Children's MINNESOTA

Children's Minnesota 2019 Community Health Needs Assessment

Data Summary

Wilder Research

DECEMBER 2019

451 Lexington Parkway North | Saint Paul, Minnesota 55104
651-280-2700 | www.wilderresearch.org

Wilder Research
Information. Insight. Impact.

Contents

Figures

Figures (continued)

Figures (continued)

Acknowledgements

Many people shared their time and knowledge to help guide this assessment process and to help us develop an understanding of the strengths, assets, concerns, and priorities of children and families living in the Twin Cities metro region. Wilder Research and Children's Minnesota would like to thank the following people for their contributions.

Community stakeholders

We would like to thank all the community stakeholders who took time to speak to the health assets, needs, and priorities of the communities they are part of or serve through their individual leadership or organization's services including:

Melissa DeBilzan
American Academy of Pediatrics – Minnesota Chapter

Zayed Ahmed
Avenues for Homeless Youth

Ahmed Muse
Brian Coyle Center

Christina Woodlee
Bridge for Youth

Bharti Wahi
Children's Defense Fund

Janice Barbee
Community Engagement Specialist

Salat Tuke
Dar Omar Al Farooq

Terri Yellowhammer
Hennepin County Child Welfare

Greg Marita
Mid-Minnesota Legal Aid

Betsy Sohn
Hope Community

Karen Kingsley
Lutheran Social Services

Laura Newton
Minneapolis American Indian Center & Bright Beginnings Project

Stephanie Graves
Minneapolis Health Department

Patina Park
Minnesota Indian Women's Resource Center

Lori Berg
Minnesota Philanthropy Partners

Doreen Day
Missing and Murdered Indigenous Women

Amber Spaniol and Liz Zeno
Minneapolis Public Schools

Dr. Laurelle Myhra
Native American Community Clinic

Joan McDonough-Schlecht
Neighborhood House

Terri Thao
Nexus Community Partners

Julie Graves
Waite House

Margaret Hayes and Sara Nelson
Wilder Foundation

Rubén Vázquez and Stephanie Thomas
YWCA

Andre Dukes
Northside Achievement Zone

Daniel Gumnit
People Serving People

Crystal Windschitl
Phillips West Neighborhood Organization

Stella Nyakundi, Kayla Vang, and Emily Walker
PICA Head Start

Kelly Leuca
Pillsbury House and Theatre

Sarah Koschinska and Younin Greenfield
Project for Pride in Living

Toni Carter
Ramsey County Commissioner

Mary Yackley and Carol Grady
Saint Paul Public Schools

Dr. Nikole T. Logan
Saint Paul Public Schools
Office of Early Learning

Alexandra De Kesel Lofthus
Second Harvest Heartland

Dianne Haulcy
Think Small

Children's Minnesota staff

We want to acknowledge the staff from Children's Minnesota who worked closely with us to design and implement this community health needs assessment: Kelly Wolfe and Megan Peterlinz. This team shaped the assessment design; provided data, information, and insight about Children's patient population and services; and coordinated with providers and community partners. The following staff members also contributed to this report by conducting interviews, gathering and analyzing data, facilitating discussions, and preparing interim documents: Hanna Abdirahman, Monica Acosta Rodriguez, Andrew Alberth, Segal Ali, Jessica Block, Fardus Bulhan, Tom Lang, Pam Ross, Lisa Skjefte, and Anna Youngerman.

In addition, we want to acknowledge the contributions of Children's Minnesota providers and staff who volunteered their time to share their perspectives on patient, family, and community needs.

Wilder Research staff

The following Wilder Research staff members also contributed to this report:

Steven Aviles
Jenny Bohlke
Leanna Browne
Megan Chmielewski
Jen Collins
Marilyn Conrad
Philip Cooper
Amanda Eggers
Thalia Hall
Amanda Hane
June Heineman
Cheryl Holm-Hansen
Sera Kinoglu
Julia Miller
Sophak Mom
Dimpho Orionzi
Maria Robinson
Dan Swanson
Jessica Tokunaga
Jacob Wascalus
Ellen Wolter

About the assessment

Through the Affordable Care Act (ACA), all not-for-profit hospitals are federally required to conduct a community health needs assessment (CHNA) that identifies the health needs and priorities of community residents and the steps that the hospital will take to address these health-related topics. The report describes the assessment process used to identify and prioritize the health topics that community members believe are most critical for Children's Minnesota (also referred to as Children's) to address. A subsequent report will include an implementation plan that describes the specific actions Children's will take during the next three years to address these priority topics.

In 2016, Children's Minnesota began to emphasize health equity in the assessment process and broadened its potential topic areas to include community conditions that contribute to health outcomes, such as poverty, education, and housing. The 2016 CHNA was a robust assessment that was community led and community informed via the Community Advisory Council (CAC). The following health priorities were identified through the 2016 assessment, and became the focus of new initiatives and expanded efforts: structural racism, income and employment, education, access to resources, mental health and well-being, and asthma.

The 2019 CHNA process, similar to 2016, gathered input from the community and Children's Minnesota staff and reviewed existing data to identify critical needs. Given that most of the 2016 priorities are based on social determinants of health, it would be unrealistic to anticipate significant, measurable improvements in three years. To that end, the 2019 assessment was designed to build upon what was learned in 2016. As a result, the goals of the 2019 CHNA were to:

- Confirm previously identified needs still exist and are significant in the community
- Refine Children's understanding of the existing health priority areas and how they present in the community
- Identify emerging needs that may not already be addressed through the existing health priority areas

Through this process, Children's was guided by the following beliefs:

- Health is strongly influenced by the conditions in which people are born, live, learn, work, play, worship, and age. These conditions, also called social determinants of health, have a greater influence on health than health care services.[1]
- Social determinants of health are shaped by structures, decisions, and policies that influence how money, power, and resources are distributed. Inequities result when policies and systems that were designed to advantage affluent, and often white, residents negatively impact groups of people, often people of color and lower-income residents. Policies that disproportionately impact people of color may not mention race explicitly. Inequities can also result when the full impacts of policies are not considered, and if people most likely to be impacted by a proposed policy have limited influence or are excluded from decisions that impact health and well-being. To that end, Children's will continue to use a racial equity lens in its Community Health Needs Assessment (CHNA) process.

[1] Schroeder, S. A. (2007). We can do better – Improving the health of the American people. *New England Journal of Medicine*, *357*, 1221-1228.

Secondary data review

A review of secondary data sources was used to describe demographic trends, and to identify potential changes in health outcomes or emerging health concerns among youth who live in the Twin Cities metro region. The demographic data used for that purpose were largely from the American Community Survey (ACS), the U.S. Census Bureau, Minnesota Student Survey, Minnesota Department of Health Public Health Data Access Portal, and other state and federal sources. Patient data were also used to describe the demographic characteristics of children served and to identify the neighborhoods where the organization serves large numbers of patients.

Community demographics and social indicators

Demographic characteristics

Children's Minnesota has a broad reach; however, a majority of children served live in the seven-county Twin Cities metro region. For the purposes of this CHNA, Children's Minnesota has adopted the following definition to describe the community it serves: the community served by Children's Minnesota includes the more than 700,000 children (0-17 years) who live in the seven-county Twin Cities region: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties.

There are high-level differences between counties. Ramsey and Hennepin counties are home to the largest number of children and the most racially and ethnically diverse populations (Figure 1). In Ramsey County, a majority of the population (57%) are children of color, with the remainder identifying as white, non-Hispanic (43%). In all other counties, white, non-Hispanic children comprise the majority of the population. Throughout the region, a relatively small percentage of children (up to 8%) were born outside the United States. Larger percentages of children (16% - 39%) live in households where a language other than English is the primary language, suggesting that many of these children are first-generation immigrants.

1. Demographic characteristics of children 0-17, by county

	Anoka	Carver-Scott[a]	Dakota	Hennepin	Ramsey	Washington
Number of children (age 0-17)	83,350	67,504	103,050	271,349	125,481	62,686
Race/ethnicity						
American Indian	<1%	1%	<1%	1%	1%	<1%
Asian (Southeast) [b]	3%	3%	3%	4%	18%	4%
Asian (other)	1%	3%	2%	4%	2%	3%
Black – African American/ Other African	6%	5%	6%	15%	13%	6%
Black – Somali	2%	<1%	3%	5%	3%	<1%
White, non-Hispanic	73%	80%	69%	53%	43%	76%
Two or more races	8%	4%	8%	7%	10%	5%
Another race/ethnicity	3%	3%	3%	5%	3%	1%
Hispanic/Latino	7%	7%	11%	12%	12%	6%
Nativity						
Born outside of the U.S.	3%	3%	3%	6%	8%	3%
Language [c]						
Percentage of students whose primary household language other than English	20%	17%	22%	33%	39%	16%

Sources. Integrated Use Microdata Series (IPUMS), 2013-17, American Community Survey 5-year estimates (2013-17), Minnesota Department of Education Student Enrollment Data (2016-17)

Note. Race/ethnicity percentages may total more than 100% because children of Hispanic ethnicity may also be included any race group with the exception of White, non-Hispanic.

[a] Carver and Scott counties were combined in order to calculate reliable race/ethnicity and nativity estimates.

[b] The Southeast Asian category includes those who identified their race as Asian and reported belonging to any of the following ancestry groups: Burmese, Cambodian, Filipino, Hmong, Indonesian, Laotian, Malaysian, Taiwanese, Thai, or Vietnamese. The category Asian (other) includes those who identified their race as Asian but did not report belonging to the ancestry groups listed previously.

[c] The most common household languages (spoken by at least 1,000 students) include English, Spanish, Hmong, Somali, Vietnamese, Karen.

Given the high volume of patients Children's serves who are under age 6, demographic information for children in this age group are provided separately below. Similar themes exist within this group when compared to the 0-17 age group (Figure 2).

2. Demographic characteristics of children 0-5, by county

	Anoka	Carver-Scott [a]	Dakota	Hennepin	Ramsey	Washington
Number of children (age 0-5)	25,878	20,193	32,622	92,357	44,949	18,728
Race/ethnicity						
American Indian	<1%	1%	<1%	1%	2%	<1%
Asian (Southeast) [b]	3%	2%	4%	4%	18%	4%
Asian (other)	<1%	2%	2%	4%	2%	3%
Black – African American/Other African	6%	5%	6%	15%	13%	8%
Black – Somali	2%	<1%	4%	5%	3%	<1%
White, non-Hispanic	72%	79%	67%	53%	42%	74%
Two or more races	10%	6%	10%	8%	10%	5%
Another race/ethnicity	3%	4%	2%	4%	3%	<1%
Hispanic/Latino	8%	5%	11%	12%	12%	6%
Nativity						
Born outside of the U.S.	1%	3%	1%	3%	5%	1%
Language [c]						
Percentage of students whose primary household language other than English	22%	17%	23%	34%	43%	17%

Sources. Integrated Use Microdata Series (IPUMS), 2013-17, American Community Survey 5-year estimates (2013-17), Minnesota Department of Education Student Enrollment Data (2016-17)

Note: Race/ethnicity percentages may total more than 100% because children of Hispanic ethnicity may also be included any race group with the exception of White, non-Hispanic.

[a] Carver and Scott counties were combined in order to calculate reliable race/ethnicity and nativity estimates.

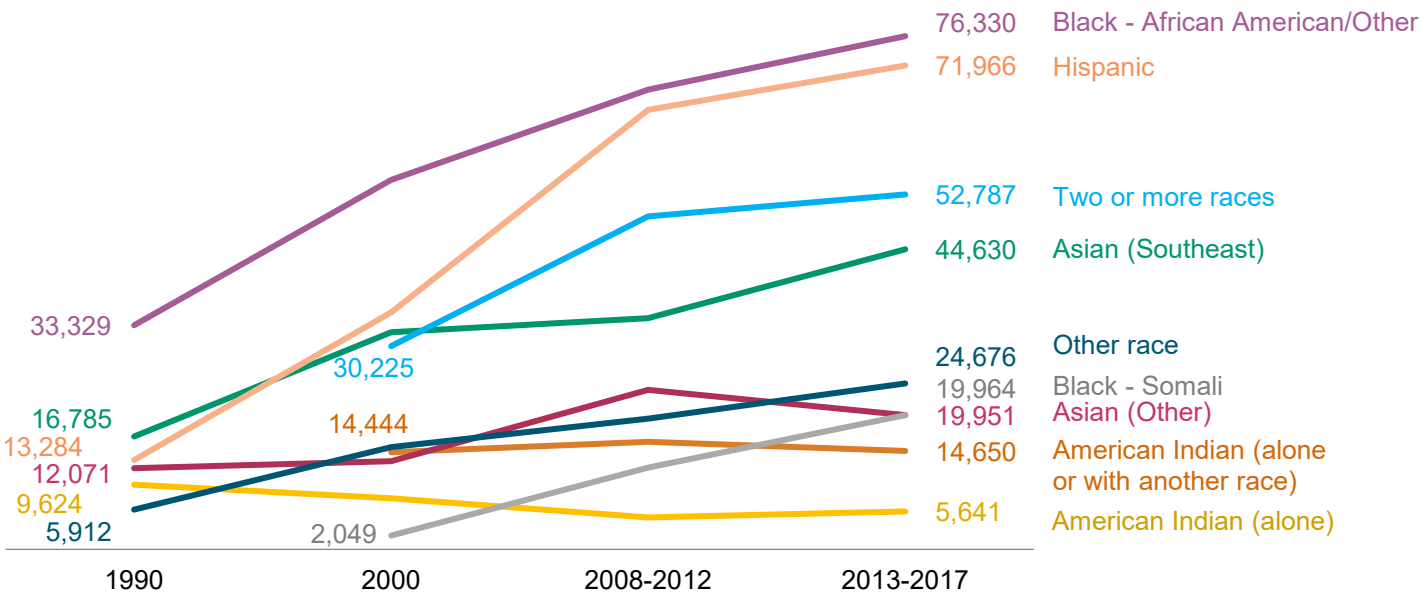
[b] The Southeast Asian category includes those who identified their race as Asian and reported belonging to any of the following ancestry groups: Burmese, Cambodian, Filipino, Hmong, Indonesian, Laotian, Malaysian, Taiwanese, Thai, or Vietnamese. The category Asian (other) includes those who identified their race as Asian but did not report belonging to the ancestry groups listed previously.

[c] The most common household languages (spoken by at least 1,000 students) include English, Spanish, Hmong, Somali, Vietnamese, Karen.

Demographic trends

The seven-county Twin Cities metro region is growing in population and increasing in racial and ethnic diversity. Since 1990, both the number of children and the cultural diversity of children and families have increased in all counties, and these trends are expected to continue. Population changes may influence how Children's Minnesota provides services, hires its workforce, or develops partnerships with community organizations in order to provide affordable, high quality, culturally responsive care. Since 1990, the most notable increases in population have been among children who are Hispanic/Latino, black, and multiracial (Figure 3). The trends listed below may not reflect the population changes in each of the many different cultural groups within each race and ethnicity category.

3. Changes in the number of children of color over time, Twin Cities metro region, (1990-2017)



Source. Integrated Use Microdata Series (IPUMS)

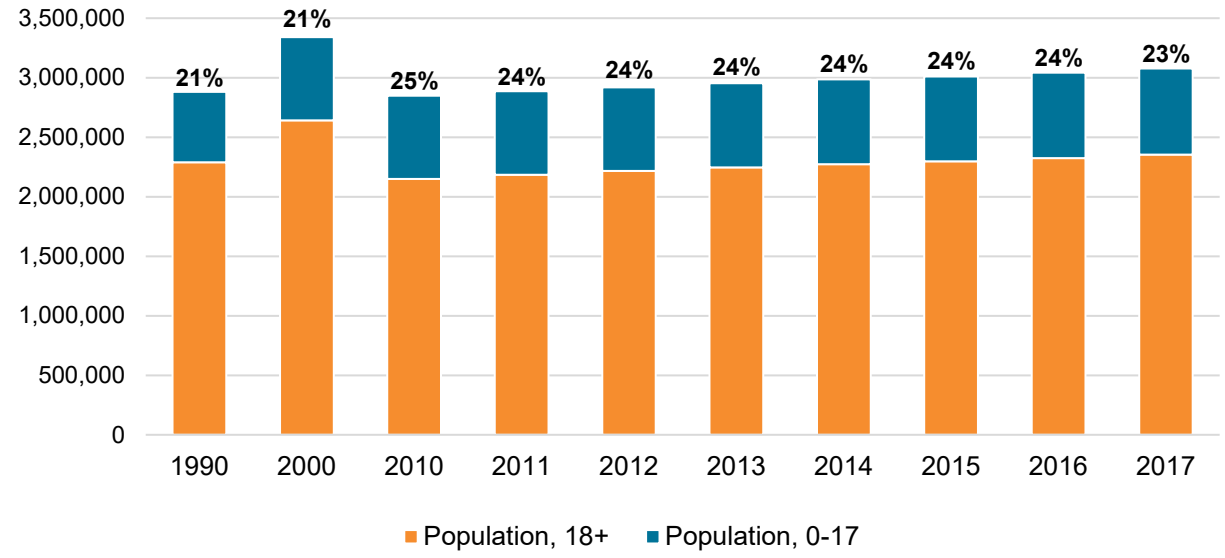
Notes. The "two or more races" category was not used by the U.S. Census before 2000. The Southeast Asian category includes those who identified their race as Asian and reported belonging to any of the following ancestry groups: Burmese, Cambodian, Filipino, Hmong, Indonesian, Laotian, Malaysian, Taiwanese, Thai, or Vietnamese. The category Asian (other) includes those who identified their race as Asian but did not report belonging to the ancestry groups listed previously.

Additional analysis of American Indian data from the U.S. Census in 2000 and 2010 showed that while there was a decrease in the number of children who identified as American Indian only during that timeframe, the number of children whose race was identified as American Indian and another race increased from approximately 14,000 to nearly 17,000.

Children as a proportion of the population

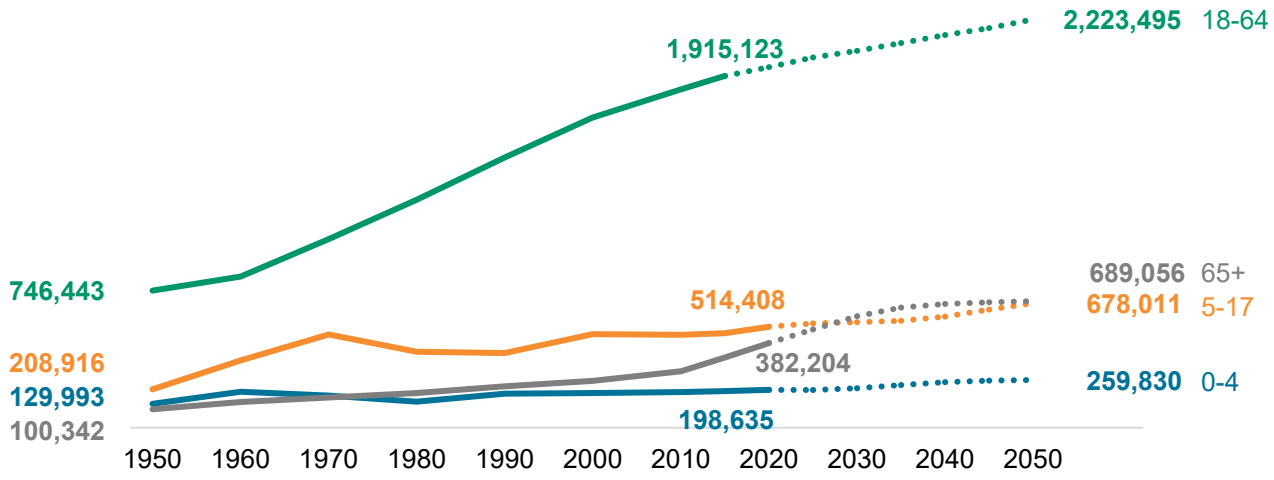
The number of children living in the Twin Cities metro has increased since 1990, and children continue to make up nearly one-quarter of the overall population. In 2017, nearly 723,000 children age 0-17 lived in the Twin Cities region, compared to nearly 593,000 in 1990 (Figure 4). At the same time, the number of adults age 65 and older has been and will continue to increase dramatically as the baby boomer generation ages. As a result of these demographic shifts, within the next decade the number of adults age 65 and older will be greater than the number of children living in the Twin Cities metro (Figure 5). This demographic change has the potential to influence how resources and funding are allocated at the state and local level.

4. Children (age 0-17) living in the Twin Cities metro relative to overall population, number and percent (1990-2017)



Source. U.S. Census Bureau, Decennial Census and Population Estimates

5. Projected changes in the population of the Twin Cities metro, by age group



Sources. U.S. Census Bureau, Decennial Census and Population Estimates. Minnesota State Demographic Center

Immigrant and refugee status

The Twin Cities is home to a growing number of immigrants and refugees. While Minnesota has proportionally fewer immigrants than the United States as a whole (9%, compared with 14% nationally), the state's foreign-born population is increasing faster than the national average. Nearly 444,000 residents are foreign born, with 79% of these residents living in the Twin Cities region. Today, 18% of children in Minnesota are either a child of an immigrant or were themselves born in a different country; in 2000 that was true for just 10% of children. The largest numbers of immigrants and refugees come from the following countries: Mexico, Somalia, India, Laos, Ethiopia, Vietnam, Thailand, China, Korea, Liberia, and Canada.[2]

Languages spoken at home

At a county level, up to 36% of school age children live in a household where a language other than English is the primary language. These percentages are higher in the region's most diverse school districts. Hennepin County, the largest of the seven counties, has the highest number of children who speak languages other than English in their homes (Figure 6). Regardless of the language spoken in their homes, most children (90% - 99%) speak English "very well." There are not good measures available that describe the degree to which institutions, schools, and other organizations have the linguistic and cultural capacity to meet the needs of all children and families.

6. Primary language spoken in household by children enrolled in school

	Enrolled students with language other than English as primary language spoken at home		Number of languages spoken	Percentage of children (age 5-17) who speak English less than "very well"
	N	%	N	%
Anoka	11,726	18%	168	3%
Carver	1,460	9%	58	1%
Dakota	13,370	18%	159	3%
Hennepin	42,762	25%	193	6%
Ramsey	33,348	36%	164	10%
Scott	3,284	13%	100	2%
Washington	4,180	10%	124	2%

Sources: Minnesota Department of Education, American Community Survey 5-year estimates

[2] Integrated Use Microdata Series (IPUMS); American Community Survey 2013-2017; Minnesota Compass.

Income, wealth, and employment

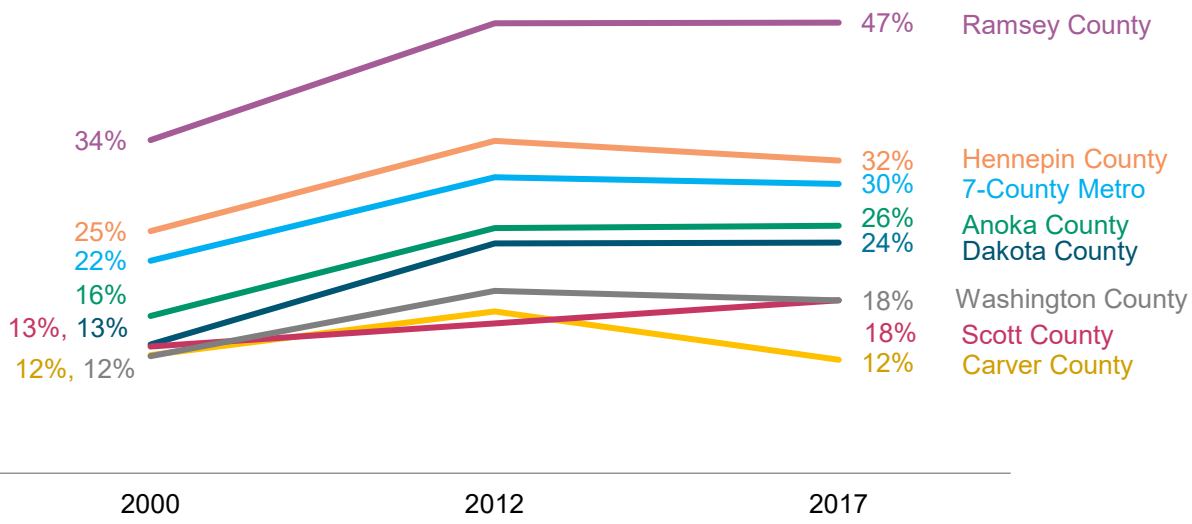
In the Twin Cities metro, health outcomes for children living in affluent households are better than those for children in lower-income households. Family income and wealth influence child health and well-being in multiple ways, influencing access to resources (e.g., safe housing, nutritious foods, clean water and air) and levels of stress. Historically, Minnesota has had a strong economy and has the third-lowest poverty rate of all 50 states. However, significant income disparities exist among racial and ethnic groups. Across the state, poverty rates are higher for households headed by residents of color (double the statewide rate) or a single female (triple the statewide rate).[3]

Beyond income differences, long-term effects of discriminatory policies and practices (e.g., housing policy discrimination, employment discrimination, racial discrimination in the criminal justice system, and unequal access to education opportunities) are major drivers of disparities in household wealth. While local data on wealth disparities were not gathered as part of this assessment, discriminatory policies have been in place in Minnesota and the Twin Cities region, disproportionately impacting people of color.

