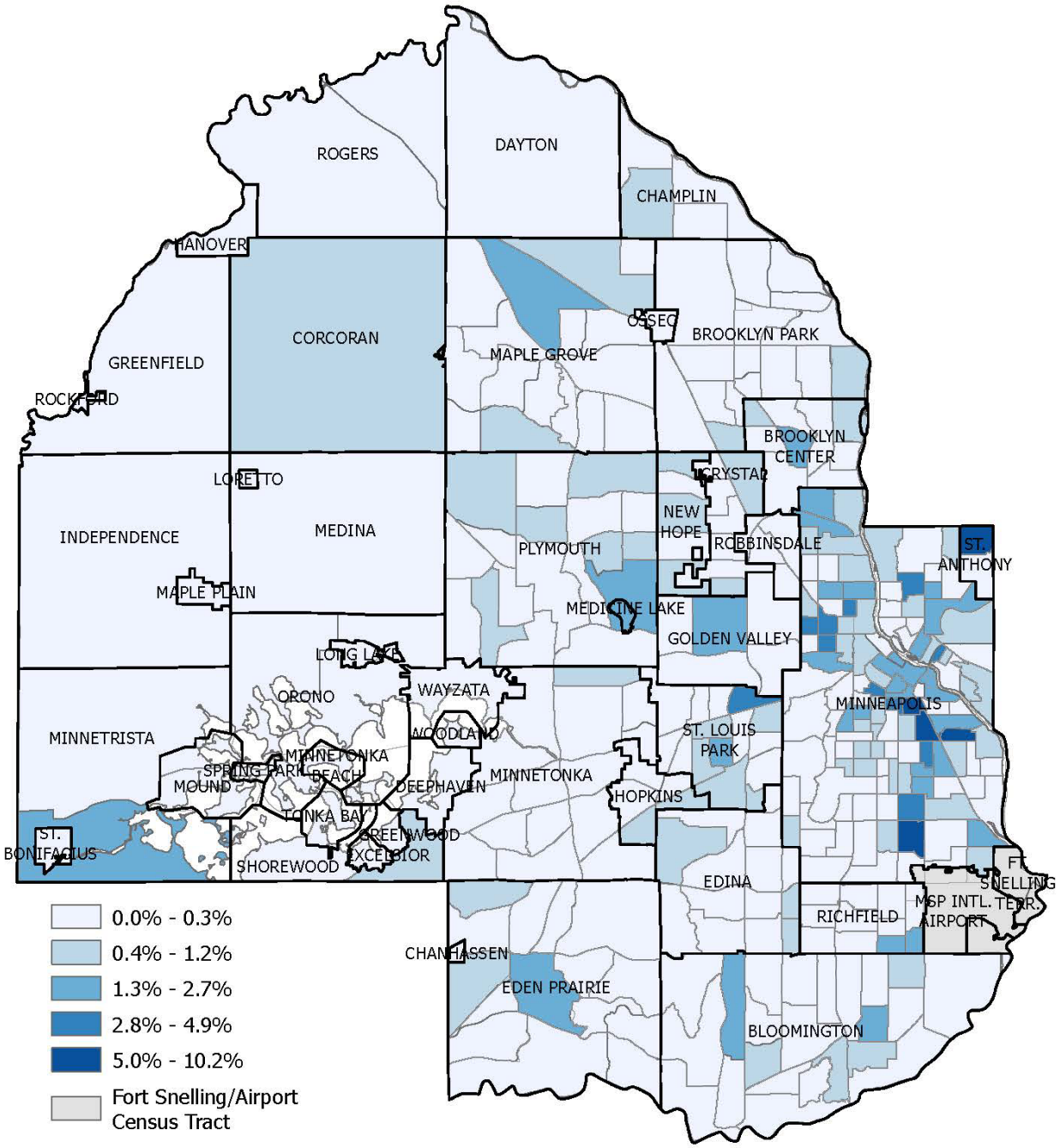
Racial diversity is concentrated in portions of Minneapolis and a few inner ring suburbs, including Brooklyn Center, Saint Louis Park, and Richfield. Figures 1 through 5 demonstrate the concentration of populations of color within those areas in the county.

Figure 1: Hispanic/Latino by census tract, 2016-2020



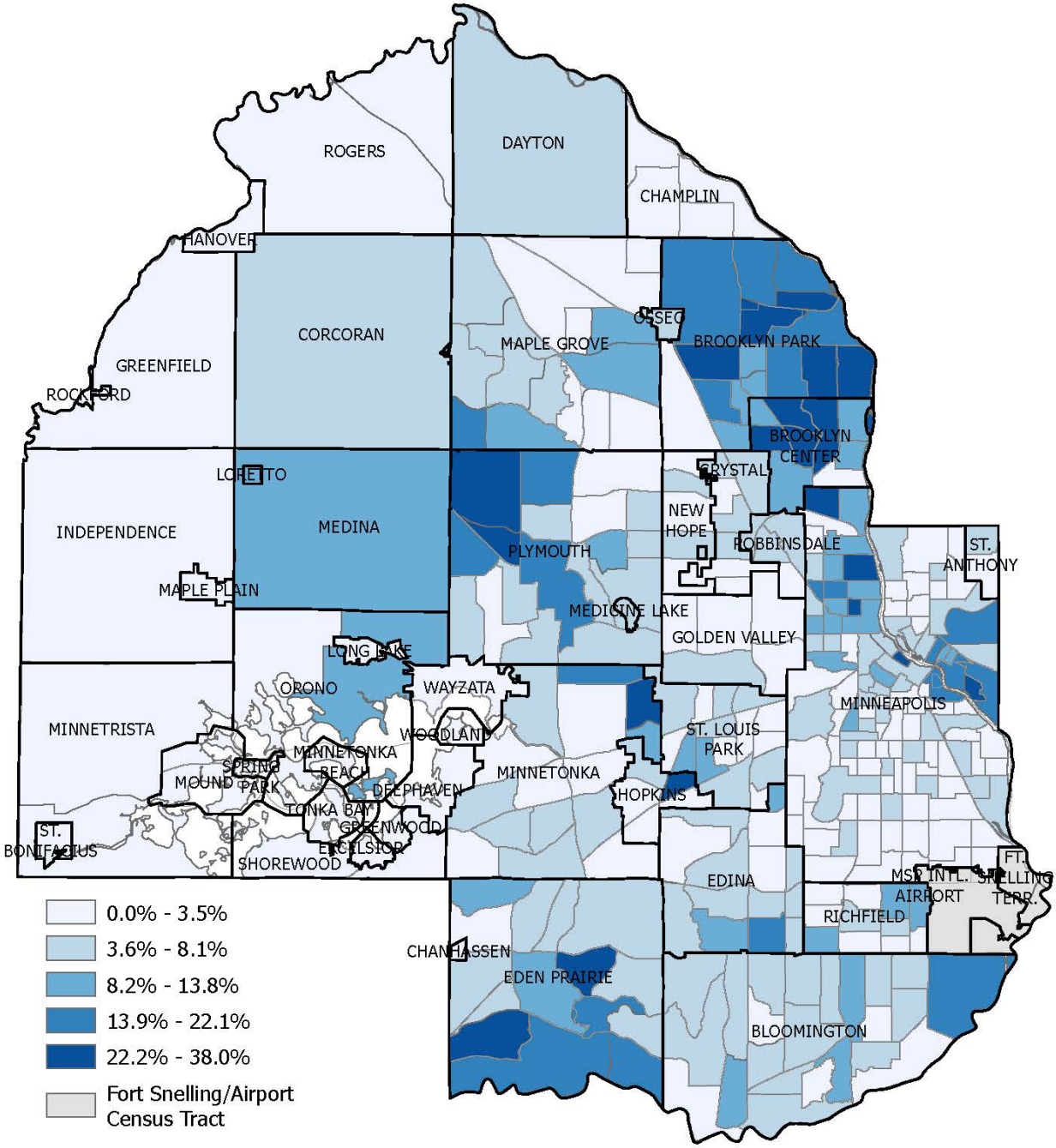
Source: American Community Survey 5-year estimates

Figure 2: American Indian/Alaska Native by census tract, 2016-2020



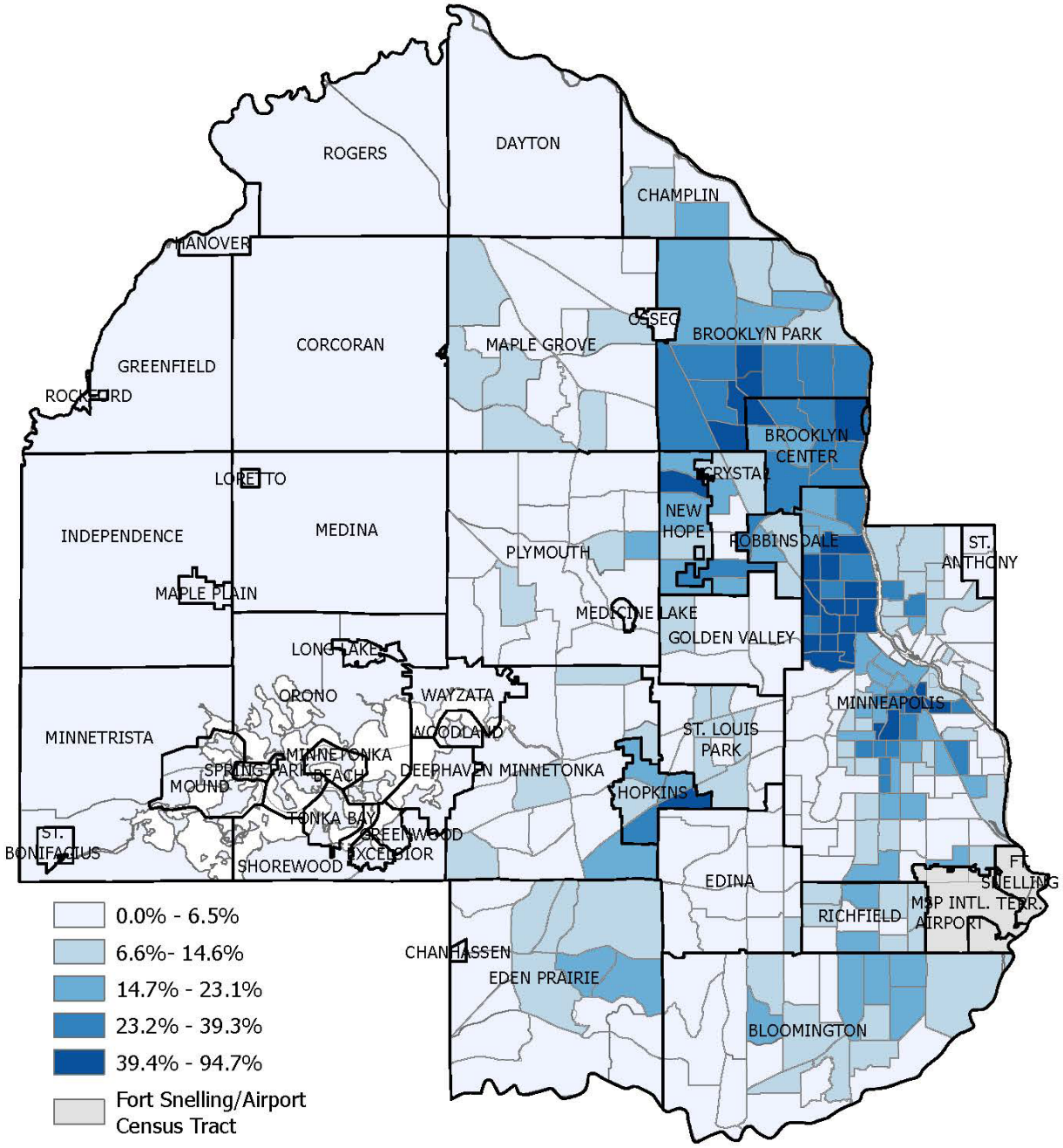
Source: American Community Survey 5-year estimates

Figure 3: Asian by census tract, 2016-2020



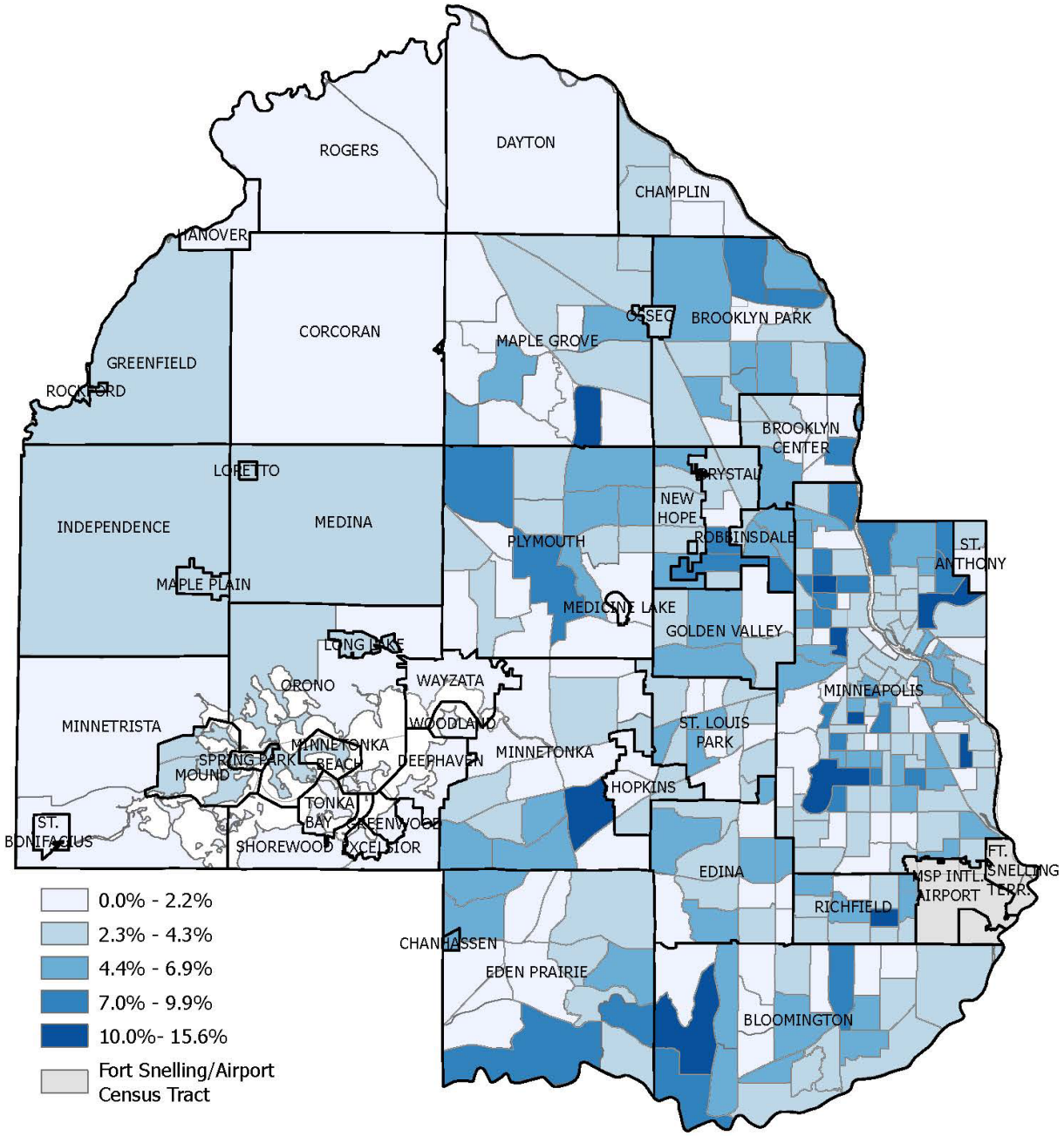
Source: American Community Survey 5-year estimates

Figure 4: Black/African American by census tract, 2016-2020



Source: American Community Survey 5-year estimates

Figure 5: Two or more races by census tract, 2016-2020



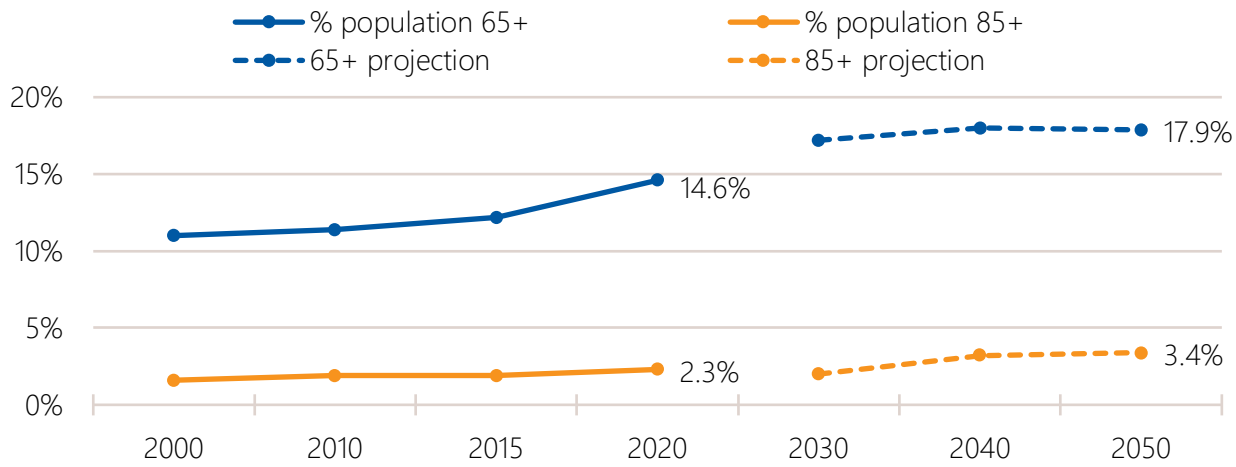
Source: American Community Survey 5-year estimates

Aging

The fastest growing age group in Minnesota over the next few decades is people ages 65 years and older. The population average is rising due to longer life spans and fewer births. Protecting the health and well-being of older adults is vital. Aging increases risks of injury from falls and disability. The cost for end-of-life care may continue to rise and pose financial challenges for aging adults.

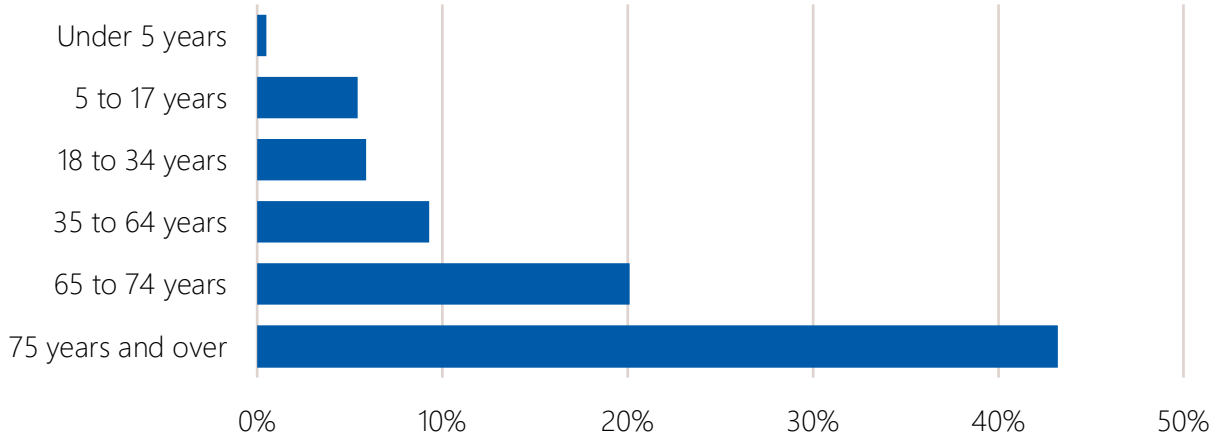
- 2020 estimates show about one in five residents were under the age of 18 and one in seven were over the age of 65 (2016-2020 American Community Survey).
- The aging population in Hennepin County is expected to grow significantly over the next 20 years. Projections for 2050 show a 22% increase of the population 65 years and older and a 48% increase of population 85 years and older (Figure 6).
- The likelihood of Hennepin County residents having a disability increases with age (Figure 7).

Figure 6: Percent of Hennepin County population 65 & 85 years and older



Source: Minnesota Department of Human Services Aging Data Profiles

Figure 7: Hennepin County residents with a disability by age, 2016-2020



Source: American Community Survey 5-year estimates

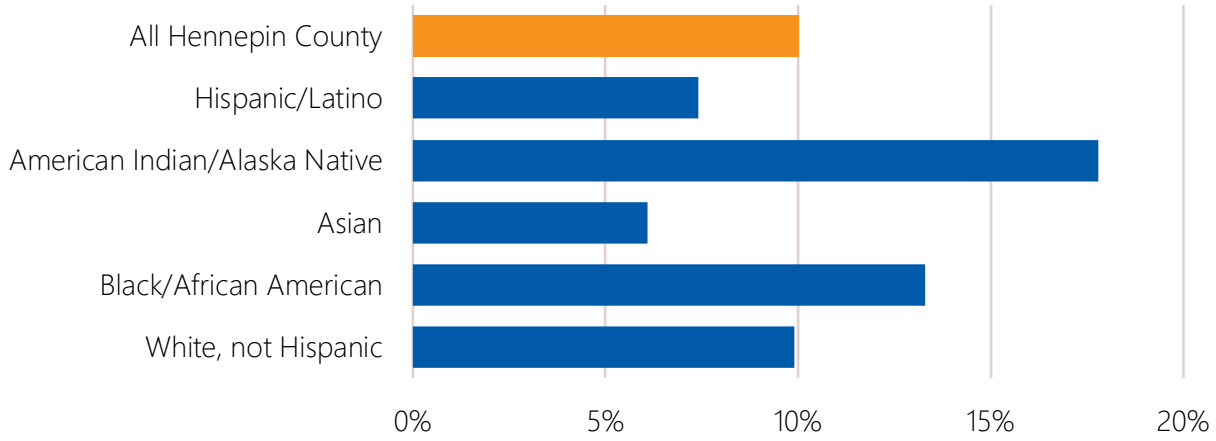
People with disabilities

There is no universal definition of disability. The definition of disability used for data collection changes how many people are included or left out. For this reason, the reported rate of people with disabilities varies depending on the data source. Due to the variability in self-reporting of disability status, different data sources produce different estimates.

The American Community Survey's (ACS) definition of disability includes visual, hearing, cognitive, ambulatory, self-care, and independent living difficulty. This definition may exclude individuals with upper body disabilities or mental illness. Comparatively, the SHAPE 2018 survey asked respondents to self-report disability status by indicating if they are "limited in any activities because of physical, mental, or emotional problems."

- Based on ACS data, one in 10 (10%) Hennepin County adults were living with a disability. SHAPE 2018 data estimates that one in five (22%) Hennepin County adults were living with a disability.
- Regardless of data source, American Indian/Alaska Native people and Black/African American people had the highest reported rates of disability (Figure 8).

Figure 8: Hennepin County adults with a disability, 2016-2020



Source: American Community Survey 5-year estimates

Introduction

The Centers for Disease Prevention and Control (CDC) defines the social determinants of health as the conditions in which people live, work, and play. These conditions impact a wide range of health risks and outcomes. Hennepin County's seven disparity reduction domains (education, employment, income, health, housing, justice, and transportation) each represent a social determinant of health that influences community health.

Figures 11, 13, 15, and 16 using data from the American Community 5-year estimates show variation by census tract and demonstrate how disparities in social determinants such as income, educational attainment, and housing are concentrated in similar areas of the county.

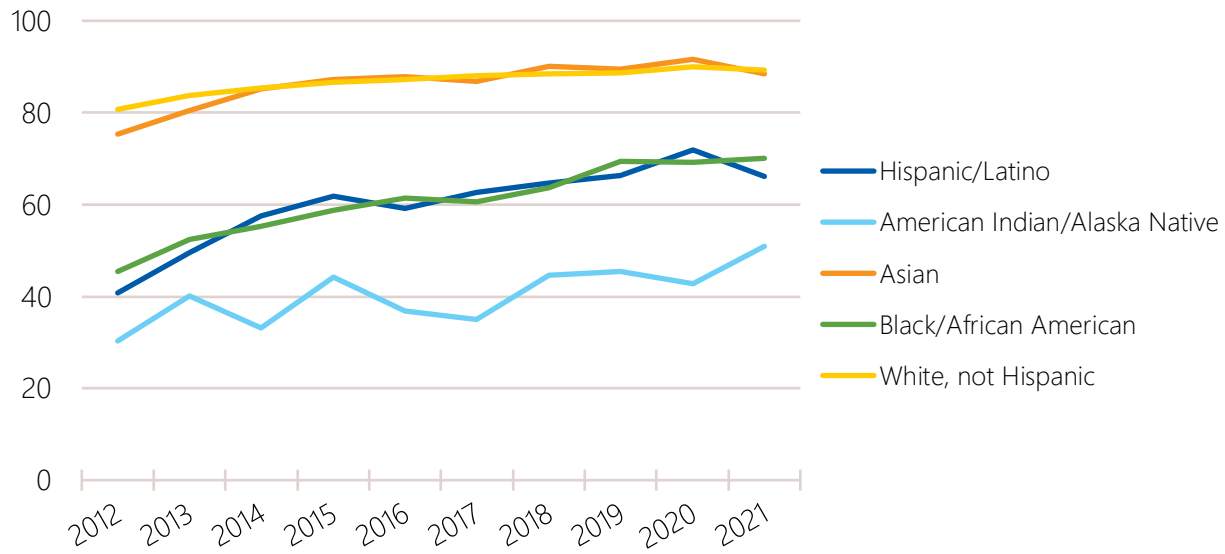
Education

Educational attainment is an important social determinant of health associated with finding employment, earning a livable wage, accessing quality health care, and securing stable housing. People with a higher level of education tend to have greater socioeconomic resources for a healthy lifestyle and a greater relative ability to live and work in environments with the resources and built environment that support healthy living.

In 2019, the graduation rate in Minnesota reached a new high of 84%. However, as of 2021, the four-year graduation rate dropped to 83.3%. The Minnesota Department of Education indicates that the COVID-19 pandemic contributed to this decrease in graduation rate.

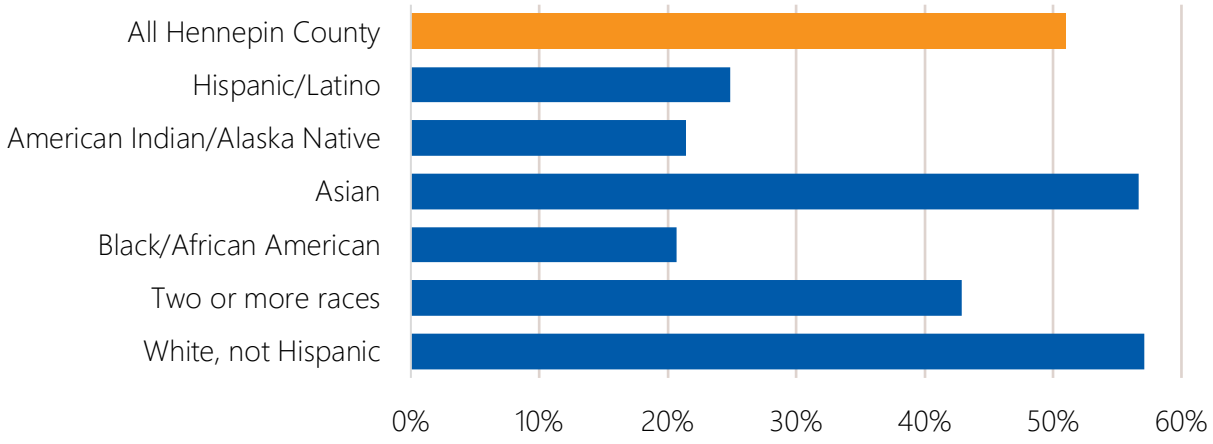
- During the 2020-2021 school year, 80.96% of Hennepin County students graduated within four years. Despite decreases during the pandemic, this is a significant improvement from 77% of students during the 2014-2015 school year.
- Although graduation rates improved for all racial/ethnic groups, disparities persisted for Hispanic/Latino, American Indian/Alaska Native, and Black/African American students in Hennepin County (Figure 9).
- Students who are eligible for free/reduced priced meals (67.36%) and students experiencing homelessness (42.76%) were less likely to graduate in four years compared to the overall rate.
- Half (51%) of Hennepin County adults ages 25 and over have a bachelor's degree; slightly higher than the overall rate for Minnesotans (1.4 times the rate in Minnesota or 36.8%).
- White and Asian adults were more than twice as likely to have a bachelor's degree compared to Black/African American, American Indian/Alaska Native, and Hispanic/Latino adults (Figure 10).

Figure 9: Percentage of students graduating in four years by race/ethnicity, 2012-2021



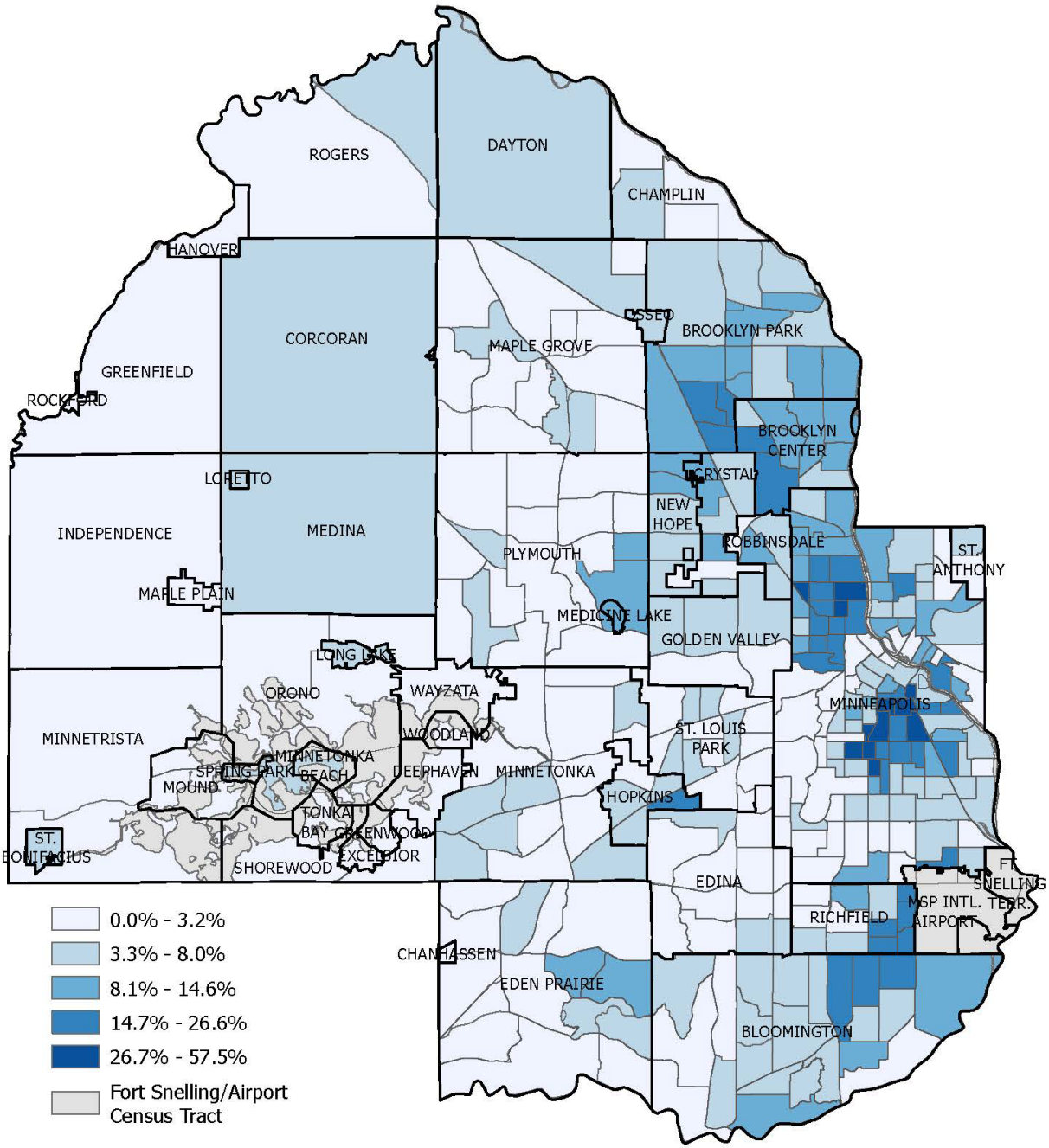
Source: Minnesota Department of Education Graduation Indicators, Hennepin County

Figure 10: Percent of population 25 years and older with a bachelor's degree or higher by race/ethnicity, 2016-2020



Source: American Community Survey 5-year estimates

Figure 11: Population 25 years and older who have not graduated high school or received GED, 2016-2020



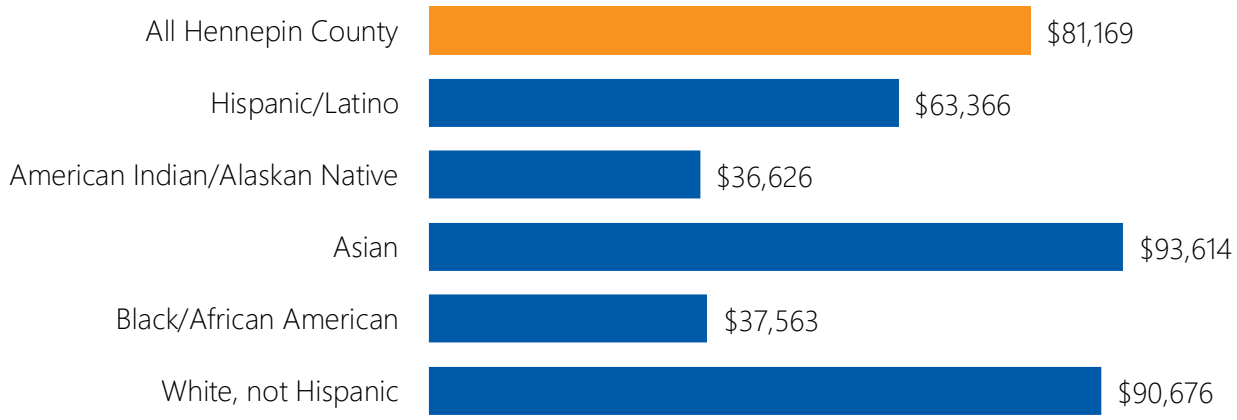
Source: American Community Survey 5-year estimates

Income and employment

Income and employment influence a variety of factors in a person's life such as where they live, what schools they attend, what type of recreation they participate in, and what type of foods they eat. In general, people that earn lower incomes tend to have poorer health outcomes.