As of 2017, the Federal Poverty Level (200% FPL) for a family of four was $49,196 a year.

Over 200,000 children in the Twin Cities metro live in households with incomes at or near poverty levels. After notable increases in the percentage of children living in lower-income households between 2000 and 2012, there has been little change as of 2017 with most counties at or near their 2012 levels (Figure 7). Nearly half (47%) of children living in Ramsey County and 32% of children in Hennepin County live in lower-income households; the percentage of children living in poverty in Ramsey County is nearly four times higher than in Carver County (the most affluent county in the region) where 12% of children live in lower-income households. There are also concentrated areas of poverty within counties, including the CHNA's focal neighborhoods in Minneapolis and Saint Paul (Figure 8).

7. Percentage of children living at or below 200% FPL overtime by county (2000 – 2017)

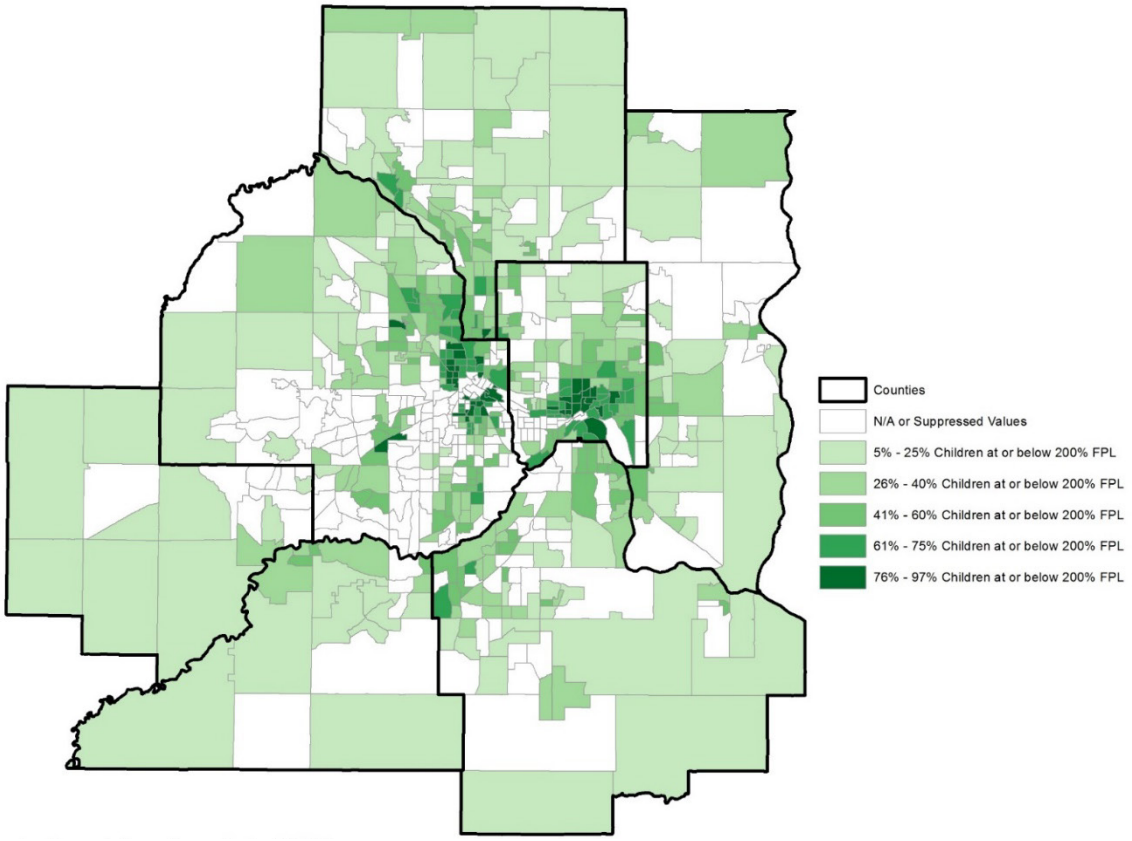


Sources. American Community Survey 5-year estimates (2000, 2008-12, 2013-17)

Notes. "Lower-income households" refers to households with an annual income at or below 200% of the Federal Poverty Level (200% FPL), $49,196 for a family of four in 2017. This is the threshold used in eligibility guidelines for some state benefit programs.

[3] Minnesota Compass. (n.d.). *Economy overview*. Retrieved from https://www.mncompass.org/economy/overview

8. Percentage of children (age 0-17) living in lower-income households, by census tract (2017)

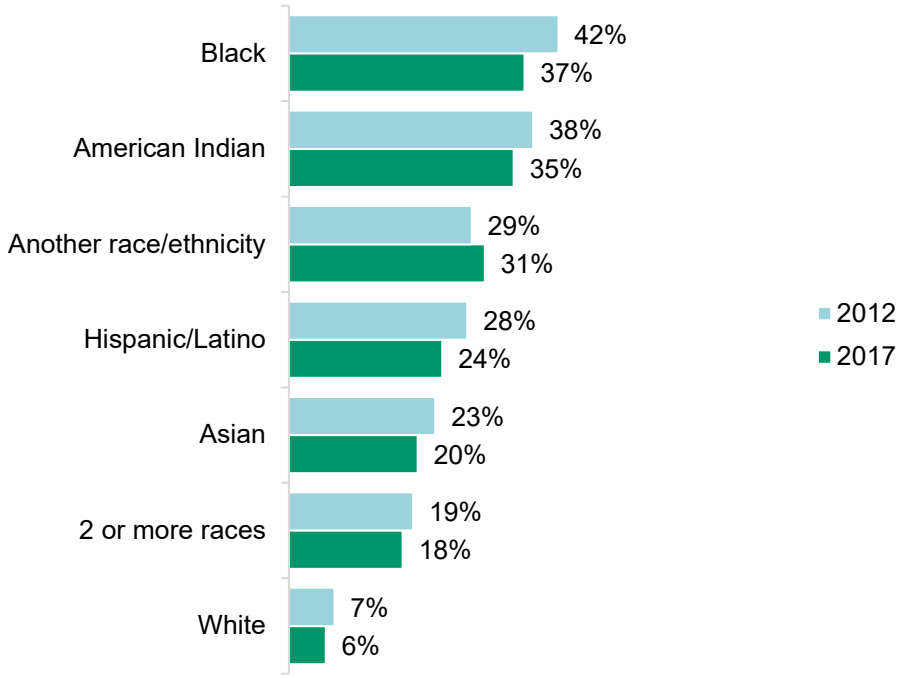


Source. American Community Survey 5-year estimates (2012-17)

Notes. "Lower-income households" refers to households with an annual income at or below 200% of the Federal Poverty Level (200% FPL), $49,196 for a family of four in 2017

Racial disparities in income levels are evident; black and American Indian children are more often living in lower-income households and experiencing poverty, especially when compared to white children. In 2017, 37% of black children, 35% of American Indian children, and a slightly smaller percentage of children of another race (31%) lived in households with incomes at or below the Federal Poverty Level, whereas only 6% of white children lived in lower-income households (Figure 9).[4] Between 2012 and 2017 there was a significant decrease in the percentage of black, white, Hispanic, and Asian children living below the federal poverty level. Changes among the other groups were not significant, suggesting not all children benefited from the post-recession economic recovery during that time.

9. Percentage of children in the Twin Cities region living at or below 100% FPL by race/ethnicity (2012, 2017)



Source. American Community Survey, 5-year estimates (2008-2012, 2013-2017)

[4] For a family of four, 100% FPL in 2017 was $24,300.

The same disparities hold true when looking at data for each of the seven Twin Cities metro counties (Figure 10). Across all counties with data available, the percentage of American Indian and black children who live in lower-income households is four to eight times higher than white, non-Hispanic children (the racial group with the lowest percentage of children living in lower-income households).

10. Percentage of children in each county living at or below 100% FPL, by race/ethnicity (2017)

	Anoka	Carver	Dakota	Hennepin	Ramsey	Scott	Washington
American Indian	**	**	**	39%	53%	**	**
Asian	9%	**	14%	11%	34%	12%	5%
Black	25%	**	27%	40%	43%	**	17%
Hispanic/Latino	20%	12%	26%	24%	28%	20%	15%
White (non-Hispanic)	6%	3%	4%	5%	6%	4%	4%
Another race/ethnicity	30%	**	31%	32%	29%	29%	**
Two or more races	20%	**	12%	17%	28%	8%	14%
All children	9%	3%	9%	15%	22%	7%	6%

Source. U.S. Census, American Community Survey, 5-year estimates (2013-2017)

Notes. Data are suppressed (**) in counties where racial/ethnic groups are too small to calculate reliable estimates.

Data presented in other recent reports can provide further insight into the economic circumstances impacting the health and well-being of children. The Minnesota State Demographic Center estimated the number of residents living at or near federal poverty levels for 17 cultural communities, including American Indian tribes and multiple ethnic groups and nationalities.[5] While the report has limitations, this analysis helps illustrate a few important points:

- Differences in socioeconomic status vary widely across cultural communities (Figure 11). These differences reflect the varied experiences of people who today call Minnesota home, including how groups have been impacted by historical events and many different types of policies, including immigration policy.
- There are wide differences in the experiences of cultural groups often reported together within a single race category (e.g., Chinese and Hmong residents grouped together in a single Asian race category).
- Nearly 350,000 white residents live below the federal poverty line, more than any other cultural group, but this comprises only 8% of the white population overall.

[5] Minnesota State Demographic Center. (2016). *The economic status of Minnesotans: A chartbook with data for 17 cultural groups*. Retrieved from https://mn.gov/admin/assets/the-economic-status-of-minnesotans-chartbook-msdc-jan2016-post_tcm36-219454.pdf

11. Number and percentage of people (all ages) living in lower-income households in Minnesota, by cultural group (2016)

Cultural group	Number living below 100% FPL (% of cultural group)	Number living between 100% and 200% FPL (% of cultural group)
Somali	26,400 (57%)	11,700 (26%)
Ojibwe	12,200 (38%)	8,400 (26%)
African American	72,800 (35%)	51,500 (25%)
Ethiopian	5,900 (35%)	3,600 (21%)
Dakota	1,800 (30%)	1,300 (22%)
Hmong	17,700 (27%)	22,300 (34%)
Mexican	47,100 (26%)	57,200 (32%)
Liberian	2,800 (21%)	4,500 (33%)
Puerto Rican	2,600 (21%)	1,600 (13%)
Vietnamese	4,300 (15%)	5,100 (17%)
Lao	1,500 (12%)	3,300 (27%)
Russian	1,200 (12%)	2,000 (21%)
Chinese	2,600 (9%)	3,700 (13%)
Korean	1,900 (9%)	3,400 (15%)
White	346,800 (8%)	578,300 (13%)
Filipino	1,000 (7%)	1,900 (14%)
Asian Indian	2,700 (6%)	4,000 (9%)
All Minnesotans	594,400 (11%)	809,000 (15%)

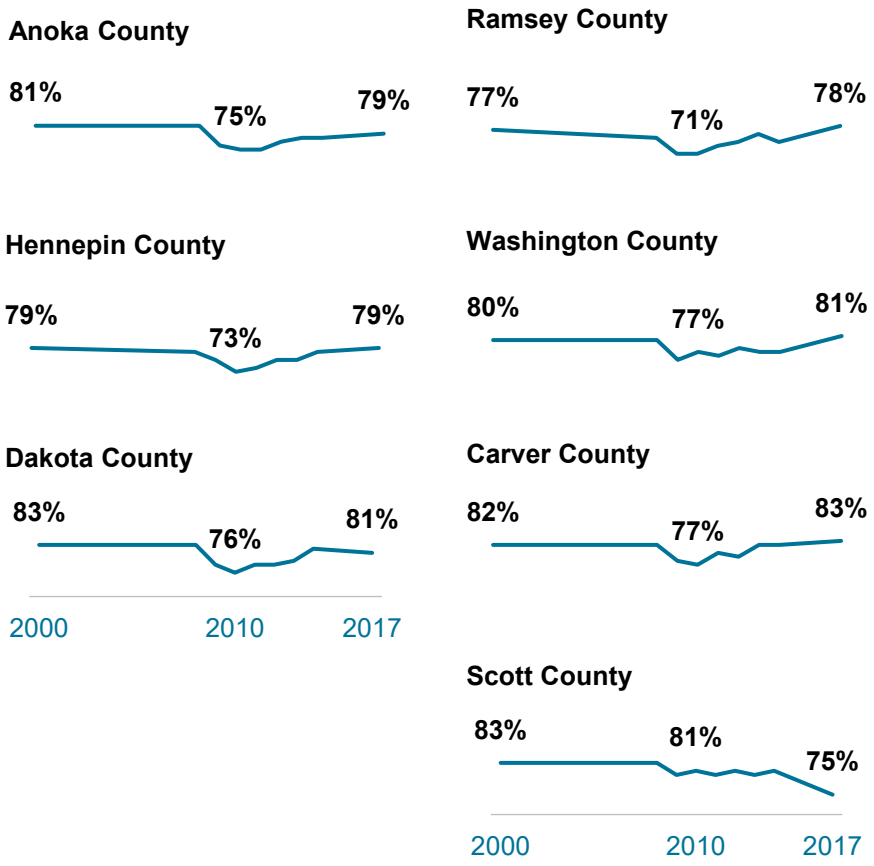
Source. Adapted from the 2016 Minnesota State Demographic Center report, The economic status of Minnesotans: A chartbook with data for 17 cultural groups. Retrieved from: https://mn.gov/bms-stat/assets/the-economic-status-of-minnesotans-chartbook-msdc-jan2016-post.pdf.

Notes. Estimates in this report were calculated from responses to the American Community Survey; data limitations do not allow for reliable regional- or county-level estimates.

Employment

Employment is the primary driver of household income. In most Twin Cities counties, employment levels are almost back to their pre-recession levels (Figure 12). During the recession, the proportion of adults working dropped to the lowest levels in Hennepin and Ramsey counties (73% and 71%, respectively), but all counties are at or above 75% today.

12. Proportion of adults (age 16-64) working, by county (2000-2017)

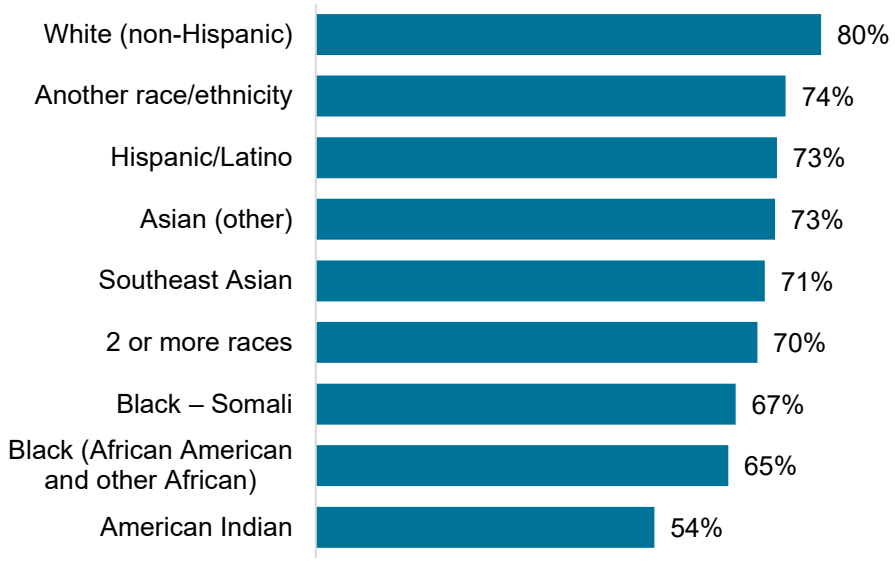


Sources. U.S. Census Bureau, Decennial Census and American Community Survey (2000, 2008-12, 2013-17)

Notes. People are considered "working" if they are self-employed, working for a family business, or working for others. The percentage of adults working considers all adults (16-64) not living in an institutionalized setting (e.g., prison, residential group home), including adults not actively looking for work or who have otherwise left the labor force.

There are significant racial disparities in employment. Only 54% of American Indian adults in the Twin Cities were working in 2017 (Figure 13). This is 26 percentage points lower than among white adults, the racial group with the highest proportion of working adults (80%). It should be noted that these data do not provide insight into job quality or income; some of the adults categorized as working may not be earning high enough wages to provide for their families.

13. Proportion of Twin Cities adults (age 16-64) working, by race/ethnicity (2017)



Source. Integrated Use Microdata Series (IPUMS) (2013-17)

Notes. People are considered "working" if they are self-employed, working for a family business, or working for others. The percentage of adults working considers all adults (16-64) not living in an institutionalized setting (e.g., prison, residential group home), including adults not actively looking for work or who have otherwise left the labor force.

The Southeast Asian category includes those who identified their race as Asian and reported belonging to any of the following ancestry groups: Burmese, Cambodian, Filipino, Hmong, Indonesian, Laotian, Malaysian, Taiwanese, Thai, or Vietnamese. The category Asian (other) includes those who identified their race as Asian but did not report belonging to the ancestry groups listed previously.

Housing

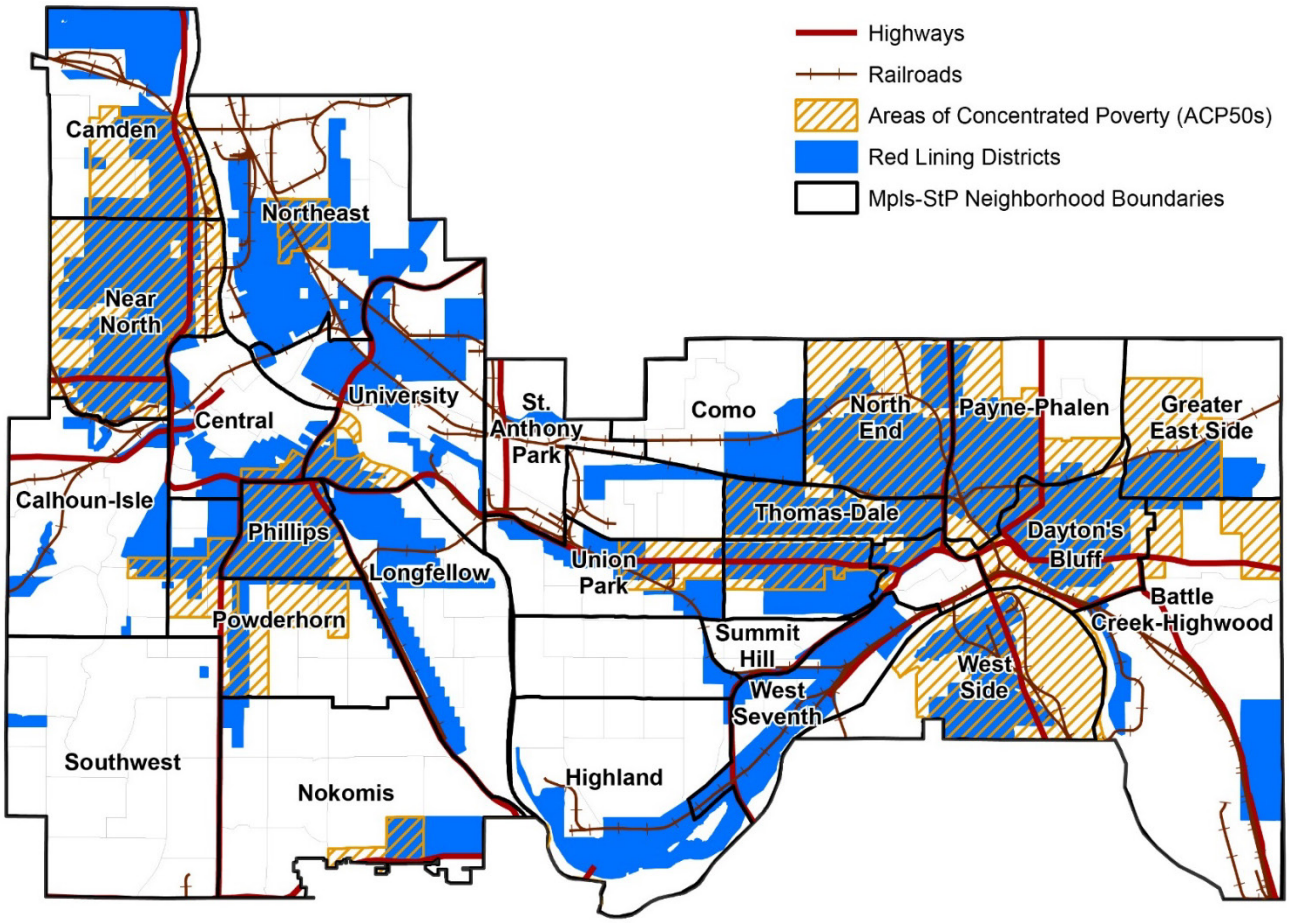
Homeownership

Homeownership is a key step, though not a guarantee, to successful wealth accumulation, particularly for lower-income families.[6] However, for many decades, policies restricted people of color from owning homes or choosing the neighborhoods where they would like to live. In the Twin Cities metro, the lasting impacts of discriminatory housing practices can be seen today by comparing "redlined" districts established decades ago to current areas of concentrated poverty (Figure 14). Redlining refers to a set of practices established by the Federal Housing Administration (FHA), other government agencies, and private banks to label neighborhoods based on their perceived credit risk. Mortgage loan applications were regularly approved for (predominantly white) people living in suburban areas or other neighborhoods with high credit ratings, and denied for residents living in areas identified as "declining" neighborhoods, often areas with many residents of color. As a result of these policies, households of

[6] Boehm, T. & Schlottmann, A. (2004). *Wealth accumulation and homeownership: Evidence for low-income households*. Retrieved from the U.S. Department of Housing and Urban Development website: https://www.huduser.gov/portal//Publications/pdf/WealthAccumulationAndHomeownership.pdf

color received just 2% of the FHA loans made between 1934 and 1968.[7] Without homeownership, lower-income residents have few options to increase wealth and financial stability and decrease intergenerational poverty.

14. Past housing policies and current areas of concentrated poverty in Minneapolis and Saint Paul: Redlining district maps



Minnesota Geospatial Information Office. Produced by Wilder Research

As a result of historical redlining policies and disparities in income, access to credit, and other forms of structural racism, there is a significant homeownership gap today. In the Twin Cities, one-quarter of black residents own their own homes, which is the lowest percentage among all racial and ethnic groups. Homeownership is higher among other minority groups including Hispanic/Latino (42%), American Indian (43%), two or more races (43%), and Asian residents (57%), but still are much lower than homeownership for white, non-Hispanic (75%) adults.[8]

---

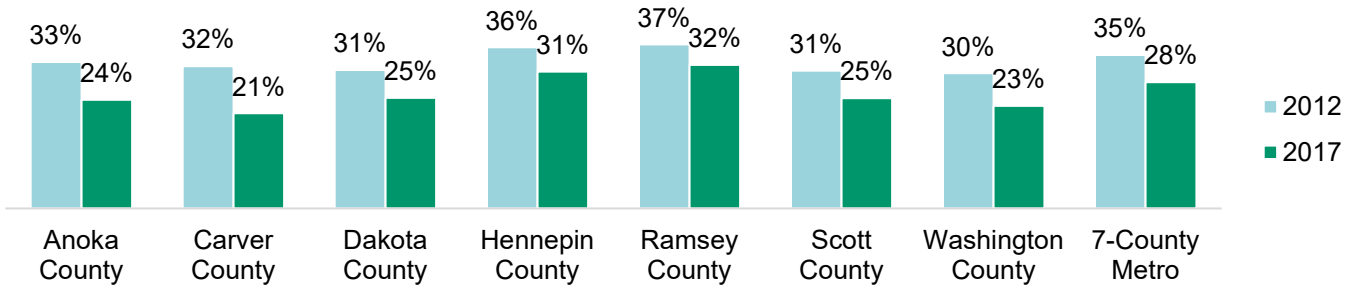
[7] Asante-Muhammed, D., Collins, C., Hoxie, J., & Nieves, E. (2016). *The ever-growing gap: Without change African-American and Latino families won't match white wealth for centuries*. Retrieved from the Corporation for Enterprise Development website: http://cfed.org/policy/federal/The_Ever_Growing_Gap-CFED_IPS-Final.pdf

[8] Homeownership rates are categorized by the racial/ethnic group of the householder. The data presented are from the Integrated Pubic Use Microdata Series for the Twin Cities region (2010-12). Retrieved from http://www.mncompass.org/housing/homeownership-gap#7-5599-d

Housing stability

When families need to spend a large amount of their income on housing, it can impact their ability to pay for other basic needs. A household is considered housing cost-burdened when 30% or more of its monthly gross income is dedicated to housing expenses, including rent or mortgage payments, taxes, and utilities. In all Twin Cities counties, the percentage of cost-burdened households decreased from 2012 to 2017. In 2017, Ramsey County had the largest percentage of cost-burdened households (32%), while Carver County had the fewest cost-burdened households (21%; Figure 15).

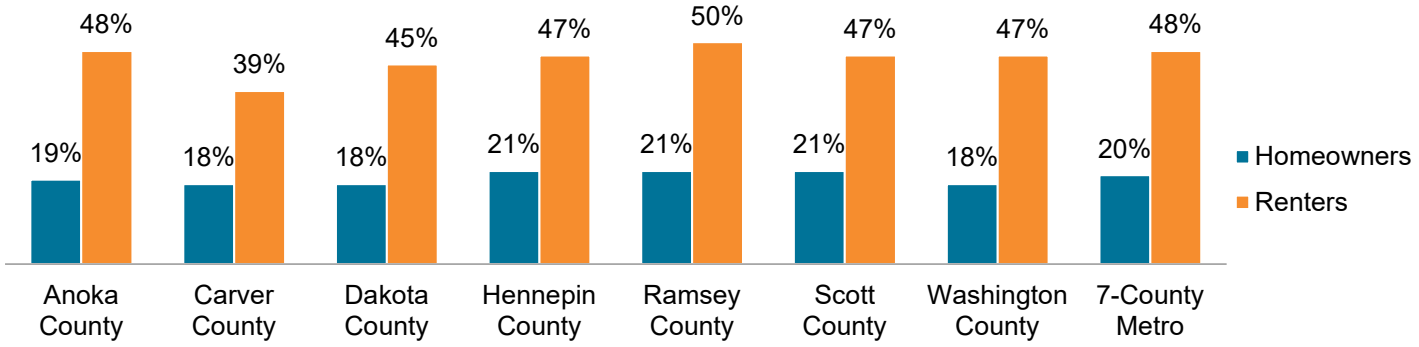
15. Percentage of cost-burdened households over time, by county (2012, 2017)



Sources. U.S. Decennial Census, American Community Survey 5-year estimates (2008-2012, 2013-17)

In 2017, just over 357,000 Twin Cities metro households lived in rental properties, including apartments and rental homes. Of those households renting, at least 39% were cost-burdened, however we see no more than 21% of cost-burdened homeowners across the metro (Figure 16).

16. Percentage of cost-burdened households, homeowners and renters (2017)



Sources. U.S. Decennial Census, American Community Survey 5-year estimates (2013-17)

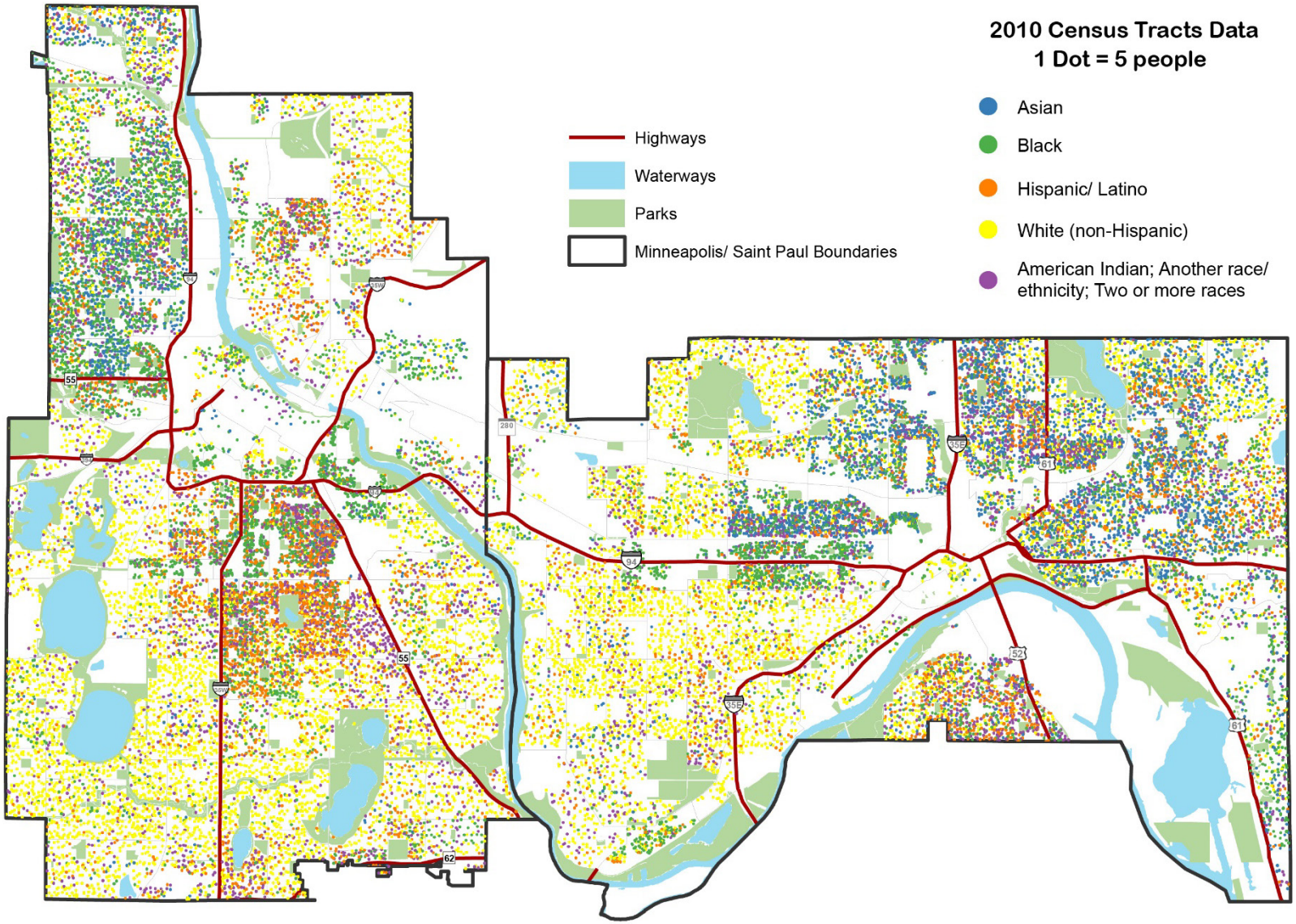
Residential segregation

Mapping of Minneapolis and Saint Paul metro residents by race and ethnicity shows that although the region is becoming increasingly culturally diverse, few neighborhoods are racially integrated (Figure 17). A report by the Institute on Metropolitan Opportunity looks in depth at how housing and education policies have reinforced neighborhood segregation.[9] The authors identify a number of key governmental decisions and policy initiatives that have increased or reinforced neighborhood segregation, including policies that have increased affordable housing goals for Minneapolis and Saint Paul while at the same time decreasing these goals in more affluent, majority-white suburbs, and revisions to the state's school desegregation rules. Another study from University of Minnesota pointed out that racially concentrated areas of affluence, which are census tracts where high proportions of residents are white and wealthy, may lead to lower empathy among white residents, potentially inhibiting policies and other efforts that would aim to reduce citywide or regional racial inequalities.[10] While it is not within the scope of this assessment to examine the extent to which specific policies have contributed to residential segregation, these examples illustrate how policy decisions can have long-lasting impacts that reinforce segregation and health disparities.

[9] Institute on Metropolitan Opportunity. (2015). *Why are the Twin Cities so segregated?* Retrieved from the University of Minnesota Law School website: https://www1.law.umn.edu/uploads/ed/00/ed00c05a000fffeb881655f2e02e9f29/Why-Are-the-Twin-Cities-So-Segregated-2-26-15.pdf

[10] Goetz, E. G., Damiano, A., & Williams, R. A.. (2015). *Racially concentrated areas of affluence: A preliminary investigation*. Retrieved from the U.S. Department of Housing and Urban Development website: https://www.huduser.gov/portal/periodicals/cityscpe/vol21num1/ch4.pdf

17. Racial dot map of children (age 0-17) living in Minneapolis and Saint Paul (2010)



Source. 2010 U.S. Census Bureau, Decennial Census

Note. 2010 decennial census data is the most current data available. Three race categories (American Indian, Another race/ethnicity, and Two or more races) were combined into a single group because reliable estimates could not be calculated for any of the categories alone.

Homelessness

In Minnesota, children represent 46% of the overall homeless population. Every three years, Wilder Research conducts a study where volunteers across the state interview as many individuals experiencing homelessness as possible on a single night, including people in shelters, transitional housing, and in non-shelter locations such as encampments and drop-in service sites. In 2018, the study found that 3,265 children were homeless with their parents, with an additional 192 living on their own. This count likely underestimates the number of children and youth experiencing homelessness since they are more likely to stay outside the shelter system, making them more difficult to find for the study. Overall, the number of homeless children decreased between 2015 and 2018, with a decrease of 1% for those with their parents and 10% for those on their own (Figure 18).

18. Changes in Minnesota youth experiencing homelessness (2009, 2012, 2015, 2018)

	2009 study	2012 study	2015 study	2018 study	% change (2015-2018)
Children (17 and under) with parents	3,251	3,546	3,296	3,265	-1%
Children on their own (17 and under)	227	146	213	192	-10%
Young adults (18-21)	1,041	1,005	779	759	-3%

Source. Wilder Research, 2018 Minnesota Homeless Study Detailed Data. Retrieved from: http://mnhomeless.org/minnesota-homeless-study/detailed-data.php

Children experiencing homelessness or other types of housing instability are at higher risk for developmental and academic delay, behavioral and socioemotional problems, and child welfare system involvement, including out of home placement. Language skills, communication skills, and mental health issues have been found to be of particular concern among young children experiencing homelessness, with effects above and beyond the effects of poverty.[11]

Educational attainment

There is a strong association between education and health. Adults with higher levels of education tend to have lower rates of acute and chronic illnesses and have higher levels of functioning as they age. There are multiple factors that contribute to this relationship: people with higher levels of education are more likely to have higher-paying jobs; less likely to live in poverty; and less likely to smoke, to drink heavily, or to be overweight or obese (all factors that contribute to chronic disease). Graduating from high school is an important step that supports overall health and wellness into adulthood.

Multiple factors that begin at birth and occur throughout childhood contribute to disparities in high school graduation. Access to high-quality early learning opportunities help children start kindergarten ready to learn. A recent study reviewing decades of research on early childhood education found that children who had access to early childhood education programming had fewer special education placements, decreased grade retention, and improved high school graduation rates when compared to children who were not able to access these programs.[12] In Minnesota, Early Head Start, Head Start, Early Childhood Family Education, Child Care Assistance Program, Early

[11] Chase, R., et al. (2018). *Minnesota early childhood risk, reach, and resilience: Key indicators of early childhood development in Minnesota, county by county*. Retrieved from Wilder Research website: https://www.wilder.org/wilder-research/research-library/minnesota-early-childhood-risk-reach-and-resilience-key-indicators

[12] McCoy, D. C., et al. (2017). Impacts of early childhood education on medium- and long-term educational outcomes. *Educational Researcher*, *46*(8), 474-487.

Learning Scholarships, Voluntary Pre-K, and School Readiness are some of the public programs available to help young children access high-quality early learning programs and develop skills to be successful in school.

Statewide, no more than two-thirds of American Indian, Hispanic/Latino, and black students graduate from high school (Figure 19). There are notable disparities in this measure of academic achievement; graduation rates continue to be much higher among Asian (86%) and white (83%) students across the state. Disparities in graduation are found in Minneapolis Public Schools (MPS) and Saint Paul Public Schools (SPPS), the school districts where Children's Minnesota's two hospital campuses are located. Graduation rates for MPS and SPPS students are lower than the statewide average overall and particularly so for some racial and ethnic groups in MPS.

19. Graduation by race/ethnicity, statewide and selected districts (2017)

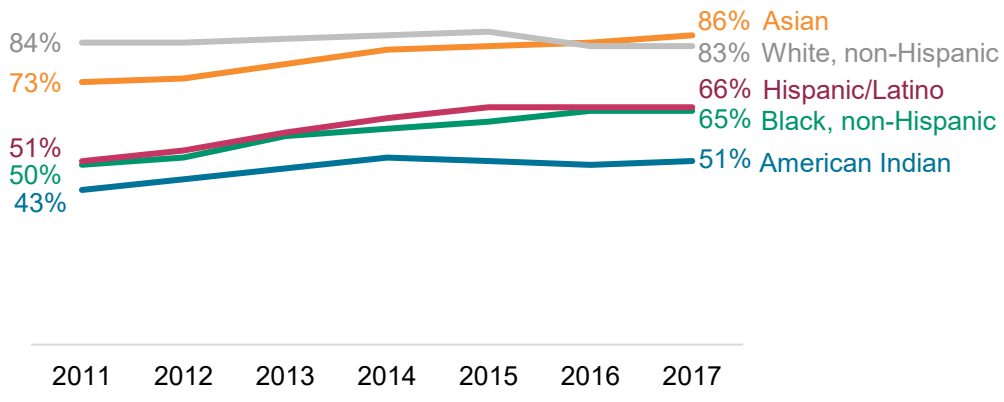
Race/Ethnicity	Minnesota	Minneapolis Public Schools	Saint Paul Public Schools
American Indian/Alaskan Native	51%	30%	53%
Asian	86%	83%	81%
Hispanic	66%	57%	70%
Black, not of Hispanic origin	65%	57%	70%
White, not of Hispanic origin	83%	86%	84%
All students	83%	66%	78%

Source. Minnesota Department of Education, Minnesota Report Card. Retrieved from the Minnesota Department of Education website: https://rc.education.state.mn.us/#mySchool/p--3.

Notes. This high-level reporting cannot capture successful efforts of schools within each county to reduce this educational disparity.

Since 2015, the percentage of students graduating has maintained or improved, however racial disparities persist (Figure 20). Asian students now have the highest graduation rate (86%). Black, non-Hispanic student graduation has improved from 2011 to 2017 (50% to 65%). Hispanic or Latino graduation rates have not changed for the past few years. American Indian students still have the lowest percentage of students graduating (51%) despite the gradual improvement since 2011. While this trend is moving in a positive direction, unless the pace of improvement increases dramatically, it will still take a number of years to eliminate disparities in graduation rates.

20. Statewide trends in graduation, by race/ethnicity (2011-17)



Source. Minnesota Department of Education, Minnesota Report Card. Retrieved from the Minnesota Department of Education website: https://rc.education.state.mn.us/#mySchool/p--3.

There are a number of factors, both within and extending beyond schools, which contribute to racial disparities in academic achievement. A recent report prepared by the Minnesota Education Equity Partnership calls out the need to address broader issues of "segregation and integration, intersections of race and economic class, and white dominance in K-12 and teacher education" to understand and change the opportunity gaps that impact students and families.[13]

Access to resources and supports

There are a number of resources and systems that support the health and well-being of children. Vibrant and healthy neighborhoods have a range of assets to support child health and development, including green spaces and parks where children can play and exercise, places to purchase healthy and affordable food, water and air free of pollution, and high-quality schools. These neighborhood assets and other types of resources need to be available, accessible, and welcoming to community residents. This section of the report highlights just a few of the many resources children and families access to support health.

Many children and families eligible for public programs intended to support the health and well-being of children, especially those in lower-income households and neighborhoods, do not receive these resources (Figure 21). Differences in enrollment by county can be the result of a number of factors, including disparities in who is reached through each county's outreach approach. There are many reasons families may choose not to participate in these programs, but these topics were not explored in this assessment. A full description of key resources that support children and families, is located in the shaded box that follows.

21. Percentage of eligible children enrolled in selected programs that support early childhood health and development (2016)

	Women, Infant, and Children (WIC)	Family Home Visiting Program	Minnesota Family Investment Program (MFIP)	Child Care Assistance Program (CCAP)	Early Childhood Screening	Head Start/Early Head Start
Anoka	52%	11%	51%	14%	34%	32%
Carver	34%	18%	38%	14%	37%	10%
Dakota	45%	15%	36%	14%	48%	12%
Hennepin	56%	14%	61%	18%	29%	22%
Ramsey	68%	11%	57%	13%	23%	18%
Scott	47%	10%	35%	17%	43%	10%
Washington	42%	12%	40%	14%	41%	11%

Source. Chase, R., et al. (2018). Minnesota early childhood risk, reach, and resilience: Key indicators of early childhood development in Minnesota, county by county. Retrieved from Wilder Research website: https://www.wilder.org/wilder-research/research-library/minnesota-early-childhood-risk-reach-and-resilience-key-indicators

[13] Hamilton, J. L., Spies, P., Godinez, J., & Mariani, C. (2016). *State of students of color and American Indian students report*. Retrieved from http://mneep.org/wp-content/uploads/2016/04/SOSOCAI-Report-2016.pdf

Brief description of public programs and resources available to young children

- **The Child Care Assistance Program (CCAP)** subsidies are available to working parents eligible for MFIP or from lower-income households to help cover the costs of child care. There are wait lists in some counties because there is more demand for CCAP subsidies than funding available.
- **Early Childhood Family Education (ECFE)** is available in school districts across the state and provides parenting education to support children's learning and development. Expecting parents and families with children from birth to kindergarten age are eligible to participate.
- **Early Childhood Screening** is available to all children beginning at age 3 to evaluate their physical, verbal, cognitive, and social-emotional development. State law requires screening to be completed within 30 days of enrollment to kindergarten.
- **Early Learning Scholarships** are intended to increase access to high quality early childhood programs for low-income families.
- **The Family Home Visiting Program** works with families with lower incomes (at or below 185% of federal poverty guidelines) who are experiencing other stressful situations, including poverty, past alcohol or drug use, or a history of abuse or neglect. Public health nurses or other trained staff provide in-home visits intended to support healthy parent-child relationships and healthy child development.
- **Head Start and Early Head Start** are available to children with low household incomes, special health needs, or other specific circumstances, such as homelessness. These programs provide young children (6 weeks to 5 years old) with services that support all aspects of child development and health.
- **The Minnesota Family Investment Program (MFIP)** supports low-income families (at or below 125% of the federal poverty level) with children. Parents are supported through cash and food assistance, as well as employment services.
- **School Readiness Programs** are available in all Minnesota school districts to help prepare children for kindergarten. The service is available to all children at a fee-for-service basis, while children who meet specific eligibility criteria can participate free of charge.
- **The Women, Infant, and Children (WIC) program** provides pregnant women, as well as new mothers and their children, with nutrition education, breastfeeding support and information, nutritious food, and referrals to health and social services. Participation in the WIC program in Minnesota has consistently been high; in 2013 (the most recent data available) Minnesota participation was the second highest in the nation, with 71% of women eligible for WIC enrolled in the program.

Adapted from:

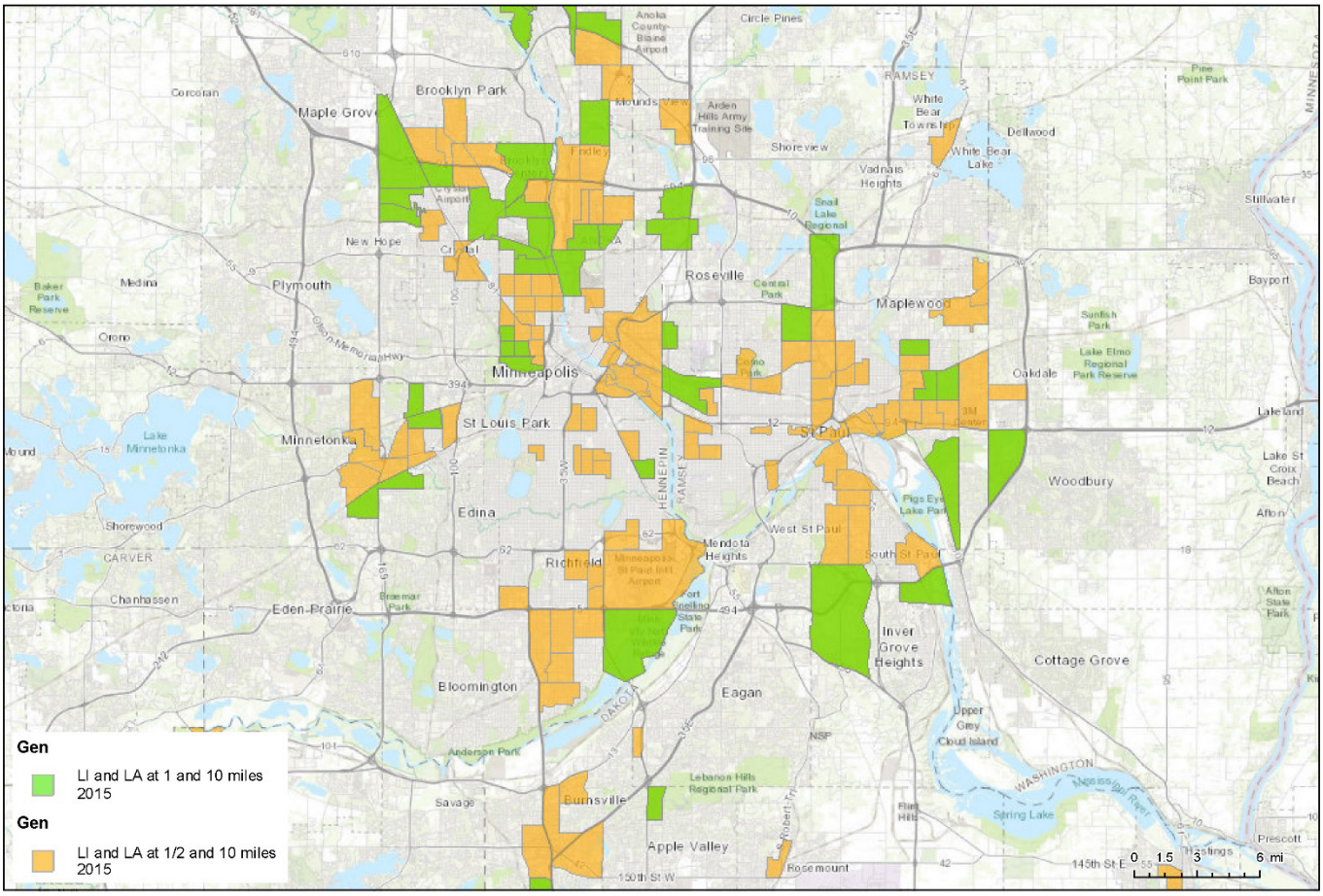
Chase, R., et al. (2015). Minnesota early childhood risk and reach report: Key indicators of early childhood development in Minnesota, county by county. Retrieved from Wilder Research website: https://www.wilder.org/wilder-research/research-library/minnesota-early-childhood-risk-reach-and-resilience-key-indicators

Office of the Legislative Auditor, State of Minnesota. (2018). Early childhood programs: 2018 evaluation report. Retrieved from https://www.auditor.leg.state.mn.us/ped/pedrep/earlychildhood.pdf

Healthy food

The U.S. Department of Agriculture define food deserts as "low-income census tracts where a significant share of the population is more than 1 mile (urban) or 10 miles (rural) from a supermarket." This measure only shows areas with low access to supermarkets; the measure assumes that high quality, affordable food is available at all supermarkets and does not capture access to fresh foods available through other types of outlets (e.g., farmers markets or convenience stores that sell high-quality fresh produce). Census tracts identified as food deserts using the USDA Food Access Research Atlas are located in Minneapolis and Saint Paul; suburban cities including Brooklyn Center, New Hope, South Saint Paul, and Maplewood; and more rural areas, including areas in Carver and Dakota counties (Figure 22).

22. Twin Cities food access – areas of Low-income (LI) and Low-Access (LA) (2015)



Food Access - Metro Region 2

Source. United States Department of Agriculture Economic Research Service, Food Access Research Atlas. Retrieved from: www.ers.usda.gov/data-products/food-access-research-atlas

Food insecurity is of particular concern for young children as it can contribute to a variety of developmental challenges. For infants and toddlers experiencing food insecurity, this may include challenges related to the development of language, motor skills, and cognitive functioning.[14] Living in a food desert is just one indicator of food insecurity a family may be experiencing. Families experiencing financial instability also likely face difficult decisions about prioritizing how to meet their family's basic needs such as affording food, housing, and transportation. In Hennepin County, 13% of adults reported that they are "sometimes" or "often" worried that food would run out before they had money to buy more.[15] In the CHNA's focal neighborhoods of Phillips/Powderhorn in Minneapolis, a higher percentage of adults (24%) reported worrying about being able to afford food. Across Hennepin County, the percentage of adults reporting food insecurity was higher for American Indians (49%), Hispanics (46%), and African Americans (43%), compared to Asians (31%) or white adults (10%).