- According to estimates from the ACS, the median household income for Hennepin County residents in 2020 was $81,169.
- There were gaps in average household income based on reported race and ethnicity. Black/African American, American Indian/Alaska Native, and Hispanic/Latino households reported significantly lower incomes than the Hennepin County average (Figure 12).
- The median income for Black/African American households was $37,563, which is less than half of the median income of White ($90,029) and Asian ($93,614) households.

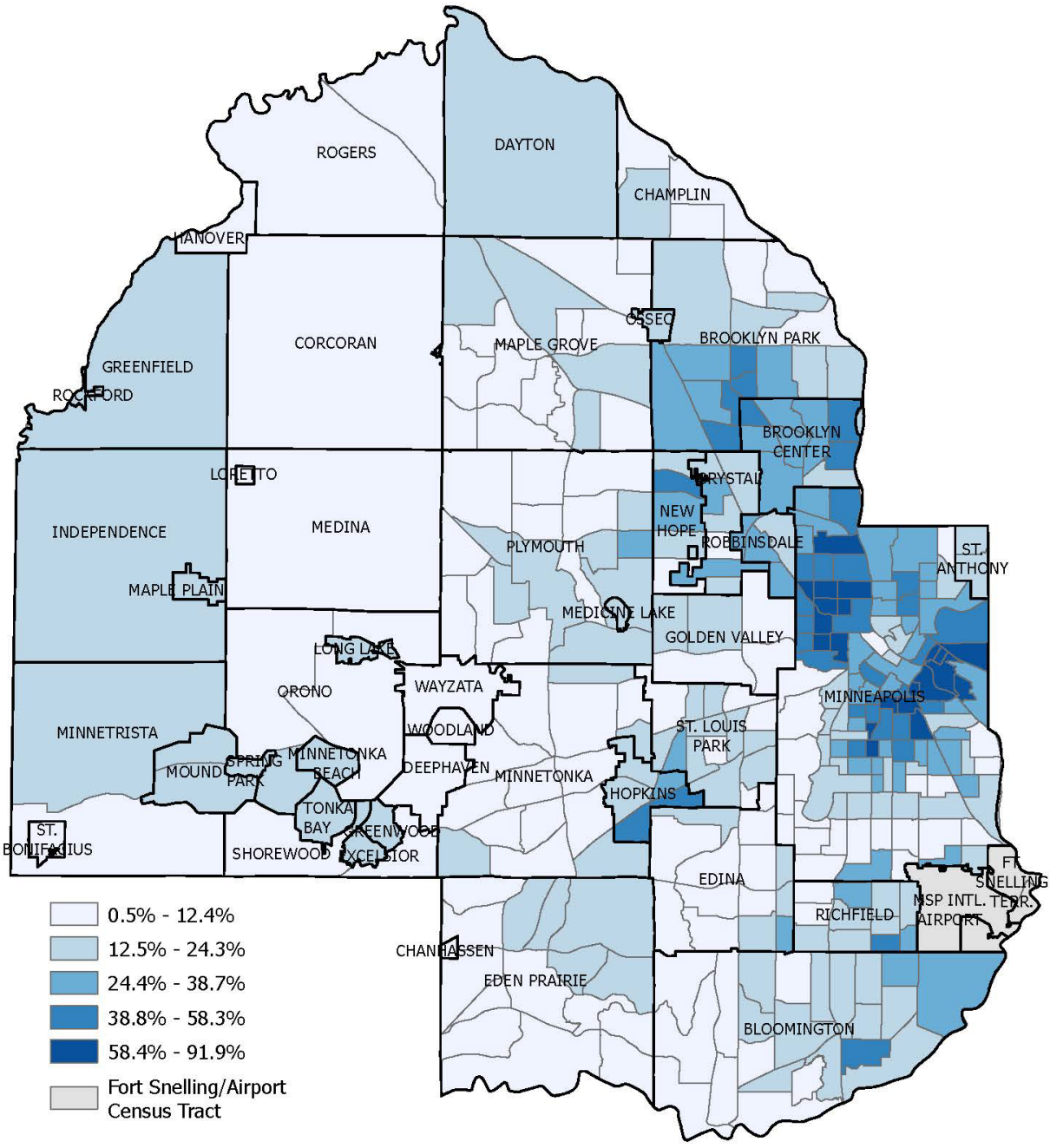
Figure 12: Median household income by race/ethnicity, 2016-2020



Source: American Community Survey 5-year estimates

In this assessment, low income is defined as the percent of the population whose income is under 200 percent of the Federal Poverty Level (FPL). The FPL is the set minimum amount of gross income that a family needs for food, clothing, transportation, shelter, and other necessities. In the United States, this level is determined by the Department of Health and Human Services.

Figure 13: Population living under 200% of the federal poverty level by census tract, 2016-2020



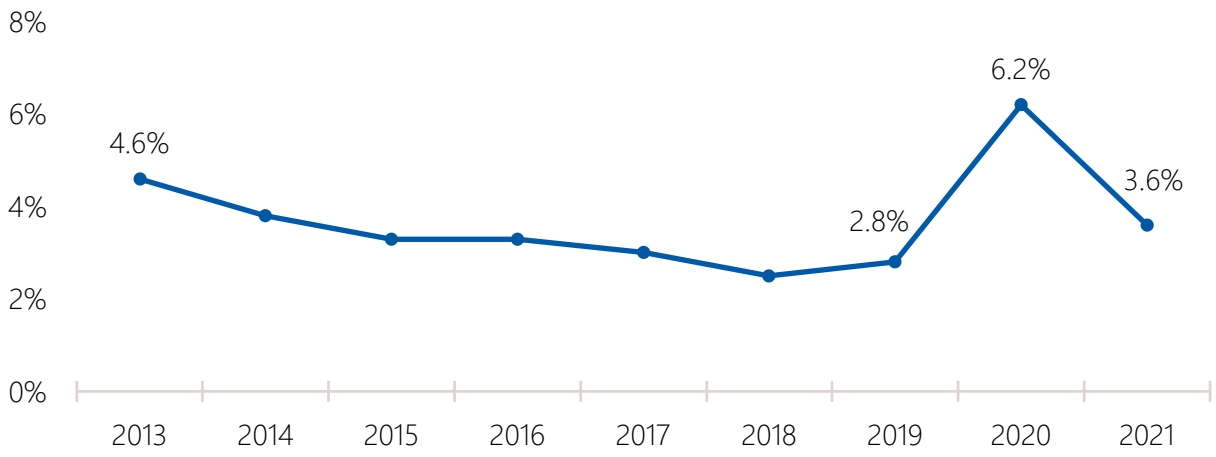
Source: American Community Survey 5-year estimates

Figure 13 above highlights a higher concentration of people with low incomes in Minneapolis and the first ring suburbs such as Brooklyn Center, Brooklyn Park, Richfield, Hopkins and areas of Bloomington, New Hope and St. Louis Park in comparison to the outer ring suburbs.

Employment

Prior to 2019, the annual average unemployment in Hennepin County had a decreasing trend. The surge in unemployment in 2020 was likely due to the COVID-19 pandemic. In 2021, the average unemployment rate began to normalize, decreasing by over 40% of the rate in 2020 (Figure 14).

Figure 14: Annual unemployment rate in Hennepin County, 2013-2021



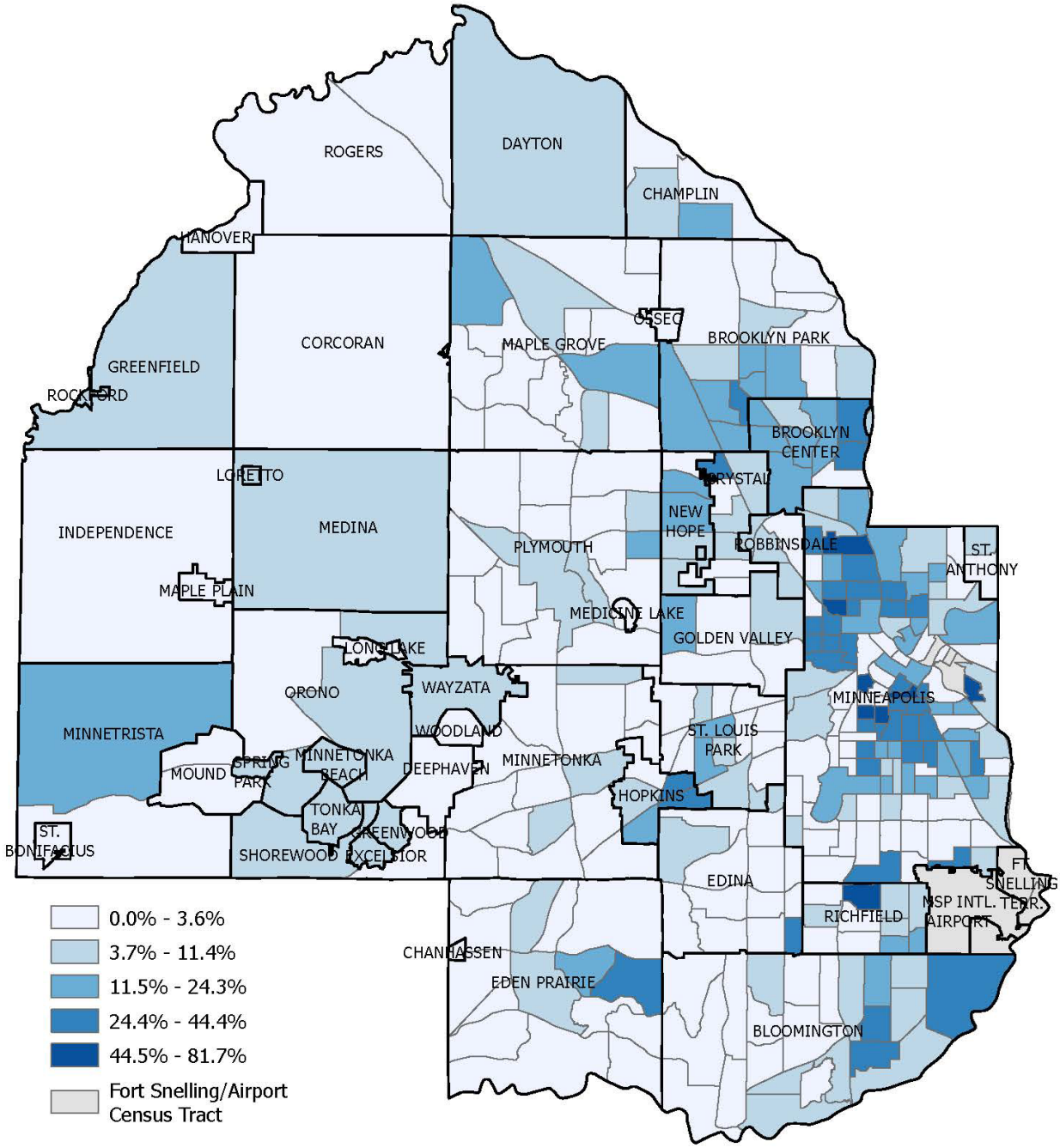
Source: Minnesota Unemployment Statistics LAUS (Local Area Unemployment Statistics) MNDEED

Families living in poverty

The number of families living in poverty is defined as the percentage of families with children under 18 that are living at or below 100% of the federal poverty level.

The ACS estimates that one in 10 (10.2%) Hennepin County residents were living below the poverty line, which is 10% higher than the poverty rate of Minnesota. 13% of children (under 18) and 8% of seniors (65 and over) in the county were living below the poverty line.

Figure 15: Families with children under 18 that are living at or below 100% of the federal poverty level by census tract, 2016-2020



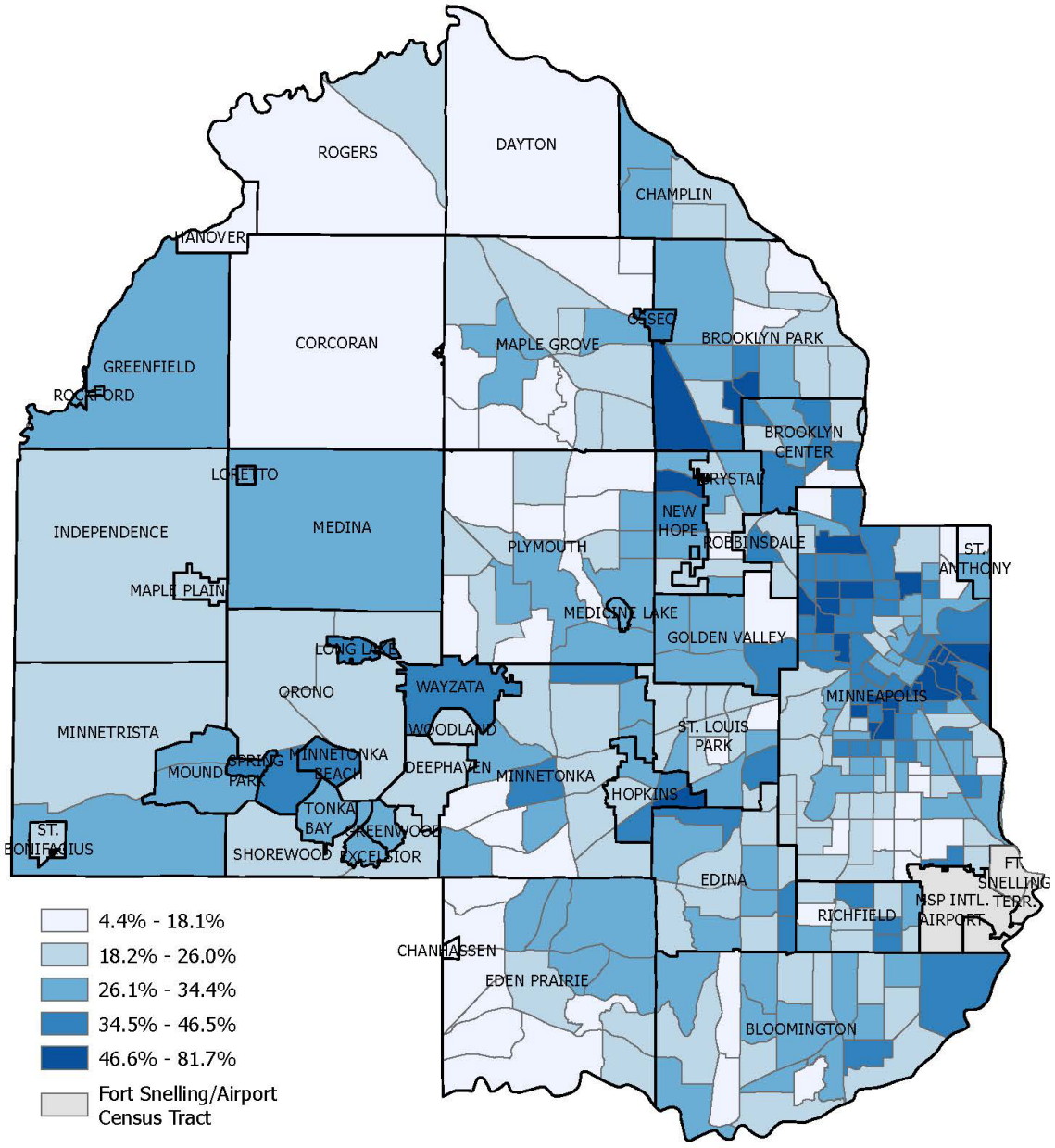
Source: American Community Survey 5-year estimates

The distribution of families living in poverty is similar to the distribution of people with low incomes. The Minneapolis area had the highest percent of families living in poverty. A few tracts in the surrounding suburbs of Brooklyn Center, Brooklyn Park, Hopkins, and Richfield had more than a third of families with children under age 18 living at 100 percent of the poverty level.

Housing

Individuals or families who pay more than 30% of their income towards housing are considered housing cost-burdened. This burden may result in difficulty affording necessities such as food, clothing, transportation, and medical care.

Figure 16: Population paying more than 30% of income toward housing (includes renter and owner occupied) by census tract, 2016-2020



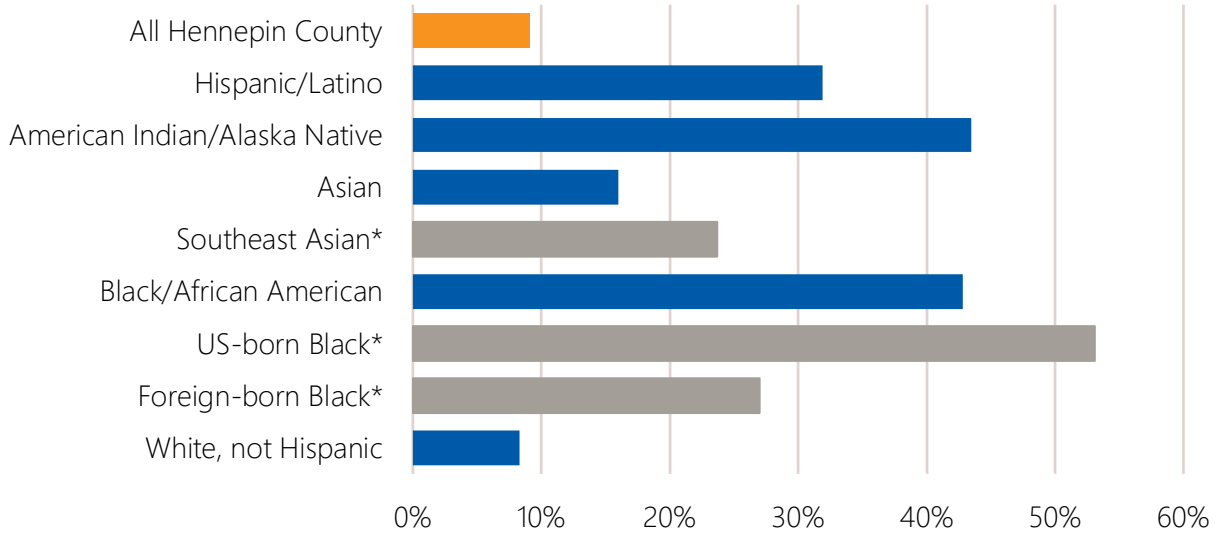
Source: American Community Survey 5-year estimates

Figure 16 highlights a higher concentration of people who are housing cost-burdened were living in Minneapolis and first ring suburbs such as Brooklyn Center, Brooklyn Park, Richfield, Hopkins, Bloomington, New Hope, and St. Louis Park in comparison to the outer ring suburbs.

In the 2018 SHAPE survey, housing insecurity was defined as people who missed or delayed a rent or mortgage payment or who experienced homelessness during the past year.

- In 2018, 7.6% of Hennepin County adults reported missing or delaying a rent or mortgage payments due to not having enough money and 2.6% reported experiencing homelessness.
- Housing insecurity varied geographically. In Minneapolis, 12.8% of adults reported experiencing housing insecurity compared to 7.1% in suburban Hennepin County (SHAPE 2018).
- Racial disparities within housing are evident. More than half (53.1%) of US-born Black adults, 43.5% of American Indian/Alaska Native adults, and 31.9% of Hispanic/Latino adults reported experiencing housing insecurity in the past year (Figure 17).
- Adults who identify as LGBT were more than twice as likely as heterosexual and cisgender adults to experience housing insecurity (SHAPE 2018).
- Adults with less than a high school education were seven times as likely to experience housing insecurity (26.4%) as adults with a college degree or higher (3.6%) (Figure 18).

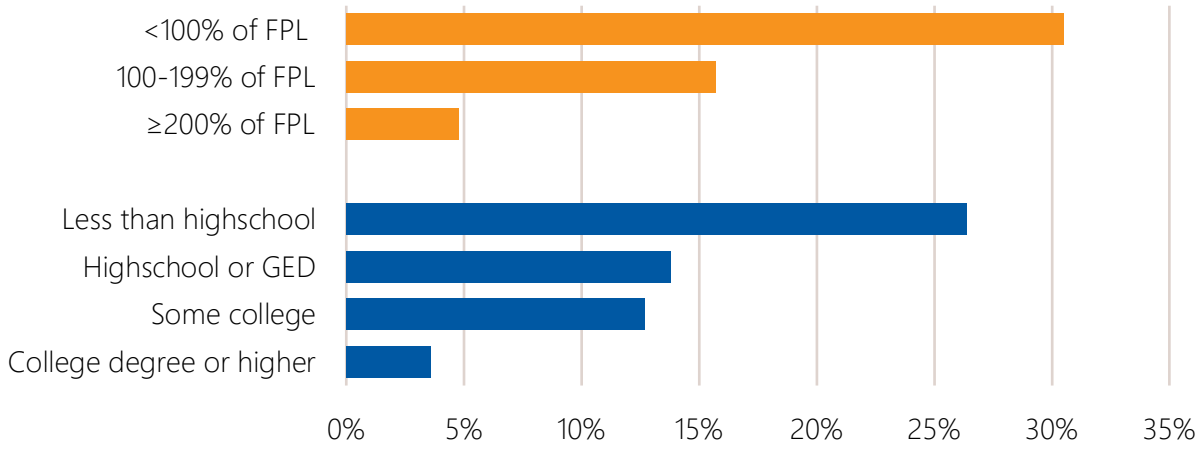
Figure 17: Percent reporting experiencing housing insecurity by race/ethnicity, 2018



Source: SHAPE

**These are subgroups from the race/ethnicity above. Southeast Asian are people who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based people's on responses to the question "were you born in the United States?"*

Figure 18: Percent reporting experiencing housing insecurity by income & education, 2018



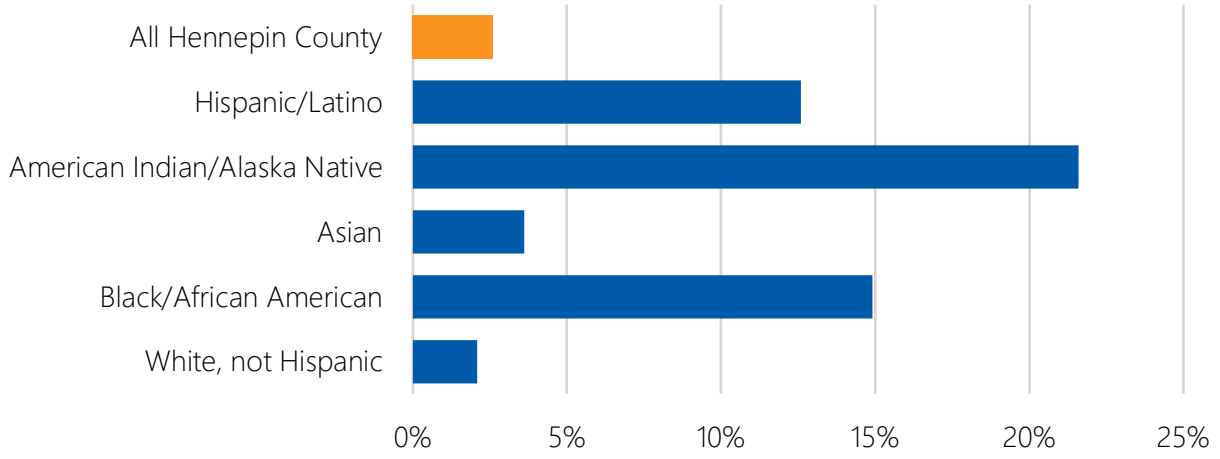
Source: SHAPE

Transportation

People rely on transportation to access goods and services such as healthy foods and health care. People experiencing transportation difficulties are less likely to access services they need, which can have a negative impact on many aspects of health.

- Hispanic/Latino, American Indian/Alaska Native, Black/African American residents were more likely to face transportation difficulties compared to White and Asian residents (Figure 19).
- Transportation barriers were more commonly reported among people with low incomes, people who have low educational attainment, people who identify as LGBT, people with a disability, people experiencing frequent mental distress, and people experiencing housing insecurity (SHAPE 2018).
- Disparity is also geographic. More Minneapolis residents (4.1%) reported lack of transportation keeping them from getting places they needed to go compared suburban Hennepin County residents (1.8%) (SHAPE 2018).

Figure 19: Percent reporting often experiencing lack of transportation during past year, 2018



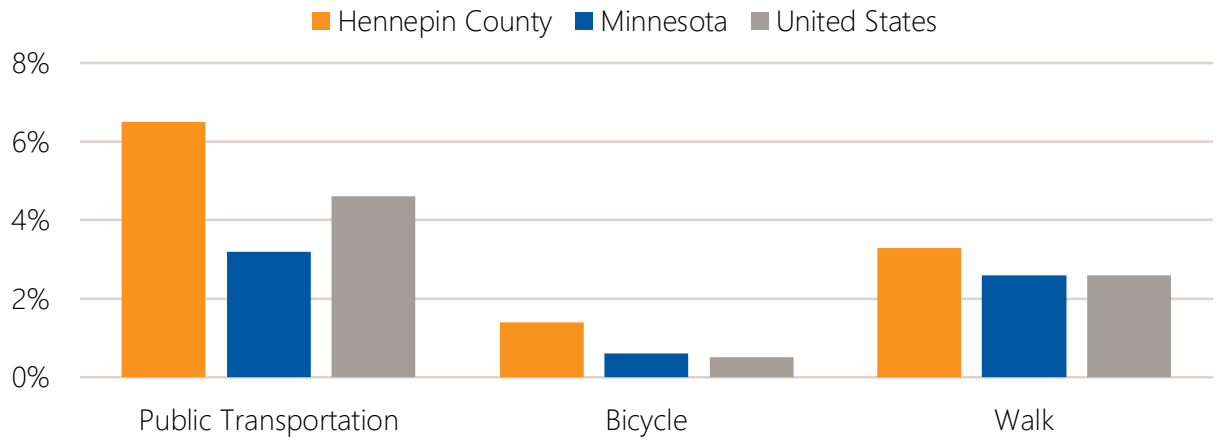
Source: SHAPE

Type of transportation used

Compared to Minnesota overall, Hennepin County residents used more transportation alternatives to cars, including bicycles, buses, and trains.

Hennepin County residents over the age of 16 were twice as likely to take public transportation or bicycle to work compared to the Minnesota average (6.4% vs. 3.2% and 1.3% vs. 0.6%, respectively) (Figure 20).

Figure 20: Means of transportation to work among workers 16 years and over (excluding cars), 2016-2020



Source: American Community Survey 5-year estimates

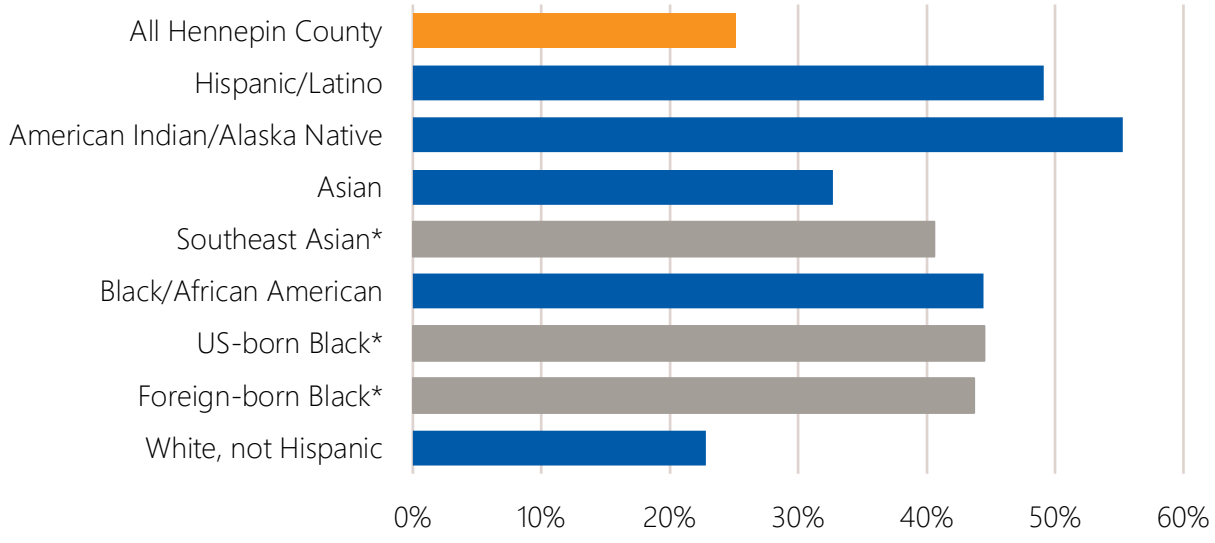
Access to health care services is critical for preventing and managing diseases. People who have health and dental insurance are more likely to access health care services. Even with health insurance, high costs can prevent people from utilizing health care services.

Dental care

Oral and dental health is an indicator of overall health and is important to general health and well-being. Oral health problems are often painful, costly, and can result in diminished quality of life. Healthy People 2030 include goals for improved oral and dental health as part of an overall plan for the promotion of health across the nation.

- In 2018, three-quarters (74.9%) of county adults visited a dentist or a dental clinic for dental care in the past year (SHAPE 2018).
- American Indian/Alaska Native (55.3%), Hispanic/Latino (49.1%), and Black/African American (44.4%) adults were more likely to report not visiting a dentist or dental clinic in the past year compared to White adults (22.8%) (Figure 21).
- Residents living in Minneapolis (67.5%) were less likely to have received dental care in the past year compared to suburban Hennepin County residents (78.9%) (SHAPE 2018).
- Adults living below the poverty line, with lower educational attainment, experiencing housing insecurity, living with a disability, or experiencing frequent mental distress were less likely to have had an annual dental visit in the past year compared to the county average (SHAPE 2018).

Figure 21: Percent who did not visit the dentist in past year by race/ethnicity, 2018



Source: SHAPE

**These are subgroups from the race/ethnicity above. Southeast Asian are people who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based on people's responses to the question "were you born in the United States?"*

Difficulty paying for health care

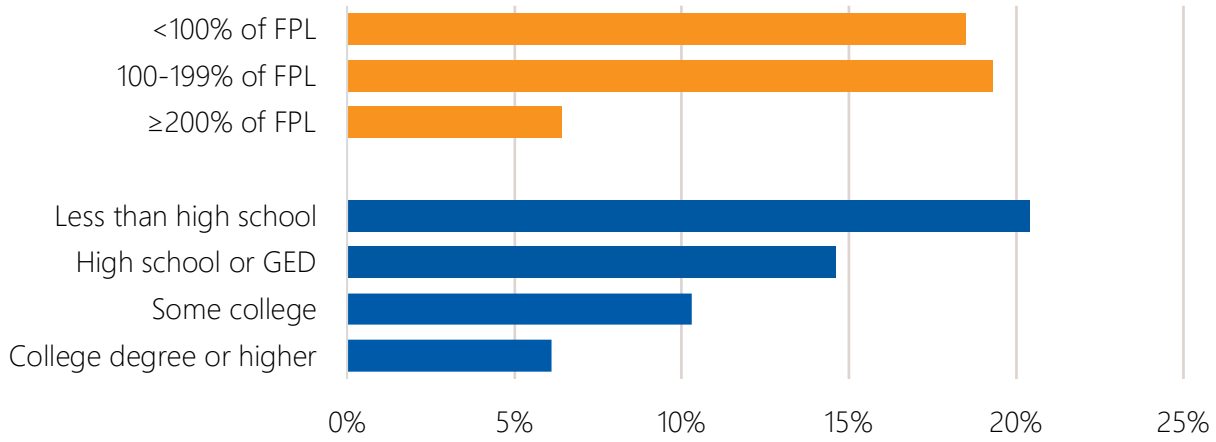
Although only 3% of Hennepin County adults lack health insurance, 23% of adults report it being somewhat or very difficult to pay for health insurance premiums, co-pays, and deductibles. Among residents who delayed necessary medical care in 2018, a majority (63.6%) cited delaying medical care due to cost or lack of insurance (SHAPE 2018).