Health care

Residents in Hennepin and Ramsey counties face significant barriers accessing health care. Medically underserved areas (MUAs) are federally designated geographic areas where residents are underserved based on four criteria: ratio of primary care physicians to residents, infant mortality rate, percentage of residents living below the poverty level, and the percentage of the population age 65 and over. In the Twin Cities metro, all medically underserved areas are located in Hennepin and Ramsey counties: the Rice-Phalen, Thomas-Dale, Dayton's Bluff, and Summit-Dale neighborhoods in Saint Paul and the Phillips, Northeast, Northside, and Cedar-Riverside neighborhoods in Minneapolis.[16] Additionally, the Northeast and Northside neighborhoods are designated as primary health care professional shortage areas.[17]

The American Indian population in Saint Paul is also designated as a medically underserved population (MUP), meaning it is a population with economic, cultural, or linguistic barriers that limit access to primary medical care services, impacting the health of children and their caregivers alike.[18] While this designation is one way to identify groups with limited access to health care, additional information from community residents and stakeholders is needed to fully understand what contributes to these difficulties accessing services.

---

14 Chase, R., et al. (2018). *Minnesota early childhood risk, reach, and resilience: Key indicators of early childhood development in Minnesota, county by county*. Retrieved from Wilder Research website: https://www.wilder.org/wilder-research/research-library/minnesota-early-childhood-risk-reach-and-resilience-key-indicators

15 Hennepin County Public Health. (2019). *SHAPE 2018 adult data book, survey of the health of all the population and the environment*. Retrieved from https://www.hennepin.us/-/media/hennepinus/your-government/research-data/documents/shape-databook-2018-new.pdf?la=en&hash=E758AEA6FAAB661017BB73E95919DD43365D5C3E

16 Health Resources and Services Administration (HRSA). (n.d.). Quick maps - medically underserved areas/populations. Retrieved from https://data.hrsa.gov/maps/quick-maps?config=mapconfig/MUA.json

17 Health Resources and Services Administration (HRSA). (n.d.). Quick Maps - Primary Care Health Professional Shortage Areas. Retrieved from https://data.hrsa.gov/maps/quick-maps?config=mapconfig/HPSAPC.json

18 Health Resources and Services Administration (HRSA). (2019). Medically underserved areas or populations. Retrieved from https://bhw.hrsa.gov/shortage-designation/muap

Health care insurance

Having health insurance is currently the best way to ensure children have access to the health care services they need to support their growth and development. Services children access through health insurance include well-child check-ups and preventative care, services to address common childhood illnesses, and services for more severe conditions when hospitalization is required. Children lacking health coverage are less likely to access the services they need, which can have both short-term impacts such as school absenteeism as well as long-term impacts such as serious illness and disability. [19,20]

The majority of children living in the Twin Cities have access to health insurance. The percentage of children in metro counties that lack health care coverage is at or below the proportion of the state overall (4%); however, that still means more than 18,000 children in the Twin Cities metro are without coverage (Figure 23).[21] This relatively low percentage is due in large part to the passage of the Affordable Care Act in 2010. However, just having health care coverage does not take into consideration the quality of the health care plan; children who are covered by high deductible plans or who have coverage that includes only the minimum requirements may have inadequate coverage for their individual health care needs. While health insurance helps many families afford services that support health and well-being, multiple studies, including one conducted by Children's Minnesota on emergency department use, have demonstrated that a number of additional factors also impact access to health care services. [22]

23. Percentage of children under age 6 without health care coverage, by county (2016)

Area	% of children
Anoka	3%
Carver	3%
Dakota	3%
Hennepin	4%
Ramsey	4%
Scott	3%
Washington	4%
Minnesota	4%

Source. Wilder Research analysis of data from U.S. Census Bureau, American Community Survey, 2012-2016

[19] Artiga, S., & Ubri, P. (2017). *Key issues in children's health coverage* [issue brief]. Retrieved from Kaiser Family Foundation website: https://www.kff.org/medicaid/issue-brief/key-issues-in-childrens-health-coverage/

[20] Chase, R., et al. (2018*). Minnesota early childhood risk, reach, and resilience: Key indicators of early childhood development in Minnesota, county by county*. Retrieved from Wilder Research website: https://www.wilder.org/wilder-research/research-library/minnesota-early-childhood-risk-reach-and-resilience-key-indicators

[21] Minnesota Compass. (n.d.) *Residents without health insurance by age*. Retrieved from https://www.mncompass.org/health/health-care-coverage#7-7152-g

[22] See the "other data sources" section of this summary for more information about the study conducted by Children's on factors influencing frequent emergency department use.

Early childhood key health indicators

Early childhood is a critical period in a child's healthy development, setting the stage for lifelong learning and long-term health and quality of life. Young children (age 0-5) are generally healthy but are at risk for some conditions, including developmental and behavioral disorders, child maltreatment, asthma and other chronic conditions, obesity, dental cavities, and unintentional injuries.[23] This summary presents prenatal indicators, as well as some measures of health and access to resources for young children and their families. It should be noted that there is little information available that describes the family and community strengths that support the health and well-being of young children.

Prenatal and birth indicators

Healthy childhood development begins during pregnancy. A total of 39,098 babies were born in the Twin Cities metro region in 2017. Forty-two percent of these births were in Hennepin County (Figure 24). The birth rate in the seven-county region is fairly close to the statewide average (12.3 births per 1,000 population). Overall birth rates in Minnesota have declined considerably since the 1960s when the birth rate peaked at 26.2 births per 1,000 population; this shift is thought to be largely due to economic changes and cultural shifts such as people waiting longer to become pregnant.[24]

24. Infant births, by county (2017)

County	Number of births	Birth rate (births per 1,000 population)
Anoka	4,213	12.0
Carver	1,170	11.5
Dakota	5,144	12.2
Hennepin	16,322	13.0
Ramsey	7,689	14.0
Scott	1,835	12.6
Washington	2,725	10.6
Minnesota	68,599	12.3

Source. Minnesota Department of Health (MDH), County Health Tables – Natality. (2017). Retrieved from https://www.health.state.mn.us/data/mchs/genstats/countytables/county2017_r2.pdf.

[23] Office of Disease Prevention and Health Promotion. (n.d.). *Healthy People 2020: Early and middle childhood*. Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/early-and-middle-childhood

[24] Minnesota State Demographic Center. (2014). *Minnesota births yet to rebound to pre-recession level*. Retrieved from https://mn.gov/admin/assets/mn-births-yet-to-rebound-to-prerecession-level-popnotes-nov2014_tcm36-219637.pdf

Prenatal care

Women who do not receive adequate prenatal care are less likely to receive important components of preventive care, such as early identification of health conditions that can impact pregnancy, and are more likely to experience a poor birth outcome, such as premature birth or low birth weight.

Across the seven-county metro, as well as statewide, the percentage of women who receive this care continues to decrease. In 2017, the percentage of women who receive prenatal care in the first trimester of pregnancy ranges from 74% in Ramsey County to 86% in Washington County (Figure 25). The percentage of women in Ramsey County who receive prenatal care in the first trimester continues to be lower than the statewide average. Prenatal care provided by doulas may not be tracked and included in this indicator, and may account for at least some of the reason for this lower percentage.

25. Percentage of women who receive prenatal care in the first trimester, by county (2010, 2014, 2017)

County	2010	2014	2017
Anoka	87%	84%	84%
Carver	93%	86%	82%
Dakota	86%	84%	82%
Hennepin	87%	79%	78%
Ramsey	76%	74%	74%
Scott	90%	85%	80%
Washington	91%	88%	86%
Minnesota	86%	82%	78%

Source. Minnesota Department of Health (MDH), County Health Tables – Natality. (2017). Retrieved from https://www.health.state.mn.us/data/mchs/genstats/countytables/county2017_r2.pdf.

As of 2017, the method used to determine the adequacy of prenatal care made a significant change, resulting in an inability to compare previous year's data with that from 2017 onward.[25] The Adequacy of Prenatal Care (APNCU) measure defines adequate prenatal care as being initiated during the first four months of pregnancy and 80% or more expected visits attended for the remaining months of pregnancy. American Indian mothers continue to have the highest percentages of inadequate prenatal care (28%), followed by black mothers (21%; Figure 26). Barriers that reduce accessibility of health care services or services provided by doulas may be contributing factors to these disparities.

26. Inadequate prenatal care among mothers in Minnesota, by race/ethnicity (2017)

Race/ethnicity of mother	2017
American Indian	28%
Asian	14%
Black	21%
Hispanic/Latino	16%
White	6%

Source. 2017 Minnesota Health Statistics Annual Summary. Retrieved from: https://www.health.state.mn.us/data/mchs/genstats/annsum/mnannsum17.pdf.
Note. Adequacy is determined using the Adequacy of Prenatal Care Utilization (APNCU) Index, and is not comparable to GINDEX Index used in previous years.

[25] The method changed from the GINDEX to the Kotelchuck's Adequacy of Prenatal Care Utilization (APNCU) in keeping with the standards of national reporting. The APNCU results in a different distribution of the adequacy of prenatal care.

Smoking during pregnancy

Smoking while pregnant increases the risk of infant morbidity and mortality.[26] Twin Cities metro counties have lower proportions of people who smoke while pregnant than the state average (9%; Figure 27). Anoka County has the highest percentage of prenatal smoking in the metro at 8%; however, this is still much lower than counties such as Itasca, Koochiching, Faribault, and Martin that have the highest rates in the state at 21-22%.

27. Percentage of women who smoked during pregnancy, by county (2016)

County	2016
Anoka	8%
Carver	3%
Dakota	5%
Hennepin	5%
Ramsey	6%
Scott	5%
Washington	5%
Minnesota	9%

Source. Minnesota Department of Health (MDH), County Health Tables – Natality. Retrieved from: https://www.health.state.mn.us/data/mchs/genstats/countytables/county2017_r2.pdf.

Prenatal alcohol and drug use

Maternal drug and alcohol use during pregnancy can negatively impact the physical, mental, behavioral, and academic development of young children. Alcohol is the substance known to have the most negative neurobehavioral effects on a developing fetus.[27] While the majority of women in Minnesota do not drink alcohol while pregnant, 8% of pregnant Minnesotans reported they drank alcohol in the final 3 months of pregnancy.[28] The percentage of women who drink during the first trimester (before they may even be aware they are pregnant) is likely much higher, as 55% of pregnant Minnesotans reported they drank alcohol in the three months before pregnancy. Alcohol consumption during pregnancy leads to an estimated 8,500 Minnesota infants born each year with prenatal alcohol exposure and 3,400 babies who will live with a fetal alcohol substance disorder.[29]

[26] Minnesota Department of Health. (2015). *Infant mortality reduction plan for Minnesota*. Retrieved from https://www.health.state.mn.us/docs/people/womeninfants/infantmort/infantmortality.pdf

[27] Proof Alliance. (2019). *Impact of alcohol and illicit drugs during pregnancy*. Retrieved from https://www.proofalliance.org/2014/05/impact-of-alcohol-tobacco-and-illicit-drugs-on-women/

[28] PRAMS. Prevalence of Selected Maternal and Child Health Indicators for Minnesota, Pregnancy Risk Assessment Monitoring System (PRAMS), 2012-2015. Retrieved from https://www.cdc.gov/prams/pramstat/pdfs/mch-indicators/Minnesota-508.pdf

[29] Proof Alliance. (2019). *How many people have an FASD?* Retrieved from https://www.proofalliance.org/2014/06/how-many-people-have-an-fasd/

The opioid epidemic continues to create concern about Neonatal Abstinence Syndrome (NAS) in Minnesota. In Minnesota, NAS is present in about 10 per 1,000 births. NAS is highest among Native American mothers (70 per 1,000 of live births), compared to about 9 per 1,000 births to white mothers.[30]

Low birthweight

Low birthweight babies weigh less than 2,500 grams (approximately 5 ½ pounds) at birth. These babies are at greater risk for health problems, particularly during their first year of life, and are more likely to have developmental complications, which can lead to longer-term difficulties with school performance and other outcomes. Teen mothers, especially those younger than age 15, and mothers in poorer health are more likely to give birth to a low birthweight baby, but any premature birth can result in low birth weight.

In 2017, about 3,800 infants were born at low birthweight in Minnesota. Infants born to American Indian (8%), African American (7%), Asian (7%), and Hispanic/Latino (6%) mothers were more likely to be born with low birthweight than infants born to white, non-Hispanic mothers (5%; Figure 28). Socioeconomic status and other factors that contribute to the health of mothers likely contribute to these disparities.

28. Low-weight births in Minnesota, by race/ethnicity (2017)

Race/ethnicity of mother	Total births	Percent low-weight births (all births)
African American/Black	8,664	7%
American Indian	1,197	8%
Asian/Pacific Islander	5,492	7%
Hispanic/Latino	4,894	6%
White, non-Hispanic	47,890	5%

Source. 2017 Minnesota Health Statistics Annual Summary. Retrieved from https://www.health.state.mn.us/data/mchs/genstats/annsum/mnannsum17.pdf.

Infant mortality

There are a number of factors associated with infant mortality (defined as the death of an infant less than one year of age), including low birthweight, preterm birth, lack of adequate prenatal care, substance use, and access to care. There has been a steady decrease in the rate of infant deaths over time in Minnesota and across all Twin Cities metro counties. Ideally, no infant deaths should occur. Healthy People 2020 established a national goal to reduce the number of infant deaths to no more than 6 per 1,000 births; all counties now meet this national benchmark, except for Ramsey County, which fell slightly short of this target in 2012-2016. Ramsey County is the only Twin Cities metro county with an infant mortality rate higher than the state average (Figure 29).

[30] Moldenhauer, R. (2017). Substance use disorder trends in Minnesota: The song remains the same [Presentation]. Saint Paul, MN: Minnesota Department of Human Services. Retrieved from https://www.mnchippewatribe.org/pdf/Moldenhauer,%20Rick%20-%20'The%20Song%20Remains%20the%20Same'%20A%26DA%20Division.pdf

29. Number of infant deaths, by county (2016)

County	Infant mortality rate (deaths per 1,000 births) 2012-2016	Number of infant deaths 2012-2016
Anoka	4.1	87
Carver[a]	3.8	22
Dakota	4.6	120
Hennepin	5.0	419
Ramsey	6.3	245
Scott	3.1	29
Washington	4.4	63
Minnesota	5.0	1,752

Source. Minnesota Department of Health (MDH), MN Public Health Data Access Portal. Retrieved from https://data.web.health.state.mn.us/web/mndata/birthoutcomes

Infant mortality rates continue to be almost twice as high for American Indian and black infants, compared to Asian, Hispanic/Latino and white, non-Hispanic infants. Disparities in infant mortality continue for some cultural groups in Minnesota (Figure 30). Disparities in some of the factors that support a healthy pregnancy (e.g., access to adequate prenatal care) and social determinants (e.g., poverty) that impact the health of mothers likely contribute to racial disparities in infant mortality rates.

30. Infant mortality rates (per 1,000 live births) by race/ethnicity of mother, Minnesota (2016)

Race/ethnicity	Neonatal mortality	Post-neonatal mortality	Total infant mortality
American Indian, non-Hispanic	5.6	4.8	10.6
Asian, non-Hispanic	4.4	1.1	5.5
Black, non-Hispanic	6.4	2.8	9.1
Hispanic/Latino, any race	3.7	1.6	5.3
White, non-Hispanic	2.9	1.2	4.1
Another race/unknown	8.9	3.7	12.5
Healthy People 2020 Goal	4.1	2.0	6.0

Sources: Minnesota Department of Health (MDH), MN Public Health Data Access Portal (2012-16). Retrieved from: https://data.web.health.state.mn.us/web/mndata/birthoutcomes

Note: Neonatal mortality is the death of a live-born infant within the first 27 days of life. The leading causes of neonatal death are disorders related to premature birth and low birth weight. Post-neonatal mortality is the death of a live-born infant from the infant's 28th day of life to one year of age. These deaths reflect events in infancy and are more likely to reflect social or environmental factors.

Early childhood indicators

There are multiple systems and supports in place to help parents and caregivers support the health and well-being of young children (age 0-5). Regular pediatric appointments are recommended for young children to screen for potential health concerns and to receive preventive care, including vaccinations. These early visits with providers are opportunities to screen for developmental concerns and for caregivers to learn information about how to support their child's health and development. There are also a number of public programs in place that help caregivers with lower income levels access resources to support the development of young children. However, there are relatively few sources of information in place that describe the health and wellness of young children, particularly the family strengths and community assets in place that support their health and overall development. This section of the summary includes measures of early childhood health before focusing on various social determinants of health that can influence health and wellness.

Immunizations

About 68% of young children in Minnesota completed the recommended childhood immunization series in 2018 (Figure 31). The Minnesota Department of Health recommends that children receive vaccinations before age 3 to prevent a range of diseases, including hepatitis A and B, polio, measles, mumps, rubella, whooping cough, chicken pox, and tetanus. Although the percentage of young children across the Twin Cities metro who complete the recommended childhood series has increased since 2016 (except in Scott County), Minnesota has not met the Healthy People 2020 goals for completing the recommended childhood series (80% of children age 19-35 months). Additionally, Dakota, Hennepin, Ramsey, and Scott counties fall below the state percentage of children with a complete childhood series. Immunizations may be missed if children have difficulty accessing health care services or if caregivers refuse vaccinations for their child.

31. Young children (24-35 months) with Complete Childhood Series (2016-2018)

County	2016	2017	2018
Anoka	58%	58%	70%
Carver	43%	63%	71%
Dakota	62%	60%	65%
Hennepin	53%	53%	64%
Ramsey	54%	55%	64%
Scott	63%	52%	60%
Washington	67%	64%	75%
Minnesota	60%	61%	68%

Source. Minnesota Department of Health (MDH), MN Public Health Data Access Portal. Retrieved from https://data.web.health.state.mn.us/immunization_basic

Note: Childhood Series includes DTaP, Polio, MMR, Hib, Varicella, PCV

With lower vaccination rates, there is greater risk for a resurgence of preventable illness. The CDC has recently confirmed 1,250 individual cases of measles nationwide since January 1, 2019, the greatest number of measles cases reported in the United States since 1992. Minnesota has not had a reported case in 2019.[31] In 2017, there was a measles outbreak connected with the Somali-American community in Minnesota. Public health officials attributed the outbreak to a steep decrease (92% vaccination in 2004 versus 42% in 2014) in vaccination rates within this community due to "anti-vaccine" efforts.[32] It is important to consider that beyond communities that share a particular cultural background or religion that may lead them to be hesitant to vaccinate, there has also been an emerging national trend of affluent, white parents choosing not to vaccinate.[33]

The World Health Organization has declared "vaccine hesitancy," the delay in acceptance or refusal of vaccines despite availability of vaccination services, as one of the 10 threats to global health in 2019.[34] Wadena and Renville counties have been identified as having higher rates of parents opting for "nonmedical" exemptions for school-required vaccinations. In February 2019, a bill was introduced in Minnesota that would provide funding for outreach to groups with lower vaccination rates to educate them on the benefits of vaccines.[35]

Obesity

Obesity information is gathered consistently for children enrolled in the Women, Infant, and Child (WIC) program, which helps lower-income children and families have better access to healthy foods and nutrition information. There is not a source of data to determine obesity rates for all children in the Twin Cities metro region.

Minnesota has not met the Healthy People 2020 goal for obesity reduction in children age 2-5 (9% obesity; Figure 32). In 2017, only two counties met the goal: Carver (8%) and Scott (8%) counties. Ramsey County has the highest proportion of WIC-enrolled children who are obese (14%), followed by Washington (14%) and Hennepin (13%). Overall, childhood obesity remained consistent with no notable upward or downward trends (Figure 33).

---

31 Centers for Disease Control and Prevention. (2019). *Measles cases and outbreaks*. Retrieved from https://www.cdc.gov/measles/cases-outbreaks.html

32 Sum, L. H. (2017, August 21). Despite measles outbreak, anti-vaccine activists in Minnesota refuse to back down. *The Washington Post*. Retrieved from https://www.washingtonpost.com/national/health-science/despite-measles-outbreak-anti-vaccine-activists-in-minnesota-refuse-to-back-down/2017/08/21/886cca3e-820a-11e7-ab27-1a21a8e006ab_story.html?noredirect=on&utm_term=.199ab2ff70ce

33 Bach, B. (2015, November 20). *California vaccination exemptions tend to cluster in white, affluent communities*. Retrieved from Stanford Medicine website: https://med.stanford.edu/news/all-news/2015/11/vaccination-exemptions-cluster-in-white-affluent-communities.html

34 World Health Organization. (2019). *Ten threats to global health in 2019*. Retrieved from https://www.who.int/emergencies/ten-threats-to-global-health-in-2019

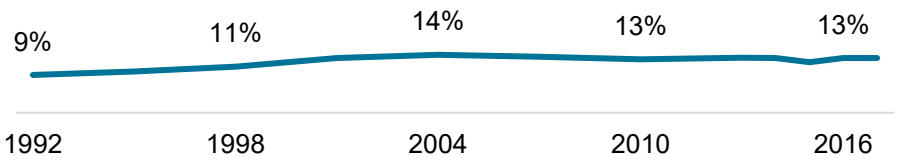
35 Editorial Board. (2019, February 19). Minnesota bill would counter dangerous vaccine disinformation [Editorial]. *Star Tribune*. Retrieved from http://www.startribune.com/minnesota-bill-would-counter-dangerous-vaccine-disinformation/506067652/

32. Obesity among WIC-enrolled children (age 2-5) in Minnesota (2014-2017)

County	2014	2015	2016	2017
Anoka	11%	11%	11%	10%
Carver	5%	7%	7%	8%
Dakota	12%	12%	12%	12%
Hennepin	12%	12%	13%	13%
Ramsey	14%	12%	13%	14%
Scott	10%	10%	9%	8%
Washington	12%	11%	11%	14%
Minnesota	13%	12%	13%	13%
Healthy People 2020				**9%**

Source. Minnesota WIC Information System. Weight Status in Minnesota WIC Children Ages 2 to 5 Years by County of Residence During Calendar Years 2012-2017. Minnesota WIC Program. 2018. Retrieved from https://www.health.state.mn.us/docs/people/wic/localagency/reports/wtstatus/annual/childcounty.pdf/

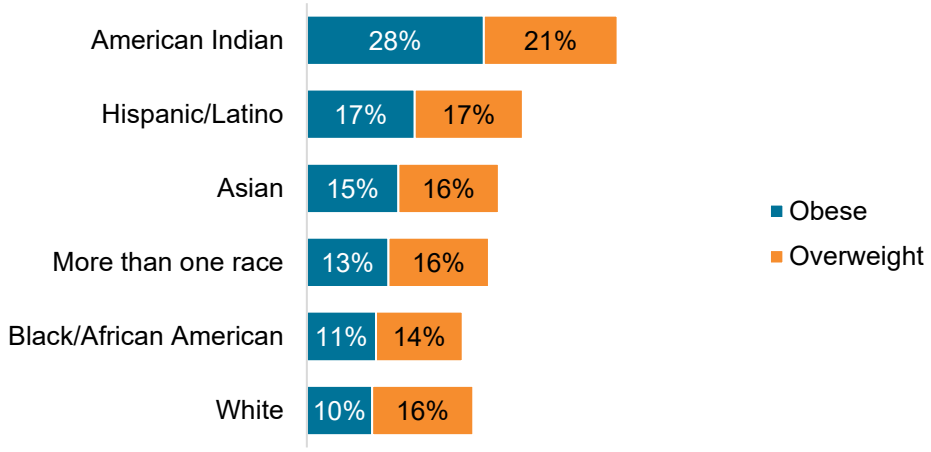
33. Changes in obesity among WIC-enrolled children (age 2-5) in Minnesota (1992-2017)



Source. Minnesota WIC Information System. *Minnesota WIC Health Indicators Summary,* Minnesota WIC Program: 2019.

Obesity among young children enrolled in WIC is still lowest among white, non-Hispanic and black children. The percentage of children who are obese is still more than twice as high among American Indian children (28%) compared to white children (10%), the racial group with lowest young childhood obesity (Figure 34). The percentage of children who are obese is somewhat higher among Asian (15%), and Hispanic/Latino children (17%; Figure 34).

34. Obesity among WIC-enrolled children (age 2-5) in Minnesota, by race/ethnicity (2017)



Source. Minnesota WIC Information System. Statewide trend data: Overweight and obesity status in children ages 2 to 5 years of age participating in Minnesota WIC by year and race/ethnicity. Retrieved from: https://www.health.state.mn.us/docs/people/wic/localagency/reports/wtstatus/healthequity/undup/wttrend.pdf

Unintentional injuries

Safety in the home and in other settings is important for the healthy development of young children, as the main cause of serious health problems and death for young children are unintentional injuries. According to the Minnesota Department of Health, motor vehicle accidents, drowning, and unintentional suffocation are the leading causes of these preventable deaths for young children (age 1-4).[36]

Childhood lead exposure

Lead exposure of any level is dangerous for young children and elevated blood lead levels (EBLLs) are linked with learning problems, behavioral problems, and death (in cases of very high levels). Younger children are at greater risk of these health problems because their brains are still developing and their bodies can absorb lead more easily. Each year, nearly 700 Minnesota children have EBLLs. Children who live in homes built before 1978 are most at risk due to the likelihood of lead-based paint in these homes.[37] Compared to other areas of the state, the Minneapolis/Saint Paul area has the highest percentage of young children with elevated blood lead levels, although it has been trending downward over time (Figure 35).

35. Percentage of children under age 6 with elevated blood lead levels (EBLLs), by region (2017)

Year	Minnesota	Minneapolis/ Saint Paul	Metro excluding Minneapolis/Saint Paul	Greater MN
2011	1.0%	2.8%	0.5%	0.6%
2012	1.2%	3.3%	0.5%	0.8%
2013	1.0%	2.4%	0.5%	0.7%
2014	0.8%	1.9%	0.4%	0.7%
2015	0.9%	2.0%	0.4%	0.9%
2016	1.0%	2.4%	0.5%	0.8%
2017	0.8%	1.9%	0.4%	0.8%

Source. Minnesota Department of Health (MDH), MN Public Health Data Access Portal. (2011-17) Retrieved from https://data.web.health.state.mn.us/web/mndata/lead_annual_level#byregion

Notes: The definition of an elevated blood lead level recently changed from 10 to 5 mcg/dL (micrograms of lead per deciliter of blood). The reference level was lowered in 2011 to identify children with levels much higher than most children.

[36] Minnesota Department of Health, Injury and Violence Prevention Unit. (2012). *Preventing unintentional injury in Minnesota: A working plan for 2020*. Retrieved from https://www.minnesotasafetycouncil.org/2020Plan/UnintentionalInjuryOnline.pdf

[37] Minnesota Department of Health. (n.d.). *Childhood lead exposure*. Retrieved from https://data.web.health.state.mn.us/web/mndata/lead

Adverse Childhood Experiences (ACEs)

There is a growing understanding that negative experiences in childhood have implications for both child and adult health outcomes. Adverse Childhood Experiences, or ACEs, refer to a set of issues including abuse, neglect, caregiver mental illness, caregiver incarceration, and divorce that studies have shown to have long-term negative impacts on health.[38] While there are not sources of data available that describe the number of young children currently impacted by these events in most areas, child maltreatment and foster care records are available for this young age group. (See the "School-age youth key health indicators" section for additional information on ACEs in older children, including disparities.)

Child maltreatment can include physical, emotional, and sexual abuse, as well as neglect by a parent or caregiver. Children under age 5 are more likely to experience neglect than older children, and are at greatest risk for injury and death from abuse. Maltreatment reports by county in this summary include both family investigations and assessments,[39] as well as facility investigations. The rate of maltreatment reports involving young children in 2016 was highest in Hennepin (44 per 1,000 children) and Ramsey (30 per 1,000 children) counties (Figure 36). Rates have increased across all counties included in this assessment and statewide. This increase likely reflects both an actual change in rates of maltreatment (e.g., drug-related maltreatment reports have increased since 2013, especially in the number of reports related to chronic parental drug use in the seven-county metro) and changes in required reporting (e.g., a 2015 law requiring local agencies to follow revised screening and reporting guidelines).[40]

36. Rate of children under age 5 with filed maltreatment report during the past year (per 1,000 children) (2013, 2016)

	2013	2016
Anoka	14	22
Carver	18	24
Dakota	15	21
Hennepin	28	44
Ramsey	17	30
Scott	19	23
Washington	13	23
Minnesota	25	39

Source. Chase. R., et al. (2018*). Minnesota early childhood risk, reach, and resilience: Key indicators of early childhood development in Minnesota, county by county*. Retrieved from Wilder Research website: https://www.wilder.org/wilder-research/research-library/minnesota-early-childhood-risk-reach-and-resilience-key-indicators

[38] For more information about ACEs in Minnesota and their impacts, see the Minnesota Department of Health website: http://www.health.state.mn.us/divs/cfh/program/ace/

[39] A family assessment is completed when social services staff accepts a report about a child's safety, but there are not threats of immediate and serious harm. A family investigation is completed by social services when a child is in immediate or severe danger or when a family refuses to work with social services staff to ensure a child is safe.

[40] Minnesota Department of Human Services. (2018). *Minnesota's child maltreatment report, 2017*. Retrieved from https://www.leg.state.mn.us/docs/2018/mandated/181110.pdf

Where there are significant concerns about the child's safety or the ability of the family to meet the child's needs, children may be temporarily placed in foster care. The removal of a child from their caregiver and home, as well as the instability of placements after a child enters the child welfare system, can be very stressful for children, lead to gaps in care, and exacerbate existing health and mental health conditions. In the Twin Cities metro, the rate of foster care placement for young children was higher in both Hennepin and Ramsey counties (11.0 per 1,000) than in other counties, although lower than the statewide rate (12.5 per 1,000; Figure 37). Overall, rates for foster care placements have increased since 2013 (with the exception of Carver County). The reasons for this increase in Minnesota foster care placements are in part due to increased parental substance use, leading to more children in need of foster care.[41] Additionally, the median length of time children are staying in out-of-home care has increased. This is largely because the cases for children who are removed due to parental substance use typically take longer to reach permanency as parents work through recovery issues.[42]

37. Rate of children under age 6 in foster care placements (per 1,000 children) (2013, 2016)

	2013	2016
Anoka	5.7	6.0
Carver	3.8	3.5
Dakota	2.6	4.1
Hennepin	7.5	11.0
Ramsey	8.8	11.0
Scott	1.4	3.4
Washington	2.1	3.9
Minnesota	8.3	12.5

Source. Chase. R., et al. (2018). Minnesota early childhood risk, reach, and resilience: Key indicators of early childhood development in Minnesota, county by county. Retrieved from Wilder Research website: https://www.wilder.org/wilder-research/research-library/minnesota-early-childhood-risk-reach-and-resilience-key-indicators

41 Minnesota Department of Human Services. (2018). *Minnesota's out-of-home care and permanency report, 2017*. Retrieved from https://www.leg.state.mn.us/docs/2018/mandated/181111.pdf

42 Minnesota Department of Human Services. (2018). *Minnesota's out-of-home care and permanency report, 2017*. Retrieved from https://www.leg.state.mn.us/docs/2018/mandated/181111.pdf

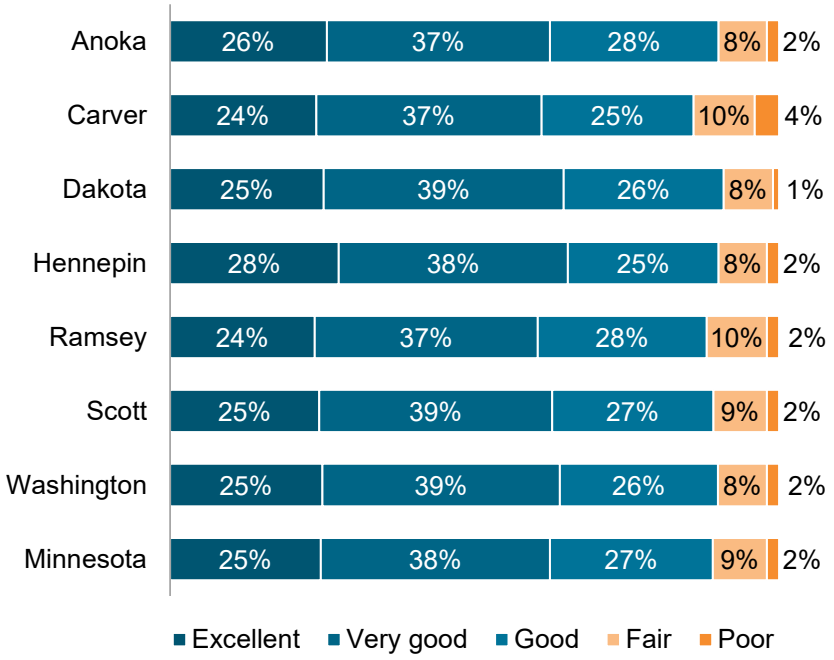
School-age youth key health indicators

This section describes the health needs and priorities for school-age children and adolescents, age 6 to 18, living in the seven-county Twin Cities metro region. The information cited includes the most recent data available, broken out in as much detail as possible (e.g., most local geography available, most detailed race/ethnicity categories). Health disparities observable through these available data sources are noted throughout.

Overall health and well-being

Over 60% of ninth-grade students in each of the Twin Cities metro counties rate their overall health as "very good" or "excellent" (Figure 38). Overall health ratings are similar across the seven-county metro (61% - 66% across counties) and comparable to the statewide average (63%). Self-reported health status is considered a good indicator of actual overall health and well-being.

38. Self-reported overall health of ninth graders, by county (2019)



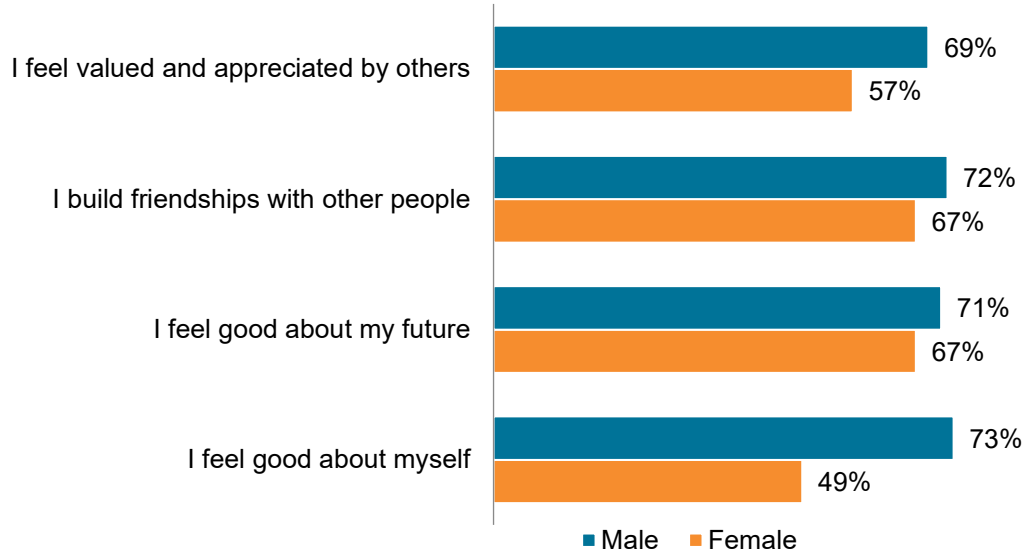
Source. Minnesota Student Survey, 2019. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

Note: Totals may not equal 100 due to rounding.

Statewide, the majority of ninth-grade students report feeling positive about their well-being, yet gender disparities exist. A notable difference in self-confidence between males and females has remained the same since 2016; 73% of ninth-grade male students reported they "often" or "almost always" felt good about themselves, compared with 49% of female students (Figure 39). This is consistent with studies that look at changes in self-esteem across the lifespan. On average, self-esteem is relatively high in childhood and drops during adolescence (particularly for girls) before rising again in adulthood.[43] Differences in body satisfaction are one of the main factors that contribute to gender differences in self-esteem in adolescence.[44]

39. Measures of well-being among ninth graders, by gender (2019)

Percentage of students who "often" or "almost always" agree with each item:



Source. Minnesota Student Survey, 2019. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242.
Note. The following question is used for each of the items listed in the figure: "In general, how does each of the following statements describe you."

A majority of ninth-grade students feel they can talk to a parent about their problems. Across the state, most students (83%) feel they can talk to a parent or guardian at least "some of the time" about problems they are having.[45] In Minnesota, female students (78%) were less likely than male students (84%) to report being comfortable talking to their parent or guardian.

Less than half of ninth-grade students feel they have other caring adults in their lives. Positive connections to non-family adults are important to the health and well-being of youth. Close to half (35% - 51% across counties) of ninth-grade students felt that a teacher or other school staff cared about them "very much" or "quite a bit" (Figure 40). Fewer students (34% - 44% across counties) felt that other adults in their community cared about them "very much" or "quite a bit."

---

43 Robins, R. W., & Trzesniewski, K. H. (2005). Self-esteem development across the lifespan. *Current Directions in Psychological Science, 14*(3), 158-162.

44 Gentile, B., Grabe, S., Dolan-Pascoe, B., Twenge, J. M., Wells, B. E., & Maitino, A. (2009). Gender differences in domain-specific self-esteem: A meta-analysis. *Review of General Psychology, 13*(1), 34-45.

45 Minnesota Department of Education. (2019). *2019 Minnesota Student Survey reports, 2013-2019* [data tables]. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

40. Percentage of ninth-grade students who feel non-family adults in their lives care about them "very much" or "quite a bit", by county (2019)

County	Teachers/other adults at school	Adults in your community
Anoka	35%	34%
Carver	51%	36%
Dakota	43%	37%
Hennepin	49%	44%
Ramsey	40%	36%
Scott	41%	38%
Washington	43%	40%
Minnesota	42%	38%

Source. Minnesota Student Survey, 2019. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

Notes. Percentages are based on student respondents who said they feel one or more of the following groups of adults in the community cares about them "quite a bit" or "very much": teachers and other adults at school or other adults in the community. Responses about caring adults who are parents or other relatives of the student are not included.

Adverse Childhood Experiences (ACEs) among school-aged children

In 2013, some ACEs questions were added to the Minnesota Student Survey. This section draws from statewide analyses of MSS data completed by the Minnesota Department of Health and SUMN (Substance Use in Minnesota)[46] to describe how often youth experience ACEs, how ACEs impact youth well-being, and how family and community strengths can reduce the negative impacts of ACEs. Analyses include Minnesota students in grades 8, 9, and 11 who completed the Minnesota Student Survey in 2016.

Description and prevalence

The seven ACEs items included in the MSS are: incarceration of parent/caregiver; living with someone who drinks too much alcohol; living with someone who uses illegal drugs or abuses prescription drugs; verbal abuse; physical abuse; household domestic abuse; and sexual abuse.

- **A majority of Minnesota children (65%) have not experienced any of these ACEs.** Fewer students have experienced one (19%), two (9%), three (4%), or four or more (4%) ACEs. Girls were somewhat more likely to experience one or more ACEs than boys (38% and 33%, respectively).
- **Seventeen percent of students experienced a parent or caregiver being incarcerated at some point in their life.** Parental incarceration was the most commonly reported ACE.
- **At least 10% of children had experienced verbal abuse (14%), physical abuse (12%), or household alcohol problems (10%).** Fewer children experienced household drug use (5%) or sexual abuse (5%).
- **Ramsey County students had the highest reporting of one or more ACEs compared to the other metro counties (38% to 41%).** Anoka and Scott counties reported 34% to 37%. Carver, Dakota, Hennepin, and Washington county students reported between 26% to 33%.
- **There are notable racial disparities in ACEs.** It was more likely for students who identified themselves as American Indian (10%), African American (7%), and Hispanic/Latino (6%) to experience four or more ACEs than students who identified as Asian (3%) or white (3%). Students who reported being low income or homeless were also more likely to report experiencing four or more ACEs (8% and 16%).[47]

Impacts on health and well-being

Initial research on the impact of ACEs found that there is a relationship between the number of ACEs experienced in childhood and increased risk of several poor outcomes in adulthood, including: alcoholism, drug use, mental health

---

46 SUMN (Substance Use in Minnesota) provides data on over 100 indicators related to alcohol, tobacco, and other drug use (www.sumn.org). It is a project of the Minnesota State Epidemiological Outcomes Workgroup, a collaborative effort across multiple state agencies and EpiMachine, LLC, and includes representatives from state agencies, coalitions, and other local organizations. Data in this summary were reported in a presentation given by Melissa Adolfson (EpiMachine, LLC) and are used with permission. Retrieved from https://www.acesconnection.com/g/minnesota-aces-action/fileSendAction/fcType/0/fcOid/478274755669690576/filePointer/478274755669690639/fodoid/478274755669690633/Minnesota-Student-Survey-2016-ACEs%20and%20Protective%20Factors%20slides.pdf

47 Percentage of 8th, 9th, and 11th graders reporting four or more kinds of adverse childhood experiences (ACEs). Minnesota Results for Children. Retrieved from https://mn.gov/mmb/results-for-children/supporting-indicators/communities/adverse-childhood-experiences.jsp

issues (e.g., depression), chronic diseases (e.g., heart disease, liver disease), higher risk sexual activity, poor academic/work performance, and lower quality of life.[48] The same patterns can be found in Minnesota: adults who experienced multiple ACEs in childhood are more likely to report their own health as "fair" or "poor," to use tobacco products and overuse alcohol, and to be diagnosed with depression or anxiety.[49] The study also found that adults who experienced five or more ACEs were more likely to be unemployed and feel financial stress.

While the initial study focused on the impact of ACEs on health outcomes in adulthood, ACEs have more immediate impact on youth health and well-being. When ACEs occur, particularly if they occur repeatedly or over long periods, children experience toxic stress that can impact brain development, influencing behavior, learning, relationships, memory, and overall health. In Minnesota, for example, youth who have more ACEs are more likely to report mental health concerns and use alcohol, marijuana, and prescription drugs.[50]

ACEs are an important, but not exhaustive, list of factors that can lead to poor health outcomes. For example, chronic poverty and its impacts on housing, food security, and access to resources, can lead to chronic stress and poor health. Children and families who come to the United States as immigrants and refugees experience stress as they learn about living in a new culture and interacting with new systems. This is in addition to the chronic stress that some families experienced in their home country. Structural racism, experiences of direct racism or discrimination, and historical trauma are also experiences that impact people of color and American Indians, but these topics are not asked about in surveys that are used to describe ACEs and their impacts.

Factors that reduce ACEs impacts

Although ACEs can have profound short- and long-term impacts on health and well-being, community and familial strengths and assets can offset the negative impacts of ACEs. Nurturing relationships, connections with supportive and caring adults, ensuring basic needs are met, and nurturing the social emotional development of children are all examples of protective factors that can reduce the negative impacts of ACEs. SUMN's analyses of MSS data showed that strong families and communities minimize the impacts of ACEs in Minnesota:

- Among students with two or more ACEs, students with greater educational engagement are less likely to report suicidal ideation in the past year (27% versus 38% for students with lower educational engagement).
- Students with two or more ACEs who feel teachers or other adults in the community care about them are 14 to 16 percentage points less likely to report suicidal ideation in the past year than students who do not feel they have that support.

In an ideal world, no child would experience abuse, neglect, and other traumatizing events. While working to prevent ACEs from occurring, it is important to help teachers, health care providers, and others who work closely with children increase their understanding of ACEs and how these events can impact development and child behavior (a trauma-informed approach), as well as to support efforts that foster community and family strengths and assets.

---

48 Violence Prevention. (2019). Centers for Disease Control and Prevention (CDC). For more information, see: https://www.cdc.gov/violenceprevention/acestudy/about.html

49 Minnesota Department of Health. (2013). *Adverse childhood experiences in Minnesota*. Retrieved from https://www.health.state.mn.us/docs/communities/ace/acereport.pdf

50 SUMN: Analysis of 2016 MSS data

Physical health

Premature death

The three leading causes of premature death among youth (age 6-24) in the seven-county metro area are unintentional injuries, suicide, and homicide (Figure 41). Nationally, the most common types of unintentional injuries for youth (age 5-24) are traffic accidents, poisoning, and drowning.[51] Leading causes of death in the seven-county metro area for young children (age 0-5) were perinatal conditions, congenital anomalies, and unintentional injury.

41. Leading causes of death in the seven-county metro, by age (2017)

	Number of child deaths			
	Age 0-5	**Age 6-11**	**Age 12-17**	**Age 18-24**
Cancer	5	4	7	3
Chronic lower respiratory disease	0	2	0	0
Congenital anomalies	58	1	1	1
Heart disease	2	0	5	6
Homicide	6	0	6	15
Perinatal conditions	90	0	0	0
Pneumonia and influenza	2	0	1	2
SIDS	3	0	0	0
Stroke (cerebrovascular)	1	1	1	1
Suicide	0	0	12	46
Unintentional Injury	16	3	9	69

Notes. "Other" deaths: Age 0-5 = **44** | Age 6-11 = **4** | Age 12-17 = **6** | Age 18-24 = **25**.

Source. Minnesota Department of Health, County Health Tables. (2018). Retrieved from https://www.health.state.mn.us/data/mchs/genstats/countytables/county2017_r2.pdf.

Health conditions

School-age children are generally healthy. Therefore, this section of the summary focuses on two conditions that can be managed or prevented by changes in behavior or environment: asthma and diabetes.

Asthma

Asthma is one of the leading causes of absenteeism from school. A number of factors can trigger an asthma episode, including air pollution, exposure to allergens, exercise, tobacco smoke, and chemical irritants. Across the seven counties in the metro region, 12%-18% of ninth-grade students have been told they have asthma.[52]

---

[51] Centers for Disease Control and Prevention. WISQARS Fatal Injury and Nonfatal Injury. Retrieved from https://www.cdc.gov/injury/wisqars/LeadingCauses.html

[52] Minnesota Department of Education. (2019). *Minnesota Student Survey reports, 2019* [data tables]. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

American Indian and African American middle and high school students are more likely to have been diagnosed with asthma.[53] The rate of asthma-related hospitalizations is higher in Minneapolis and Saint Paul than in other parts of the metro region, particularly in the downtown areas of each city and nearby neighborhoods (Near North and Phillips neighborhoods in Minneapolis, Summit-University neighborhood in Saint Paul).[54] Emergency department (ED) visits due to asthma are also higher for children in the metro compared to children in greater Minnesota, however ED visits appear to have declined slightly between 2015 and 2017 (Figure 42).

42. Asthma ED visits among children (0-17), rate per 100,000, age-adjusted, by region (2015-2017)

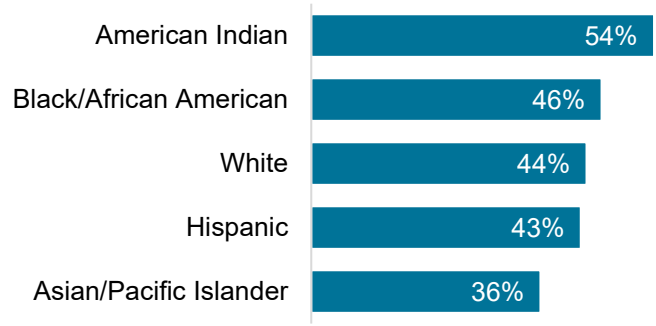
	2015	2016	2017
7-county metro children	78	74	69
Greater MN children	44	38	37

Source. Minnesota Hospital Association, 2017. Retrieved from https://data.web.health.state.mn.us/web/mndata/asthma_ed#byregion.

Exposure to Environmental Tobacco Smoke (ETS)

Environmental tobacco smoke (ETS) is a mix of chemicals in the air that results from burning tobacco (cigarettes, cigars, pipes) and from exhaled smoke. ETS or second-hand smoke causes cancer and no level of exposure is considered safe. ETS is particularly harmful to children. In the 2014 Minnesota Youth Tobacco Survey, almost half (47%) of nonsmoking Minnesotan youth were exposed to ETS in any of the surveyed settings (home, car, at school, at work, or in a public place) in the previous week. Public places (31%) were the most common settings for exposure to secondhand smoke, followed by in the car (20%), in the home and at school (both 16%), and at work (4%).[55] American Indian youth are more likely to be exposed to ETS (Figure 43). Though legislation restricting smoking in workplaces and indoor public spaces has contributed to decreased rates of ETS, these regulations do not extend to private homes, public outdoor spaces, or cars.

43. Percentage of youth exposed to Environmental Tobacco Smoke (ETS), by race/ethnicity (2014)



Source. 2008-2014 Minnesota Youth Tobacco Surveys. Retrieved from https://data.web.health.state.mn.us/ets_youth

53 Minnesota Department of Health. (n.d.). *Asthma quick facts.* Retrieved from https://www.health.state.mn.us/diseases/asthma/data/quickfacts.html

54 Minnesota Department of Health. (n.d.). *Asthma hospitalizations (2009-2013)* [Interactive map]. Retrieved from MN Public Health Data Access https://apps.health.state.mn.us/mndata/webmap/asthma.html

55 Minnesota Department of Health. (n.d.). *Environmental tobacco smoke*. Retrieved from https://data.web.health.state.mn.us/ets

Diabetes and contributing factors

In the seven-county metro region, approximately 1% of ninth-grade students have been told they have diabetes; the Minnesota Student Survey asks students about diabetes generally, and does not differentiate between Type I and Type II).[56] This may be an underestimate of the prevalence of the disease. A much larger percentage of students have an increased risk of developing diabetes because of their weight or health behaviors. One-quarter of Minnesota ninth-grade students are overweight or obese, with Ramsey County having the largest percentage of youth who are obese (12%; Figure 44). The percentage of students who are overweight or obese changed little from 2016, staying the same or changing by a few percentage points, depending on the county.