Delayed prescriptions

High prescription drug costs and difficulty affording medication has led many people to forgo or ration their prescriptions. Delaying refills, skipping doses, or stopping necessary prescription medications can worsen health conditions or result in hospitalization.

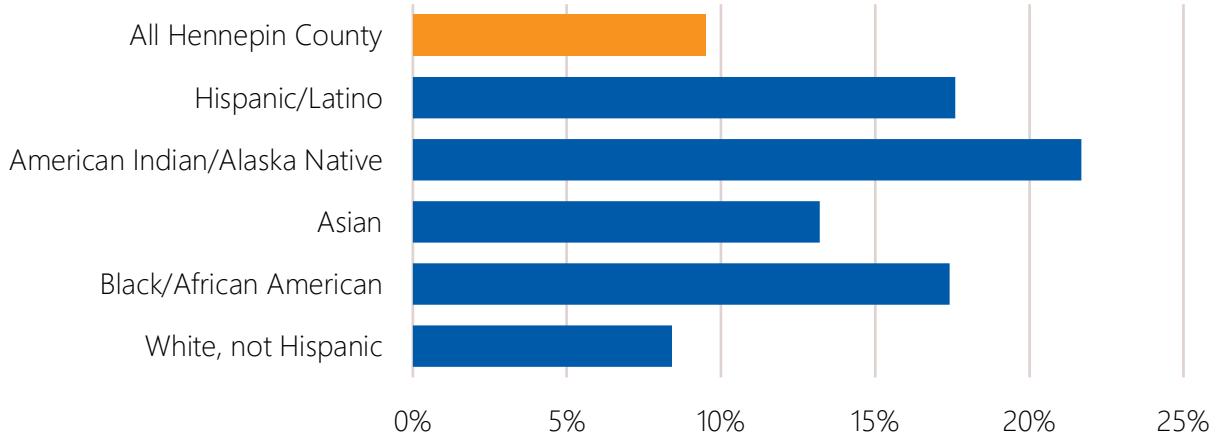
- Nearly one in 10 (9.5%) adults who take prescription medications reported delaying refills, skipping doses, taking a smaller amount, or not filling a prescription, due to cost (SHAPE 2018).
- The likelihood of having difficulty paying for a prescription medication decreased as income and educational attainment increased (Figure 22).
- White adults were less likely to delay prescription medication use compared to any other race or ethnicity (Figure 23).

Figure 22: Percent who delayed or did not fill a prescription due to cost in past 12 months by income & education, 2018



Source: SHAPE

Figure 23: Percent who delayed or did not fill a prescription due to cost in past 12 months by race/ethnicity, 2018



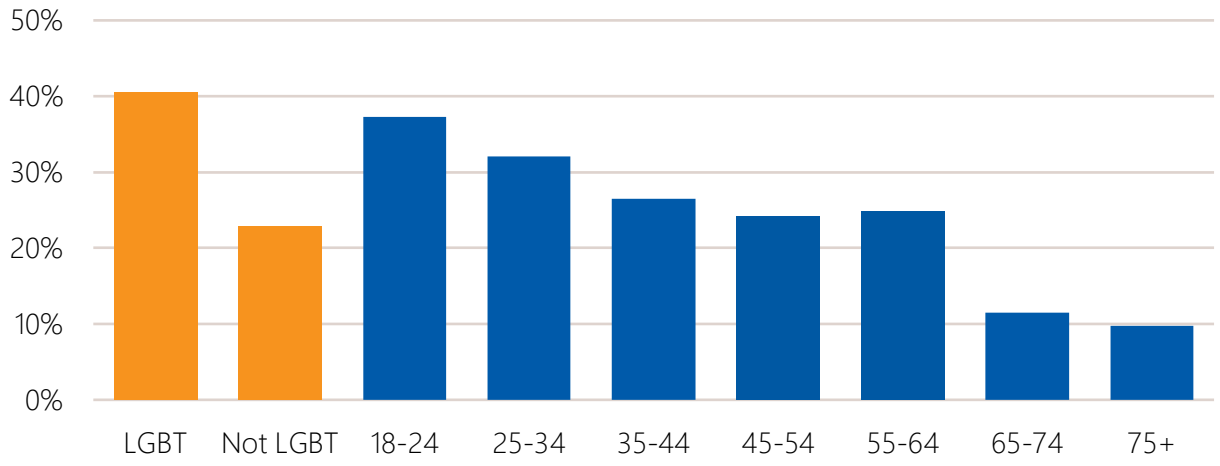
Source: SHAPE

Delayed medical care

Delaying medical care can increase the risk of severe illness or death for people with underlying conditions. During the height of the COVID-19 pandemic in June 2020, estimates show approximately 41% of adults in the U.S. delayed or avoided medical care due to COVID-19 concerns (Czeisler, et al., 2020). More than half of Americans who reported delaying medical care in 2021 also reported having at least one pre-existing condition (Gertz, Pollack, Schultheiss, & Brownstein, 2022).

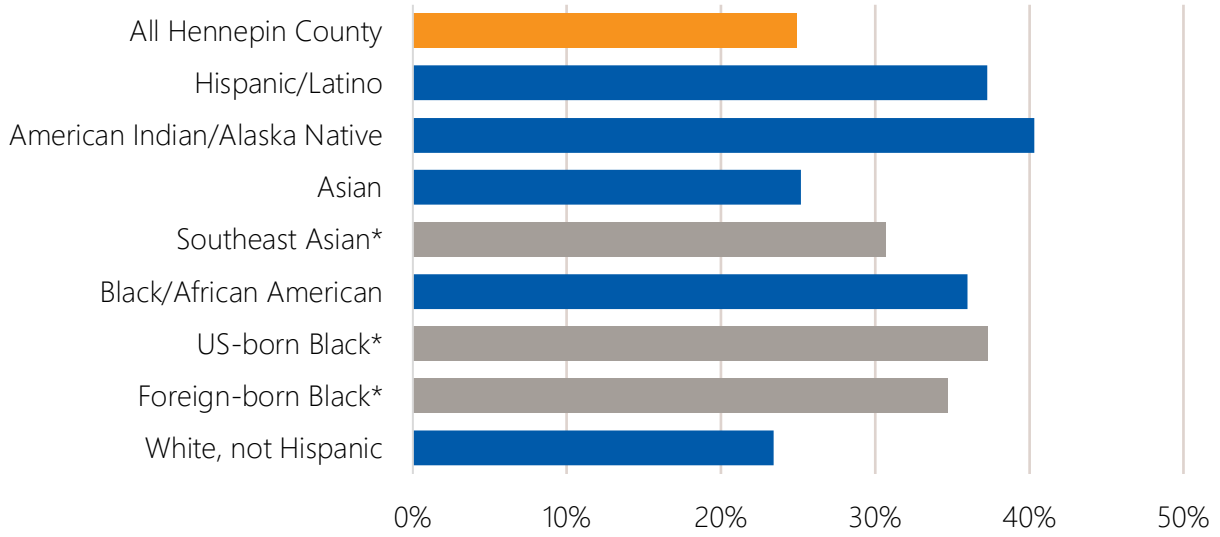
- In 2018, 24.9% of Hennepin County adults delayed or did not get the medical care they needed (SHAPE 2018).
- Adults who identify as LGBT were more likely to delay needed medical care compared to people who do not identify as LGBT (Figure 24).
- The likelihood of delaying needed medical care decreased with age (Figure 24).
- People experiencing housing insecurity (53.9%) or frequent mental distress (45.7%) were more than twice as likely to report unmet medical needs compared to people who were not experiencing housing insecurity (21.7%) or frequent mental distress (21.0%) (SHAPE 2018).
- Hispanic/Latino, American Indian/Alaska Native, and Black/African American adults - racial groups with the highest rates of uninsurance - were more likely to report unmet health care needs compared to the groups with lowest rates of uninsurance, Asian and White adults (Figure 25).

Figure 24: Percentage reporting delayed heatlh care by LGBT identification and age, 2018



Source: SHAPE

Figure 25: Percentage reporting delayed health care by race/ethnicity, 2018



Source: SHAPE
**These are subgroups from the race/ethnicity above. Southeast Asian are people who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based on people's responses to the question "were you born in the United States?"*

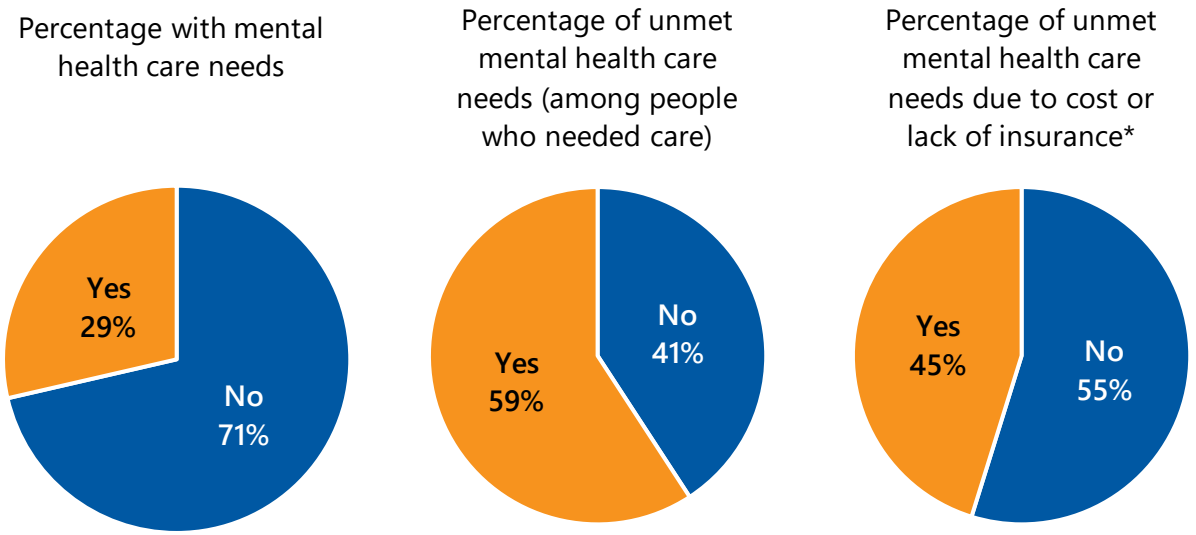
Delayed mental health care

Delaying mental health care can cause an individual unnessecary psychological suffering. The longer individuals postpone mental health care, the more likely their concerns will escalate to crisis or suicide. Stigma, the high cost of services, and difficulty accessing qualified mental health professionals contribute to delays in receiving mental health care.

- About 29% of adults reported there was a time when they "wanted to talk with or seek help from a health professional, about stress, depression, a problem with emotions, excessive worrying, or troubling thoughts" (Figure 26).

- Mental health care needs were much higher among young adults, people who identify as LGBT, people with low incomes, people with a disability, and people experiencing housing insecurity (SHAPE 2018).
- For adults who reported wanting to see a health professional for mental health concerns, nearly six out of 10 (59.2%) delayed or did not get the care they needed (Figure 26).
- Nearly half (45%) of adults who delayed seeing a health professional for mental health concerns did so because of concerns about cost (Figure 26).

Figure 26: Adults with unmet mental health care needs, 2018



Source: SHAPE
**Among people experiencing unmet mental health care needs.*

Introduction

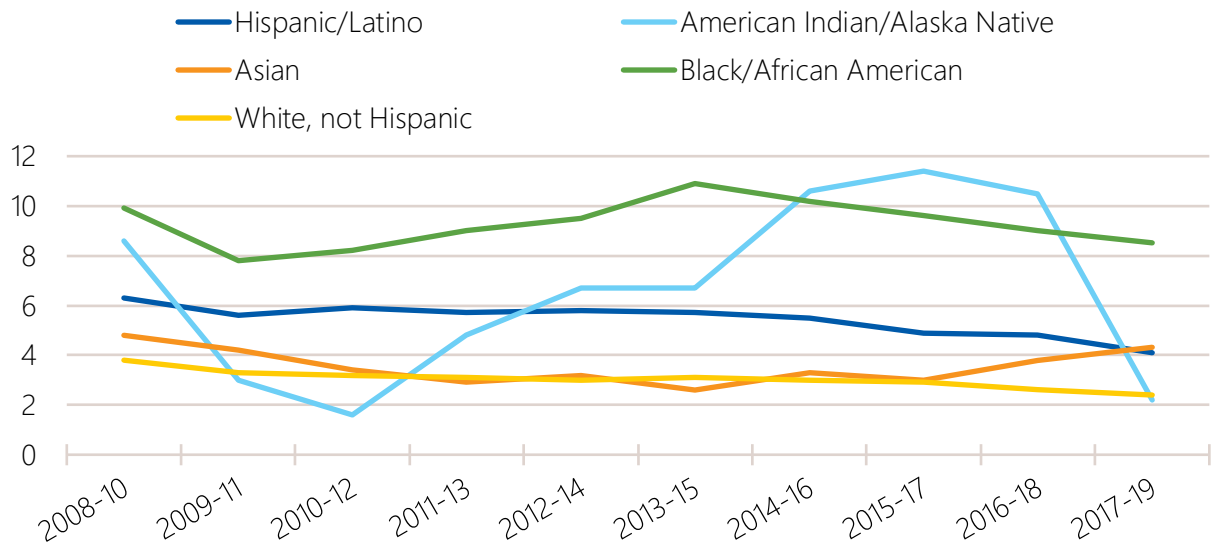
Improving the health and well-being of mothers, infants, and children continues to be a crucial area of focus in public health. Not only does their well-being determine the health of the next generation, but it can also help predict future public health challenges and disparities.

Infant mortality

Infant mortality is the death of an infant within the first year of life. Infant mortality not only impacts families, but the communities they live in. Because infants are among the county's most vulnerable residents, infant mortality is an important indicator of population health.

- According to 2019 Hennepin County death records, 78 babies died before their first birthday. This represents 5.1 babies per 1,000 born, which is slightly below the national rate (5.6 per 1,000) and on target with the Healthy People 2030 goal of 5.0 infant deaths per 1,000 live births.
- In Hennepin County, racial and ethnic disparities mirror those seen nationally, with the highest rates of infant mortality among babies born to US-born Black/African American mothers.
- Infants born to Black/African American mothers (8.5 per 1,000) died at rates more than 3.5 times the rate of infants born to White mothers (2.4 per 1,000) (Figure 27).

Figure 27: Infant mortality rate by race/ethnicity of mother, 2008-2019



Source: MN Vital Statistics, Hennepin County death records

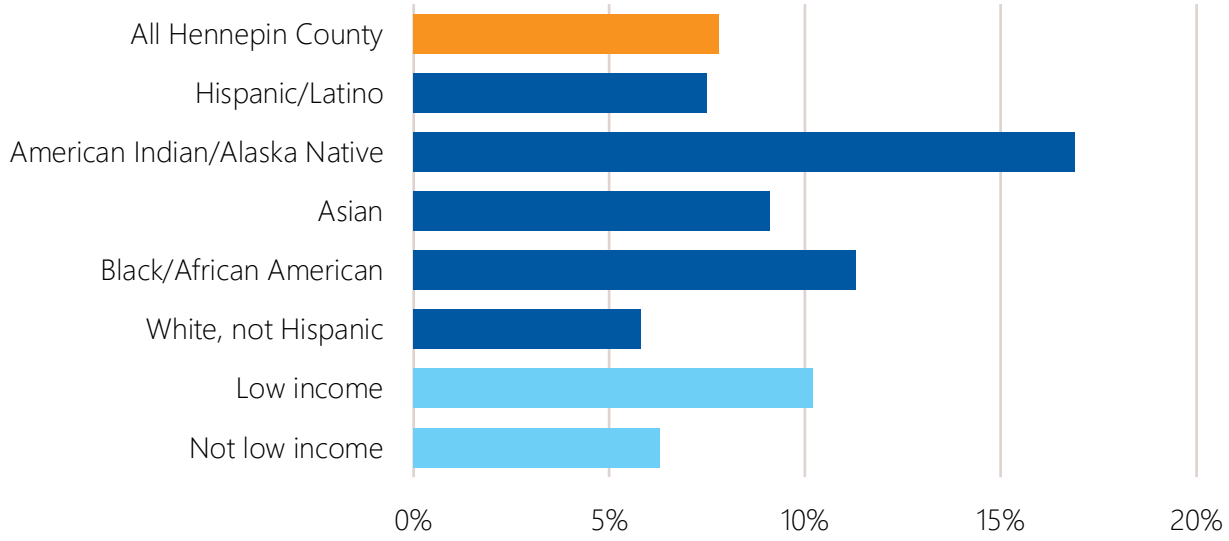
Low birthweight

Birth weight is an indicator of infant mortality and development. Babies born weighing less than 5.5 pounds are considered low birth weight. Low birth weight is associated with infant mortality, developmental difficulties, and higher rates of non-communicable diseases such as diabetes and hypertension later in life. For this indicator, the statistics are limited to singleton or one-child births.

- In 2019, 7.8% of all babies born in Hennepin County were low birthweight (Figure 28).

- The percent of low birthweight infants has slowly increased from 2011 (7.0%) to 2019 (7.8%).
- Infants born to American Indian/Alaska Native (16.9%) and Black/African American mothers (11.3%) were at highest risk of being low birthweight (Figure 28).
- Mothers with low incomes (10.2%) were more likely to have low birthweight babies than mothers who did not have low incomes (6.3%) (Figure 28).

Figure 28: Percent low birth weight by mother's demographics, 2019



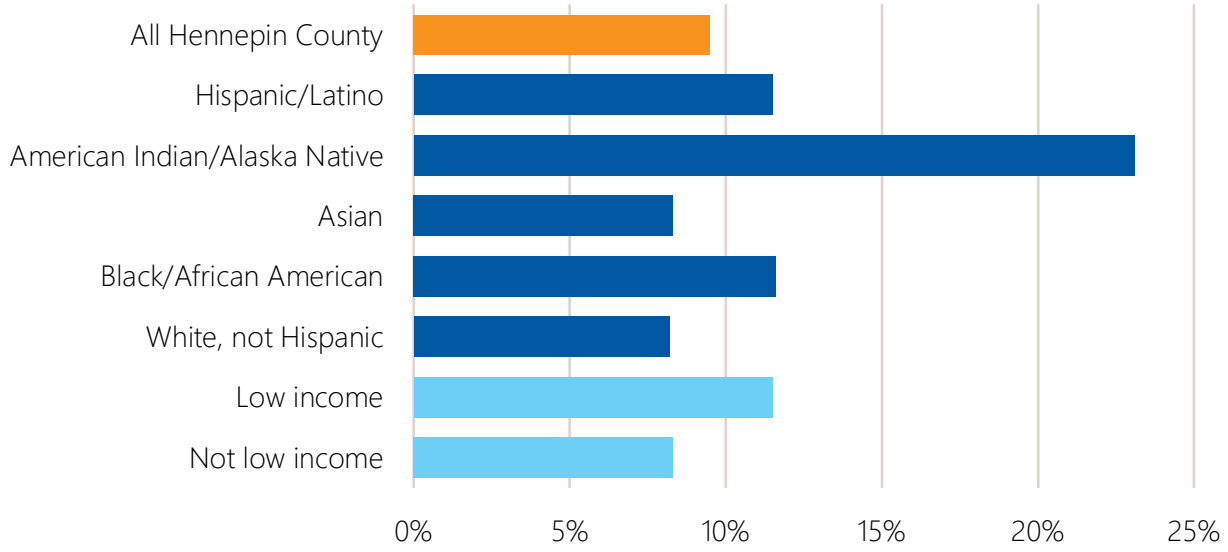
Source: MN Vital Statistics birth records

Preterm birth

Babies born before 37 weeks of gestation are considered preterm and premature. Preterm babies are at higher risk of developing illness, feeding/digestive problems, intellectual or developmental delays and even death.

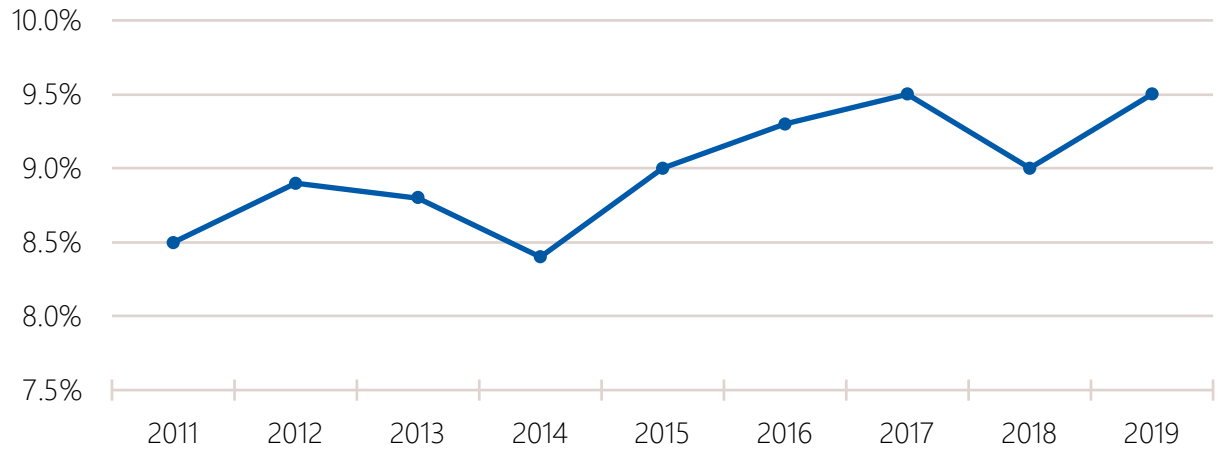
- In 2019, 9.5% of all births in Hennepin County were delivered preterm, or before 37 weeks gestation (Figure 29).
- Babies born to American Indian/Alaska Native mothers (23.1%) were most likely to be preterm, followed by babies born to Black/African American (11.6%) and Hispanic/Latino mothers (11.5%) (Figure 29).
- Expectant mothers with low incomes (11.5%) were more likely to deliver preterm compared to mothers who did not have low incomes (8.3%) (Figure 29).
- There is an increasing trend in percent of babies born preterm in Hennepin County (Figure 30).

Figure 29: Percent preterm delivery by mother's demographics, 2019



Source: MN Vital Statistics birth records

Figure 30: Percent preterm delivery in Hennepin County, 2011-2019



Source: MN Vital Statistics birth records

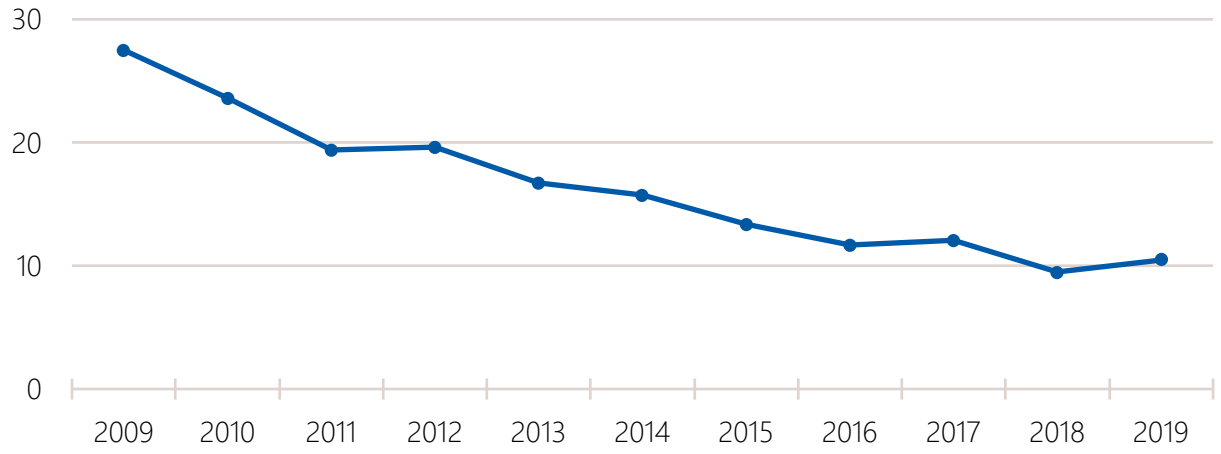
Maternal age

Giving birth or being pregnant during the teen years can result in significant social, health, and economic burden for the parents, their children, and their communities. Children of teenage parents are more likely to become teenage parents themselves, experience health issues, perform poorly in school, and be incarcerated as an adolescent.

- According to 2019 Hennepin County birth data, 367 births, or 10.5% of all births in Hennepin County were to mothers ages 15 to 19.
- The teen birth rate declined from 27.5 births per 1,000 in 2009 to 10.5 births per 1,000 in 2019 (Figure 31).

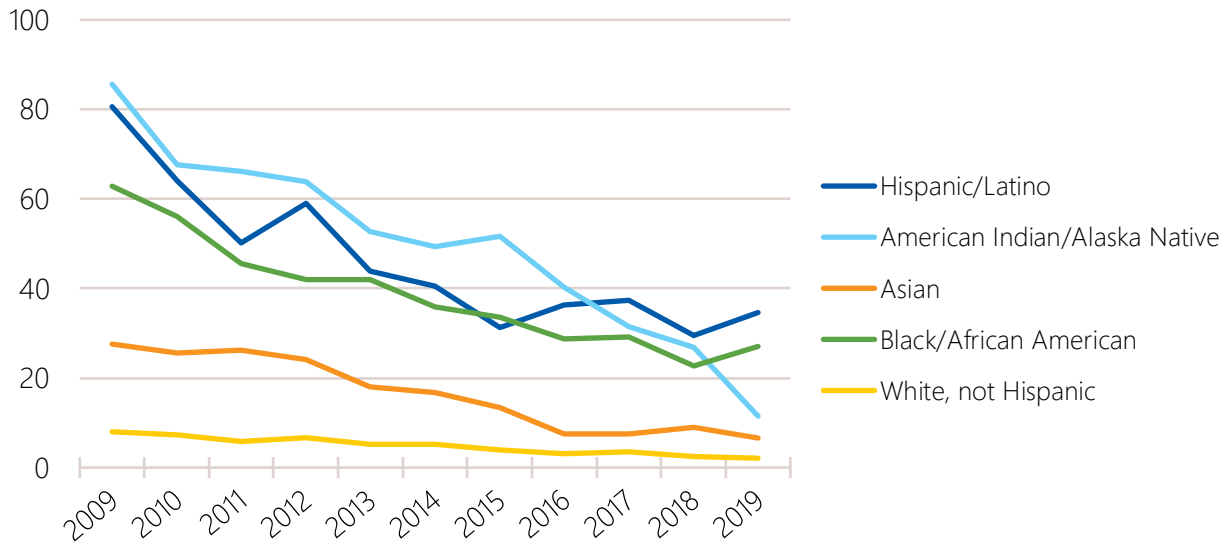
- Disparities remain in the rates of teen births for some racial and ethnic groups, especially Hispanic (34.6), African American (27.1), and American Indian/Alaska Native mothers (11.5) (Figure 32).

Figure 31: Birthrate (per 1,000) for mothers 15-19 years, 2009-2019



Source: MN Vital Statistics, Hennepin County birth records

Figure 32: Birthrate (per 1,000) for mothers 15-19 years by race/ethnicity, 2009-2019



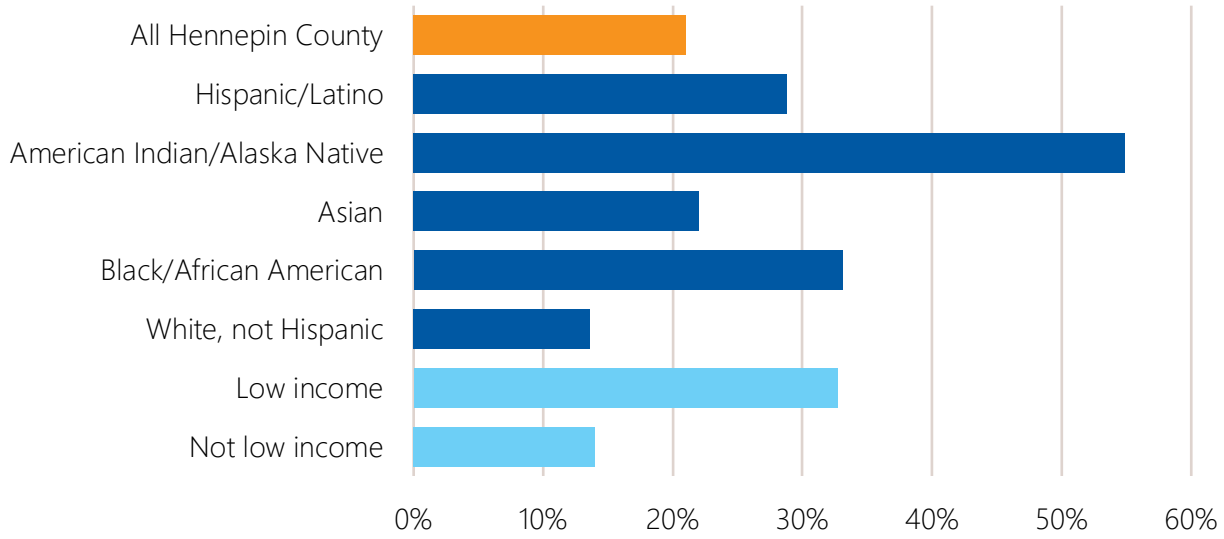
Source: MN Vital Statistics, Hennepin County birth records

Early and adequate prenatal care

Prenatal care helps keep pregnant people and their babies healthy. Receiving regular medical care during pregnancy reduces the risk of pregnancy and birth complications. The earlier prenatal care is started during pregnancy, the lower the risk of birth complications. Prenatal care starting in the first trimester of pregnancy is ideal; people who do not receive prenatal care until their third trimester, or who do not receive any care prior to delivery, are at risk for birth complications.

- In 2019, 79% of pregnant people in Hennepin County received early and adequate prenatal care (Figure 33). This is near the Healthy People 2030 target, which aims for at least 80.5% of pregnant people receiving early and adequate prenatal care.
- American Indian/Alaska Native people who are pregnant were the least likely (54.9%) to receive early and adequate prenatal care compared to any other race/ethnicity. Black/African American (33.1%) and Hispanic (28.8%) people who are pregnant were the second and third least likely, respectively. By comparison just 13.6% of White pregnant people received late or no prenatal care (Figure 33).
- People who have low incomes (32.7%) were more than twice as likely to not receive early and adequate prenatal care compared to those who do not have low incomes (14.0%) (Figure 33).

Figure 33: Late or no prenatal care by mother's demographics, 2019



Source: MN Vital Statistics birth records

Introduction

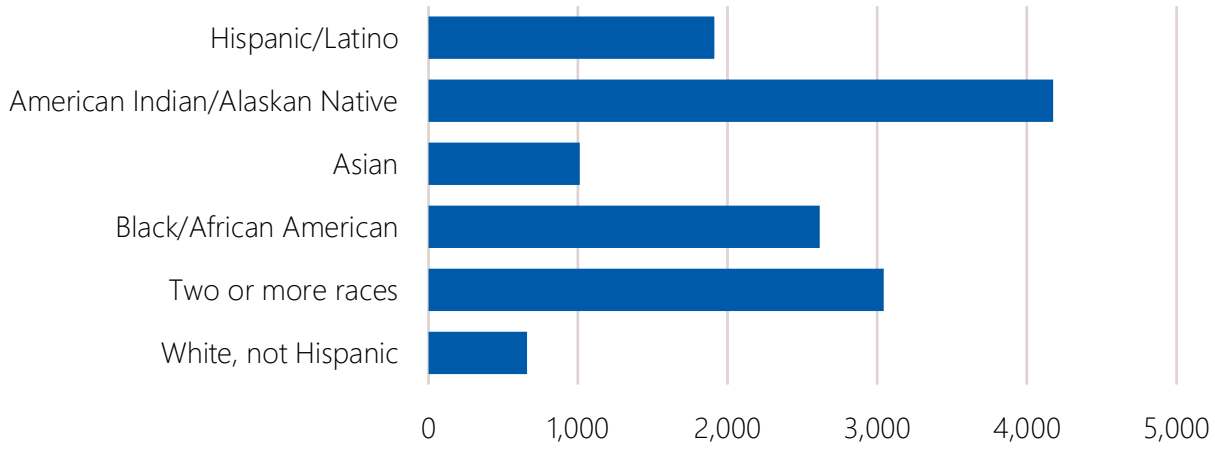
Infectious diseases are diseases that can be spread from the environment or from one person to another. Hennepin County Public Health works to prevent and manage infectious disease using strategies such as providing immunization services, surveillance, and responding to outbreaks.

COVID-19

Many longstanding disparities, like poverty and unemployment, got worse because of the COVID-19 pandemic. People of color, American Indian/Alaska Native people, and members of refuges and immigrant communities were more likely to get sick, have severe illness, be hospitalized, and die from COVID-19.

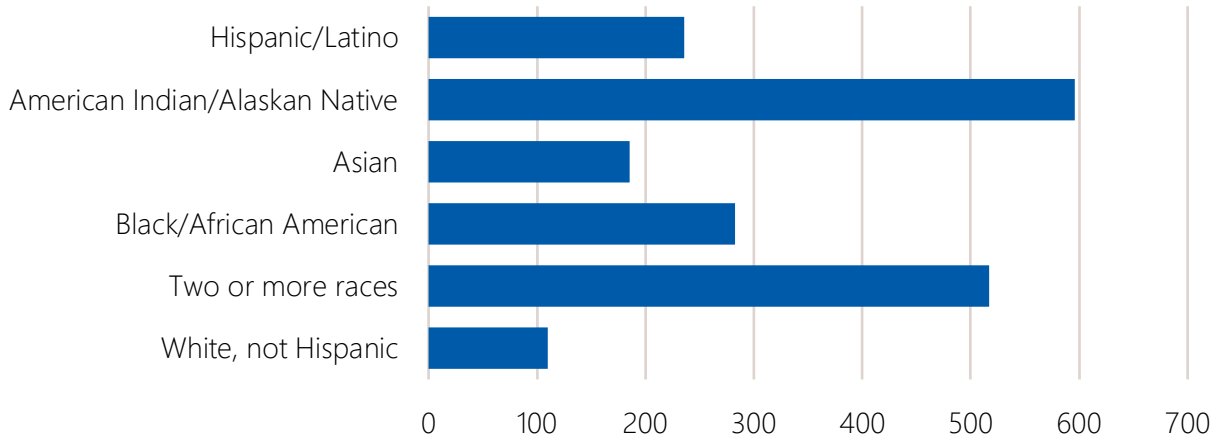
- As of June 2022, age-adjusted COVID-19 hospitalization rates were highest among American Indian/Alaska Native, multi-race, Black/African American and Hispanic residents (Figure 34).
- Although most COVID-19 deaths were among White residents, the highest age-adjusted death rates were observed among American Indian/Alaska Native, Black/African American, and multi-race residents. This shows a disproportionate impact on communities of color (Figure 35).
- As of September 2022, data compiled by Hennepin County Public Health approximated that 81% of the county population had received at least one COVID-19 vaccine dose and 75% had a completed COVID-19 vaccine series at that time.
- Black/African American residents were less likely to be vaccinated against COVID-19 compared to residents from other race/ethnicity groups in Hennepin County (Figure 36).

Figure 34 Hennepin County COVID-19 hospitalization rate (per 100,000) by race/ethnicity as of June 23, 2022



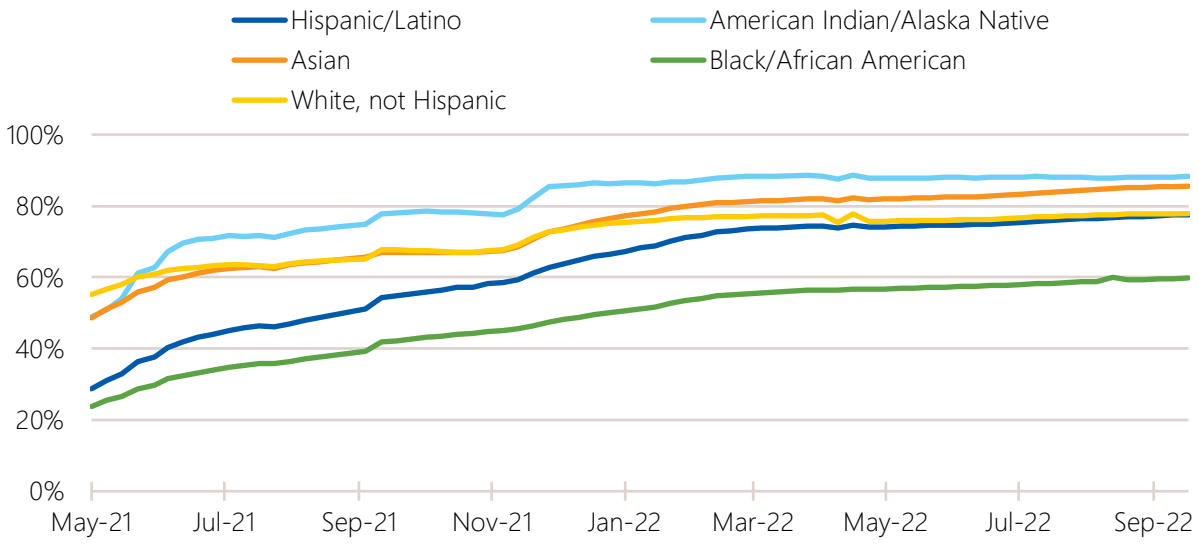
Source: Minnesota Department of Health, age-adjusted

Figure 35: Hennepin County COVID-19 death rate (per 100,000) by race/ethnicity as of June 23, 2022



Source: Minnesota Department of Health, age-adjusted

Figure 36: Percent of population (5 years or older) by race/ethnicity with at least on COVID-19 vaccine dose as of September 26, 2022



Source: HCPH epidemiology, vaccines reported by zip code so numbers may include residents outside of Hennepin County

Sexual health

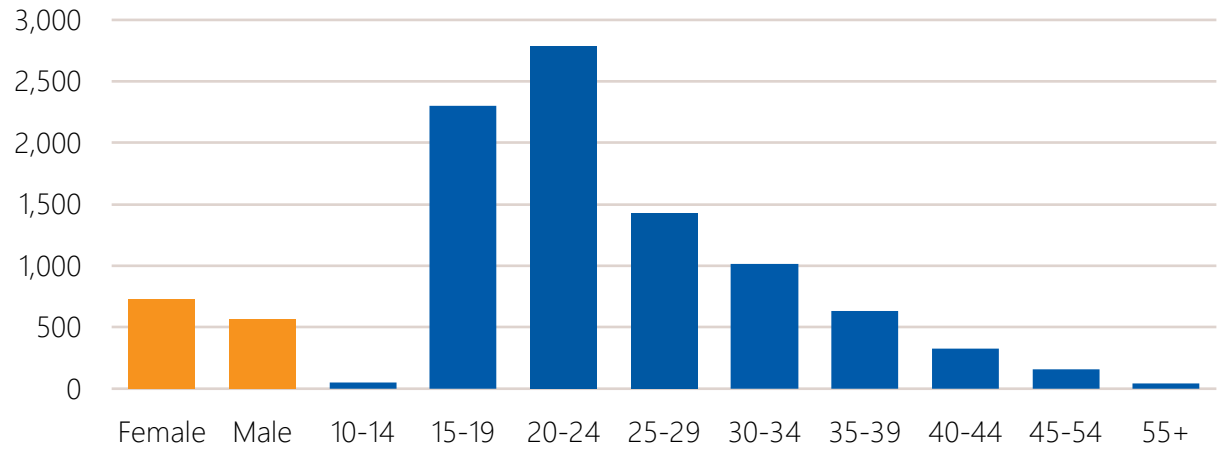
Sexual health is not simply an individual experience. It is influenced by societal factors such as income status, social norms, policies, and available services. Sexually transmitted infections (STIs) are a sexual health indicator of concern. STIs are infections that are spread through sexual activity. Some STIs, including HIV, are also transmitted through infected blood. STIs can be passed to infants from their mothers during pregnancy, birth, or chestfeeding.

Chlamydia

For females, complications from chlamydia include pelvic inflammatory disease (PID) which may cause infertility, chronic pelvic pain, or tubal pregnancy. Males who are left untreated typically develop urethral infections, and in rare cases, may become sterile.

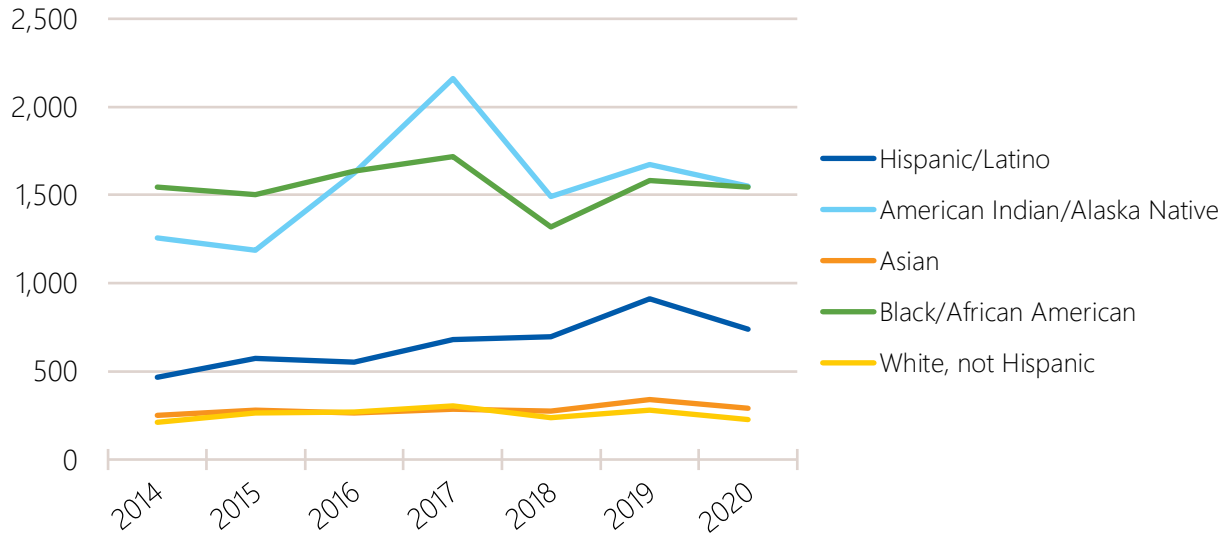
- Sexually active adolescents (ages 15-19) and young adults (ages 20-24) were at highest risk for chlamydia infections (Figure 37).
- The chlamydia rate for females in 2021 was approximately 1.3 times higher than for males (731 cases compared to 565 cases per 100,000 population) (Figure 37).
- Chlamydia infection was disproportionately found in Black/African American, Hispanic/Latino, and American Indian/Alaska Native populations (Figure 38).

Figure 37: Chlamydia rate (per 100,000) by sex and age, 2021



Source: HCPH epidemiology

Figure 38: Chlamydia rate (per 100,000) by race/ethnicity, 2014-2020



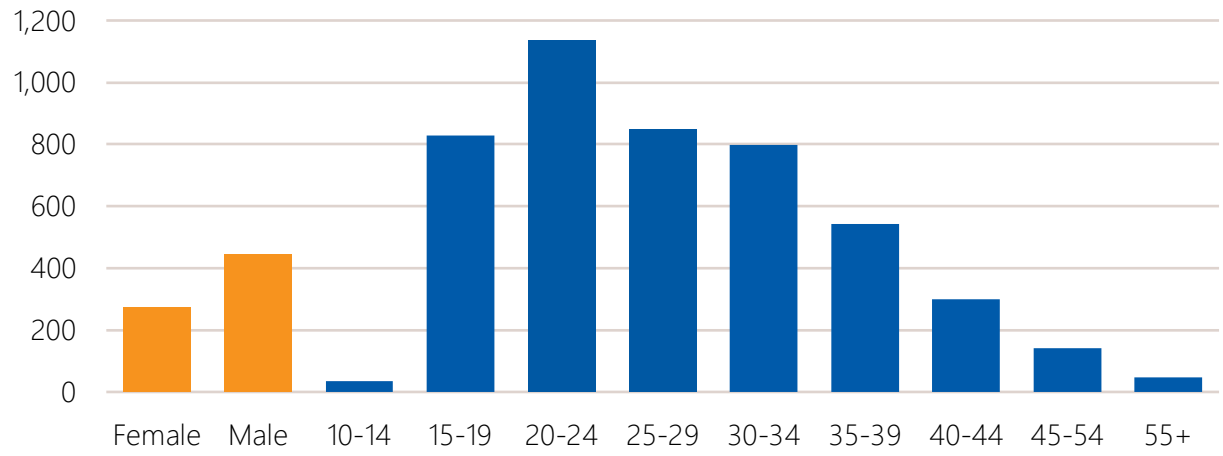
Source: HCPH epidemiology

Gonorrhea

Untreated gonorrhea in males can cause epididymitis (a painful condition affecting the testes) and in females, pelvic inflammatory disease (PID). These conditions can lead to infertility. Although treatable, gonorrhea continues to persist in the population. Oftentimes, people may not recognize the symptoms or attribute their condition to other causes.

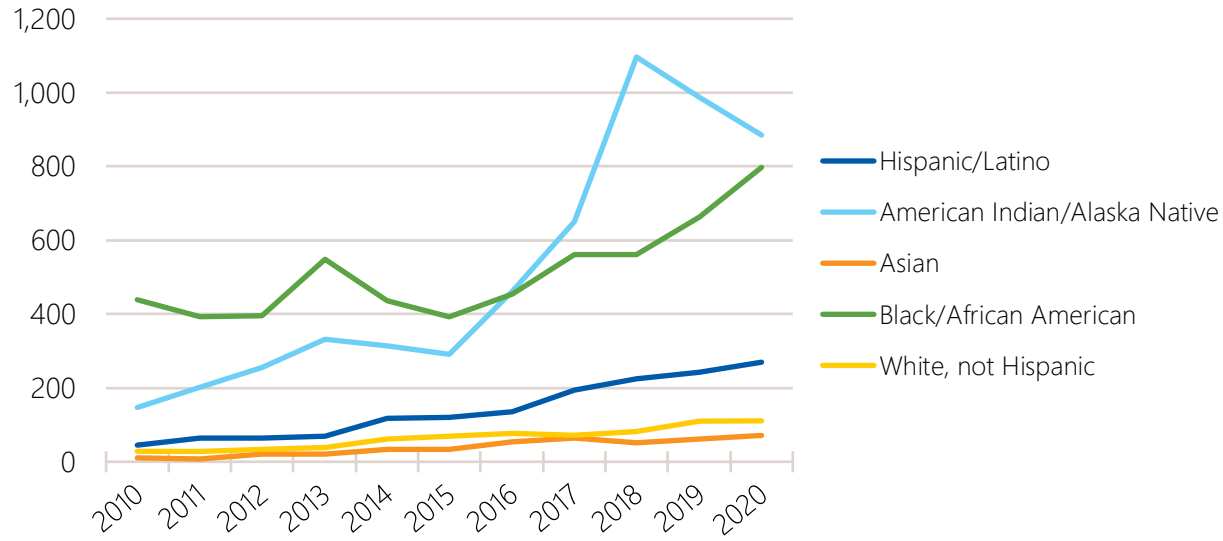
- In 2021, the gonorrhea rate was higher for males than females (440 cases vs. 274 cases per 100,000 population) (Figure 39).
- Sexually active young adults (ages 20-34) and adolescents (ages 15-19) were at highest risk for gonorrhea infections (Figure 39).
- Gonorrhea remained disproportionately high in the American Indian/Alaska Native and the Black/African American populations (Figure 40).

Figure 39: Gonorrhea rate (per 100,000) by sex and age, 2021



Source: HCPH epidemiology

Figure 40: Gonorrhea rate (per 100,000) by race/ethnicity, 2010-2020



Source: HCPH epidemiology

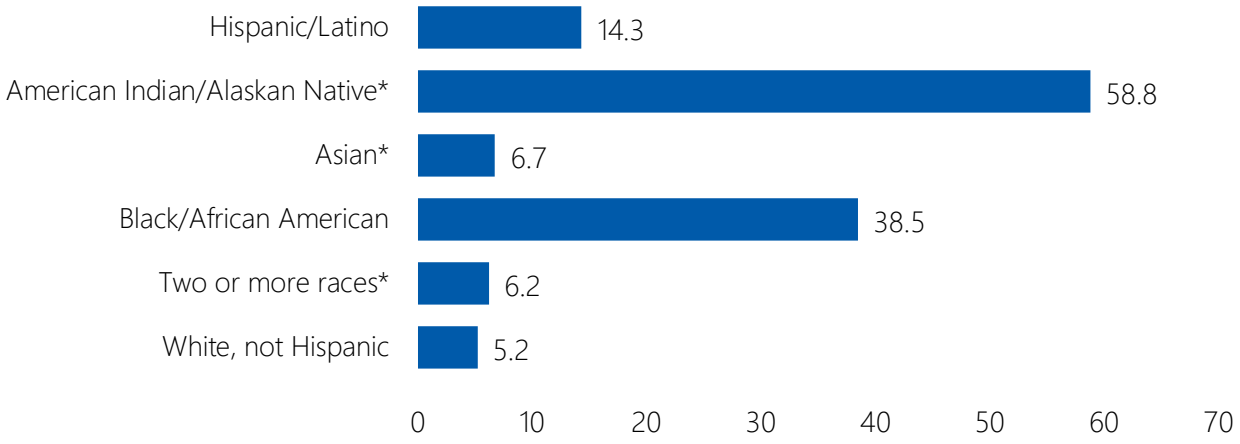
HIV/AIDS

Human immunodeficiency virus (HIV) infects the cells of the immune system, weakening the body's ability to fight other infections or diseases. The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS). Without proper medical treatment, AIDS is a fatal condition.

As noted by the Minnesota Department of Health in a recent report about drug overdose deaths, in Minnesota, factors like systemic racism have prevented communities of color (particularly African American and American Indian Minnesotans) from having equal access to the resources needed to be healthy. Poverty, ACEs, intergenerational trauma, and intergenerational substance use are all social determinants of health influenced by systemic racism. The health inequities experienced by communities of color, as a result of social determinants of health and systemic racism, result in overdose death disparities for communities of color (MDH - Differences in Rates of Drug Overdose Deaths by Race (2019)). These same inequities also lead to disproportionately higher rates of HIV infection.

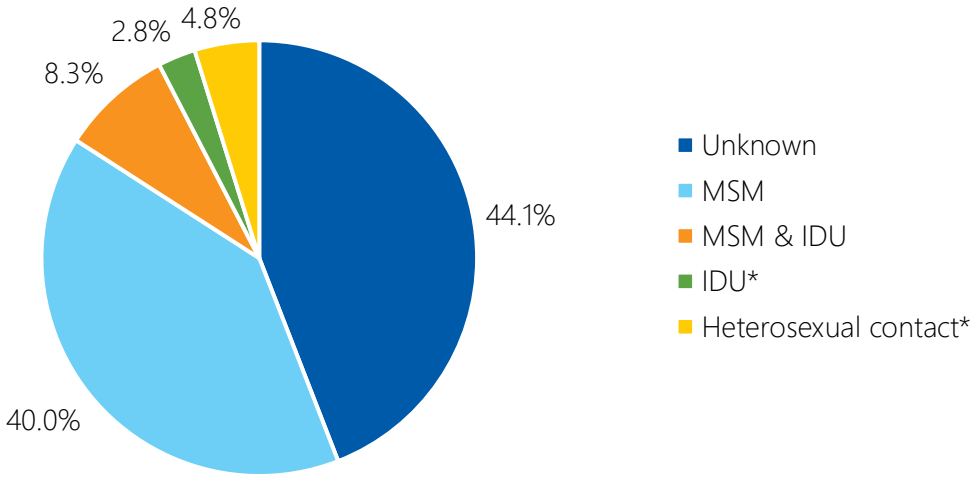
- HIV infection was disproportionately found in American Indian/Alaska Native and Black/African American populations (Figure 41).
- Men who have sex with men (MSM) were at the greatest risk for acquiring HIV infection. Higher rates of HIV among MSM populations, stigma, and lack of access to care contribute to increased risks for MSM. MSM accounted for 40% of new HIV cases in 2021. People who were both injection drug users (IDU) and MSM accounted for 8% of new cases; heterosexual contact accounted for another 5% of new cases (Figure 42).

Figure 41: HIV infection rate (per 100,000 population) by race/ethnicity, 2021



Source: HCPH epidemiology
**Case counts fewer than 12 and rates calculated in these scenarios are considered unstable and should be interpreted with caution.*

Figure 42: Mode of transmission for new HIV infections, 2021

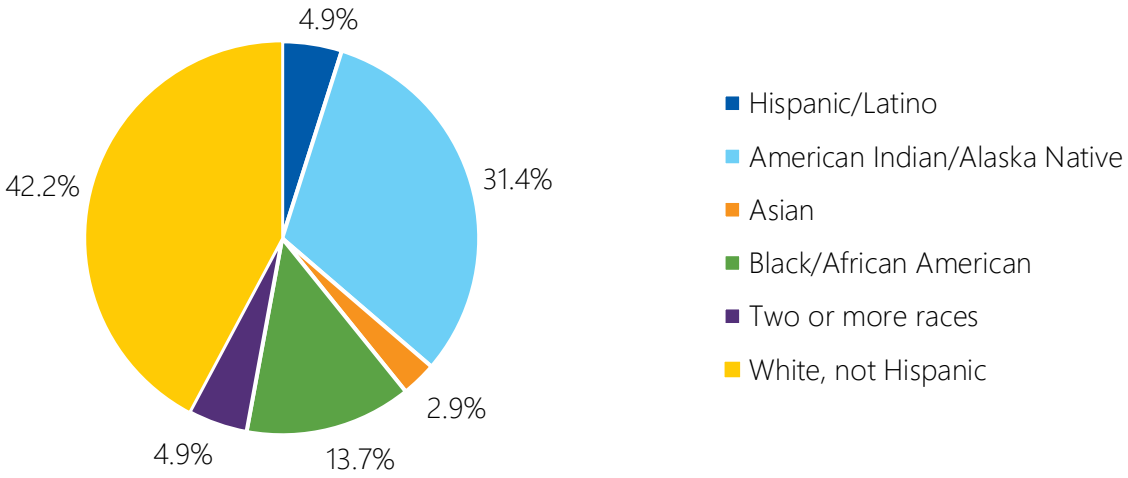


Source: HCPH epidemiology
**Case counts fewer than 12 and rates calculated in these scenarios are considered unstable and should be interpreted with caution.*

In 2020 the Minnesota Department of Health declared an HIV outbreak in Hennepin and Ramsey Counties among people who inject drugs (PWID) and/or who have a history of unsheltered homelessness, with cases dating back to 2018.

- The American Indian/Alaska Native population has been disproportionately impacted by the outbreak compared to other race/ethnicity groups (Figure 43).

Figure 43: Percentage of Hennepin and Ramsey County HIV outbreak cases by race/ethnicity, 2018-2022



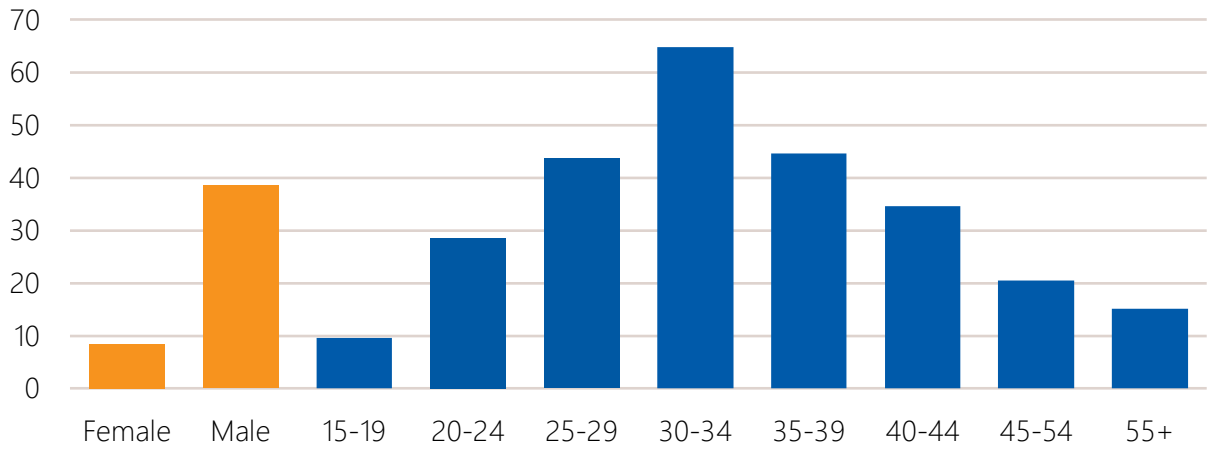
Source: HCPH epidemiology as of 6/23/22

Syphilis

Many of the syphilis cases reported in Minnesota are among Hennepin County residents, as new infections are most common in the Twin Cities metropolitan area. The symptoms of syphilis emerge as a single sore (primary stage), a rash (secondary stage), and may progress to organ damage, brain or nerve problems, and even death. Although treatable, syphilis continues to persist because people may not recognize the symptoms or attribute their condition to other causes.

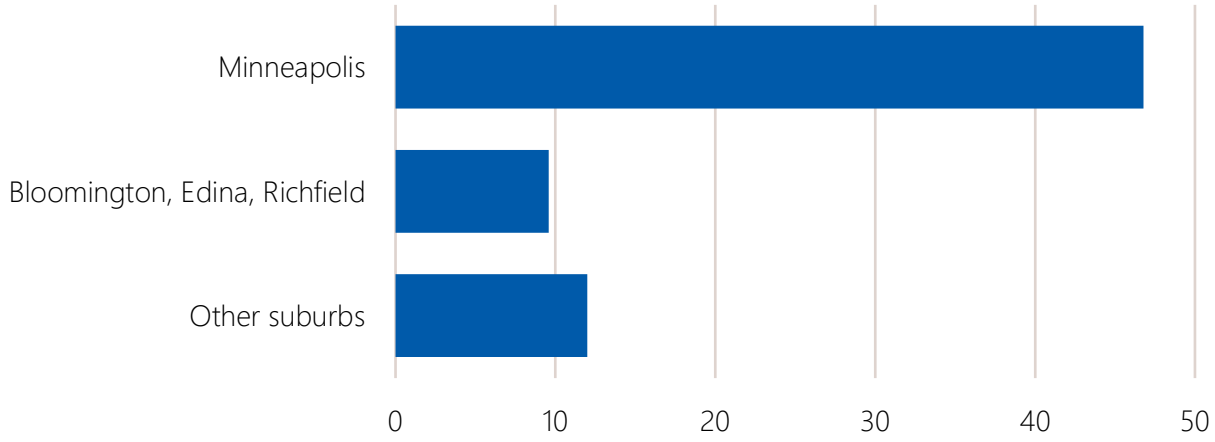
- In 2021, early syphilis (primary and secondary stages) was most common in adults ages 30-34 (Figure 44).
- Most early syphilis cases were found in males (Figure 44). In 2021, more than 80% of early syphilis cases were male.
- The rate of early syphilis varies by geography. In 2021, the rate for Minneapolis was 47 cases per 100,000 population compared to 10 cases per 100,000 population in Bloomington, Edina, Richfield and 12 cases per 100,000 population in Suburban Hennepin County (Figure 45).

Figure 44: Early syphilis rate (per 100,000) by gender and age, 2021



Source: HCPH epidemiology

Figure 45: Early syphilis rate (per 100,000) by geography, 2021



Source: HCPH epidemiology

Vaccination

Vaccines help keep children healthy. Preventable disease outbreaks can happen when children in the community do not receive the recommended vaccines. A higher rate of vaccine coverage indicates a greater level of community protection.

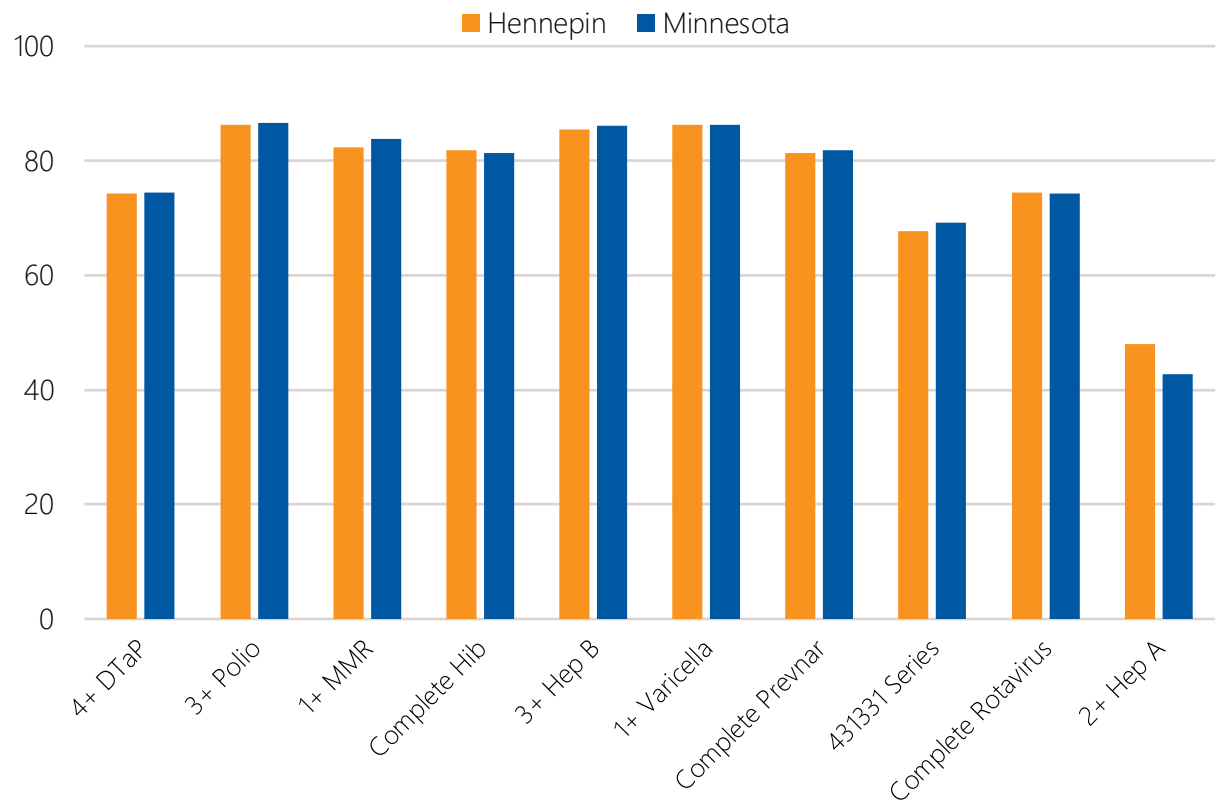
By two years of age, all children are reccommended to have received the complete vaccine series, known as the "431331 series."

- 4 doses of diphtheria-tetanus-pertussis (DTaP)
- 3 doses of polio, one dose of measles-mumps-rubella (MMR)
- 3 doses of Hepatitis B
- 3 doses of Haemophilis Influenza, type B (Hib)
- 1 dose of Varicella vaccine

In 2019, 68% of Hennepin County children, ages 24-35 months, completed the 431331 series (Figure 46).

- The coverage rate for ages 24-35 months with a complete series increased from 52% in 2015 to 68% in 2019. However, Hennepin County's coverage rate remains slightly lower than the Minnesota average.

Figure 46: Average vaccination coverage 24-35-month-olds, 2019



Source: Minnesota Immunization Information Connection (MIIC)

Introduction

The environment influences community health and well-being. The built (man made) and natural environments include the physical components of where people live, work, and play. People interact with their environment through the air they breathe, the homes they live in, the parks and recreation spaces they use, and the grocery stores they go to.

Air quality

Air quality affects lung and heart health. Poor air quality and exposure to air pollution puts people at greater risk for respiratory and cardiovascular disease. Two of the most common and harmful air pollutants are ozone and particulate matter; for this reason, they serve as key indicators of air quality.

Not all residents experience the same level of exposure to air pollution. Disparities in air quality reflect structural racism in systems of city planning, infrastructure, and policies. People who live near areas of high traffic volume or industry are likely to experience more air pollution than those who reside in areas that are less industrial or congested. Because of this, some populations experience more air pollution and negative health burdens.