44. Weight status of ninth graders, by county (2019)

County	Normal or underweight	Overweight	Obese
Anoka	74%	15%	11%
Carver	78%	13%	9%
Dakota	76%	15%	9%
Hennepin	79%	12%	9%
Ramsey	73%	14%	12%
Scott	79%	14%	7%
Washington	79%	13%	8%
Minnesota	75%	14%	11%

Source. Minnesota Student Survey, 2019. Retrieved from: http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242
Note. 2013 data do not include students from or Chanhassen Public Schools (Eastern Carver County); data from these counties should be interpreted with caution. Weight status was based on body mass index (BMI) calculated using students' self-reported height and weight.

Similar to 2013 and 2016 survey results, relatively few ninth-grade students meet recommended guidelines for physical activity and healthy eating. The Centers for Disease Control and Prevention (CDC) *Physical Activity Guidelines for Americans* recommends that children age 6 to 17 should be physically active for at least 60 minutes each day. Only 17% of ninth-grade students in the state meet these physical activity requirements.[57] In its food pyramid, the U.S. Department of Agriculture (USDA) recommends that school-age children consume at least two servings of fruit and three servings of vegetables a day. Approximately one-third of ninth graders across Twin Cities metro counties are meeting fruit serving recommendations and even less are meeting vegetable serving recommendations (7%-14% across counties; Figure 45). A number of factors contribute to how easily students can be physically active and follow a healthy diet, including the availability and affordability of resources that support health, the safety of their outdoor play spaces, and comfort or experience with exercise and meal preparation.

[56] Minnesota Department of Education. (2019). *Minnesota Student Survey reports, 2019* [data tables]. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

[57] Minnesota Department of Education. (2019). *Minnesota Student Survey reports, 2019* [data tables]. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

45. Percentage of ninth-grade students who meet recommended physical activity and healthy eating guidelines (2019)

County	60 minutes of physical activity daily	2 or more servings of fruit daily	3 or more servings of vegetables daily
Anoka	18%	36%	14%
Carver	21%	36%	13%
Dakota	18%	31%	9%
Hennepin	16%	34%	10%
Ramsey	13%	27%	9%
Scott	16%	28%	7%
Washington	16%	32%	9%
Minnesota	17%	29%	8%

Source. Minnesota Student Survey, 2019. Retrieved from: http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

Mental health

At least 21% of ninth-grade students reported having a long-term mental health, behavioral, or emotional problem in all Twin Cities metro counties. The percentage of students reporting a mental health problem across the state has increased since 2016 from 17% to 23% (Figure 46). Among ninth-grade students in Minnesota, females are more likely than males to report having any long-term mental health, behavioral, or emotional problems (30% compared to 16%, respectively).[58] Results from the College Student Health Survey conducted by the University of Minnesota showed 42% of students reported having a mental health diagnosis in their lifetime, compared to 25% of students in 2007.[59] This observed increase may not be a change in actual prevalence; reduced stigma around mental illness may make youth more willing to discuss problems they are experiencing and seek treatment.

46. Percentage of ninth graders reporting long-term mental health, behavioral, or emotional problems (2010, 2013, 2016, 2019)

County	2010	2013	2016	2019
Anoka	12%	12%	16%	22%
Carver	9%	10%	18%	25%
Dakota	11%	13%	18%	23%
Hennepin	10%	13%	17%	23%
Ramsey	12%	13%	17%	21%
Scott	12%	11%	20%	23%
Washington	10%	13%	19%	22%
Minnesota	11%	13%	17%	23%

Source. Minnesota Student Survey, 2019. Retrieved from: http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

[58] Minnesota Department of Education (2019). *2019 Minnesota Student Survey statewide tables, 2013-2019*. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=11

[59] University of Minnesota. (2018). *2018 College student health survey report: Health and health-related behaviors: University of Minnesota-Twin Cities students*. Retrieved from https://boynton.umn.edu/sites/boynton.umn.edu/files/2018-11/CSHS-2018-UMN-Twin-Cities.pdf

Suicide is increasing in Minnesota and nationally. Minnesota's youth suicide rate (age 15-24) is higher than the national youth suicide rate (14.7 per 100,000 compared to 12.8 per 100,000). White, non-Hispanic male youth in Minnesota have a 12% higher suicide rate than the national rate for the same group. Minnesota male youth were also four times more likely to die by suicide compared to female youth in 2015 and 2016.[60] For all ages, suicide rates continue to be higher in greater Minnesota than in the seven-county metro area, even with an 18% increase from 2016 to 2017 in the male suicide rate in the metro area.

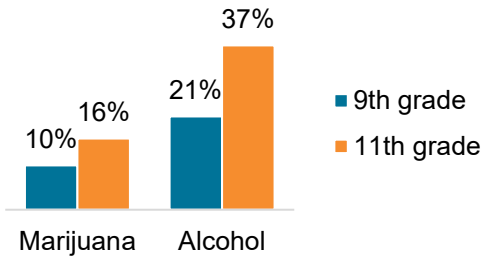
Suicide rates have increased for all races, with the highest increase (61%) in the American Indian community (57 suicides in 2008-2012 and 98 suicides in 2013-2017 across Minnesota).[61] Statewide, there has been an increase in non-fatal self-inflicted injury (SII) for all age groups (from 6,552 cases in 2012 to 9,581 cases in 2017). In 2017, over half of all SII were among youth and young adults (10-24 years) and females had higher numbers of SII compared to males across all age groups. The most common mechanisms of non-fatal SII were poisoning and cutting/piercing.[62]

Youth health behavior indicators

Substance abuse

Alcohol, marijuana, or prescription drugs were used by less than one-quarter of ninth-grade students. In 2019, ninth-grade students were less likely to have used alcohol (21%) or marijuana (10%) compared to 11th graders (37% and 16% respectively; Figure 47). In contrast, there was little difference in the percentage of ninth and 11th grade students who reported misusing a prescription drug in the past 30 days (4% for both grades).[63]

47. Percentage of ninth and eleventh grade students that used alcohol or marijuana during the past year (2019)



Source. Minnesota Student Survey, 2019. Retrieved from https://public.education.mn.gov/MDEAnalytics/DataTopic.jsp?TOPICID=11.

Note: Students were instructed to not include use of medical marijuana prescribed to them by a doctor.

60 Minnesota Department of Health. (2019). *Alcohol and suicide: White male youth in Minnesota*. Retrieved from https://www.health.state.mn.us/communities/suicide/documents/alcoholsuicidewmy.pdf

61 Minnesota Department of Health. (2018). *Suicide in Minnesota, 1999-2017 Data Brief*. Retrieved from https://www.health.state.mn.us/communities/suicide/documents/2017suicidedatabrief.pdf

62 Coutinho, S., Heinen, M., Carter, T., & Roesler, J. (2018). Non-fatal self-inflicted injury fact sheet. Retrieved from Minnesota Department of Health website: https://www.health.state.mn.us/communities/suicide/documents/2017nonfatalselfinflictedinjury.pdf

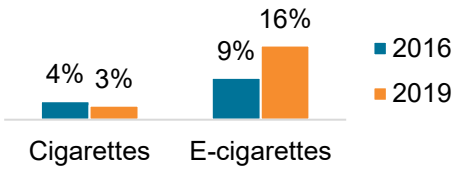
63 The MSS asks students how often, in the past 30 days, they have used prescription drugs that were not prescribed to them. This item on prescription drug misuse was first added to the survey in 2013. There is not a question comparable to the alcohol and marijuana survey items that asks about any misuse during the past year.

The percentage of students who reported having alcoholic beverages at least once in the past year has declined greatly over time. In 1992, nearly two-thirds (64%) of ninth-grade students in Minnesota reported using alcohol in the past year, compared to 21% in 2019.[64, 65]

Cigarette and e-cigarette use

While use of conventional cigarettes continues to decrease among Minnesota youth, there was a 75% increase in reported use of e-cigarettes between 2016 and 2019 (Figure 48). The most common reasons youth gave for using e-cigarettes included: a friend or family member used them (11%); e-cigarettes come in flavors such as mint, candy, fruit, or chocolate (10%); they were curious about e-cigarettes (8%); e-cigarettes are less harmful than other forms of tobacco (6%); and some other reason (7%).[66]

48. Percentage of Minnesota ninth graders reporting cigarettes or e-cigarettes use in the past 30 days (2019)



Source. Minnesota Student Survey, 2019. Retrieved from https://www.health.state.mn.us/communities/tobacco/data/docs/2019_mss_tobacco.pdf

Most e-cigarette products contain nicotine, which contributes to deficits in cognitive development in youth and is highly addictive.[67] However, even more concerning in recent months are the severe lung injuries, and even deaths, being attributed to e-cigarette use.[68] Unfortunately many youth seem to be unaware of the risks of e-cigarettes with 71% of ninth graders saying there was either no, slight, or a moderate risk to using e-cigarettes.[69]

New analysis from the Minnesota Youth Tobacco Survey at finds that youth with asthma are more likely to use conventional tobacco products or e-cigarettes when compared to youth without asthma. This finding is concerning as youth with asthma who use tobacco are less likely to have their asthma symptoms controlled and may require subsequent medical interventions.[70]

---

64 Minnesota Departments of Education, Health, Human Services, & Public Safety. (2013). Minnesota Student Survey 1992-2013 trends. Retrieved from http://www.health.state.mn.us/divs/chs/mss/trendreports/msstrendreport2013.pdf

65 Minnesota Department of Education. (2019). *Minnesota Student Survey reports, 2019*. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

66 Minnesota Department of Health. (2017). *Minnesota Youth Tobacco Survey frequencies 2017*. Retrieved from https://www.health.state.mn.us/data/mchs/surveys/tobacco/2017_myts_freqs.xlsx

67 U.S. Department of Health and Human Services. (2019). Know the risks: E-cigarettes and young people. Retrieved from https://e-cigarettes.surgeongeneral.gov/knowtherisks.html

68 Siegel, D.A., Jatlaoui, T.C., Koumans, E.H., et al. (2019). Update: Interim guidance for health care providers evaluation and caring for patients with suspected e-cigarette, or vaping, product use associated with lung injury – United States, October 2019. *CDC Morbidity and Mortality Weekly Report*. Retrieved from https://www.cdc.gov/mmwr/volumes/68/wr/mm6841e3.htm

69 Minnesota Department of Health. (2019). 2019 Minnesota Student Survey: E-cigarette and cigarette findings. Retrieved from https://www.health.state.mn.us/communities/tobacco/data/docs/2019_mss_tobacco.pdf

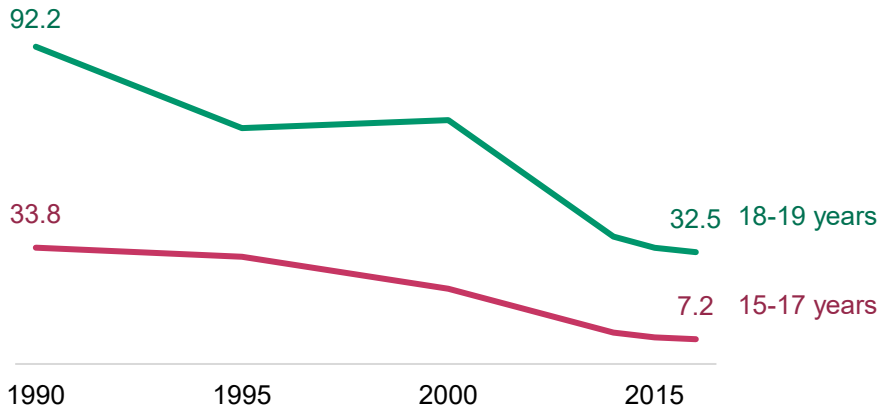
70 Minnesota Department of Health. (2019). *Tobacco use and asthma.* Retrieved from https://www.health.state.mn.us/communities/tobacco/data/docs/0201_tobacco_asthma.pdf

Sexual activity

Teen pregnancy

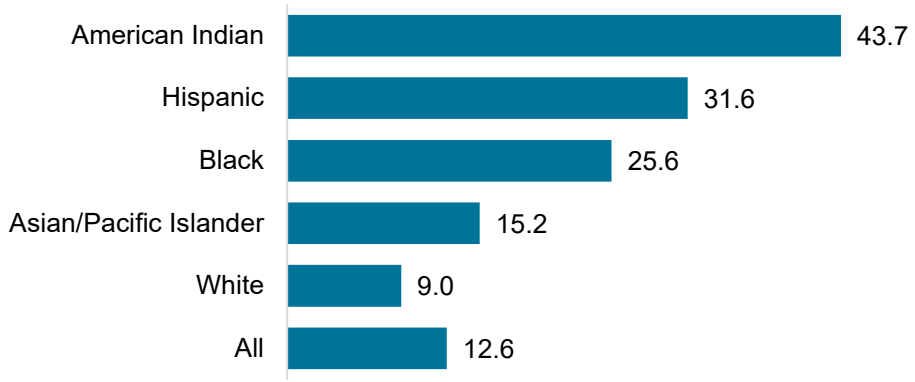
In Minnesota, the teen pregnancy rate has steadily decreased since 1990 (Figure 49). In 2016, there were 755 births to teenagers age 15-17 and nearly three times as many births (n=2,249) to teenagers age 18-19. The same trend in decreased teen births has occurred nationally, likely due to teenagers waiting longer before becoming sexually active and the increased use of more effective contraceptive methods.[71] In Minnesota, birth rates have decreased among adolescents in all racial groups except American Indian youth, which increased by 6% from 2015 to 2016. American Indian, Hispanic/Latina, and black teenagers are more likely to give birth than white teenagers, the racial group with the lowest teen birth rate (Figure 50). Although pregnancy and birth rates are highest among non-white adolescents in Minnesota, the largest number of adolescent births is among white youth.

49. Changes in teen pregnancy, rate per 1,000 females, statewide (1990-2016)



Source. Farris, J., et al. (2018). *2018 Adolescent sexual health report*. Retrieved from the University of Minnesota Department of Pediatrics website: https://www.pediatrics.umn.edu/sites/pediatrics.umn.edu/files/2018_ashr_report_final_0.pdf
Note. The teen pregnancy rate is the number of pregnancies to a specific age group per 1,000 female population of the specific age group.

50. Minnesota teen birth rates, rate per 1,000 females age 15-19, by race/ethnicity (2016)



Source. Farris, J., et al. (2018). *2018 Adolescent sexual health report*. Retrieved from the University of Minnesota Department of Pediatrics website: https://www.pediatrics.umn.edu/sites/pediatrics.umn.edu/files/2018_ashr_report_final_0.pdf
Note. The teen birth rate is the number of births to a specific group per 1,000 female population of the specific age group.

[71] Farris, J., et al. (2018). *2018 Adolescent sexual health report*. Retrieved from the University of Minnesota Department of Pediatrics website: https://www.pediatrics.umn.edu/sites/pediatrics.umn.edu/files/2018_ashr_report_final_0.pdf

Among teenagers age 15-19, pregnancy rates in Ramsey and Hennepin counties are higher than the statewide average (Figure 51). The counties with the highest teen pregnancy rates are the most racially and ethnically diverse counties; the observed differences between counties are due to racial disparities in teen pregnancy rates.

51. Teen pregnancy rates, per 1,000, by county (2016)

County	15-17 years	18-19 years	15-19 years
Ramsey	13.0	42.6	26.4
Hennepin	10.4	38.9	21.9
Anoka	7.3	34.2	16.4
Dakota	4.8	33.6	14.5
Washington	3.7	24.9	10.8
Scott	3.3	26.4	10.5
Carver	1.4	14.9	6.0
Minnesota	8.0	34.5	18.6

Source. Minnesota Department of Health, County Health Tables (2016 natality table). Retrieved from https://www.health.state.mn.us/data/mchs/genstats/countytables/county2016_r1.pdf
Note. The teen pregnancy rate is the number of pregnancies to a specific age group per 1,000 female population of the specific age group. Because of the relatively small numbers of births in some Minnesota counties, pooled data over a 3-year period (2014-16) were used to calculate more reliable rates.

Sexually transmitted infections

Though adolescents (age 15-19) account for only 7% of the population in Minnesota, they accounted for 25% of chlamydia and 18% of gonorrhea cases in 2017.[71] High rates of STIs among this age group are likely the result of limited access to prevention services and lack of comfort seeking services, including concerns about confidentiality.

The chlamydia incidence rate for adolescents (age 15-19) has increased between 2007 and 2017 (from 1,071 to 1,606 adolescents infected per 100,000 population). Gonorrhea incidence rates have fluctuated over the same period, but are now at the highest rates in over 10 years (316 adolescents infected per 100,000 population). STIs are more common among black, American Indian, and Hispanic/Latino adolescents than among Asian or white adolescents.[72]

LGBTQ Youth

On most mental, physical, and sexual health measures, adolescents who identify as LGBQ have worse outcomes than their heterosexual peers. In 2019, 19% of Minnesota ninth graders identified their sexuality as something other than heterosexual (Figure 52). Mental health issues impact a majority of this population, with 60% of ninth graders who identified as gay, lesbian, or bi-sexual reported having long-term mental, behavioral, or emotional health problems. Additionally, 8% of Minnesota ninth graders reported being bullied because they are gay, lesbian, or bisexual or because someone thought they were.[73] Higher rates of abuse and harassment at home, at school, and in the community contribute to these mental health disparities. One indicator of the increased

[72] Farris, J., et al. (2018). *2018 Adolescent sexual health report*. Retrieved from the University of Minnesota Department of Pediatrics website: https://www.pediatrics.umn.edu/sites/pediatrics.umn.edu/files/2018_ashr_report_final_0.pdf

[73] Minnesota Department of Education. (2019). *Minnesota Student Survey reports, 2019* [data tables]. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

harassment and rejection LGBTQ youth face is the sizeable percentage of homeless young adults (age 18-24) who identify as LGBTQ. (22%)[74] Physical health is also a concern for LGBTQ youth, with 17% being obese and less than one-third getting the recommended amount of weekly physical activity.[75]

52. Sexual orientation of Minnesota ninth grade students (2019)

Sexual Orientation	%
Heterosexual	77%
Bisexual	5%
Questioning/not sure	2%
Pansexual	2%
Gay or Lesbian	1%
I don't identify myself in any of those ways	9%
I don't understand the question	2%

Source. Minnesota Student Survey. 2019. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=242

Minnesota transgender youth experience marked health disparities, yet they access health care less than cisgender youth. In 2019, 3% of Minnesota ninth graders identified themselves as transgender, genderqueer, gender fluid, or unsure about their gender identity (TGNC). Sixty-two percent of TGNC youth reported their general health as poor, fair, or good (compared to 33% of cisgender youth) but also reported lower rates of preventive health check-ups than cisgender youth, suggesting TGNC youth face barriers to accessing the health care system.[76] For TGNC youth, schools can be places of harassment and victimization, as they are seven times more likely to report bullying about their gender compared to their cisgender peers, and 42% report experiencing sexual harassment in the past 30 days (Figure 53).[77] Harassment and a lack of support at school and home leads to serious mental health issues for many TGNC youth, as they are three times more likely than their cisgender peers to report thoughts of suicide and five times more likely than their cisgender peers to attempt suicide.

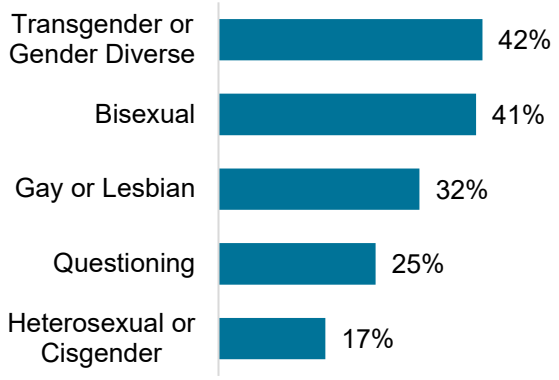
74 2018 Minnesota Homeless Study: Statewide report of adults experiencing homelessness. Retrieved from Wilder Research website: https://www.wilder.org/sites/default/files/imports/2018_HomelessStudy_CharacteristicsFactSheet_5-19.pdf

75 Minnesota Department of Health. (2017). 2017 Minnesota statewide health assessment. Retrieved from https://www.health.state.mn.us/communities/practice/healthymnpartnership/docs/2017MNStatewideHealthAssessment.pdf

76 Rider, G., McMorris, B, Gower, A, Coleman, E, & Eisenberg, M. (2018). Health and care utilization of transgender and gender nonconforming youth: A population-based study. *Pediatrics, 141*(3). Retrieved from https://pediatrics.aappublications.org/content/pediatrics/early/2018/02/01/peds.2017-1683.full.pdf

77 University of Minnesota Department of Pediatrics. (2017). *What are we learning about Minnesota high school students who identify as transgender or gender non-conforming (TGNC)?* Retrieved from https://www.pediatrics.umn.edu/sites/pediatrics.umn.edu/files/tgnc_quick_fact_sheet.pdf

53. Percentage of Minnesota students reporting sexual harassment in the past 30 days, by sexual orientation and gender identity (2016)



Source. Farris, J., et al. (2018). 2018 Adolescent sexual health report. Retrieved from the University of Minnesota Department of Pediatrics website: https://www.pediatrics.umn.edu/sites/pediatrics.umn.edu/files/2018_ashr_report_final_0.pdf

Practices that support and affirm TGNC youth include using gender-neutral language, asking youth their pronouns, providing staff training on TGNC youth, and rethinking and redesigning gender binary spaces (like bathrooms).

Considerations for interpreting secondary data

Overall

We recognize that many different cultural communities fall within each race/ethnicity category, and there is diversity in experience and perspective within each cultural community. Most secondary data sources report estimates based on responses provided by a sample of community residents. Often, potential disparities are reported using broad cultural or socioeconomic categories, which does not capture the diversity of opinions and experiences of residents. The data provided in this summary are a starting point to better understand factors that contribute to health and well-being in the Twin Cities metro. However, there are limitations in the data available. The race and ethnicity categories used in this report are intended to be more detailed and reflective of the backgrounds of residents who live in the Twin Cities metro, but are imperfect. Further, reported differences between populations reflect the varied experiences of residents, including the many ways that immigration, housing, education, employment, and other policies have impacted specific racial and ethnic groups.

American Community Survey data

The demographic data presented in this summary are largely from the American Community Survey (ACS). The U.S. Census Bureau administers this survey to a sample of residents and the sample is weighted in order to calculate estimates for the population. Throughout this summary, we present the most detailed data available. However, there are limitations in the degree to which race and ethnicity data can be disaggregated while still providing reliable estimates at a more local (county or neighborhood) level or in counties where relatively few people of the same racial or ethnic community live. Therefore, in some tables, estimates are suppressed because there are not enough residents of a racial or ethnic community to calculate a reliable estimate. Most ACS data reported in this summary cite a date range (e.g., 2013-17) rather than a single year; the U.S. Census Bureau uses averaged data from a 5-year period to calculate the most reliable estimates possible. Health indicator data for young children and adolescents is from a variety of sources including Minnesota Student Survey, Minnesota Department of Health Public Health Data Access Portal, and other state and federal data sources.

Minnesota Student Survey data

The Minnesota Student Survey (MSS) is cited frequently in this summary, as it includes questions that consider child health and well-being holistically. The MSS is administered every three years to students in selected grades throughout the state; individual survey items and grade levels of students asked to participate have changed over time. This summary includes data from MSS results from 2013, 2016, and 2019 (the most recent survey results available). Some survey instrument questions changed between 2013, 2016, and 2019. While most questions stayed the same, other questions were updated with changes to the question or response options. We present results from the ninth grade survey because all MSS items are asked of these young adolescents and the response rate for students at this grade level is higher than for older students. Although these surveys are given repeatedly over time, student populations may change between administrations of the survey. Caution must be used when making comparisons over time. Two limitations when interpreting information from this data source include:

- In 2019, the Minnesota Department of Education provided schools and parents copies of the MSS in Spanish, Somali, and Hmong for consent purposes, but the survey was only administered to students in English. Schools and districts with students who were not proficient in English were asked to provide accommodations for students to take the survey. In schools that could not develop translations or provide interpreters, the survey results may not adequately reflect the opinions and experiences of students who receive English Learner (EL) services.
- In 2019, over 81% of Minnesota's school districts participated. Chanhassen Public Schools (Eastern Carver County Public Schools) decided to opt out of the MSS in 2019. Data from this county are included in the summary, but should be interpreted with caution as they exclude the opinions and experiences of large numbers of students. Additionally, only a small sample of Minneapolis Public Schools (a district where nearly two-thirds of students are youth of color) participated. Because these students and potentially some English Learner students were not included, the MSS does not report response rates by race and ethnicity at the county level.

Primary data collection

As part of the 2019 CHNA process, multiple stakeholder groups were asked to consider whether the health topic areas prioritized through the 2016 CHNA continue to be community needs that should be addressed by Children's Minnesota. All groups were invited to identify additional emerging or unmet health needs within the community. The following sections provide a summary of each primary data collection activity including community stakeholder interviews, Children's Minnesota staff discussion groups, a survey of Children's Minnesota providers, and caregiver focus groups.