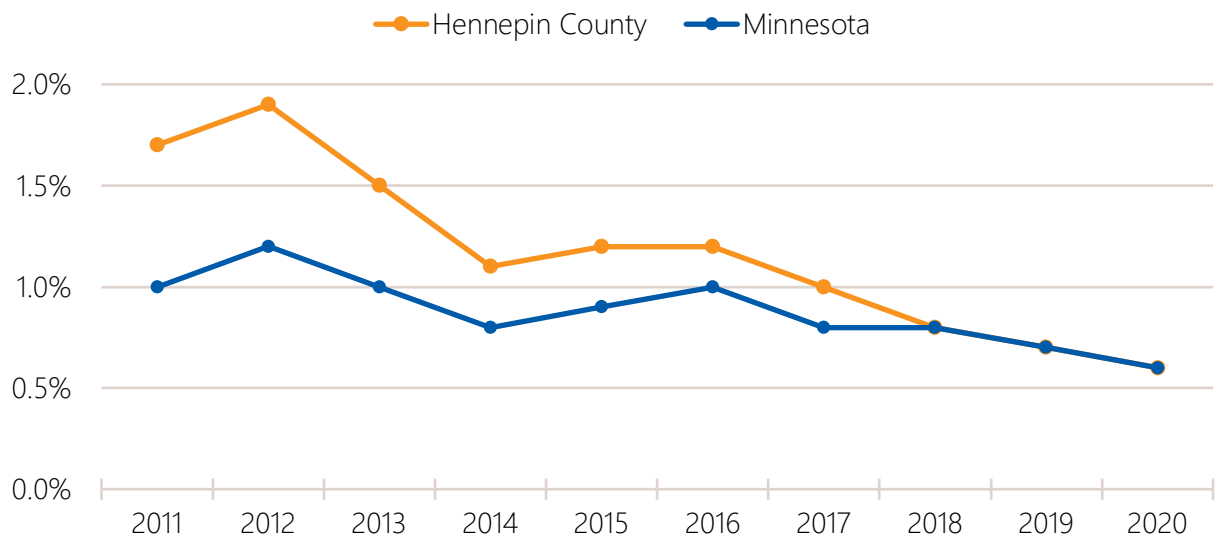
- From 2008 to 2015, air quality in the Twin Cities metro was improving. During this time, ozone pollution reduced by about 10% and fine particulate matter pollution reduced by 30%.
- As of 2015, the highest estimated rates of air pollution related death and disease were found in the Twin Cities metro neighborhoods with the highest percentages of Black/African American, Indigenous and People of Color (BIPOC), people who have low-incomes and are uninsured, and people who live with a disability.
- Death rates attributed to poor air quality were highest in zip codes with high populations of older adults and zip codes with pervasive systemic inequities including structural racism, housing insecurity, and discriminatory health care (Life and Breath: Twin Cities Metro Area, 2022).

Lead exposure

It is important to protect children from lead exposure because there is no known safe blood level. Elevated blood lead levels in children are correlated with developmental, behavioral, and learning problems. Lead exposure is most harmful to children under age 6, as their brains are still developing. According to the CDC, children who live in poverty or in older housing are at greatest risk of lead exposure. BIPOC children are more likely to be living in poverty than White children putting them at higher risk of elevated blood lead levels.

- The Minnesota Department of Health reported that 19% of Hennepin County children under age 6 were tested for blood lead in 2020. This is a decrease from 23% in 2019. This drop in testing may be due to COVID-19 pandemic.
- Since 2011, the percentage of Hennepin County children with elevated blood lead levels (EBLLs) has continued to decline (Figure 47).

Figure 47: Percent of children under 6 years with elevated blood lead level tests (>5mcg/dL), 2011-2020



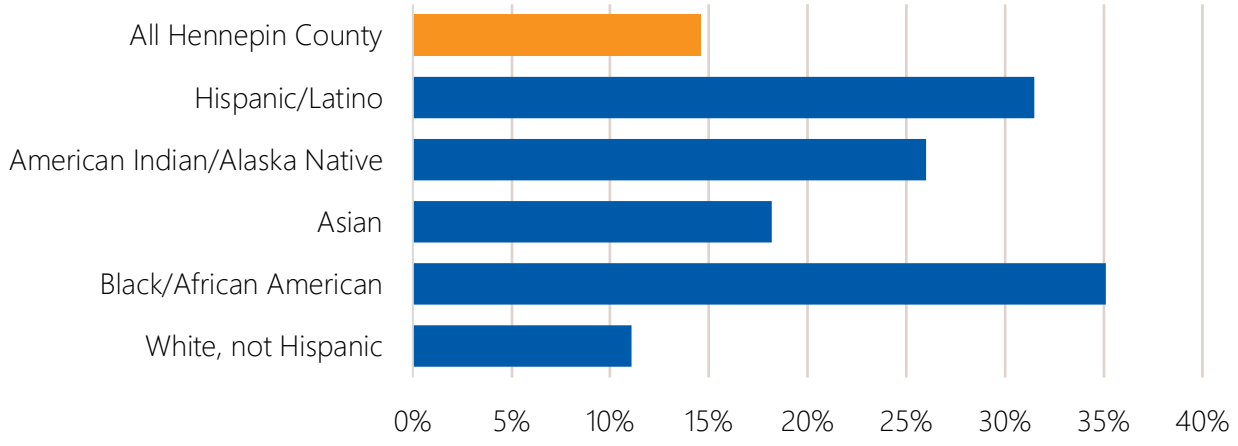
Source: Blood Lead Information System (BLIS)

Physical activity

Regular physical activity helps prevent and manage chronic diseases such as diabetes, heart disease, and hypertension. It also helps strengthen muscles, manage weight, and improve mental health. The CDC recommends that adults ages 18 to 64 get at least 150 minutes of moderate physical activity two days a week. For children and adolescents ages 6 to 17, they recommend about an hour of physical activity a day. These recommendations vary for adults over 65 and people who are pregnant or post-partum. Currently, many children and adults fall short of recommendations.

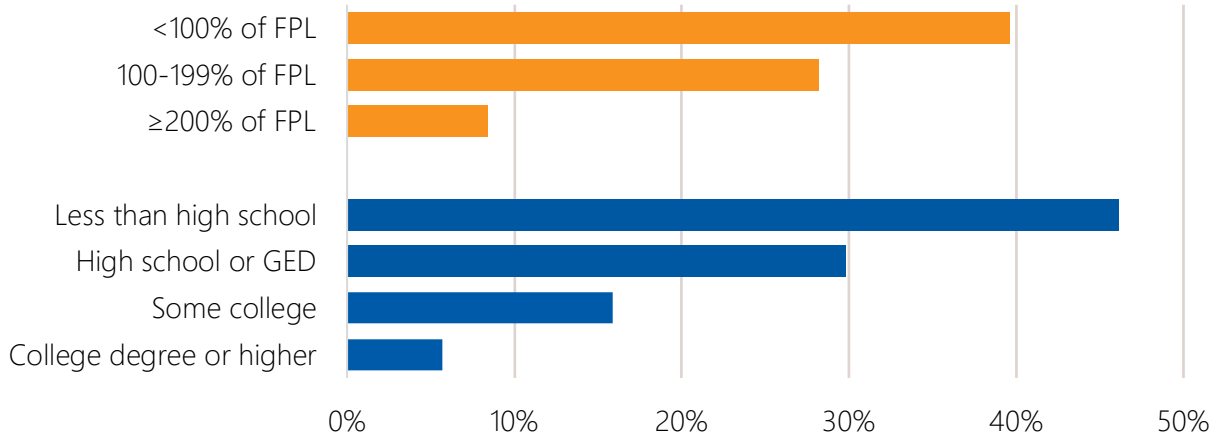
- In 2018, 14.6% of Hennepin County adults engaged in no leisure time physical activity. Although 85.4% of adults engaged in some leisure time physical activity, only 49.1% of adults met the Healthy People 2020 physical activity guideline (SHAPE 2018).
- Black/African American adults reported the lowest levels of leisure time physical activity compared to adults from other racial and ethnic groups (Figure 48).
- Adults with lower incomes were less likely to engage in leisure time activity compared to adults with higher income. Disparities were similar for adults with lower education levels (Figure 49).
- White students were most likely to participate in an hour of physical activity for at least five days per week compared to students from other race/ethnicity groups (Figure 50).
- Students who are female and students with low incomes were less likely to participate in an hour of physical activity for at least five days per week compared to students that are male or students with higher incomes, respectively (Figure 51).

Figure 48: Percentage of adults reporting no leisure time activity by race/ethnicity, 2018



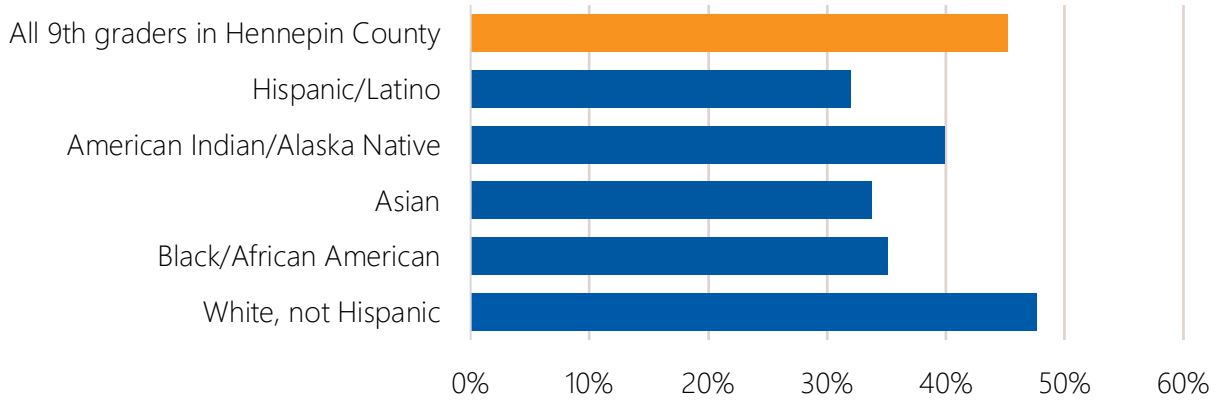
Source: SHAPE

Figure 49: Percentage of adults reporting no leisure time activity by income and education, 2018



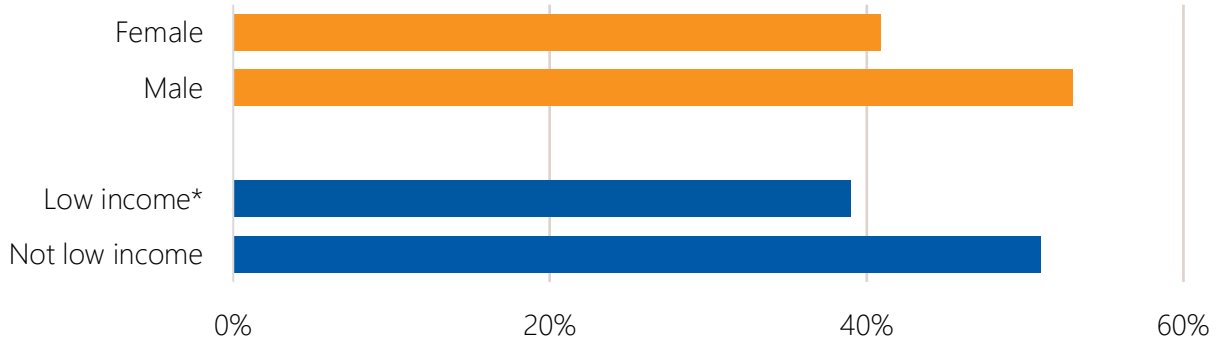
Source: SHAPE

Figure 50: Percentage of 9th grade students reporting 60 minutes of physical activity five or more days a week by race/ethnicity, 2019



Source: MSS, Hennepin County

Figure 51: Percentage of 9th grade students reporting 60 minutes of physical activity five or more days a week by gender and income, 2018



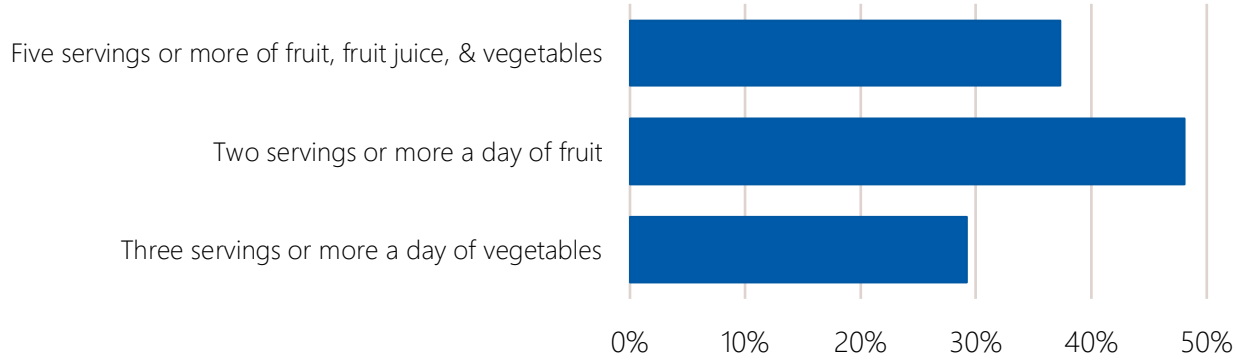
Source: MSS, Hennepin County
**Low income defined as students who report receiving free/reduced price lunch.*

Healthy eating

The foods people eat impact their health and well-being. Regular consumption of fruits and vegetables reduces the risk of chronic diseases such as obesity, type II diabetes, and heart disease. The World Health Organization recommends adults eat at least 400 grams of fruits and vegetables daily, or the equivalent of five servings. To maintain healthy development, they recommend that children eat two or more servings of fruit and three or more servings of vegetables per day.

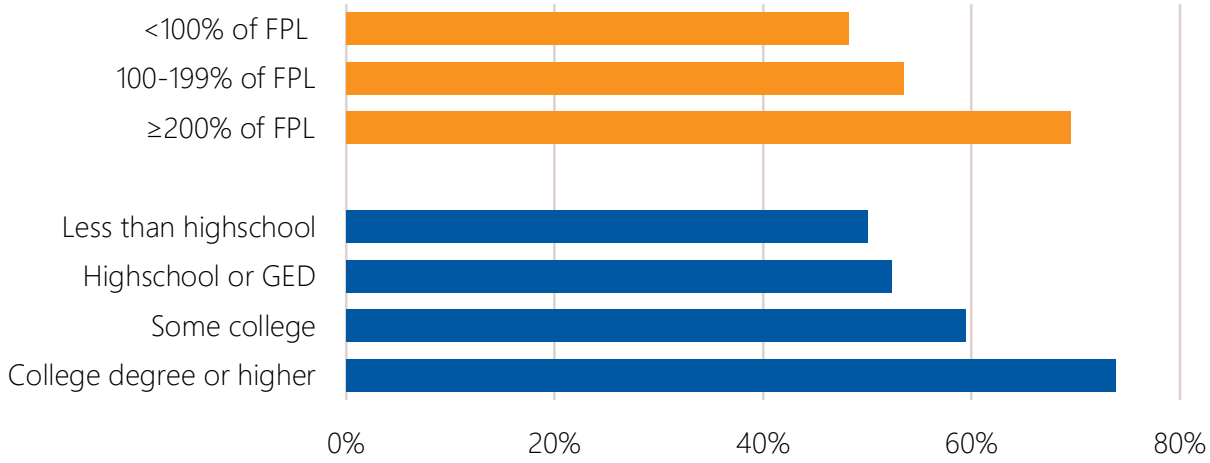
- In 2018, 37.3% of Hennepin County adults reported having the recommended five or more servings of fruits and vegetables a day (Figure 52).
- Nearly half (48.1%) of adults reported eating the recommended two servings or more of fruit a day and less than a third (29.2%) of adults reported eating the recommended three servings of vegetables a day (Figure 52).
- The likelihood of consuming at least three servings of fruits and vegetables per day increased with income and education attainment (Figure 53).
- Among 9th grade students in Hennepin County, students who have low incomes were less likely to have at least one fruit or vegetable per day compared to students who do not have low incomes (Figure 54).

Figure 52: Percentage of adults reporting nutrition intake, 2018



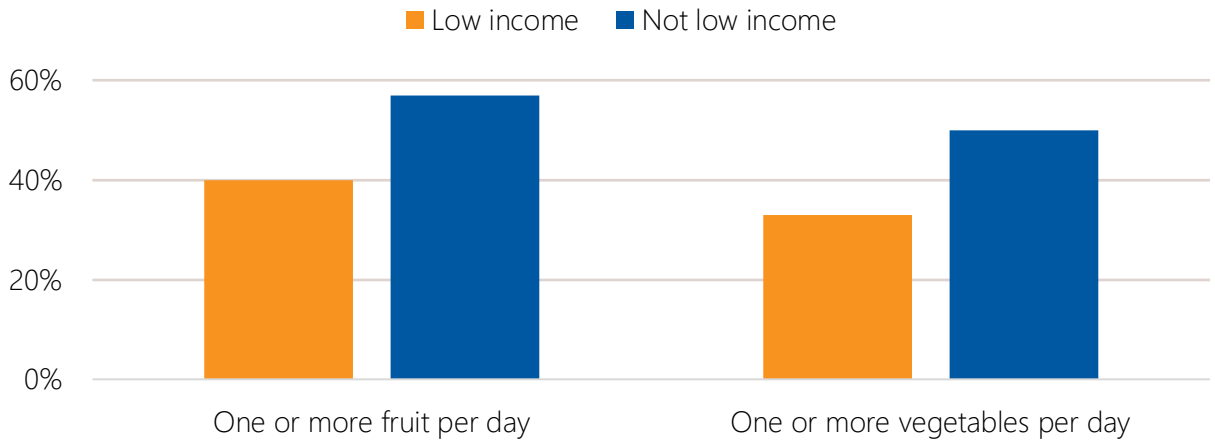
Source: SHAPE

Figure 53: Percentage of adults reporting three servings of fruits & vegetables per day by income & education, 2018



Source: SHAPE

Figure 54: Percentage of 9th grade students reporting fruit or vegetable consumption by income, 2019



Source: MSS, Hennepin County

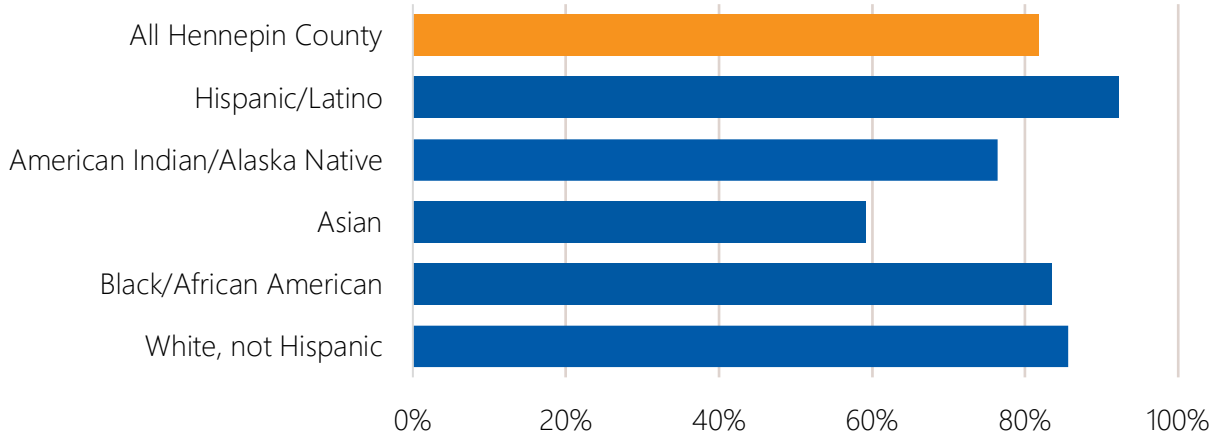
Low income defined as students who report receiving free/reduced price lunch.

Breastfeeding initiation

Breastfeeding or chestfeeding is the best source of nutrition for most infants. The American Academy of Pediatrics recommends breastfeeding for the first 6 months of infancy. Both infants and the birthing parent can benefit from breastfeeding. Infants who are breastfed have reduced risks of asthma, obesity, type II diabetes, ear infections, and other conditions. Parents who breastfeed are at lower risk for high blood pressure, type II diabetes, ovarian cancer, and breast cancer.

Nationwide, the rates of breastfeeding initiation have increased. Disparities in breastfeeding by race and ethnicity persist. Hennepin County WIC provides breastfeeding and chestfeeding support to new and expectant parents enrolled in the WIC program.

Figure 55: Percentage of WIC program participants who initiated breast feeding, 2019



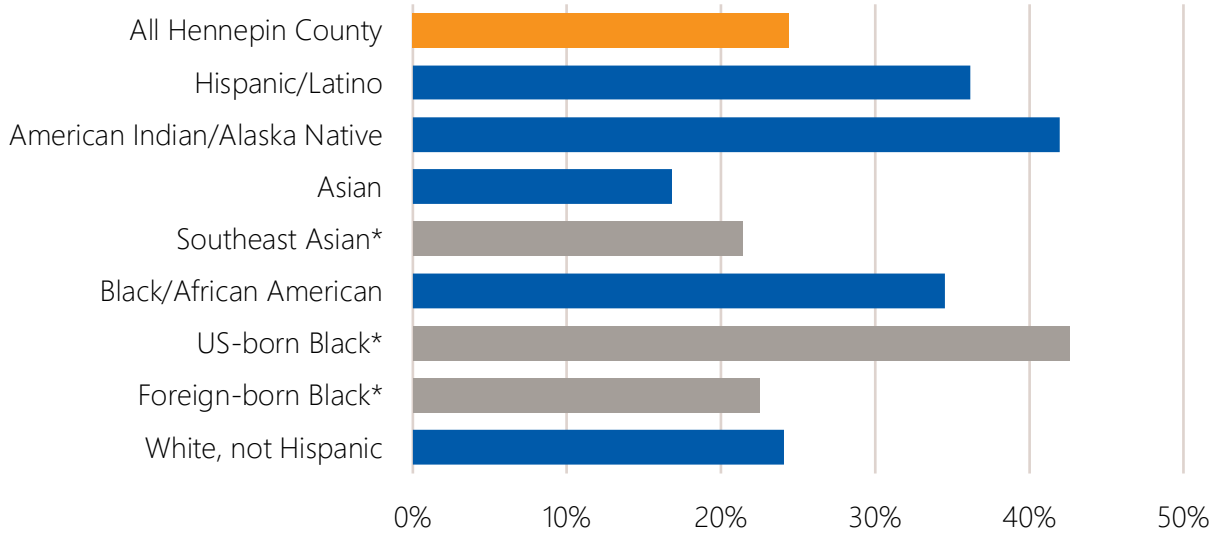
Source: WIC data

Obesity

Obesity rates are increasing. Nationally, about one in five children and greater than one in three adults have obesity. Obesity is associated with worse mental health, reduced quality of life and chronic diseases such as type II diabetes, heart disease and stroke.

- In 2018, 24% of Hennepin County adults were obese and 33% were overweight. Combined, more than half (57%) of Hennepin County adults exceed a healthy weight (SHAPE 2018).
- Obesity prevalence among Hispanic (36.2%), American Indian (42%), and US-born Black (43%) adults was significantly higher than the Hennepin County average (24%) (Figure 56).
- Higher rates of obesity were found with adults who did not graduate high school, have low incomes (Figure 57), have a disability, are experiencing housing insecurity, and who reported frequent mental distress.
- For Hennepin County adolescents (8th, 9th, and 11th graders), higher rates of obesity and overweight were found among American Indian, Hispanic, Black/African American and multi-racial students compared to White or Asian students (Figure 58).

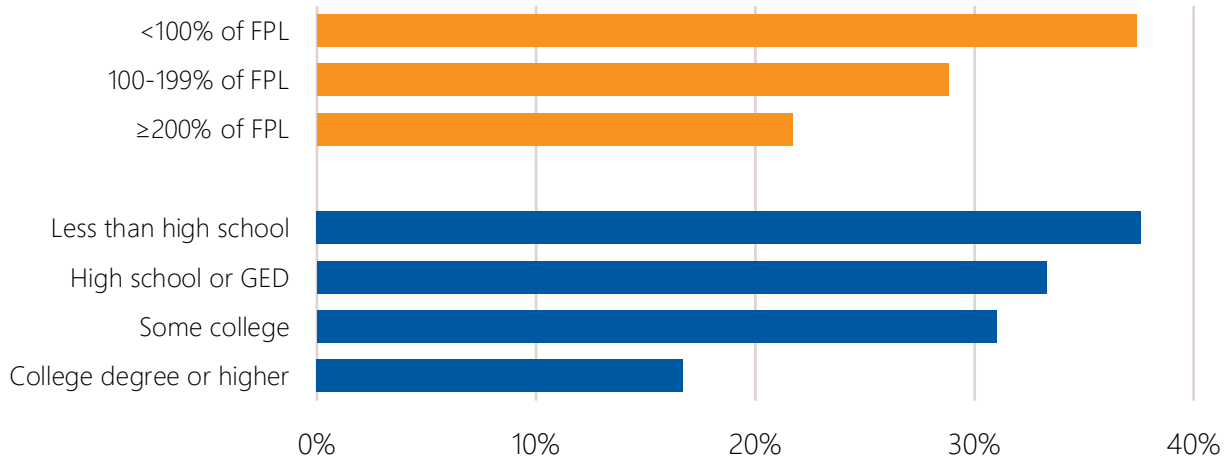
Figure 56: Percentage of adults with obesity by race/ethnicity, 2018



Source: SHAPE

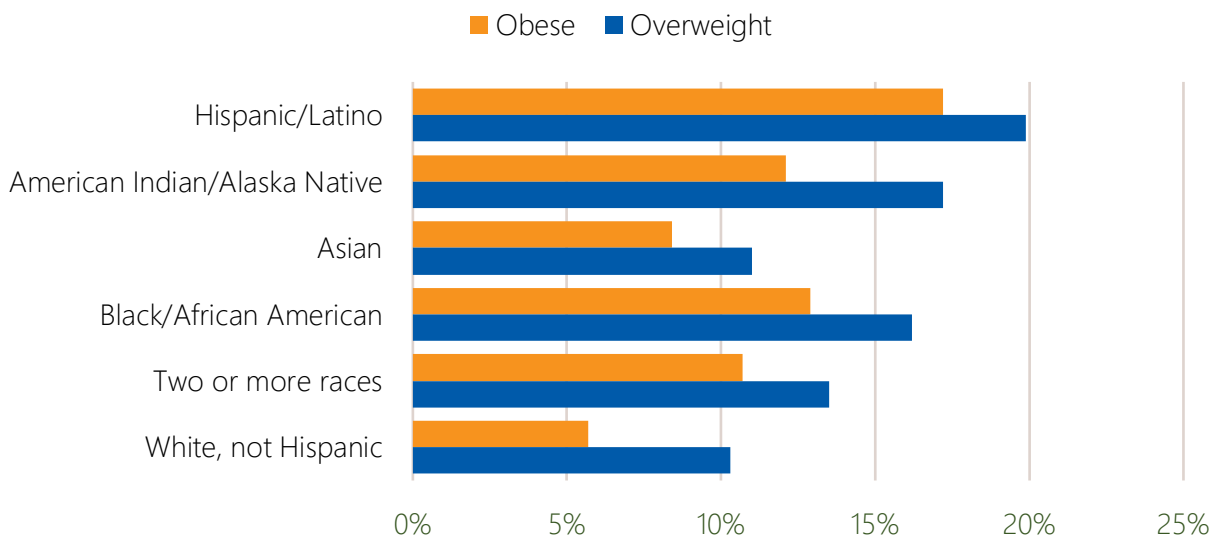
**These are subgroups from the race/ethnicity above. Southeast Asian are those who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based on responses to the question "were you born in the United States?"*

Figure 57: Percentage of adults with obesity by income and education, 2018



Source: SHAPE

Figure 58: Weight status by race/ethnicity (8th, 9th, and 11th graders), 2019



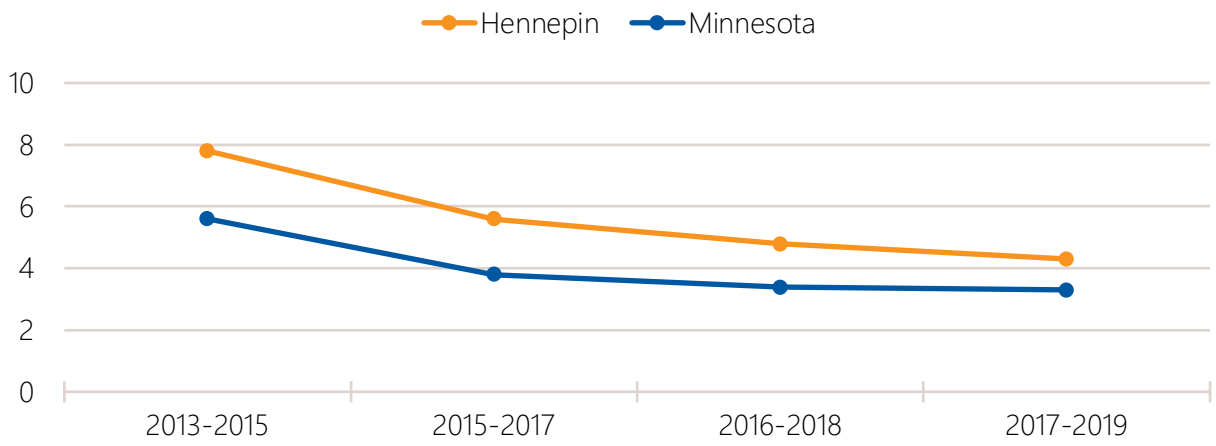
Source: MSS, Hennepin County

Asthma

Asthma is a treatable chronic lung disease that often results in higher health care costs and more missed days at school or work. Severe asthma attacks can result in an emergency department visit, hospitalization, or death.

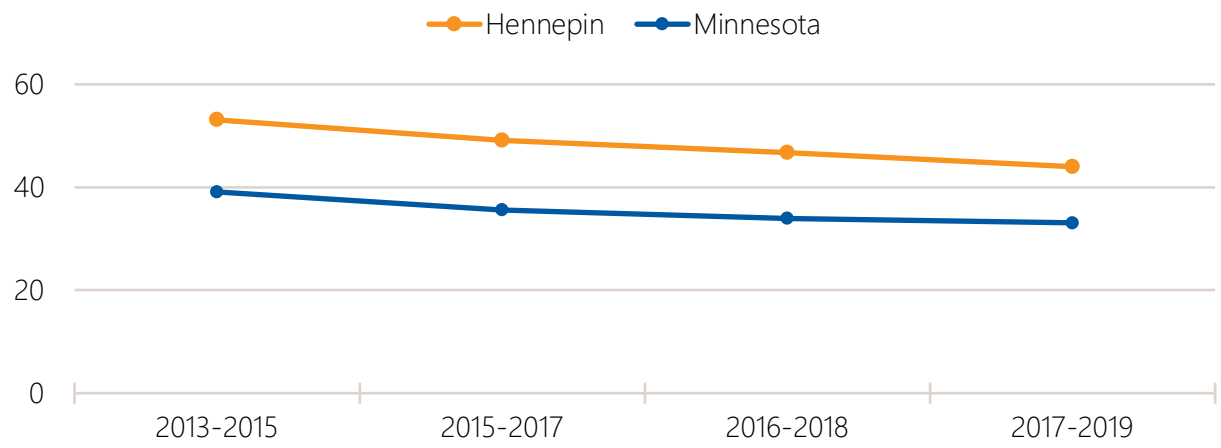
- Rates of asthma related emergency department (ED) visits and hospitalizations improved in both Hennepin County and Minnesota. However, Hennepin County rates remain worse than statewide rates (Figure 59 & 60).
- In 2019, 12.4% of 5th grade students in Hennepin County reported an asthma diagnosis (Figure 61).
- Asthma rates were highest among Black/African American (18.2%) and American Indian (16.8%) 5th graders (Figure 61).

Figure 59: Age-adjusted hospitalization rate (per 10,000) due to asthma, 2013-2019



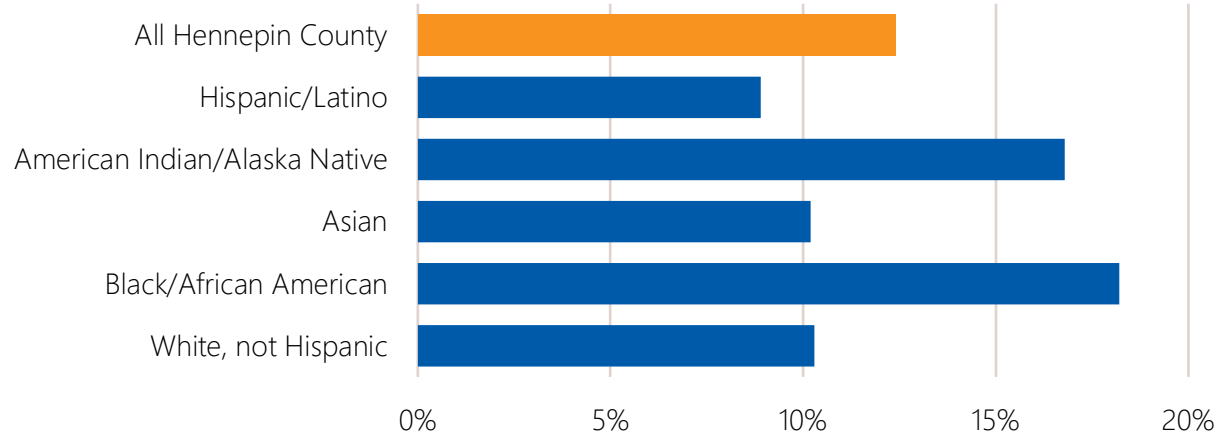
Source: Minnesota Hospital Discharge Data (MNHDD)

Figure 60: Age adjusted emergency department visit rate (per 10,000) due to asthma, 2013-2019



Source: Minnesota Hospital Discharge Data (MNHDD)

Figure 61: Percentage of 5th grade students who self-report asthma, 2019



Source: MSS, Hennepin County

Introduction

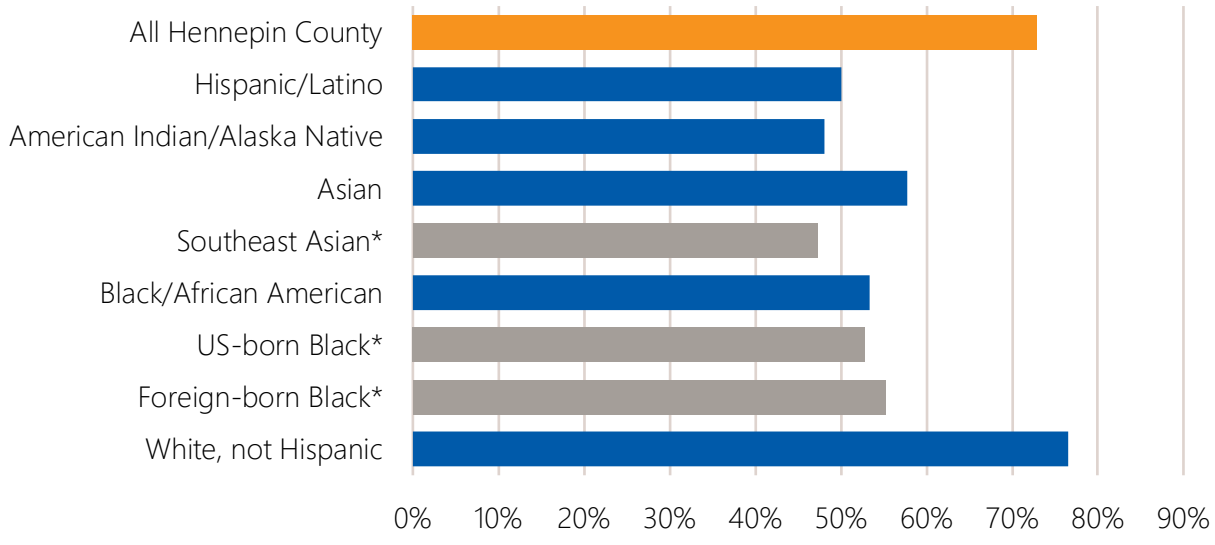
Mental health is not limited to diagnosis of mental illness; it encompasses emotional, psychological, and social well-being. People who don't have a diagnosed mental illness may not have good mental health. Similarly, people who have a diagnosed mental illness may not have poor mental health. Mental health includes factors such as problematic substance use, stress, social connectedness, and social isolation. Mental health encompasses people's thoughts, sense of purpose and identity, feelings of social connectedness, and resilience. Mental health status is relevant at every stage of life and can change or fluctuate over time.

Social connectedness

Research shows social and emotional support from others can be protective for health. Social and emotional support is associated with positive mental well-being and positive self-rated health status. The 2018 SHAPE survey includes social and emotional support from any source, such as family, friends, neighbors, and/or coworkers.

- In 2018, 72.9% of adults reported always or usually getting the social and emotional support they need (Figure 62).
- Most White residents (76.5%) reported that they always or usually get the social and emotional support they need. This is much higher than adults from other races and ethnicities (Figure 62).
- The likelihood of adults receiving the social and emotional support they need increased with income and educational attainment (Figure 63).

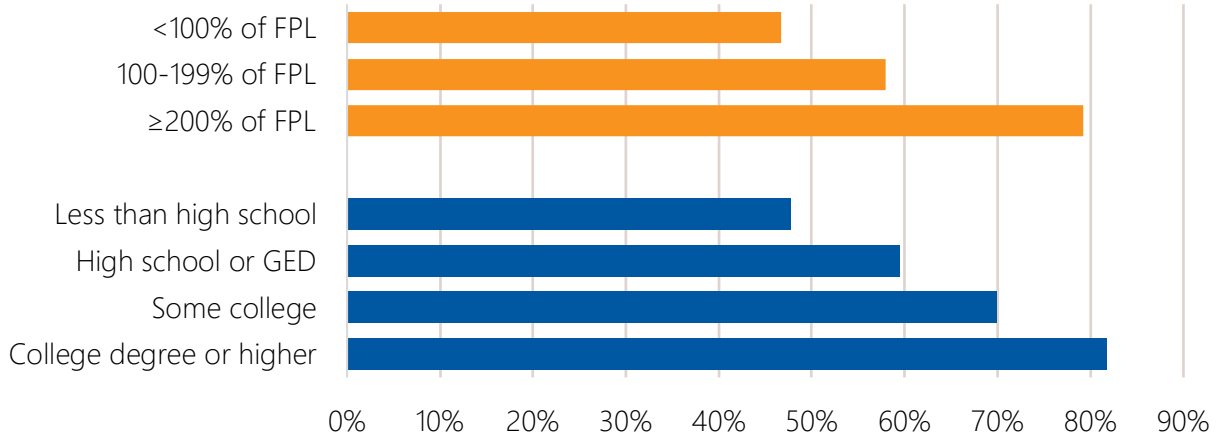
Figure 62: Percentage of adults reporting high social and emotional support by race/ethnicity, 2018



Source: SHAPE

**These are subgroups from the race/ethnicity above. Southeast Asian are those who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based on responses to the question "were you born in the United States?"*

Figure 63: Percentage of adults reporting high social and emotional support by income and education, 2018



Source: SHAPE

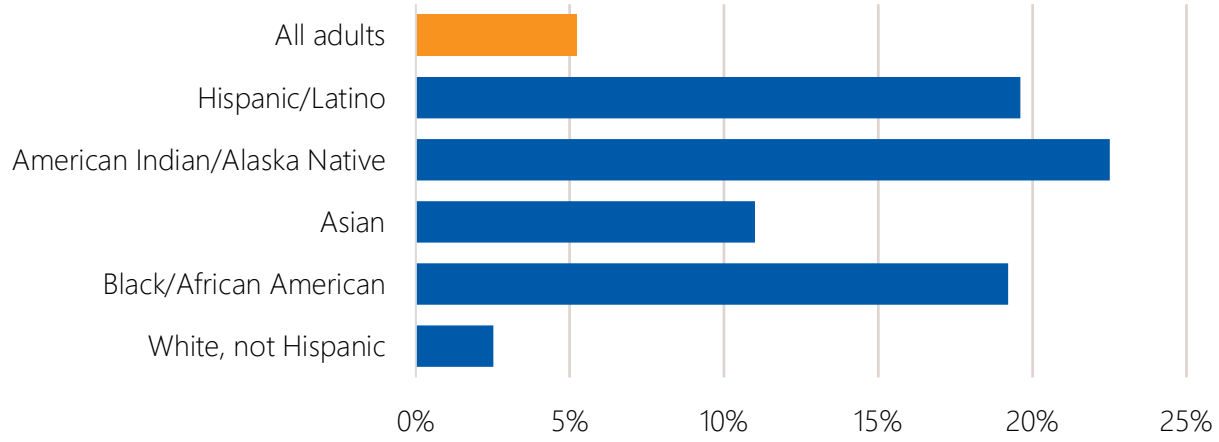
Experience of discrimination

Research has shown that people who report experiences of discrimination may suffer from physical health problems. This includes hypertension and breast cancer, poorer self-reported health, and higher risk factors for disease such as obesity, high blood pressure, and substance use. Research studies also link discrimination to worse mental health outcomes, including depression, psychological distress, and anxiety.

The 2018 SHAPE survey assessed the frequency of discrimination. The survey asked, "How often are you in situations where you feel unaccepted because of your race, ethnicity or culture?" Respondents who answered, "at least once a month" were classified as experiencing frequent discrimination.

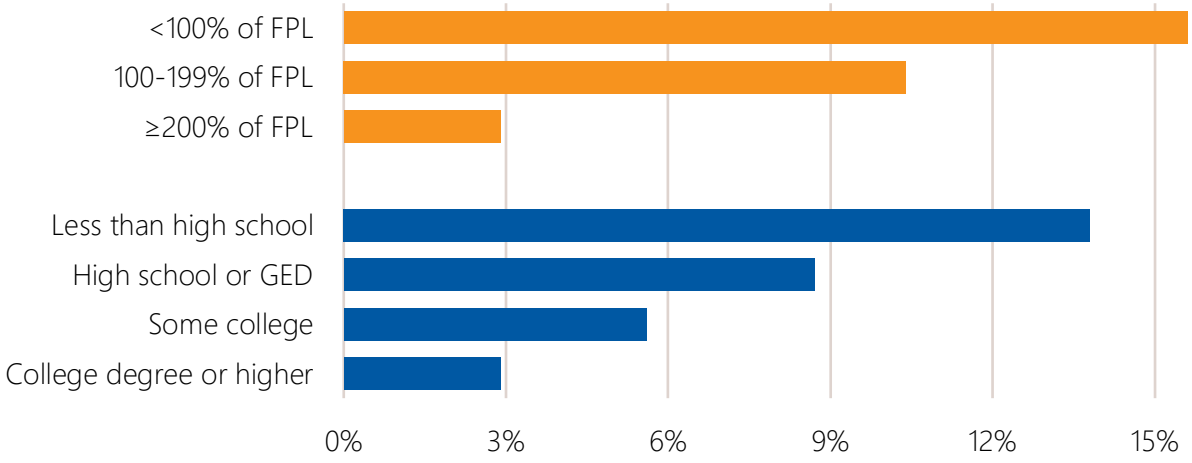
- In 2018, 5% of Hennepin County adults reported frequent discrimination (Figure 64).
- Disparities exist for US-born Black/African American residents, American Indian/Alaska Native residents, Hispanic residents (Figure 64), LGBT populations, people with disabilities and adults who experience frequent mental distress.
- Adults with lower income and lower education more frequently reported frequent discrimination compared to adults with higher income (15.6% vs. 2.9%) and higher education attainment (13.8% vs. 2.9%) (Figure 65).

Figure 64: Percentage of adults who experienced frequent discrimination by race/ethnicity, 2018



Source: SHAPE

Figure 65: Percentage of adults who experienced frequent discrimination by income and education, 2018



Source: SHAPE

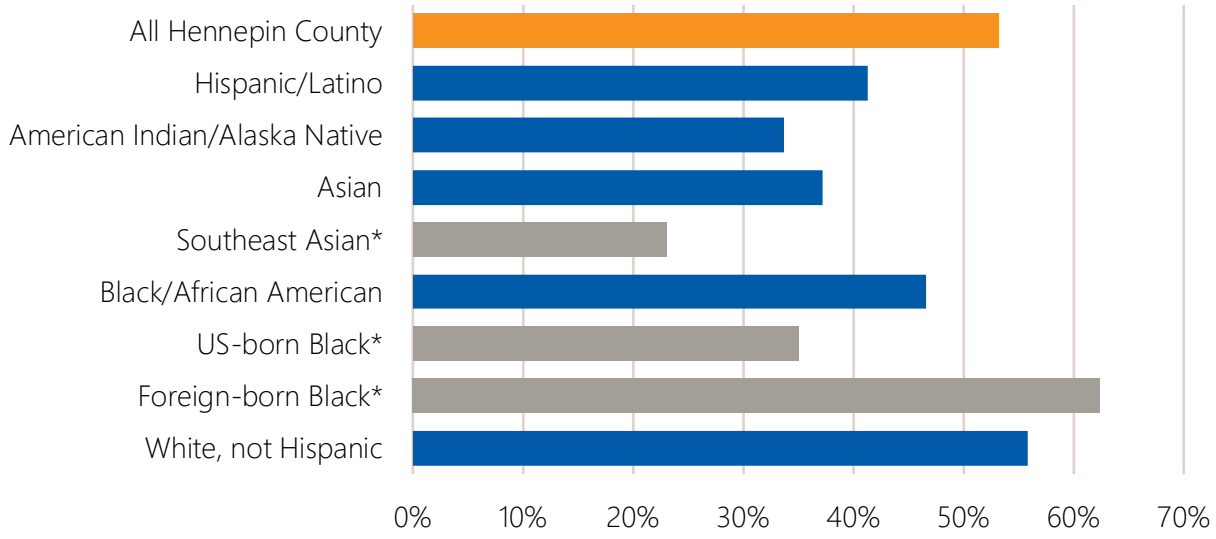
Neighborhood safety

The neighborhood people live in can impact their mental health, level of physical activity, and perception of safety. If residents believe their neighborhood to be unsafe, they are less likely to spend time outside maintaining their property, exercising, or running errands. Perceptions of an unsafe neighborhood may also lead to people distrusting their neighbors and experiencing social isolation.

- In 2018, more than half (53%) of Hennepin County adults considered their neighborhood very safe from crime. However, perception of safety varied widely by geography with areas as low as 12% in the Camden and Near North communities in Minneapolis to 80% in the western outer-ring suburbs (SHAPE 2018).

- Disparities are present for American Indian/Alaska Natives, Southeast Asians, US-born Black/African Amercians (Figure 66), young adults 18-24, people who identify as LGBT, people with disabilities, and adults who experience frequent mental distress.
- Adults with lower incomes and lower levels of education were less likely to feel their neighborhood was very safe from crime compared to adults with higher income (37.2% vs. 57.7%) and higher education attainment (39.8% vs. 59.3%) (Figure 67).

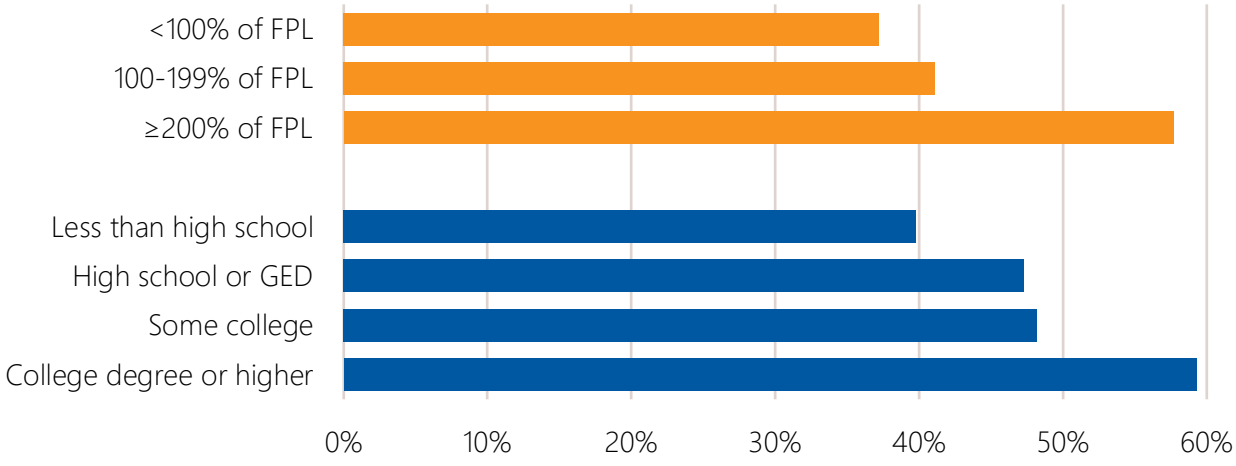
Figure 66: Perception of neighborhood as "very safe" for adults by race/ethnicity, 2018



Source: SHAPE

**These are subgroups from the race/ethnicity above. Southeast Asian are those who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based on responses to the question "were you born in the United States?"*

Figure 67: Perception of neighborhood as "very safe" for adults by income and education, 2018



Source: SHAPE

Students with caring adult

Research demonstrates there are health benefits for adolescents who have a positive relationship with a non-parent adult. Studies show adolescents who have a connection with a caring adult report less risky behaviors, lower tobacco use and more positive mental health.

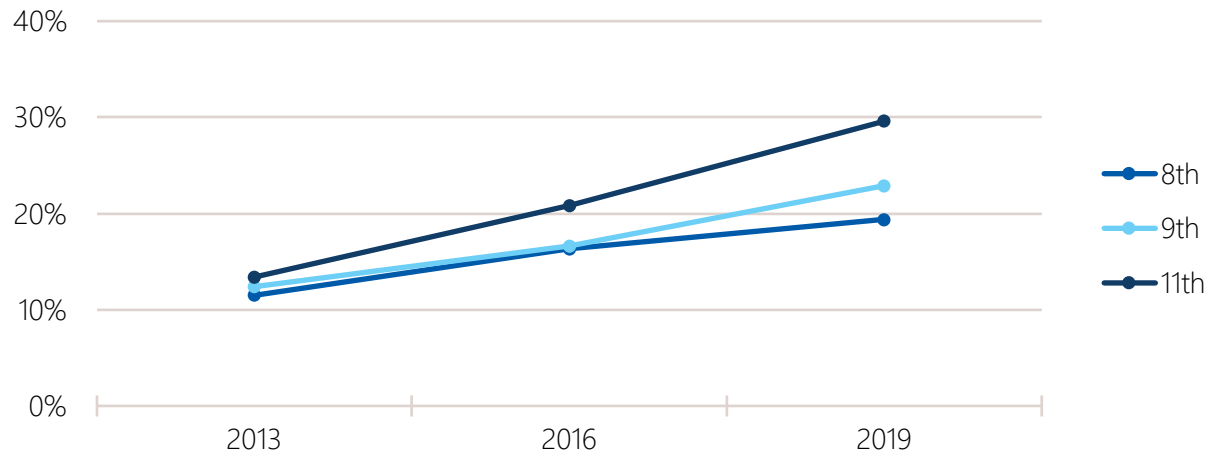
In 2019, 89% of 9th graders in Hennepin County reported a connection with a caring adult in their community. This rate has remained steady since 2007.

Self-reported mental health

Mental health is a significant factor in overall well-being. For adults, chronic mental health issues may interfere with work participation and interpersonal relationships. For children, chronic mental health, emotional, or behavioral problems can impact physical, mental, and social development.

- In 2018, one out of five adults in Hennepin County reported seeing a mental health professional for their own health (SHAPE 2018).
- Since 2013, the percentage of Hennepin County students reporting long-term mental health, emotional, or behavioral problem has increased (Figure 68).

Figure 68: Percentage of students reporting long-term mental health, emotional, or behavior problem, 2019



Source: MSS, Hennepin County

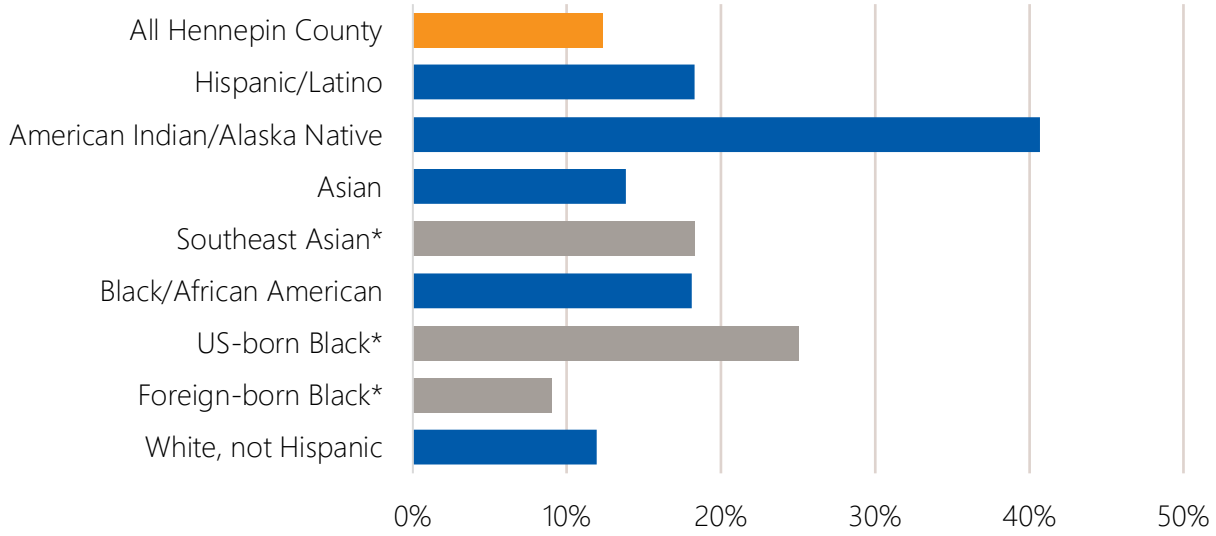
Frequent mental distress

Mental health is essential to a person's well-being, relationships, and ability to contribute to their community or society. Mental distress affects many and can be disabling and costly. In the SHAPE 2018 survey, frequent mental distress was defined as adults who reported their mental health was "not good" for 14 days or more of the last 30 days.

- In 2018, 12.3% of Hennepin County adults reported experiencing frequent mental distress (Figure 69).
- American Indian adults (40.7%) reported frequent mental distress at much higher rates compared to other race and ethnicity groups (Figure 69).

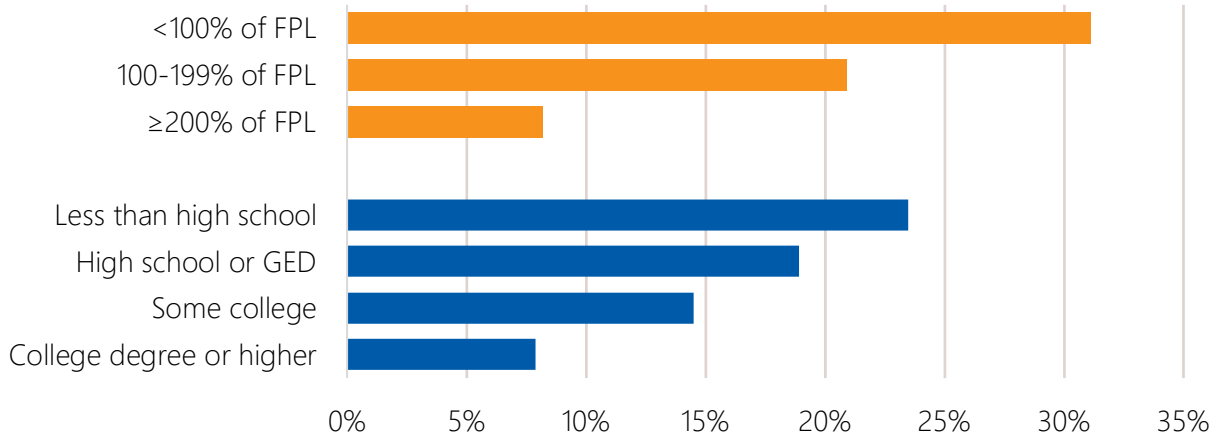
- Adults who identify as lesbian, gay, bisexual (LGB) (21.9%) were almost twice as likely as heterosexual adults (11.3%) to report frequent mental distress. Transgender adults (41.4%) were more likely to report experiencing frequent mental distress than cisgender male (10.6%) and cisgender female (13.85%) adults.
- Adults who have a disability (29.9%) were about four times more likely to report frequent mental distress, compared to adults without a disability (7.4%) (SHAPE 2018).
- The prevalence of frequent mental distress decreases with higher educational attainment and income (Figure 70).

Figure 69: Percentage of adults who experience frequent mental distress by race/ethnicity, 2018



Source: SHAPE
**These are subgroups from the race/ethnicity above. Southeast Asian are those who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based on responses to the question "were you born in the United States?"*

Figure 70: Percentage of adults who experience frequent mental distress by income and education, 2018



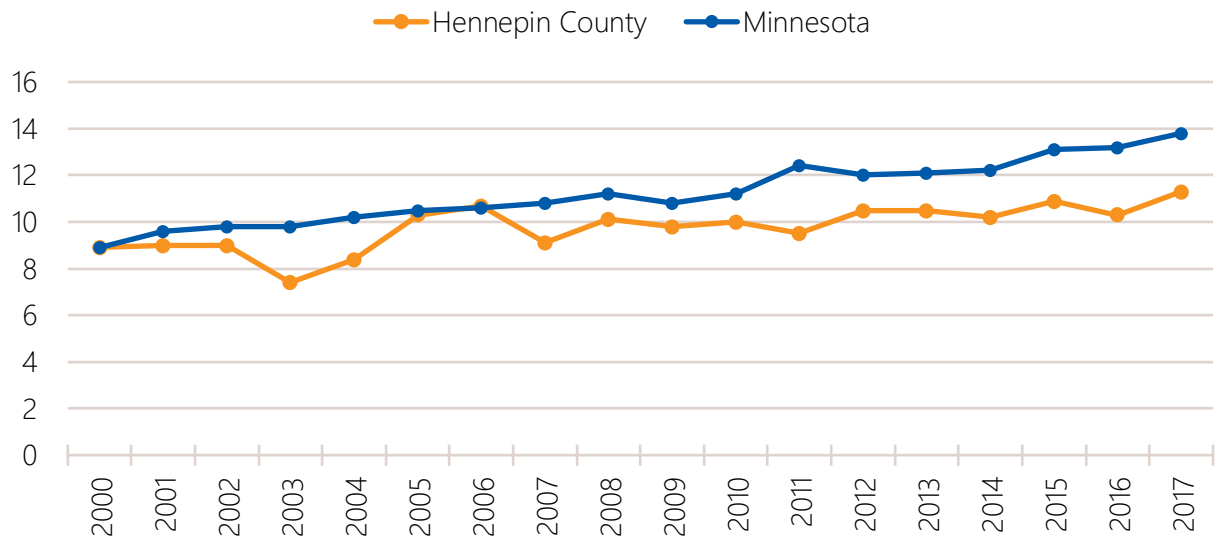
Source: SHAPE

Suicide mortality

Suicide is the tenth leading cause of death for adults in Hennepin County. A suicide attempt is when a person harms themselves with the intent to end their life, but they do not die as a result of their actions. Many more people survive than die from suicide attempts, but they often have serious injuries. Suicide attempts do not always result in a physical injury.

- From 2000 to 2017, the suicide rate in Hennepin County increased from 8.9 to 11.3 per 100,000 (Figure 71).
- The age adjusted suicide rate in Hennepin County is lower than overall in Minnesota (Figure 71).
- Suicide rates were higher for males compared to females. Females tend to consider and attempt suicide at higher rates than males, but males are more likely to die by suicide.

Figure 71: Age adjusted suicide rate (per 100,000), 2000-2017

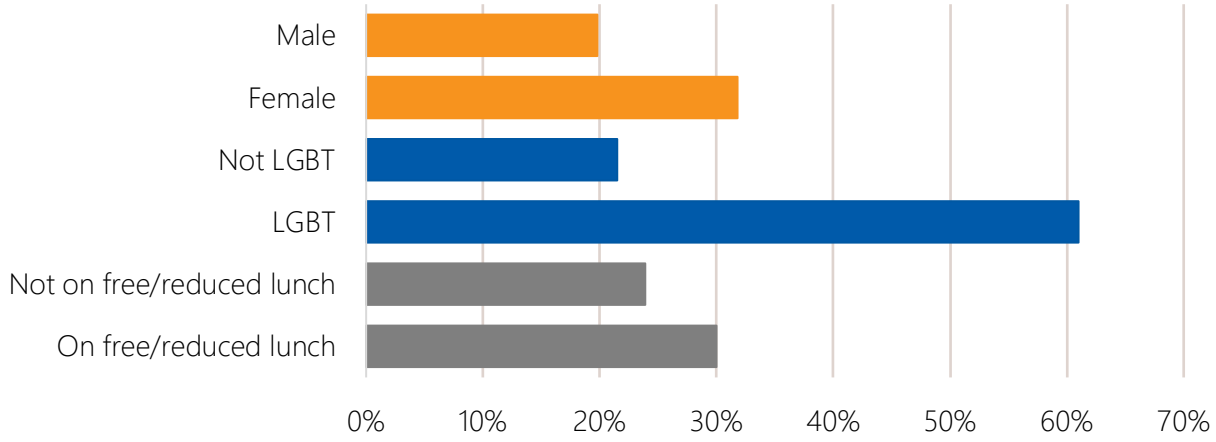


Source: MN Vital Statistics death records

Adolescent suicide and self-injury

- In 2019, one in four (26.2%) Hennepin County youth attending public schools in grade 8, 9, and 11 reported having attempted suicide or self-inflicted injury.
- Students receiving free or reduced-price lunch were more likely to attempt suicide compared to students who do not receive free or reduced-price lunch (Figure 72).
- Students who identify as LGBT were almost three times more likely to attempt suicide compared to students who did not identify as LGBT (Figure 72).

Figure 72: Adolescents reporting self-harming or attempting suicide (8th, 9th, and 11th graders), 2019



Source: MSS, Hennepin County

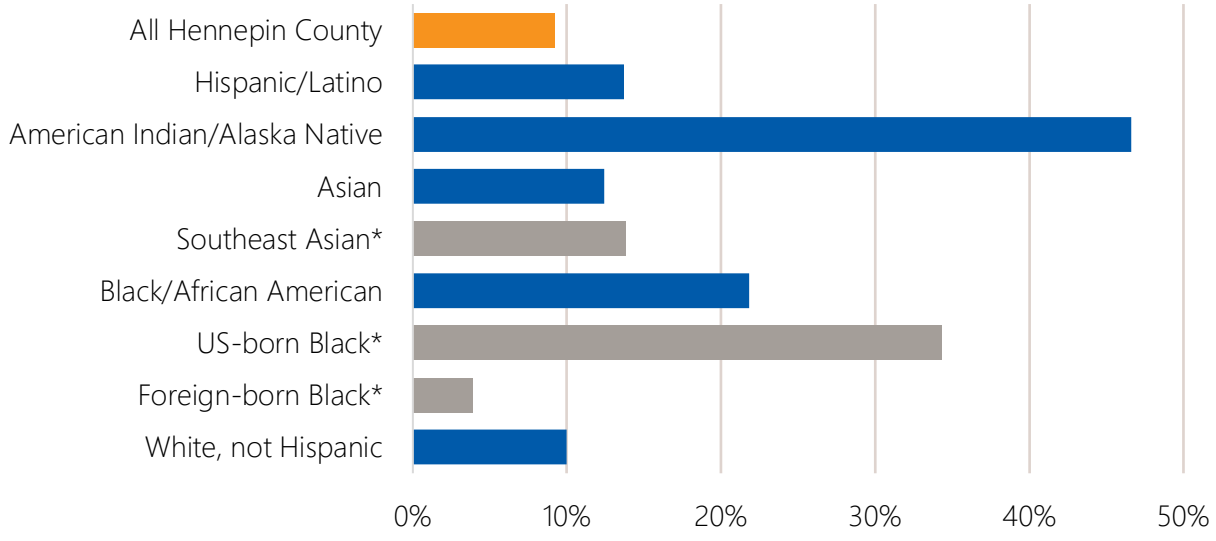
Substance abuse—involving drugs, alcohol, or both—is associated with a range of challenges including family disruptions, financial problems, lost productivity, academic struggles, domestic violence, and crime. Moreover, both social attitudes and legal responses to the consumption of alcohol and illicit drugs make substance abuse one of the most complex public health issues (Healthy People 2020, n.d.).

Tobacco use

Commercial tobacco use is still the largest preventable cause of death, disability, and disease in the United States. Smoking is linked to heart disease, stroke, and other chronic lung diseases, including 90% of lung cancer cases in the United States. Smoking also increases a person's risk for cancer of the bladder, throat and mouth, kidneys, cervix, and pancreas.