Community stakeholder interviews

Children's Minnesota staff conducted semi-structured interviews with 41 community stakeholders or stakeholder groups who work closely with children and families. Children's Minnesota staff identified stakeholders because they see them as having critical perspectives on children's health and are able to speak to the needs of children from specific geographic and/or cultural communities. These stakeholders represented multiple sectors, including school districts, local nonprofit organizations, faith communities, and neighborhood associations. Stakeholders were asked to reflect upon the current state of health priorities identified by Children's in 2016, and to identify what emerging health issues they are seeing in the communities they serve.

Existing health priorities

Stakeholders were informed about the six health priority areas Children's has been working to address since the 2016 CHNA: structural racism, mental health and well-being, income and employment, asthma, education, and access to resources. They were then asked to share which issue or issues they felt were most important to address and why. Mental health and well-being and structural racism were the priority areas that were most frequently named by community stakeholders. Access to resources and income and employment were also frequently identified as significant issues. Community stakeholders did not prioritize asthma and education as often. The following outlines the ways in which community stakeholders perceived these issues to be present in their community and implications for their presence. Bulleted items in each area reflect the main themes identified during the community stakeholder interviews.

Mental health and well-being

- Overall, the mental health system cannot provide needed services due to a lack of resources in the community and a lack of infrastructure.
- American Indian and immigrant and refugee communities are, or have been, more likely to experience trauma, yet there are limited culturally appropriate providers and information to meet their needs.
- Children living in lower-income areas have more difficulty gaining access to mental health services to get assessments, obtain a diagnosis, and get necessary medications, even though they more often experience chronic stress due to community violence or chronic/episodic poverty. In addition, many children experience racial discrimination.

- Specific mental health or behavioral concerns include depression, anxiety, trauma, and substance abuse disorders such as opioid or heroin use.

Structural racism

- Community stakeholders consistently pointed to structural racism as the way in which policies and practices were designed to intentionally deny certain communities access to opportunities and resources that support advancement and success. Structural racism shapes the environment in which people live and ensures that certain communities continuously feel devalued.
- The following are examples of the impacts of structural racism that appear in the community today: providers do not represent the communities they serve (e.g., few providers of color) which contributes to implicit bias; services are not culturally appropriate; substance use and chronic stress are high in African American and American Indian communities due to persistent structural racism and historical trauma.

Access to resources

- Many stakeholders viewed insufficient access to resources such as housing, healthy foods, employment opportunities, and education/schooling as a fundamental problem.
- A number of community stakeholders specifically identified a lack of access to insurance and/or health care as a specific barrier for the populations they worked with.

Income and employment

- Income and employment were seen as important health issues; however, community stakeholders most often focused on how the lack of income and employment opportunities in their communities contributes to poverty. Some spoke specifically to deep poverty that is present in Indigenous communities and in African American communities that contributes to cycles of intergenerational poverty.
- Income and employment are also issues for families who are lower income, but who may not be living in poverty. Community stakeholders reported that parents in these families often work two or three minimum wage jobs, often with poor benefits, and struggle to consistently maintain stable housing and transportation.
- Respondents felt that a lack of income and employment exacerbates issues around access to resources such as health care and healthy food.

Education

- Fewer community stakeholders identified education as one of the most important health issues to address, when compared to other existing health priority areas.
- Several respondents indicated that parents who had limited educational opportunities now experience greater challenges obtaining employment and adequate income, which then negatively impacts children. Today's children will be impacted the same way if the issue is not addressed.
- Those identifying education as a significant issue focused on inequities and discrimination within the education system, such as racial disparities in disciplinary action, access to early childhood education, and access to tutoring and enrichment opportunities outside of school.

Asthma

- Asthma was mentioned as an issue that still impacts children. However, stakeholders did not see it as a priority in the same way as other health issues. This could be due in part to the fact that the other health issues are larger, systemic issues that contribute to asthma, but also because stakeholders acknowledged that interventions are in place to address asthma, even if they don't always address it in full.

Emerging health issues identified

After community stakeholders shared their perspectives on the importance of existing health priorities, they were asked what health topics or emerging issues they felt Children's should be aware of or consider as a priority in 2019 and why. The main topics identified include culturally responsive services, housing, food and nutrition, stress and trauma, and parental education. The following outlines the ways in which community stakeholders perceived these issues to be present in their community and implications for their existence.

Culturally responsive services

- Many community stakeholders discussed the importance of culturally responsive services and resources for supporting community health.
- Stakeholders often pointed to the following things as being important components of culturally responsive services and resources: staff who are representative of the community served; overall cultural competency and sensitivity of staff; staff who speak the same languages as the community they serve; and ensuring access to services that align with cultural practices. Stakeholders noted that the lack of these culturally responsive services and resources are barriers to community health.

Housing

- Housing was often mentioned as an emerging health concern that impacts the community because it is a fundamental need that all people have. Stakeholders discussed their concerns related to housing in a variety of ways, including: housing instability, lack of affordable housing, poor quality housing, housing in unsafe neighborhoods, housing that is not culturally appropriate (e.g., cannot accommodate family sizes), gentrification and displacement of families, and homelessness.
- Some stakeholders felt a lack of affordable housing causes significant stress for families and increases the likelihood that they may have negative interactions with service systems.
- Some stakeholders expressed concern about how a family's lack of stable or quality housing makes it difficult to be healthy overall, and even more difficult to manage chronic conditions.

Food and nutrition

- Access to healthy foods was a common theme among community stakeholder responses. A family may have difficulty accessing food due to their location (not near stores with an adequate selection of food or not near food shelves) or due to a lack of financial resources.
- Educating parents and children about healthy eating and nutrition is important to ensure that families who do have access to food are utilizing the resource in the most productive way possible to support their health.

- Stakeholders identified how food access and knowledge is important for overall well-being, but is also important when it comes to managing specific physical and behavioral health conditions such as diabetes and attention-deficit/hyperactivity disorder (ADHD).

Stress and trauma

- While some stakeholders discussed stress and trauma as part of mental health and well-being, others identified stress and trauma as independent issues.
- Community stakeholders felt long-term exposure to stress and trauma can eventually lead to physical and mental health problems due to how the stress puts strain on people's bodily systems over time.
- Stakeholders felt stress and trauma most often are the result of community members having to interact with child protection, education, and criminal justice systems that often discriminate against certain communities, as well as having to endure racism in day-to-day interactions.
- Stakeholders observed that stress and trauma has become more prominent for immigrants and refugees, especially Latinos, due to current political rhetoric and changes in federal immigration policies.

Parent education

- Parent education was another health issue identified by stakeholders important to address. Stakeholders felt that gaps in parental knowledge in topics such as healthy eating, physical activity, and managing medical conditions can negatively impact the health and well-being of children now and in the future.

Children's Minnesota staff discussion groups

Wilder Research facilitated discussion groups with staff at both the Minneapolis and Saint Paul campuses in February 2019. Staff were asked about their perceptions of family needs related to Children's existing priority areas (developed in 2016), and what other needs are prominent among the children and families they work with. Staff who participated in these discussions included community liaisons, mental health practitioners, Community Connect staff, social workers, case managers, family resource coordinators, interpreters, patient experience coaches, and legal services staff.

Importance of existing health priorities

Structural racism (primarily) and **income and employment** (secondarily) were most often identified as key fundamental issues that must be addressed to improve all other areas of a child and family's life.

- Structural racism impacts key activities that support health, including a family's ability to earn income and how children and parents access community and clinical services.
- Adequate income allows families to address the environmental factors that impact health (transportation, housing, food, etc.), and to ensure access to medical services.

Many staff felt basic resources are typically available, however **access to resources** is limited due to barriers families experience or a lack of culturally responsive resources.

- Immigrant and refugee communities are unable to access appropriate resources due to barriers resulting from cultural concepts and language.
- Families receive referrals for community services, but it can be difficult for them to follow through on the referral independently. Children's staff who work with families receiving referrals may not have enough time available to provide the additional support.
- A lack of communication and familiarity with available resources among Children's staff results in families having difficulty accessing resources that exist within Children's.
- Some Children's Minneapolis staff felt the growth of the Minneapolis location has made it more difficult for families to access resources.

A majority of Children's staff identified **mental health** as a key health issue. Identifying and understanding mental health conditions is significantly influenced by patient culture. Staff identified a few key concerns:

- Immigration status is exacerbating mental health issues and overall stress.
- Providers not specializing in mental health may not have adequate information to proactively identify potential mental health issues.
- Lack of community resources may push more youth to address mental health concerns through inpatient services, which are already in short supply.

A small number of staff discussed **asthma** as a health issue.

- Staff identified the connection between environmental factors (smoking and mold) and asthma.

A small number of staff discussed **education** as a health issue.

- Staff briefly discussed how schools play a role in a child's health, such as managing asthma or other conditions through school nurses.

Emerging health issues identified

Listed below are the main emerging health issues and relevant concerns identified during the staff discussion groups.

Housing

- There is a lack of safe, affordable housing.
- Children and their families cannot achieve optimal health while living in a shelter or inadequate housing that has mold, pest infestation, lack of space, lack of heat/AC, or is in an unsafe neighborhood.

Immigration/legal

- Staff feel immigrant and refugee communities (particularly Latino) are not accessing care or appropriately accessing care due to the current political environment and recent changes in federal immigration policies.
- Staff feel immigrants are also more likely to be exploited by property owners or to live in poorer housing in order to avoid drawing attention to themselves.
- Immigrants do not understand their legal rights, which may result in them being taken advantage of.

Culturally appropriate services and resources

- While staff acknowledged Children's has been making efforts to provide culturally responsive care, staff indicated that the persistent lack of those services and resources still makes it difficult for families to get the services they need in many areas.
- There is a lack of staff diversity related to languages spoken as well as a shared cultural identity.
- Resources are not always translated or services explained in a way that takes into consideration a family's cultural identify.

Parental education

- Parents need education so they can support their child's health and well-being.
- Staff felt the following types of education are important for families to improve children's health: how environmental factors impact health conditions, like asthma and smoke; how to administer medications; how to manage insurance; and understanding legal rights.
- Culturally specific informational materials are not always available, which makes educating families difficult.

Food

- While Children's already has some services available to address food insecurity, staff felt it is a persistent issue that will be difficult to address by just providing food. Additional support around education about nutrition, as well as addressing fundamental issues contributing to food insecurity (e.g., income) are needed.
- Food provided in the hospital/clinic is not always seen as healthy or culturally appropriate.

Obesity

- Some staff expressed concern about obesity among children. They felt that it is compounded by parents not having the time and/or money to provide healthy food and to ensure children are getting physical activity.
- Several staff felt Vida Sana[78] was a very helpful program and could still benefit the community.

Transportation

- Families lack transportation, which makes it difficult to follow-up on referrals, attend appointments, and access education and healthy food.

Insurance

- Parents lack of insurance leads to poor health, which negatively impacts children.
- Immigrant families may not be highly motivated to seek and maintain insurance because they may not be fully aware of the potential financial risks of not being insured.

[78] Vida Sana is a Children's Minnesota community-based wellness initiative that helps Latino families in Minneapolis improve their health and well-being free of charge.

Children's Minnesota provider survey

A select group of Children's Minnesota providers and some staff received an online survey via email in the summer of 2019. These providers and staff included clinic managers, physicians, social workers, and nurse practitioners. They worked in a variety of locations (Minneapolis, Saint Paul, and suburban communities) and settings (emergency departments, inpatient setting, primary care, and specialty clinic care). Respondents were asked to provide their perspectives on the importance of continuing 2016 priorities, perceptions of emerging health issues, and what barriers families experience to health and wellness. The survey was sent to a total of 169 providers and staff; 41 participated in the survey for a 24% response rate. The low response rate may be due to survey fatigue among potential respondents, as Children's Minnesota had conducted several other provider and staff surveys in the preceding months. Information from the provider survey is intended to supplement other primary data collection and secondary data review. Given the lower than anticipated response rate it is unlikely the results represent the experiences of all Children's staff.

While respondents had the opportunity to share their views on a variety of important aspects of patient and community health, caution should be exercised when using this data as a small number of providers responded and each question was not answered by all respondents. However, this data is still valuable to the CHNA when used alongside other primary and secondary data points.

Importance of existing health priorities

Survey respondents were asked to think about the following six priority needs identified in the 2016 CHNA: asthma; mental health and well-being; access to resources; income and employment; and structural racism. They were also asked to consider what other emerging issues, trends, or concerns they see as impacting the health and well-being of youth and families.

Mental health and wellness is the highest ranked health priority. Almost all survey respondents "strongly agree" or "somewhat agree" that mental health and well-being should continue to be one of Children's health priorities (98%). This is followed by asthma and education with 95% "strongly" or "somewhat" agreeing they should continue as health priorities. Ninety-three percent "strongly agree" or "somewhat agree" that structural racism should be a continued focus, while 93% felt that access to resources should also continue with three in four survey respondents "strongly" agreeing. Fewer respondents agree that income and employment should continue as a health priority (86%; Figure 54).

54. 2016 health priorities to continue

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know
Mental health and well-being	88%	10%	2%	0%	0%
Access to resources	75%	18%	5%	0%	3%
Asthma	63%	32%	2%	0%	2%
Education	54%	41%	2%	0%	2%
Income/employment	49%	37%	7%	0%	7%
Structural racism	23%	70%	5%	3%	0%

Providers were then asked what Children's Minnesota could do to better address the 2016 health priorities. Suggestions could include small improvements or large changes that take place at Children's or through its work with community partners. The suggestions provided for each priority area were coded into common themes. The most common types of responses for each health priority are outlined below; the full list of responses is located in the Provider Survey Data Tables section.

Health Priority *(number of staff who suggested improvements)*	**Type of suggestions for improvements to address priorities**
Mental health and well-being *(n=39)*	– Create/expand/improve the mental health unit – Increase social work support and resources – Improve support/care for youth waiting for inpatient psychiatric services – Provide training for clinicians and staff on mental health
Access to resources *(n=22)*	– Continue/expand Community Connect – Build community relationships with programs providing resources – Need more resources/social worker support
Structural racism *(n=28)*	– Provide/continue discussion/education about diversity/structural racism – Recruit/hire diverse professional staff – Examine/research racial disparities/practices in our clinic/hospitals
Income and Employment *(n=14)*	– Lobby/petition/speak out about income equality/minimum wage increases – Improve Community Connect services by adding educational, employment, and other resources – Recruit/retain diverse workforce
Education *(n=17)*	– Improve connections with student's educational team/school – Improve educational opportunities for hospital doctors/staff – Provide opportunities to address patient educational needs at Children's or within the community – Lobby/support early childhood education
Asthma *(n=27)*	– Understand/support the elimination of asthma triggers – Improve/increase education to families/clinics – Improve procedures/access to asthma medication – Improve/increase education to community/schools

Emerging health issues identified

All respondents were asked what issues or important trends impacting the health and well-being of children Children's should be aware of and consider in 2019. Twenty-one shared at least one topic they feel is an emerging health concern. Suggestions provided were wide-ranging and there was not one main issue identified by the majority of respondents. The most frequently mentioned issues are outlined below. The full list of responses is located in the Provider Survey Data Tables section.

- Social media/social bullying/bullying (24%)
- Immunization hesitancy (14%)
- Gun violence prevention (14%)
- The need to improve treatment processes for children (10%)
- Obesity (10%)
- Access to health care (10%)
- Impact of anxiety on children (10%)
- Lack of housing and food for children (10%)

Barriers to health and wellness

The availability of community resources, neighborhood conditions, economic circumstances, and experiences of discrimination, trauma, or abuse are all issues that can be barriers to health and well-being. Forty providers responded to the following questions about barriers to health and wellness. Respondents were asked to rank the significance of the following barriers based on the conversations they had with patients or their caregivers. The concerns most often identified as major barriers are outlined below; the full list of responses is located in the Provider Survey Tables section.

- Chronic stress (80%)
- Housing instability, difficulty accessing affordable housing (78%)
- Poverty (78%)
- High health care costs (60%)
- Quality of living conditions (60%)
- Racism, prejudice, hate, discrimination (58%)
- Trauma, including historical trauma (58%)
- Limited reliable transportation options (58%)

When asked, 38% of respondents said they "always/very often" include discussing barriers as part of the conversation they have with patients or caregivers. The rest reported that they "sometimes" discuss barriers with their patients or caregivers.

Community assets, resources, and strengths

One-third of respondents reported that they "always or very often" include community and cultural resources as part of the conversation they have with patients or their caregivers (33%). Just over half reported that they "sometimes" discuss this with their patient or caregiver (53%), 13% reported that they "rarely or never" discuss this with their patient or caregiver, and 3% were not sure.

Twelve of the 41 respondents provided topic areas that they would be interested in knowing more about in order to better serve patients and their families. The topic areas that those respondents were most interested in knowing more about included financial support resources (3 respondents), existing resources (3 respondents), culturally specific resources (3 respondents), and housing (2 respondents).

Provider survey data tables

The following tables (Figures 55-61 and 63) present the frequency with which responses were provided to open-ended questions. Respondents could provide more than one response, so totals may be greater than 100%. Given the number of respondents, this data should not be interpreted as representative of all Children's staff.

55. What can Children's do to better address mental health and well-being?

N=39	Percent
Create/expand/improve the mental health unit	36%
Increase social work support and resources	19%
Improve support/care of youth waiting for inpatient psychiatric beds	15%
Provide training for clinicians and staff around mental health	15%
Include mental health professionals in primary care clinics	8%
Advocate/lobby for more mental health beds	5%
Increase efforts to place mental health patients	5%
Encourage better quality of life	3%
Reduce hypersensitivity/stigma	3%
Streamline care for specific diagnosis	3%
Consider notation about mobile crisis unit	3%

56. What can Children's do to better address access to resources?

N=22	Percent
Continue/expand Community Connect	41%
Build community relationships with programs providing resources	27%
Need more resources/social worker support	23%
Other	18%

57. What can Children's do to better address structural racism?

N=28	Percent
Provide/continue discussion/education about diversity/structural racism	57%
Recruit/hire diverse professional staff	36%
Examine/research racial disparities/practices in our clinic/hospitals	11%
Not an issue at Children's	4%

58. What can Children's do to better address income and employment?

N=14	Percent
Lobby/petition/speak out about income equality/minimum wage increases	29%
Improve Community Connect services (add educational, employment, and other resources)	29%
Recruit/retain diverse workforce	21%
Have MFIP worker/Financial Resource Counselor available at hospital	14%
Increase salary base/keep on par with national salaries	14%
Establish consistent/more aggressive screening of families to be referred to Community Connect	14%

59. What can Children's do to better address education?

N=17	Percent
Improve connections with student's educational team/school	29%
Improve educational opportunities for hospital doctors/staff	24%
Provide opportunities to address patient educational needs at Children's or within the community	24%
Lobby/support early childhood education	12%
Stronger financial commitment	6%
Pay families for having kids attend school	6%
Partner with school to study school-based interventions.	6%

60. What can Children's Minnesota do to better address asthma?

N=27	Percent
Understand/support the elimination of asthma triggers	26%
Improve/increase education to families/clinics	22%
Improve procedures/access to asthma medication	22%
Improve/increase education to community/schools	15%
Increase access to pulmonary staff	7%
Provide ED doctors with access to pulmonary notes	4%
Support efforts suggested by the asthma committee	4%
Develop a nursing position to follow-up with families	4%

61. What other emerging issues or important trends impacting the health and well-being of children should Children's be aware of in 2019?

N=21	Percent
Social media/social bullying/bullying	24%
Immunization hesitancy	14%
Gun violence prevention	14%
The need to improve treatment processes for children	10%
Obesity	10%
Access to health care	10%
Impact of anxiety on children	10%
Lack of housing and food for children	10%
Issues with using telemedicine	5%
The LGBTQ community	5%
Expand education and outreach	5%

62. Barriers to Health and Wellness

N=40	Major barrier	Somewhat of a barrier	Small barrier	Not a barrier	Don't know/ not sure
Chronic stress	80%	13%	5%	0%	3%
Housing instability/difficulty accessing affordable housing	78%	20%	0%	0%	3%
Poverty	78%	20%	3%	0%	0%
High health care costs (e.g., insurance premiums, appointment co-pays, prescription costs)	60%	38%	3%	0%	0%
Quality of living conditions	60%	35%	0%	0%	5%
Racism, prejudice, hate, discrimination (including both individual systemic/structural experiences)	58%	30%	5%	3%	5%
Trauma, including historical trauma	58%	30%	3%	3%	8%
Limited reliable transportation options	58%	38%	5%	0%	0%
Lack of health insurance	40%	35%	18%	3%	5%
Limited access to affordable, healthy foods in neighborhood	38%	33%	18%	3%	10%
Crime and community violence	33%	58%	3%	5%	3%
Inadequate school resources/opportunities for quality education	23%	53%	13%	5%	8%
Limited employment options	20%	58%	13%	3%	8%
Neighborhood police presence	18%	33%	13%	13%	25%
Limited access to parks, recreation centers, and other places to exercise	18%	30%	30%	10%	13%
Environmental conditions, including air quality	10%	50%	25%	3%	13%
Pedestrian and bicyclist safety, including the availability of sidewalks and bike paths	10%	28%	35%	13%	15%
Traffic safety, including speeding and drunk driving	3%	38%	38%	3%	20%

Note: This table reports information that was collected via closed-ended questions. Total may not equal 100 due to rounding.

63. What community resources, assets, and strengths, if any, would you like to know more about in order to better support patients and their families?

N=12	%
Financial support resources	25%
Existing resources	25%
Culturally specific resources	14%
Housing	17%
Insurance issues	8%
Employment	8%
Coordination of care	8%
Safe places for children	8%
Free adult education	8%
How to engage parents	8%

Caregiver focus groups

Children's Minnesota staff worked with two local community partners (American Indian Family Center and Parents In Community Action) to organize two focus groups to inform the CHNA. A total of 19 caregivers participated. Caregivers were asked to discuss what needs most impact their community and family. Information from caregiver focus groups is used as a supplement to the other primary data collection and secondary data review. Because only two focus groups were conducted and participants came from specific cultural communities, responses may not be representative of the experiences of all families potentially reached by Children's.

Below are the main themes identified during the caregiver focus groups.

Mental health concerns

- A number of caregivers discussed specific mental health conditions their children have that they find difficult to manage. Several of these caregivers have had difficulty accessing health care services to effectively address their child's needs. Caregivers were more concerned about how their child's mental health needs are not being addressed appropriately while in school, such as having a space where children with mental health needs can eat lunch or get support when not in a special education classroom.
- Many caregivers also mentioned their concerns about generalized stress and anxiety among children in their community. They felt children might have to deal with difficult situations in the community and do not have the coping skills or support necessary to successfully navigate those challenges.

Culturally appropriate services

- Many caregivers reported that services and providers are not always sensitive to their cultural values or traditional practices. They feel that this makes it more difficult for their children to get the services they need even if they have access.
- Several caregivers discussed how the lack of culturally sensitive informational materials prevents some caregivers from understanding how and why certain medical services need to be done for their children.

Community instability

Caregivers shared a variety of unique perspectives related to the 2016 health priority areas and other areas of concern for the community through stories about their own experiences. Overall, caregivers talked about the ways community instability is making it difficult for their children to be healthy. The two main factors discussed were structural racism and access to services and resources.

- **Structural racism**. The American Indian caregivers who participated in the focus groups felt the instability within their community is the result of the systems and policies in place that have discriminated against them for generations.
- **Accessing services and resources**. A number of caregivers mentioned how they cannot readily access necessary services within their community. Others discussed how support services and resources might be provided for a period of time, then due to policy or funding changes, the service is taken away without a plan to fill the gap in the community.

Other concerns that were discussed to a smaller degree include inadequate housing and substance use.

Community Discussion Boards

To hear from children and families during the community health needs assessment (CHNA) process, Children's Minnesota staff posted discussion boards at community events as well as in the Children's Minneapolis and Saint Paul general pediatrics clinics. The discussion boards prompted children and families to finish the sentence:

Children who are healthy _____.

The prompt was written in multiple languages (English, Hmong, Somali and Spanish) and people were invited to answer the question in any language. More than 640 people added their written comments to the discussion boards and each response was entered into a spreadsheet by location and displayed in a word cloud. The comments shared at all events and locations showed that children and families described health holistically to include physical and mental health, connections with others, and engaging in healthy behaviors. Most of the comments focused on strengths, assets, and engaging in healthy activities rather than describing health as the absence of illness or other problems.