- In 2018, 9% of Hennepin County adults were classified as current smokers (Figure 73). This rate is lower compared to adults in Minnesota overall (15%).
- There are disparities by income and education. In 2018, 18% of adults in Hennepin County with low-income (<200% FPL) were current smokers compared to 6% of adults from households with higher income (≥200% FPL). Similar differences were seen for education among adults with less than a high school education currently smoking (17.2%) compared to adults with a college degree or higher (3.9%) (Figure 74).
- Smoking rates were higher among American Indian/Alaska Native (46.6%) and US-born Black adults (34.3%) compared to other racial and ethnic groups (Figure 72).
- Majority of US-born Black smokers (88.7%) smoke menthol tobacco (SHAPE 2018).
- The rate of youth who report smoking cigarettes is declining in Hennepin County (Figure 75).
- The highest rate of cigarette smoking in the past 30 days was reported by American Indian students compared to students of other races/ethnicities (Figure 76).

Figure 73: Current smoking status of adults by race/ethnicity, 2018



Source: SHAPE

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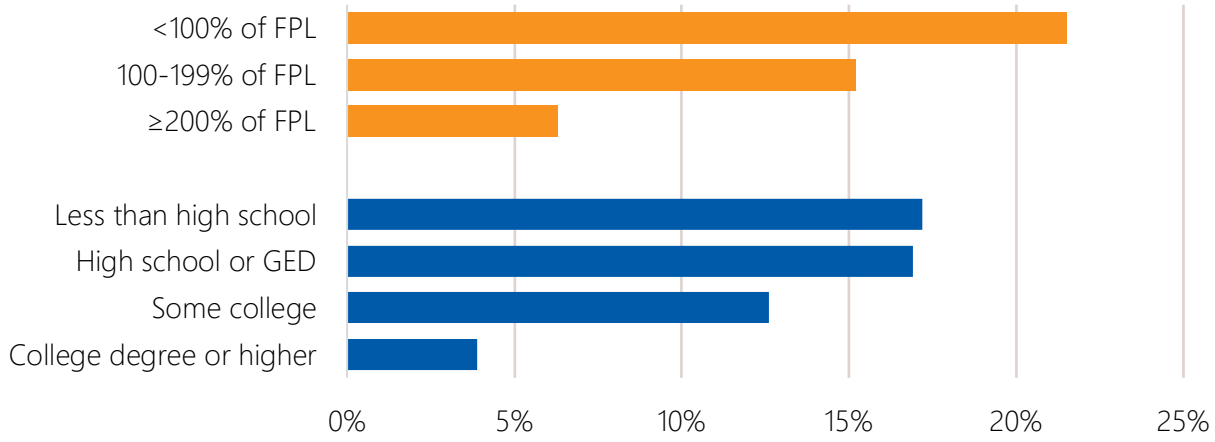
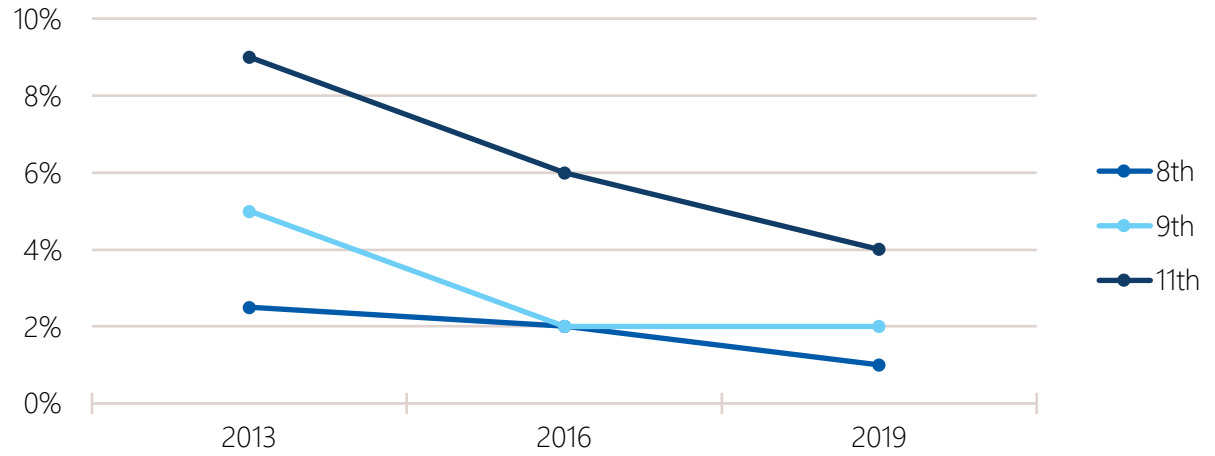
Figure 74: Current smoking status of adults by income and education, 2018



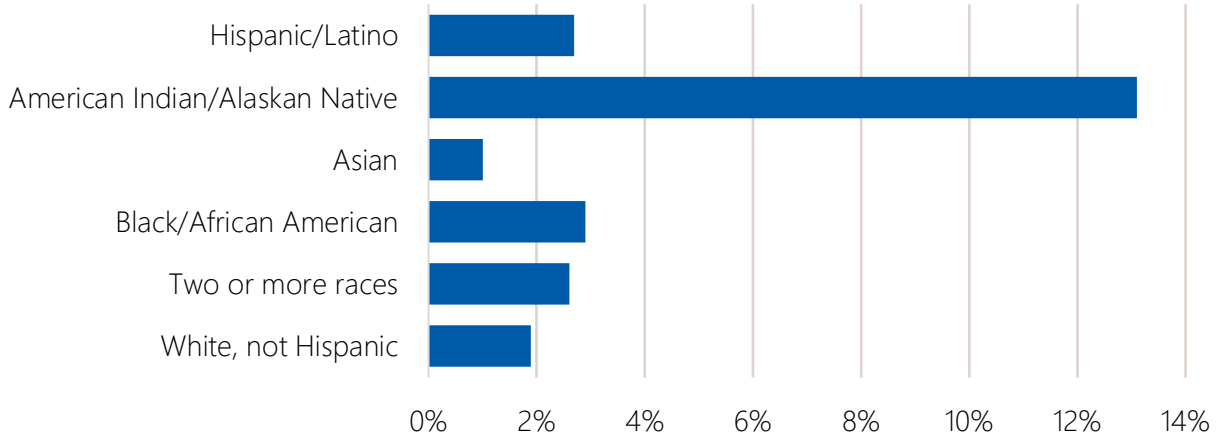
Source: SHAPE

Figure 75: Past 30-day cigarette use (8th, 9th, and 11th graders), 2013-2019



Source: MSS, Hennepin County

Figure 76: Cigarette use in the past 30 days by race/ethnicity (8th, 9th, and 11th graders), 2019



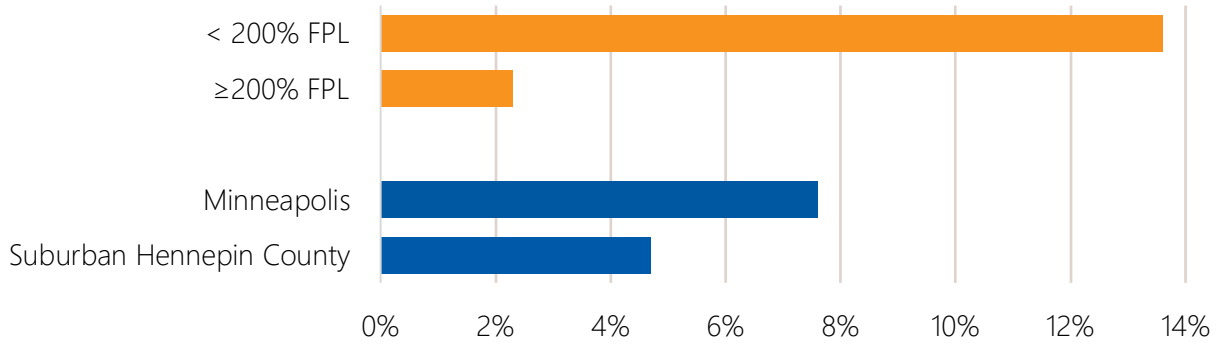
Source: MSS, Hennepin County

Exposure to secondhand smoke

Smokers are not the only ones affected by tobacco smoke. Secondhand smoke is a serious health hazard for nonsmokers. Studies show that the risk of developing heart disease is about 25-30% higher among people exposed to environmental tobacco smoke. People who have high blood pressure or high blood cholesterol have an even greater risk of developing heart diseases when they are exposed to secondhand smoke.

- In 2018, 5.7% of Hennepin County adults and 6.4% of households with children under the age of 18 were exposed to secondhand smoke at home.
- Regardless of age, secondhand smoke exposure was highest among US-born Black residents when compared to other racial and ethnic groups.
- Adults with low incomes were more likely to be exposed to secondhand smoke than adults who did not have low incomes (14% vs. 2%), as were adults in Minneapolis compared to suburban Hennepin County (8% vs. 5%) (Figure 77).

Figure 77: Adult secondhand smoke exposure by income and geography, 2018



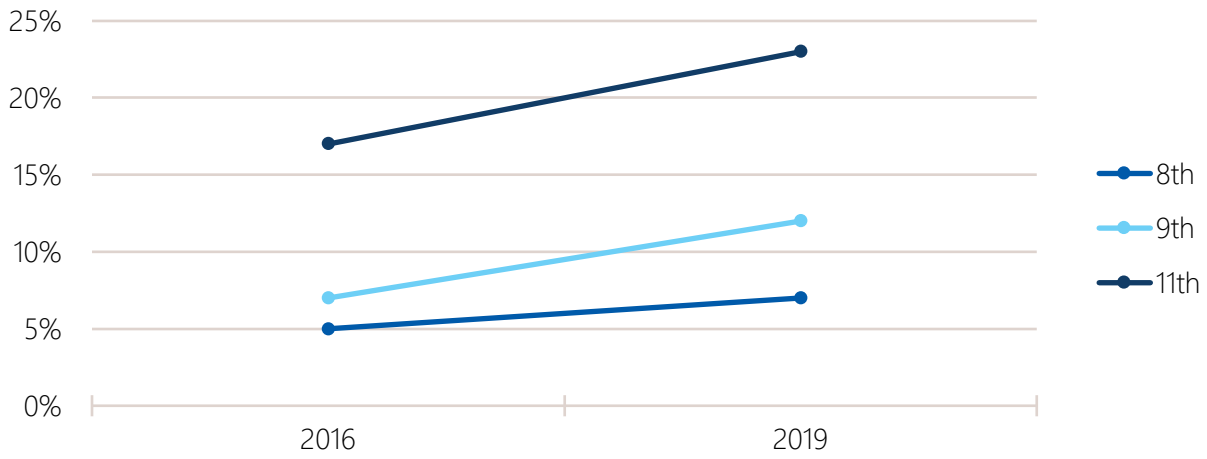
Source: SHAPE

Current e-cigarette users

Electronic cigarettes (e-cigarettes) continue to gain popularity, especially among youth. E-cigarettes are now the most used commercial tobacco product among youth. Nearly all e-cigarettes contain nicotine, a highly addictive substance that can harm developing brains. The aerosol produced from e-cigarettes contains additional harmful substances such as ultrafine particles, heavy metals, and other cancer-causing chemicals.

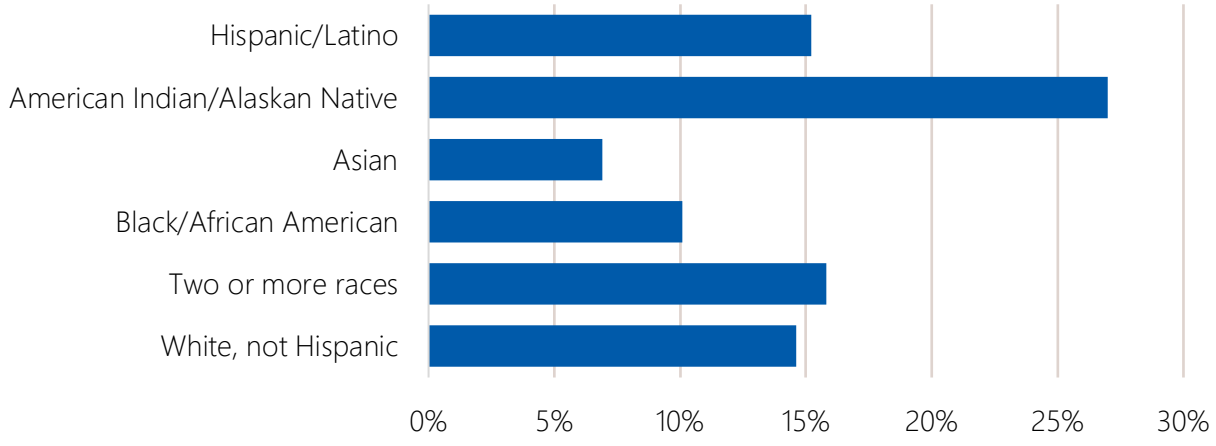
- In 2018, 2.3% of adults in Hennepin County reported using e-cigarettes (Figure 78). The 2019 rate of e-cigarette use was higher among Hennepin County youth (13.4%).
- The percentage of Hennepin County youth who report using e-cigarettes increased significantly since 2016 (Figure 79).
- In 2019, 23% of 11th graders were e-cigarettes users, which is more than three times the rate of 8th graders (7%) (Figure 79).
- E-cigarette use was lowest among Asian (7%) and Black/African American (10%) students (Figure 79).
- Regardless of grade level, female students were more likely to be e-cigarette users compared to male students.

Figure 78: E-cigarette use in the past 30 days (8th, 9th, and 11th graders), 2016-2019



Source: MSS, Hennepin County

Figure 79: E-cigarette use in the past 30 days by race/ethnicity (8th, 9th, and 11th graders), 2019



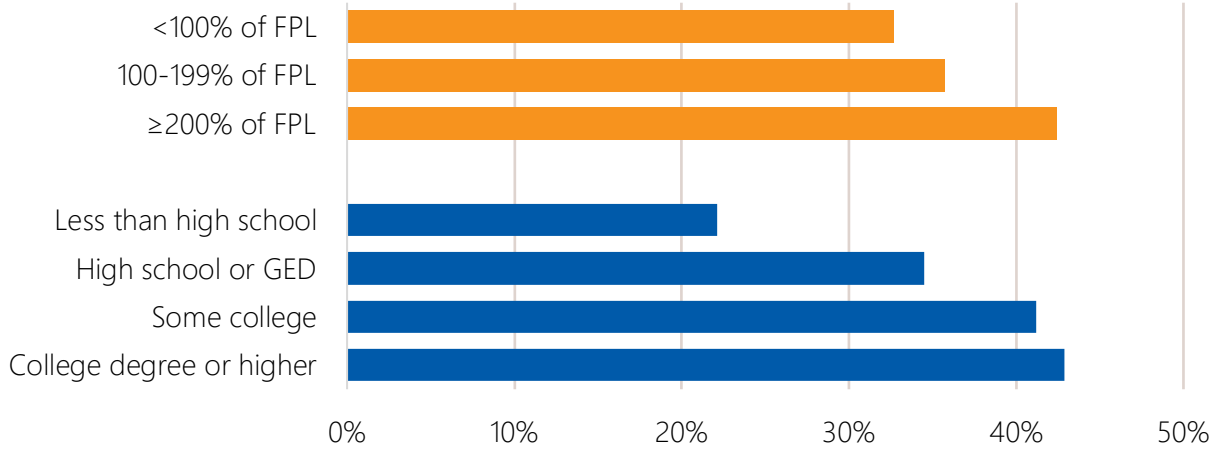
Source: MSS, Hennepin County

Alcohol use

The 2018 SHAPE survey classifies problem drinking as either binge drinking or heavy drinking. These definitions vary slightly by gender. Binge drinking is defined as consuming more than four drinks (for women) or five drinks (for men) in a single occasion on one day or more in the past 30 days. Heavy drinking is defined as consuming more than one drink (for women) or two drinks (for men) per day on average during the past 30 days.

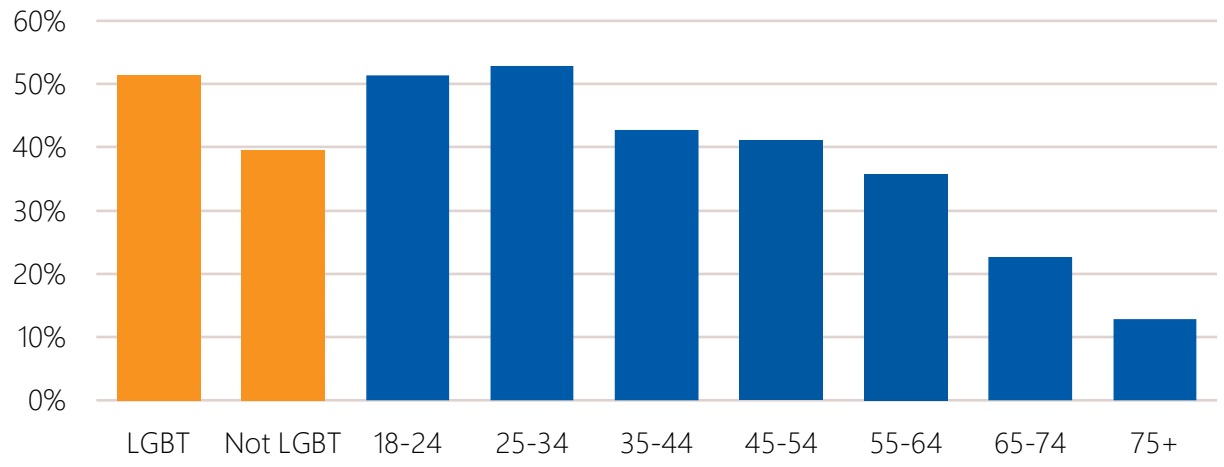
- About four in 10 (39.9%) Hennepin County adults reported problem alcohol consumption, meaning they engaged in heavy or binge drinking (SHAPE 2018).
- Adults who have higher income and higher education reported disproportionately high rates of problem drinking compared to their counterparts (Figure 80).
- The rate of problem alcohol drinking is significantly higher among young adults than among older adults (Figure 81).
- The LGBT community reported a rate of problem drinking that is significantly higher than the rate reported by adults who are not members of the LGBT community (51% vs. 40%) (Figure 81).

Figure 80: Problem drinking for adults by income and education, 2018



Source: SHAPE

Figure 81: Problem drinking for adults by LGBT identification and age, 2018

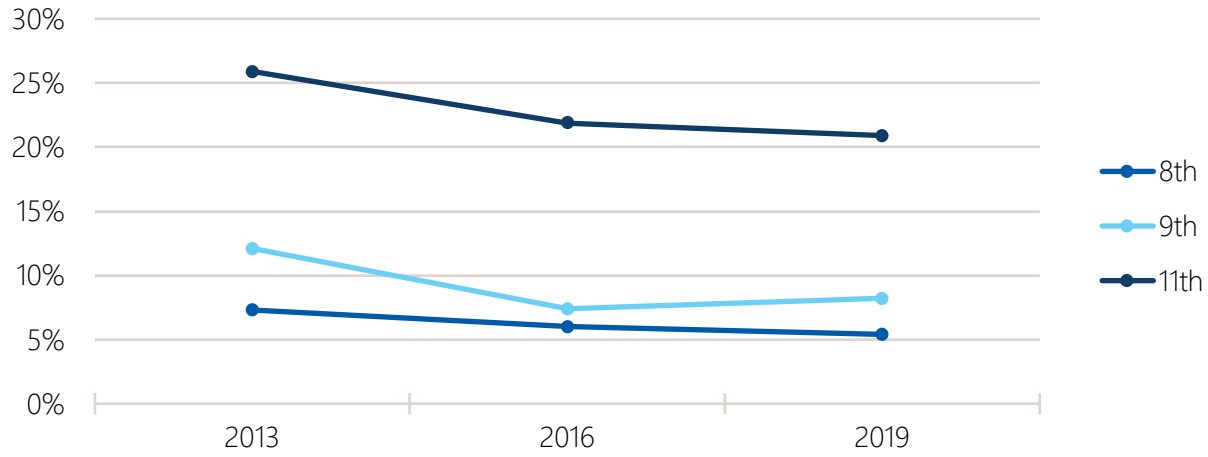


Source: SHAPE

Adolescents – in Hennepin County, Minnesota and nationwide – commonly abuse alcohol. Youth who drink alcohol are at risk of academic, social, legal, physical, and emotional problems. Youth who binge drink are at risk of experiencing problems related to drinking more than youth who drink alcohol but do not binge drink.

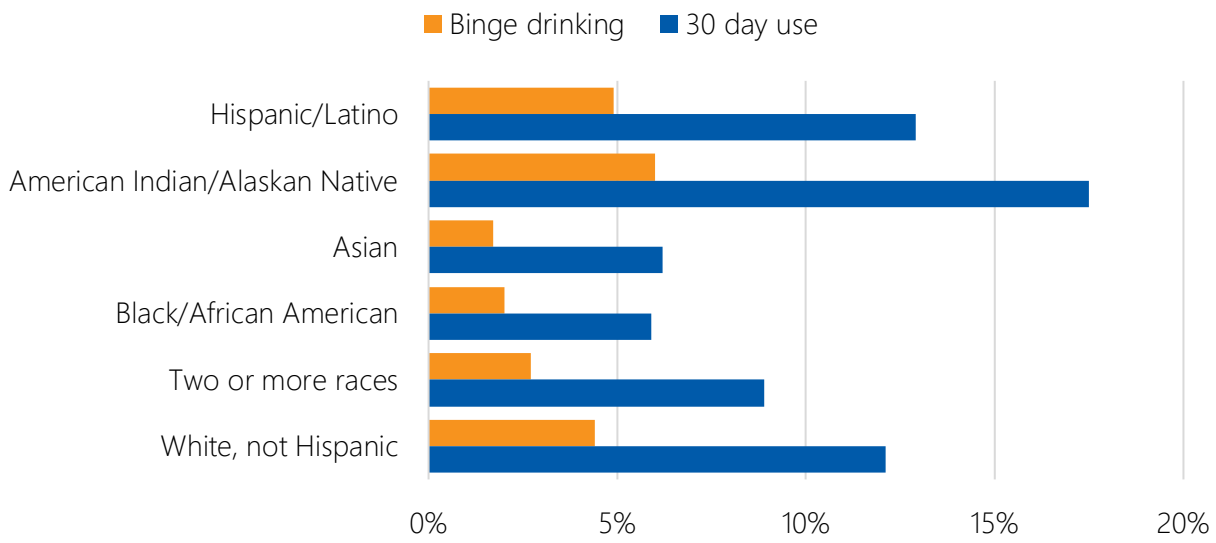
- In 2019, one in 10 (10.7%) Hennepin County youth (8th, 9th, and 11th graders) reported using alcohol at least once during the past 30 days (MSS 2019).
- There is a decreasing trend of adolescent alcohol use (Figure 82).
- In 2019, 3.8% of Hennepin County students reported binge drinking in the past 30 days, a decline from 4.6% in 2016 (MSS).
- American Indian, Hispanic, and White students were more likely to report binge drinking or drinking in the past 30 days compared to other students (Figure 83).

Figure 82: Adolescent past 30-day alcohol use, 2013-2019



Source: MSS, Hennepin County

Figure 83: Adolescent alcohol use within past 30 days by race/ethnicity (8th, 9th, and 11th graders), 2019



Source: MSS, Hennepin County

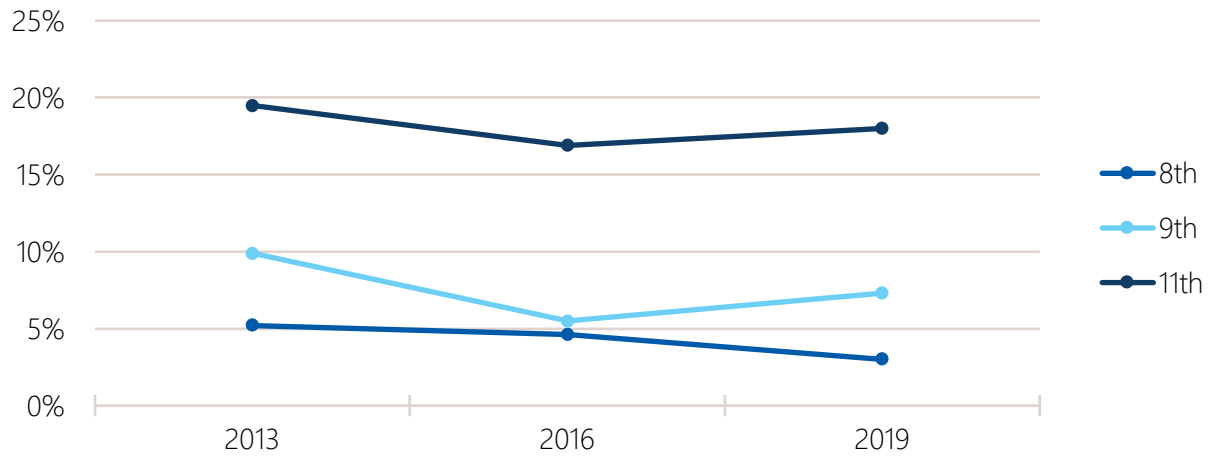
Marijuana use

Marijuana is the most commonly used drug in the United States. Although it is legal in some states, it remains illegal at the federal level. Marijuana contains a psychoactive compound called Tetrahydrocannabinol (THC) that can be impairing. Many people believe marijuana is not addictive, but research estimates that about 30% of people who use marijuana have a marijuana use disorder. Marijuana use is also linked to cognitive and learning difficulties and mental illness.

In July 2022, Minnesota passed legislation legalizing the sale of edibles that contain up to five milligrams of hemp-derived THC per serving, with a limit of 50 milligrams per package. Hemp and marijuana are both cannabis plants that contain THC. In comparison to marijuana, hemp plants have very low THC. New legislation and popularity of marijuana use poses risks for misuse among adolescents. Marijuana-related data highlighted in this assessment pre-date the legislation change in 2022.

- According to 2019 Minnesota Student Survey results, 8.7% Hennepin County youth (8th, 9th, and 11th graders) attending public schools reported marijuana use during the past 30 days.
- In 2019, 11th grade students (18%) reported marijuana use in the past 30 days at six times the rate of 8th grade students (3%) (Figure 84).

Figure 84: Adolescent past 30-day marijuana use (8th, 9th, and 11th graders), 2013-2019



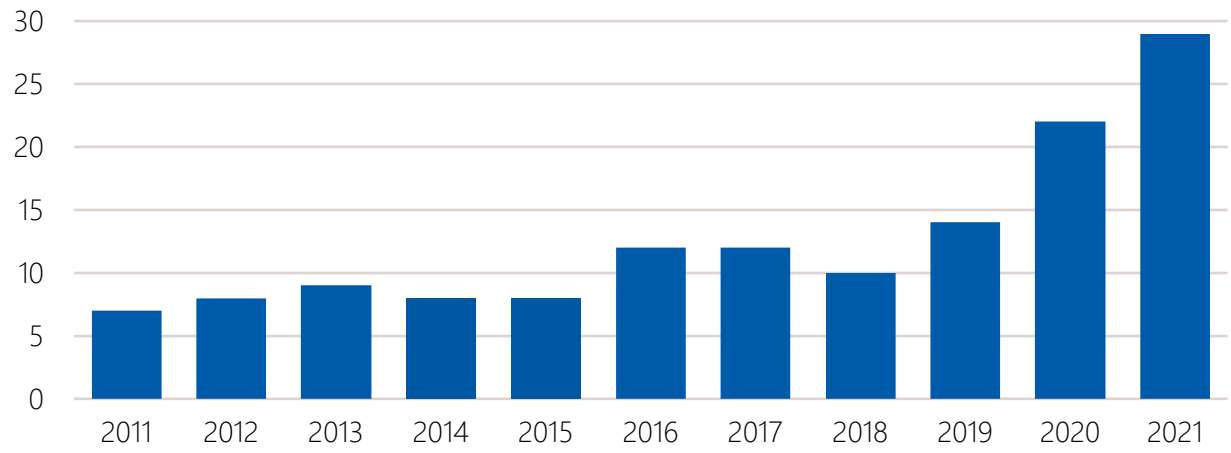
Source: MSS, Hennepin County

Opioids and drug overdose deaths

The opioid crisis in the United States is getting worse. Opioid overdoses are increasing and becoming more deadly because of fentanyl. Opioids are a class of drugs that include prescription pain pills, heroin, fentanyl, and fentanyl analogs. Opioids can be natural (opium), semi-synthetic (hydrocodone, oxycodone) and synthetic (fentanyl, fentanyl analogs). Opioids affect the opioid receptors in people's bodies and are intended to relieve pain. However, opioids also produce respiratory depression, and have a potential for misuse, dependence, addiction, and overdose.

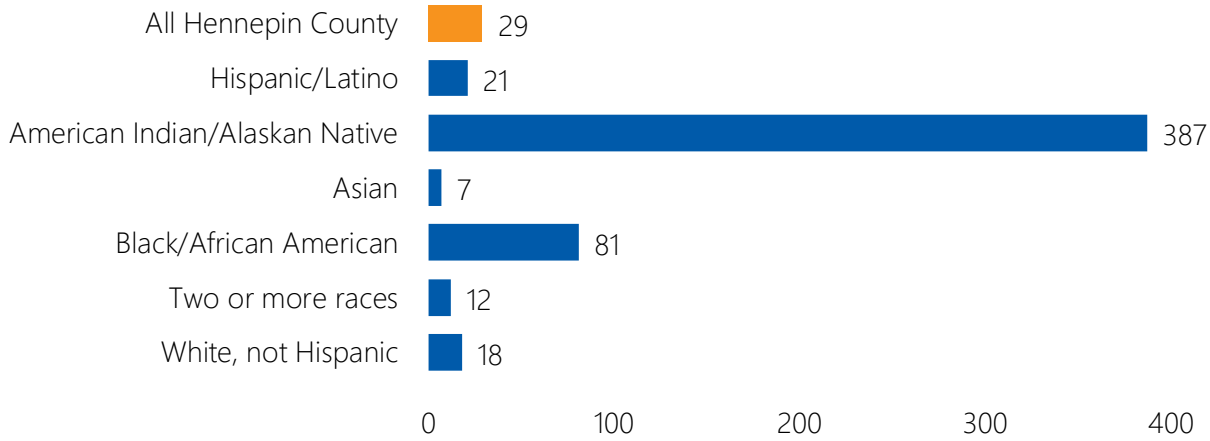
- Since 2011, opioid deaths have increased in Hennepin County and Minnesota (Figure 85).
- 2020 death data shows synthetic opioids (like fentanyl) are involved in most drug-related deaths among Hennepin County residents.
- Data from the Minnesota Prescription Monitoring Program show opioid prescribing in Hennepin County has been decreasing since 2016. However, Minnesota hospital discharge data after 2016 shows increasing rates of nonfatal overdoses and increasing health care visits for opioid dependence.
- In 2021, 94% of opioid-related deaths involved fentanyl, and 30% involved both methamphetamine and opioids.
- More than half (55%) of the opioid-related deaths among Hennepin County residents from 2011 to 2021 were among Minneapolis residents.
- American Indian and Black/African American adults experienced a disproportionality high rate of opioid-related deaths compared to other race/ethnicity groups (Figure 86).
- The percentage of 8th grade students who reported using prescription pain medications without a prescription, or differently than how a doctor intended, increased six-fold from 0.6% in 2013 to 3.6% in 2019 (Figure 87).

Figure 85: Annual opioid-related death rate (per 100,000), 2011-2021



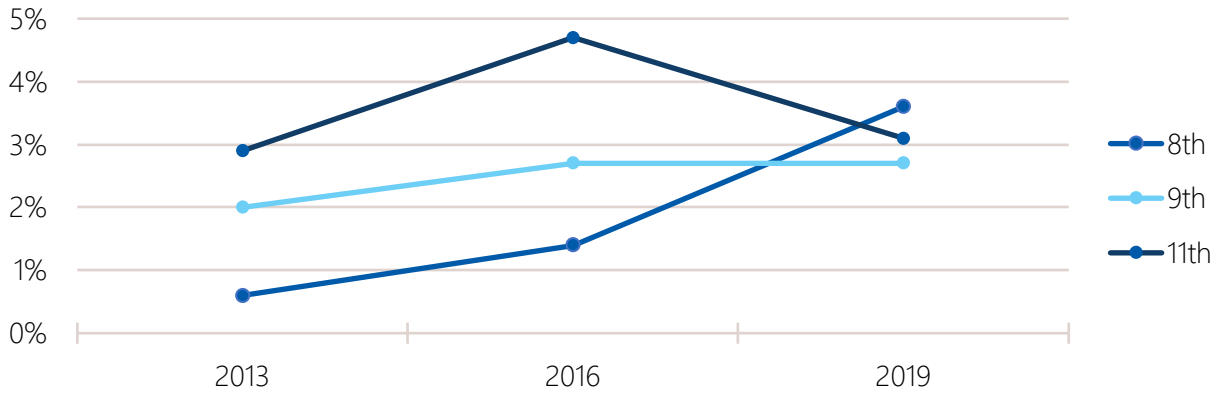
Source: MN Vital Statistics, Hennepin County death records

Figure 86: Opioid-related death rate (per 100,000) by race/ethnicity, 2021



Source: MN Vital Statistics death records

Figure 87: Adolescent prescription pain medication misuse in past 12 months (8th, 9th, & 11th graders), 2013-2019



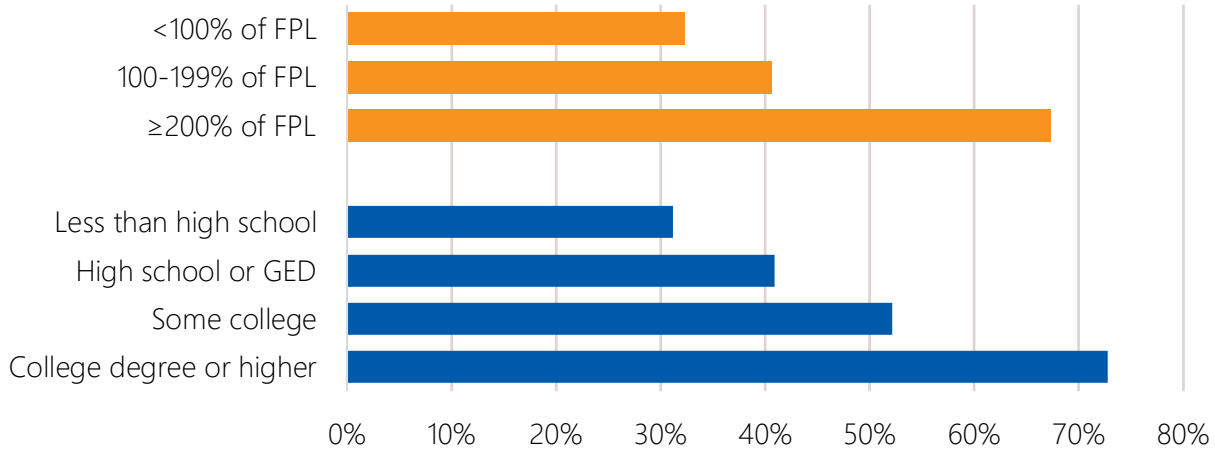
Source: MSS, Hennepin County

Overall health

Self-rated health reflects how an individual perceives their overall health. Although it is subjective, self-rated health helps predict future health care needs and mortality.

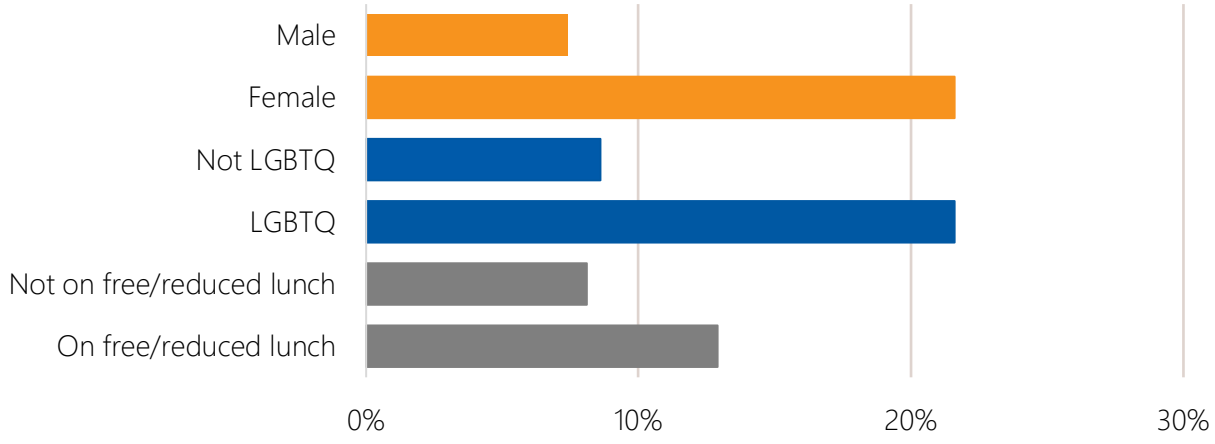
- In 2018, 59.5% of adults reported their health was very good or excellent (SHAPE 2018).
- The 2018 SHAPE survey results indicate the likelihood of self-reporting very good or excellent health increased with higher income and educational attainment (Figure 88).
- In 2019, 90.4% of Hennepin County youth attending public schools in the 8th, 9th, and 11th grades reported their health was good, very good, or excellent (MSS 2019).
- Adolescents who receive free/reduced lunch, identify as LGBTQ, or identify as female were more likely to report poor or fair health (Figure 89).

Figure 88: Percent reporting very good or excellent health by income and education, 2018



Source: SHAPE

Figure 89: Percentage of adolescents who reported poor or fair health (8th, 9th, and 11th graders), 2019



Source: MSS, Hennepin County

Chronic health conditions and diseases

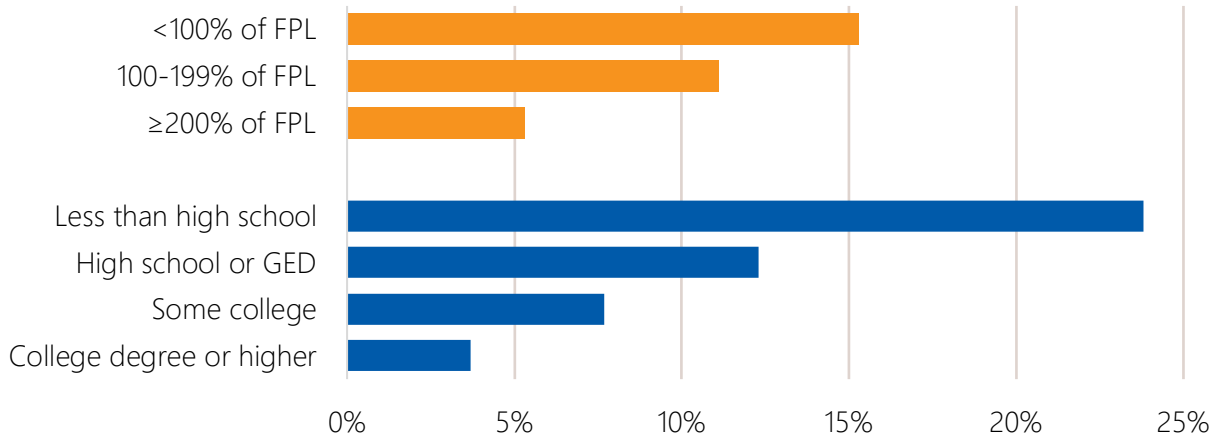
The CDC defines chronic diseases as conditions that last a year or more and require ongoing medical attention or limit activities of daily living. Most chronic diseases are caused by common risk factors of tobacco use, poor nutrition, lack of physical activity, and excessive alcohol use. Because chronic diseases are related to behavior, they are largely preventable. Throughout the United States, chronic diseases are the leading cause of death and disability. The burden of chronic disease is experienced disproportionately by communities of color and low-income populations.

Diabetes

Diabetes is a chronic condition that affects how the body breaks down sugar. Over time diabetes can lead to health concerns such as nerve damage, heart disease, vision loss, and kidney disease. The most common type of diabetes, type II diabetes, is preventable. The risk of type II diabetes can be reduced with regular physical activity, healthy eating, and healthy weight management.

- In 2018, 7.4% of adults ages 18 years and older in Hennepin County reported ever having diabetes (excluding gestational diabetes) (Figure 90).
- The likelihood of receiving a diabetes diagnosis decreases as household income and educational attainment increases (Figure 90).

Figure 90: Percentage of adults who reported diabetes by income and education, 2018



Source: SHAPE

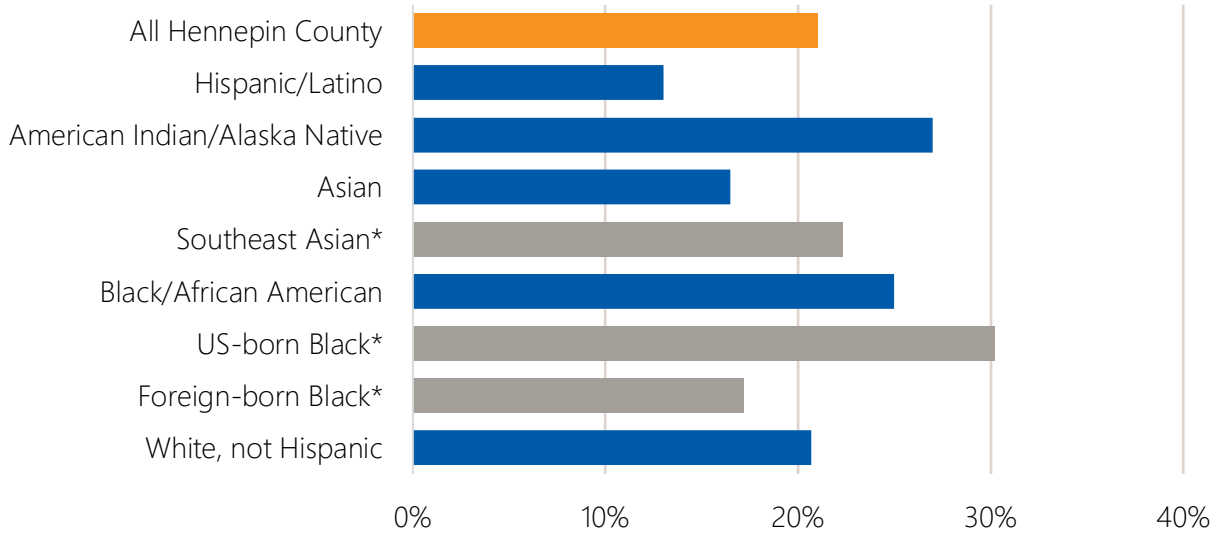
Cardiovascular health

Cardiovascular diseases affect the heart and blood vessels. Common risk factors for cardiovascular diseases include high blood pressure, high cholesterol, smoking, lack of physical activity, poor nutrition, and excessive alcohol use.

- In 2018, 21% of Hennepin County adults reported ever having been diagnosed with hypertension (Figure 91).
- The rate of hypertension increases with age. However, it decreases with higher household income and educational attainment (Figure 92).

- The prevalence of hypertension among US-born Black residents (30.2%) was significantly higher than the Hennepin County average (21%) (Figure 90).
- The rate of hypertension among those who have a disability (39%) was more than twice the rate among adults who do not have disability (15.8%) (SHAPE 2018).

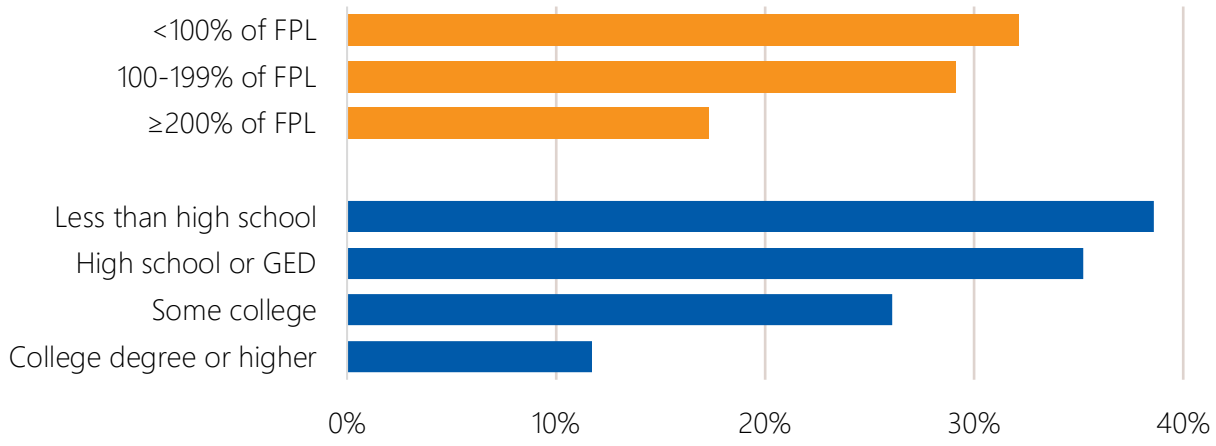
Figure 91: Percent of adults who reported hypertension by race/ethnicity, 2018



Source: SHAPE 2018

**These are subgroups from the race/ethnicity above. Southeast Asian are those who indicated they are Hmong, Cambodian, Laotian, Thai, Vietnamese or Burmese. US-born Black and Foreign-born Black are based on responses to the question "were you born in the United States?"*

Figure 92: Percentage of adults who reported hypertension by income and education, 2018

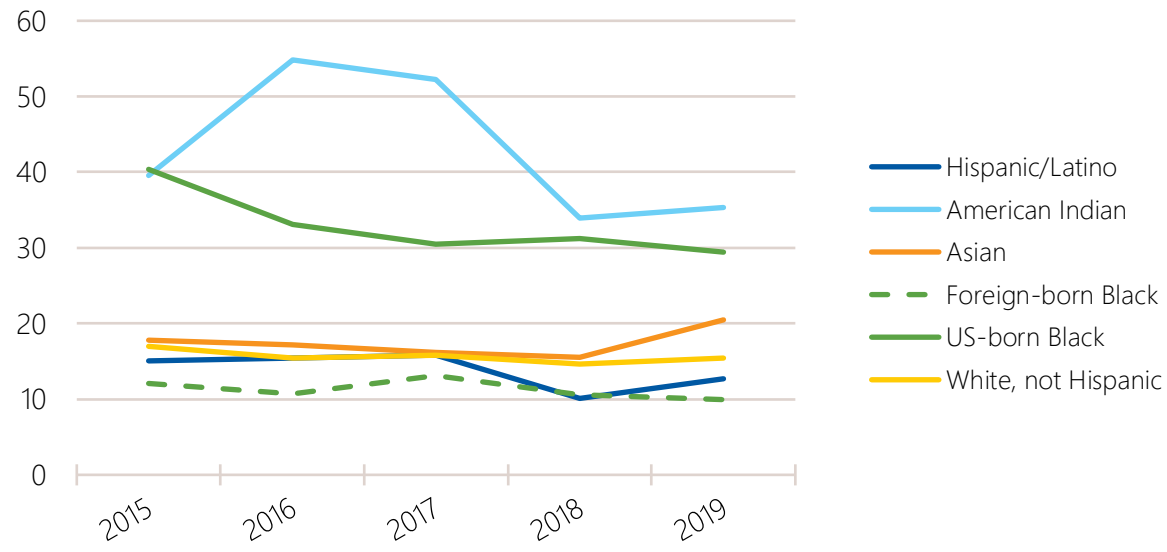


Source: SHAPE

Leading causes of death

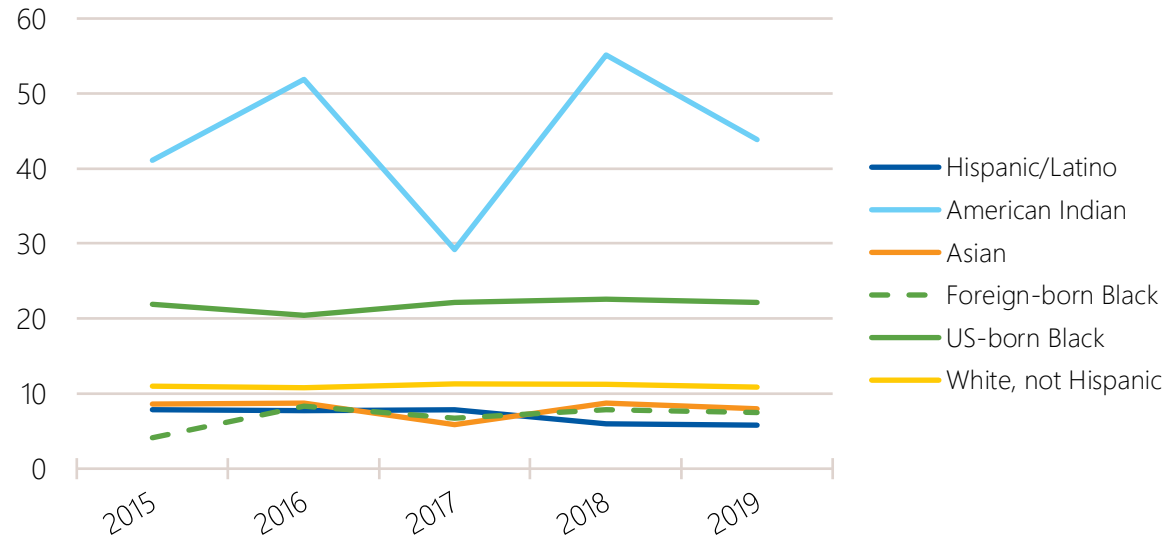
Cancer has remained the leading cause of death in Hennepin County since 2000, followed by heart disease. The leading causes of death are similar across racial groups, though the overall burden is disproportionate.

Figure 93: Cancer death rate per 10,000 population by race/ethnicity (age-adjusted), 2015-2019



Source: MN Vital Statistics, Hennepin County death records

Figure 94: Heart disease death rate per 10,000 population by race/ethnicity (age-adjusted), 2015-2019



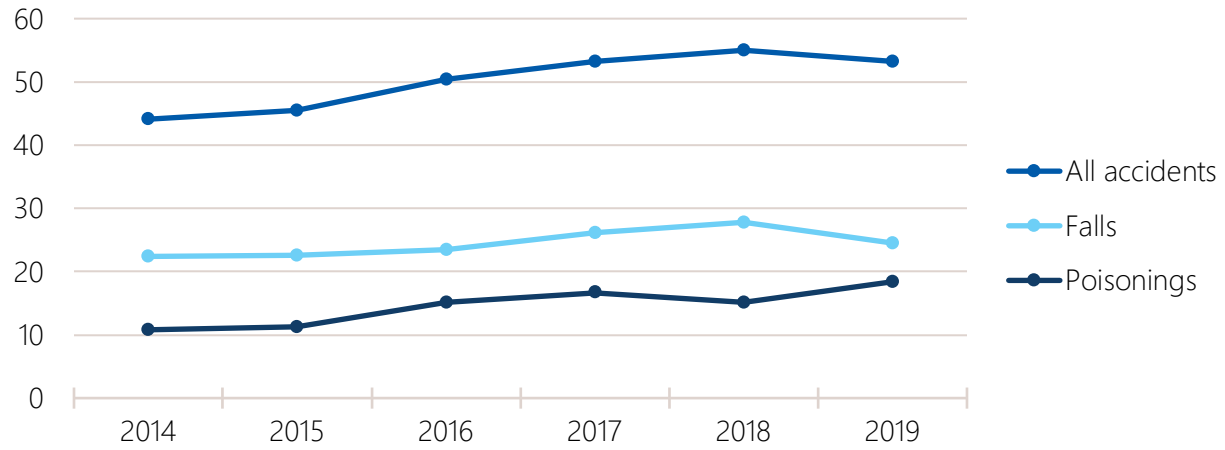
Source: MN Vital Statistics, Hennepin County death records

Unintentional injuries

Unintentional injury or accidents are a leading cause of death nationwide. In Hennepin County, unintentional injuries have increased since 2014. This increase is driven by falls and poisonings related to drug use. Falls affect a higher proportion of older adults. Poisonings disproportionately affect young and middle-aged adults, American Indian/Alaska Native and Black/African American communities.

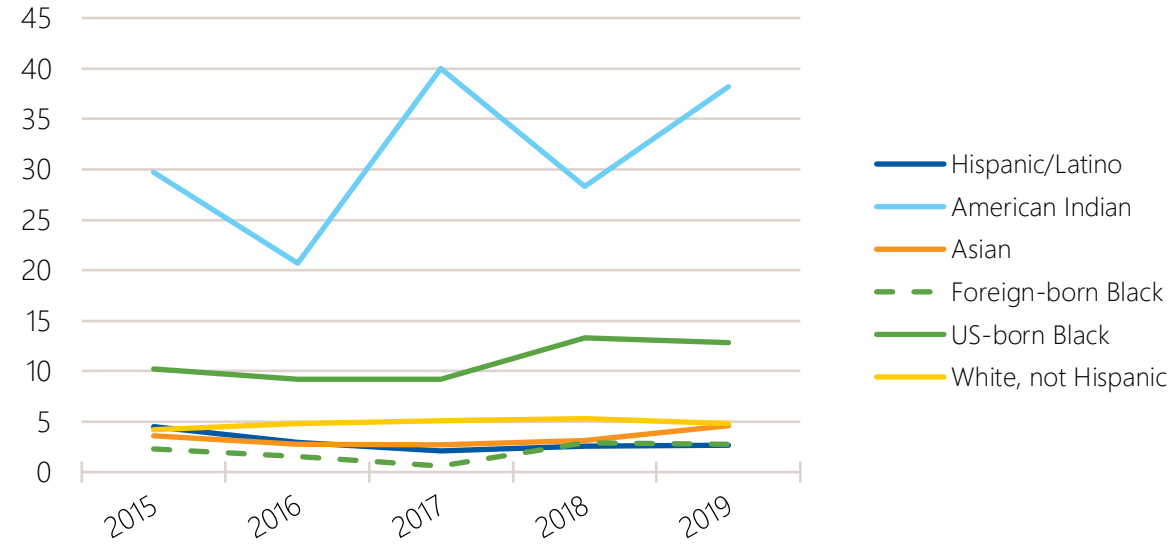
- According to Hennepin County death records, unintentional injuries were the third leading cause of death in 2019.
- Unintentional injuries are the leading cause of death for American Indian/Alaska Native residents.
- The most common causes of accidental death include falls and poisonings, which are most often drug related. Overall, there is an increasing trend of deaths due to falls and poisonings (Figure 95).
- American Indian and US-born Black residents die from unintentional injuries at a disproportionately high rate compared to residents from other race/ethnicity groups (Figure 96).

Figure 95: Unintentional injury death rate per 100,000 population, 2014-2019



Source: MN Vital Statistics, Hennepin County death records

Figure 96: Unintentional injury death rate per 10,000 population by race/ethnicity (age-adjusted), 2015-2019



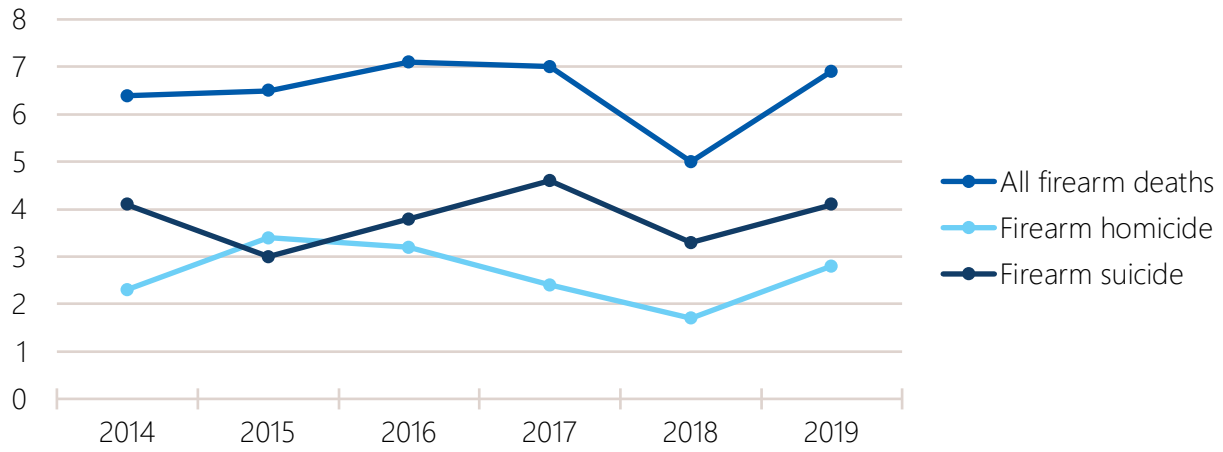
Source: MN Vital Statistics, Hennepin County death records

Violent deaths

Violent deaths resulting from intentional use of physical force, are often directly associated with firearms. Nationally, deaths due to firearms increased by approximately 25% from 2015 to 2020. Gun violence affects more than just victims and their families, friends, and coworkers, it affects communities. Gun violence impacts person's perception of safety and security and can cause increased feelings of stress and anxiety.

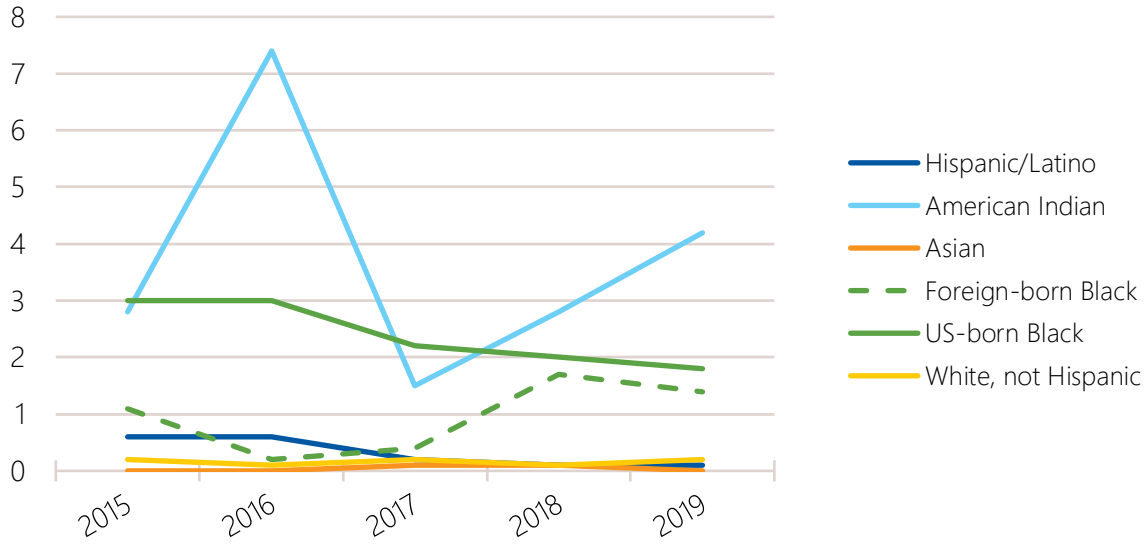
- There was no significant change in the overall rate of deaths related to firearms in Hennepin County in 2019 compared to 2014 (Figure 97).
- In 2019, approximately 60% of firearm related deaths were suicides (Figure 97).
- Death by assault, also known as homicide, is most common among American Indian and US-born Black residents (Figure 98).

Figure 97: Firearm death rate per 100,000 population, 2014-2019



Source: MN Vital Statistics, Hennepin County death records

Figure 98: Homicide death rate per 10,000 population by race/ethnicity (age-adjusted), 2015-2019



Source: MN Vital Statistics, Hennepin County death records

Conclusions

Methods

Data sources and limitations

All of the data sources that we used have their own limitations. Data can help inform decisions and develop priorities, but we understand that it is not the only factor that influences decision-making. Below are brief descriptions and limitations of each of the main data sources used in this assessment.

Timing of data

Most of the population survey data in this report was collected in 2018 and 2019, prior to the COVID-19 pandemic. Data collected prior to the pandemic can serve as a reference for monitoring the impact of COVID-19 on population health. Where possible, more recent data from 2020 and 2021 are included. Recent data highlights the initial impact of COVID-19 and how disparities that existed prior to the pandemic have been exaserbated.

Broad race/ethnicity

Race and ethnicity data are collected via survey responses from residents. In this assessment, comparisons by race and ethnicity are made using broad race/ethnicity categories based on limited options for self-identification in surveys. Data available from these surveys cannot reflect the differences among ethnic groups and nationalities within the broad race/ethnicity categories. While it is important to report data by race/ethnicity to reflect the diversity of the population in Hennepin County, it is also important to note that given the limitations, the data does not tell the whole story.

Sexual orientation and gender identity

Data on sexual orientation and gender identity are limited by the response options available to respondents. Sexual orientation data from SHAPE 2018 is presented as LGBT (lesbian, gay, bisexual, transgender) while sexual orientation data from MSS is presented as LGBTQ (lesbian, gay, bisexual, transgender, queer, questioning) to reflect survey response options. Where possible, data was reported by sexual orientation to highlight inequities, not to indicate that being cisgender or heterosexual is the standard. Similarly, gender classification options may be limited to a binary sex model (male and female) and may not accurately reflect a respondent's gender identity.

Minnesota Student Survey (MSS)

The Minnesota Student Survey (MSS) is one of the longest running youth surveys in the nation. A triennial survey that began in 1989, the survey is an anonymous statewide school-based survey conducted to gain insights into the world of students and their experiences. The survey asks students about their activities, opinions, behaviors, and experiences. Students respond to questions on school climate, bullying, out-of-school activities, health and nutrition, emotional and mental health, relationships, substance use and more. Questions about sexual behaviors are asked only of 9th and

11th grade students. Students were able to indicate their sexual orientation and gender identity as queer or questioning. All responses are anonymous.

Some limitations of the MSS include:

- Variable response rate by district and grade
- Trend data set only includes districts participating in every year of trend analysis.
- Minneapolis Public Schools not represented due to inconsistent participation over time
- Association versus causation
- Recall bias
- Exaggerated student responses-The majority of students exhibit patterns of responses to questions that are reasonable for a given question and consistent across similar questions. In addition, as results have demonstrated, percentages for many answers are consistent over time across the eight Minnesota Student Survey administrations studied for this report. Such similarities are likely to occur only if the survey responses reflect the actual perceptions of Minnesota's youth; it is extremely unlikely that these patterns could be replicated by chance over time. Furthermore, the survey findings are often consistent with findings in similar states and with national trend lines of increasing or decreasing behaviors.

SHAPE 2018

The 2018 Survey of the Health of All the Population and the Environment, or SHAPE 2018, is the latest implementation in a series or surveys collecting information on the health of Hennepin County residents and the factors that affect their health across a broad range of topics. SHAPE results help us understand how healthy residents are, examine differences in health among different communities, and understand how social factors such as income, education, and housing stability affect health. SHAPE was initiated in 1998, and has repeated the effort every four years since, including data collection iterations in 2002, 2006, 2010, and 2014

Some limitations of SHAPE 2018 include:

- Low response rate (24%), non-response bias impacts ability to generalize
- Respondents with limited English proficiency were under-represented
- Small sample sizes limit ability to report some crosstabs
- Data are self-reported and subject to recall bias
- Results are only generalizable to county adults who live in households with a residential address
- For statistical reliability, the 2018 SHAPE survey results report respondents who identified as gay, lesbian, bisexual, and/or transgender together as “LGBT self-identified.” In 2018, respondents were not able to identify their orientation as queer or questioning.

US Census/American Community Survey

The US Census is conducted every ten years and is the most accurate count of the population.

The American Community Survey (ACS) is an ongoing survey that provides vital information on a yearly basis about our nation and its people.

Census

- Data only includes individuals who earned wages in the US
- Short-form only, basic demographics only

American Community Survey

- Estimates, not actual counts such as with census.
- Five-year estimates used for census tract data. Five-year estimates are more accurate than one-year estimates, but less timely.
- Margin of error increases as geographic unit decreases in size (i.e., tract versus county). One year data frequently not available or reliable for tract level.

MN Vital Statistics

The Minnesota Vital Statistics System (MVSS) is a part of the Minnesota Center for Health Statistics (MCHS) at the Minnesota Department of Health. The MVSS compiles statistical data on all births, deaths, infant deaths, and fetal deaths to Minnesota residents. These data are provided to MVSS by the Office of Vital Records, the state entity responsible for registering the facts of birth and death in the State of Minnesota using information submitted by hospitals, clinics, or medical examiners. Limitations of these data include:

Birth records

- Medical record extraction for some elements inconsistent
- Race/ethnicity categories inadequate
- Race/ethnicity category changes make reporting trends challenging

Death records

- Race/ethnicity reported by other than decedent
- Cause of death could be influenced by death reporting practices of certifiers

Other data sources

- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) data
- Minnesota Department of Education graduation rates
- MN Department of Human Services Aging Data Profiles
- Minnesota Department of Employment and Economic Development (MNDEED) unemployment statistics
- Minnesota State Demographic Center projections
- Minnesota Immunization Information Connection (MIIC)
- Minnesota Hospital Discharge Data (MNHDD)
- Blood Lead Information System (BLIS)

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