Discussion boards were posted at the following events and locations:

Event	Location	Date
Cinco de Mayo	Westside, Saint Paul	May 2019
American Indian Wellness Fair	Phillips, Minneapolis	May 2019
Mall of America Health & Safety Fair	South Loop District, Bloomington	June 2019
Juneteenth	Camden, Minneapolis	June 2019
Somali Independence Day	Powderhorn, Minneapolis	June 2019
Children's Minnesota – Minneapolis clinic	Phillips, Minneapolis	July 2019
Children's Minnesota – Saint Paul clinic	Ford Road/West Seventh, Saint Paul	July 2019
CLUES Fiesta Latina	Dayton's Bluff, Saint Paul	August 2019
Minneapolis Urban League Family Day	Near North, Minneapolis	August 2019
Open Streets – Franklin	Phillips, Minneapolis	August 2019

The word cloud image below captures responses provided by more than 640 people at community events and Children's clinics. The most frequently used words and/or phrases are generally the largest.

Relevant public health efforts in the community

Local public health departments in the Twin Cities region also conduct regular assessments of community health (all ages) to identify health priorities and inform their efforts to improve health. In a review of the most recent Community Health Improvement Plan (CHIP) reports completed by Wilder Research, the following goals, directly related to health and wellness of young children, were identified (Figure 64). These may offer initial opportunities for collaboration. Through a series of community stakeholder interviews and ongoing outreach and engagement with community partners, Children's Minnesota will also be identifying additional opportunities for collaboration and partnership identified by these local organizations and residents as most important to their community.

64. Relevant public health goals to improve the health of school-age children and adolescents

Local public health department(s)	Years	Goal
Anoka County	2015-19	Promote mental health prevention, education, and access to services*
	Revised in 2016	Address homelessness and shortage of affordable housing*
		Address violence and safety for all ages*
		Reduce obesity across all age groups*
Carver County	2015	Reduce underage alcohol consumption among students by changing the idea that it is simply a "rite of passage"
	Updated 2018	Build on successful partnership with Waconia Public Schools (HERO Coalition) and the Drug Free Communities Support grant to launch comparable programs at other K-12 schools in the county.
		Increase physical activity and opportunities to access local produce (increase number of farmers markets promoting Power of Produce (POP) Club and accepting SNAP/EBT benefits)*
Dakota County	2014-19	Reduce the percentage of preschool children who are obese
		Reduce the percentage of children and adolescents (9th grade students) who are obese
		Reduce the percentage of 9th graders who attempted suicide in the past year; Increase the percentage of youth who receive treatment for mental distress
Hennepin County; Cities of Bloomington, Edina, Richfield; City of Minneapolis	2019-23	Reduce disparity in frequent mental distress reported by people of color and families/households experiencing housing insecurity (both to align with Health People 2020 goals)*
		Reduce the disparity in social connectedness and neighborhood cohesion reported by people of color and families/households experiencing housing insecurity (both to align with Health People 2020 goals)*

Local public health department(s)	Years	Goal
Ramsey County	2014-18	Reduce the percentage of children (age 0-18) living in poverty
		Increase the percentage of high school students who graduate within 4 years
		Increase the percentage of ninth graders who: a) eat 4+ fruit/ vegetable servings each day; b) get moderate physical activity for at least 60 minutes 5 or more days a week
		Decrease the percentage of Hispanic females reporting suicidal ideation
		Decrease the percentage of: a) ninth graders who have been bullied; b) female students who have been "hit, hurt, or threatened" by someone they are dating; c) students of color who have ever been "hit hard or often"
		Increase the utilization of preventive services (defined as Child and Teen Check-ups) by 2%, among publicly insured Ramsey County teens
Scott County	2015-19	Increase access and availability of fruits, vegetables, and physical activity options for school-age children
		Reduce effects of Adverse Childhood Experiences
		Increase children's access to professional dental care
Washington County	2014	Increase the prevalence of youth who: a) eat the recommended number of servings of fruits and vegetables and b) meet guidelines for moderate physical activity
	New plan will be developed in 2019	Reduce the number of 12th graders (under age 18) who smoke
		Reduce suicide attempts among ninth grade students
		Increase portion of youth who experience social and emotional support from adults at school

Note. Items with an asterisk (*) have an unspecified age target or include adults as priority populations.

Supplemental tables and maps

Detailed characteristics of children in key neighborhoods

65. Demographic characteristics of children living in key neighborhoods served by Children's Minnesota (2018)

	Phillips (Minneapolis)	Powderhorn (Minneapolis)	West Side (Saint Paul)	Thomas-Dale (Saint Paul)	Dayton's Bluff (Saint Paul)
Number of children (age 0-17)	7,273	12,832	4,420	5,127	5,588
Percentage served by Children's MN	40%	33%	28%	26%	22%
Race					
African American/black	47%	32%	18%	40%	20%
American Indian	6%	**	**	**	**
Asian/Pacific Islander	3%	2%	7%	37%	39%
Caucasian/white (non-Hispanic)	6%	21%	25%	10%	20%
Two or more races	3%	10%	10%	9%	12%
Other race[a]	19%	22%	22%	**	**
Ethnicity					
Hispanic[b]	38%	38%	40%	5%	12%
Nativity					
Born outside of U.S.	40%	23%	18%	32%	24%
Socioeconomic status					
Percentage of children living in poverty (age 0-17)	81%	60%	67%	74%	69%
Percentage of children living in poverty (under age 5)	81%	55%	74%	77%	68%
Employment rate (working-age adults)	67%	81%	75%	68%	66%
Cost-burdened households	51%	39%	35%	42%	44%

Source. American Community Survey, 5-year pooled estimate (2013-17)

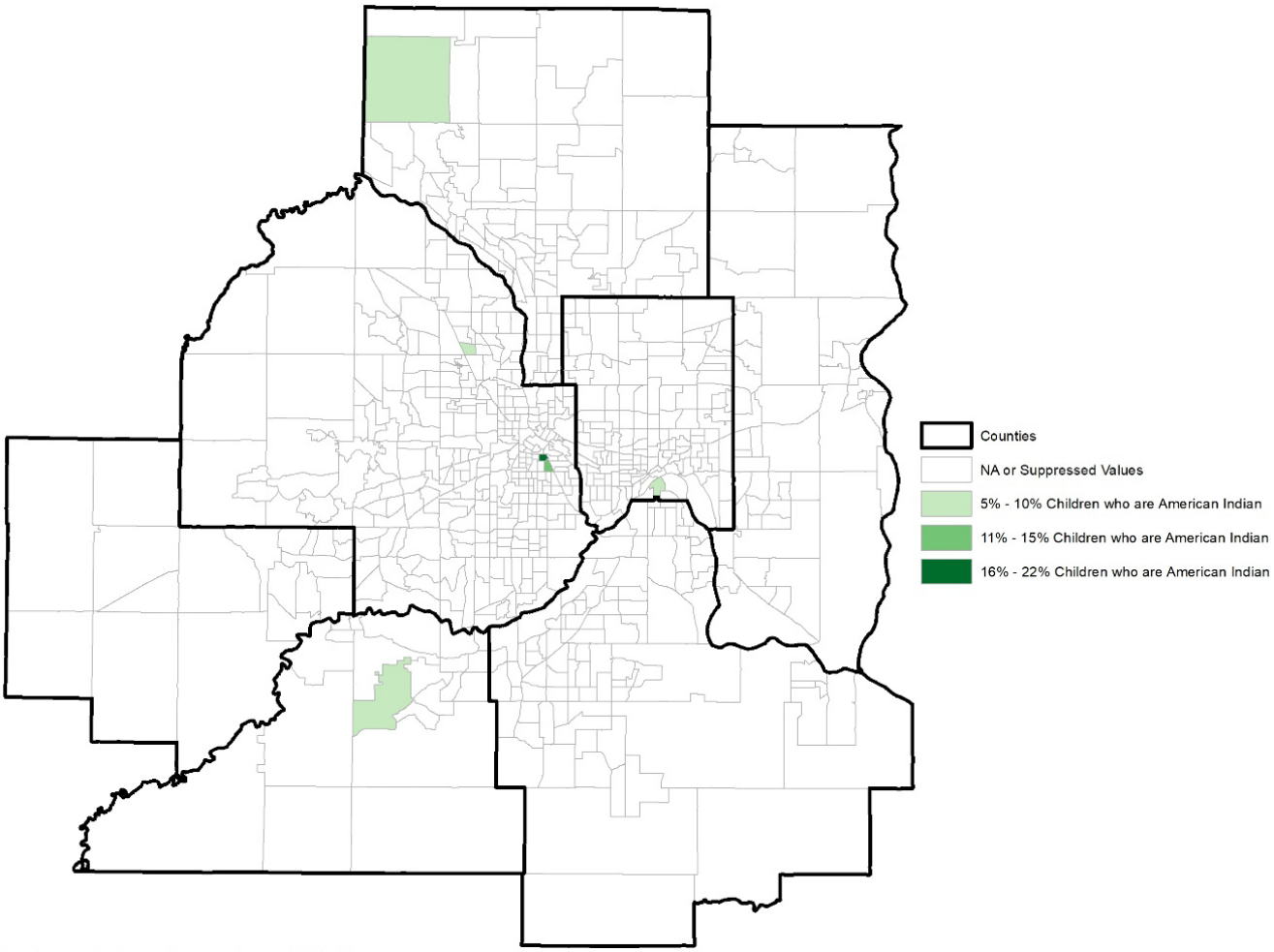
**** = Due to small numbers, reliable estimates cannot be calculated.

[a] "Other" race often includes, but is not limited to, people who identify as Hispanic/Latino.

[b] The American Community Survey asks about race and ethnicity separately. Children identified as Hispanic are also represented in one of the race categories presented in this table.

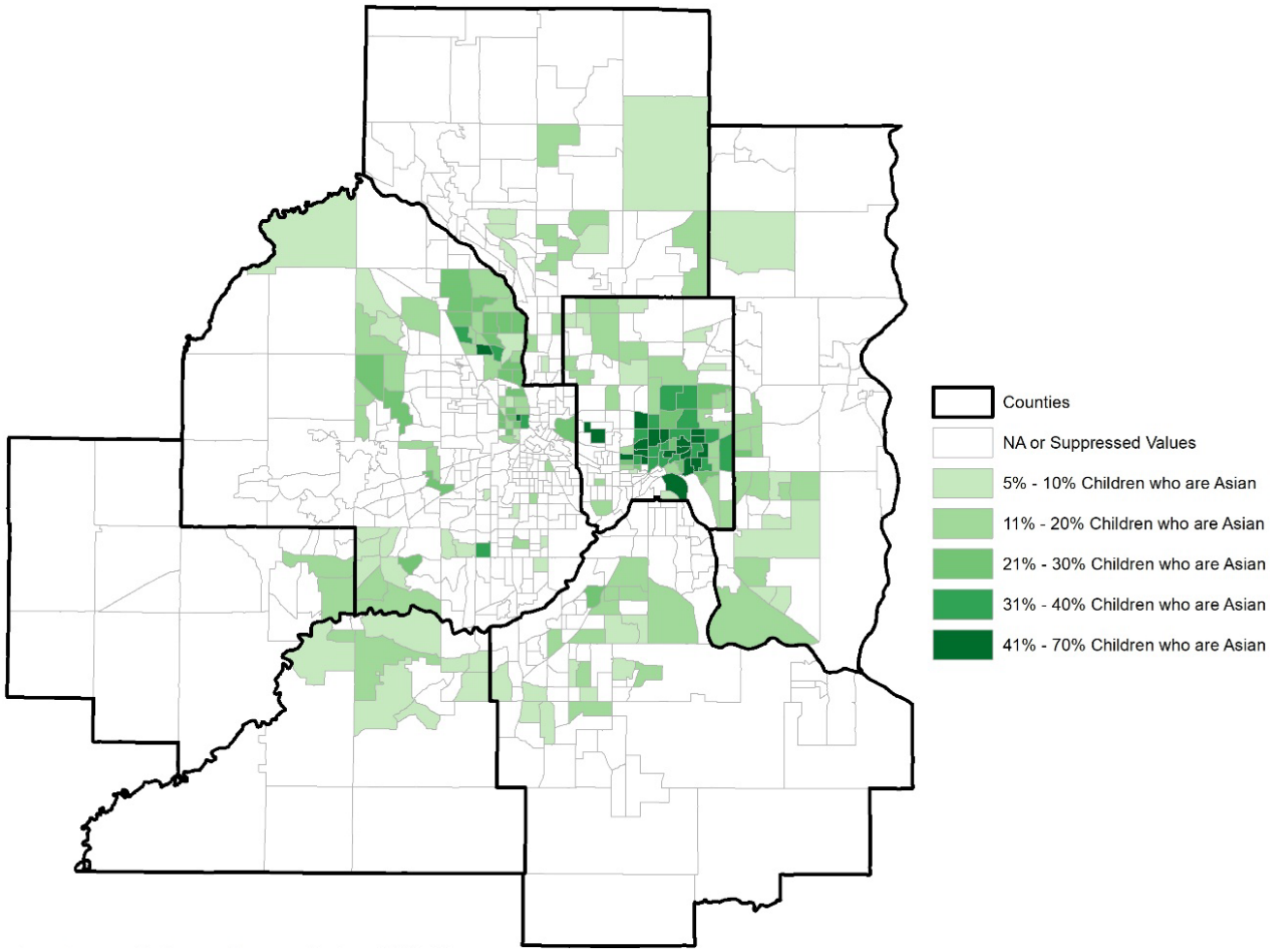
Mapping of children in the Twin Cities metro, by race and census tract

66. Percentage of children who are American Indian, by census tract (2017)



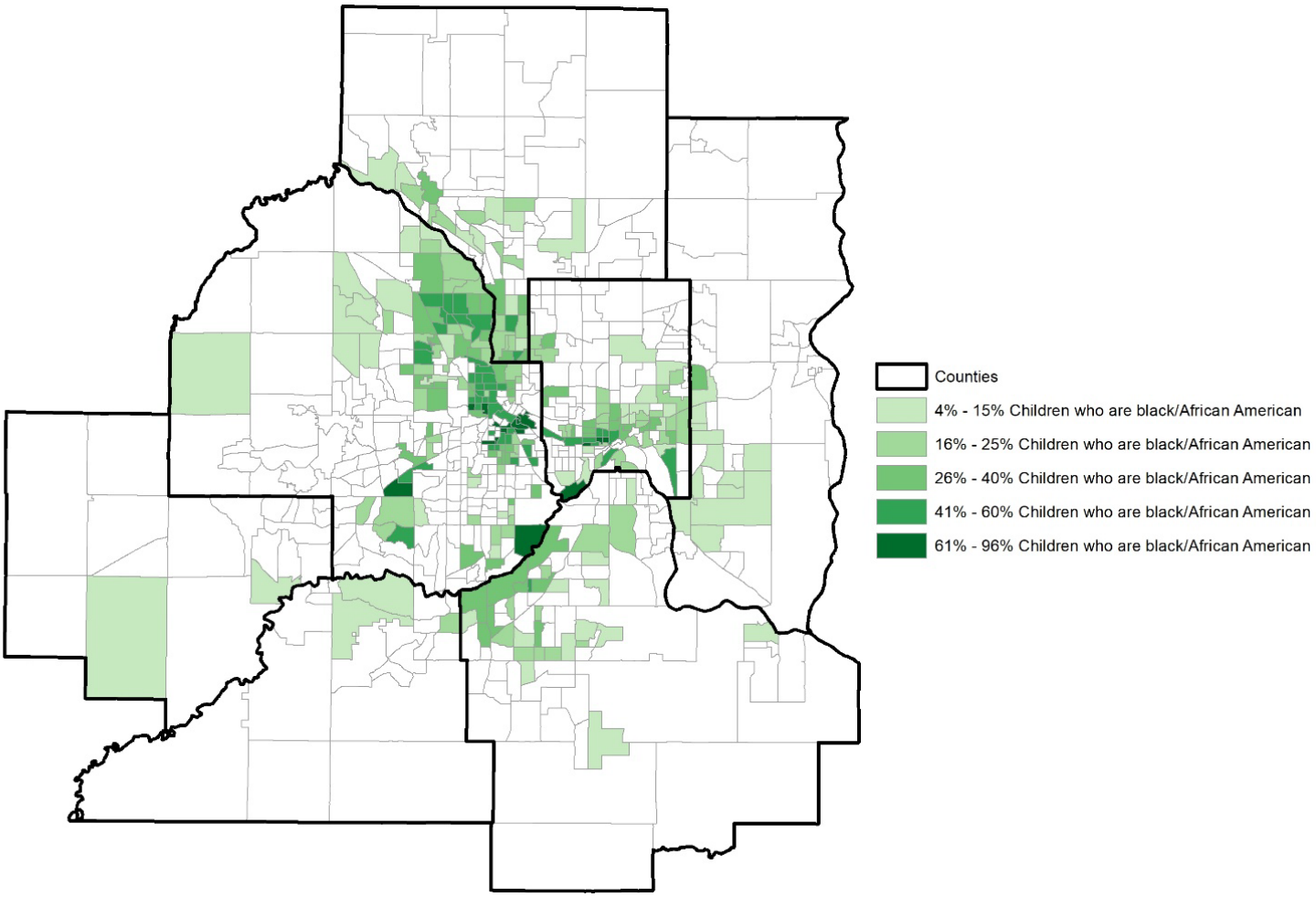
Source: American Community Survey 5-year estimates (2013-17)

67. Percentage of children who are Asian, by census tract (2017)



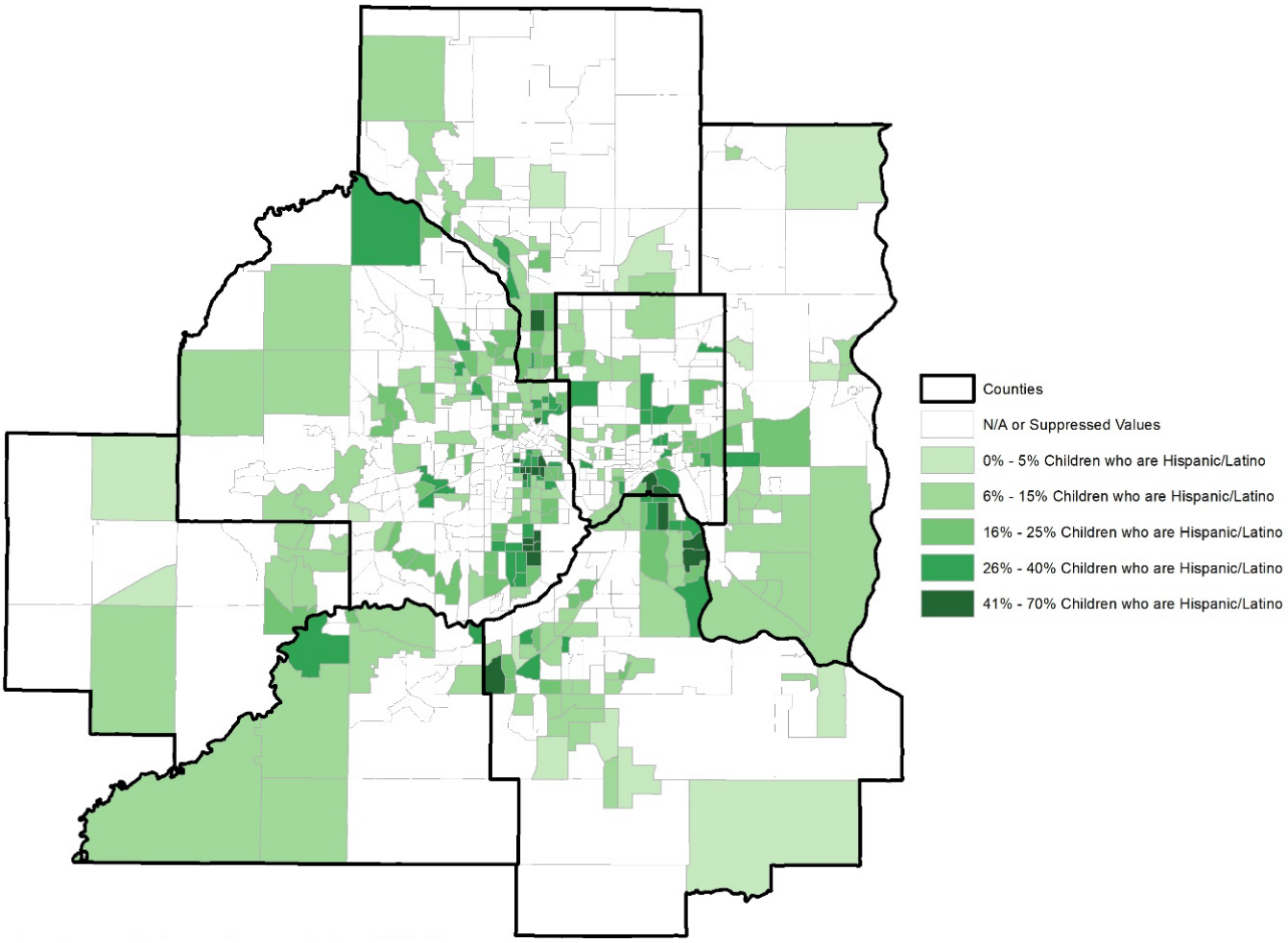
Source: American Community Survey 5-year estimates (2013-17)

68. Percentage of children who are black/African American, by census tract (2017)



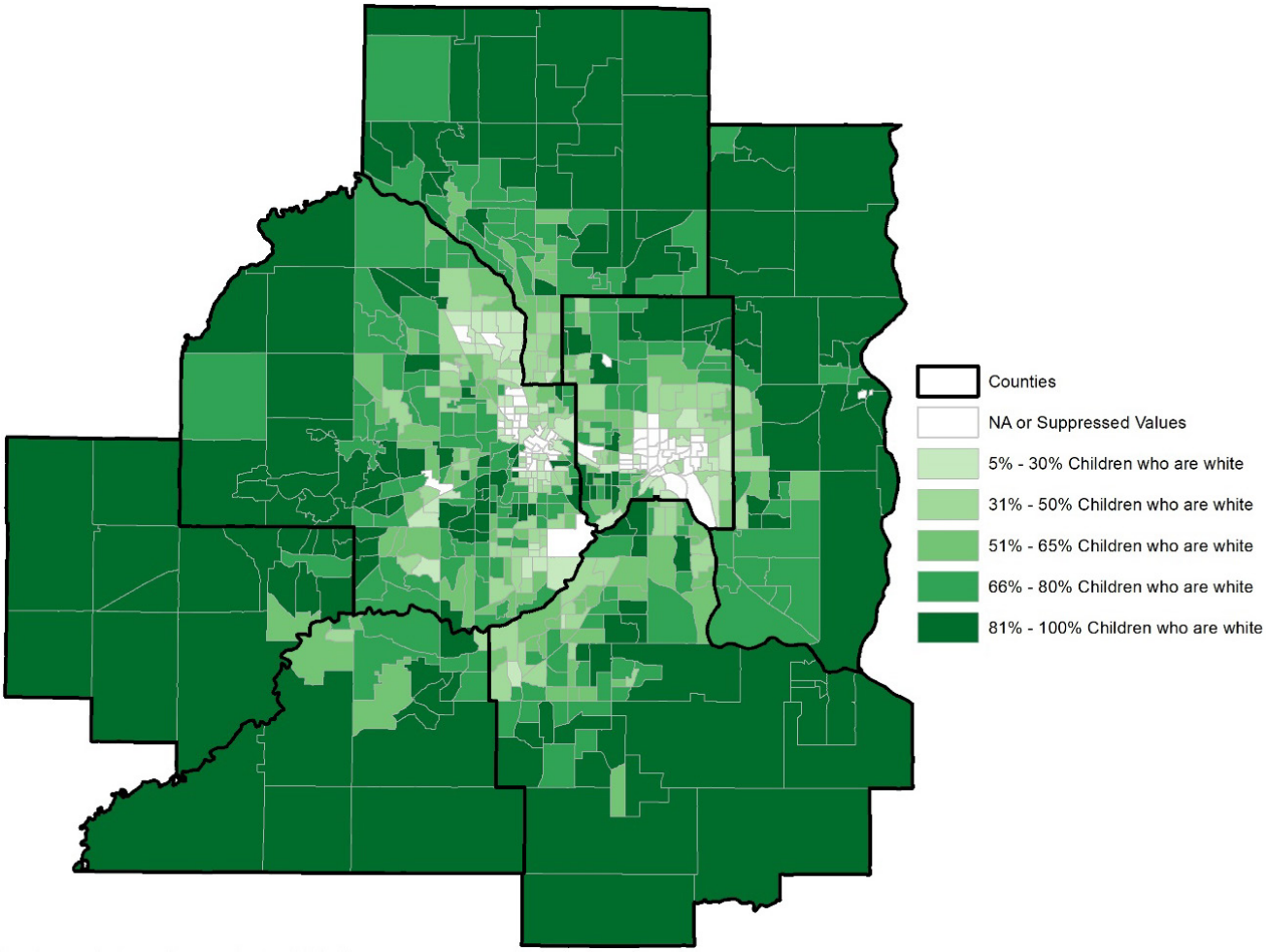
Source: American Community Survey 5-year estimates (2013-17)

69. Percentage of children who are Hispanic/Latino, by census tract (2017)



Source: American Community Survey 5-year estimates (2013-17)

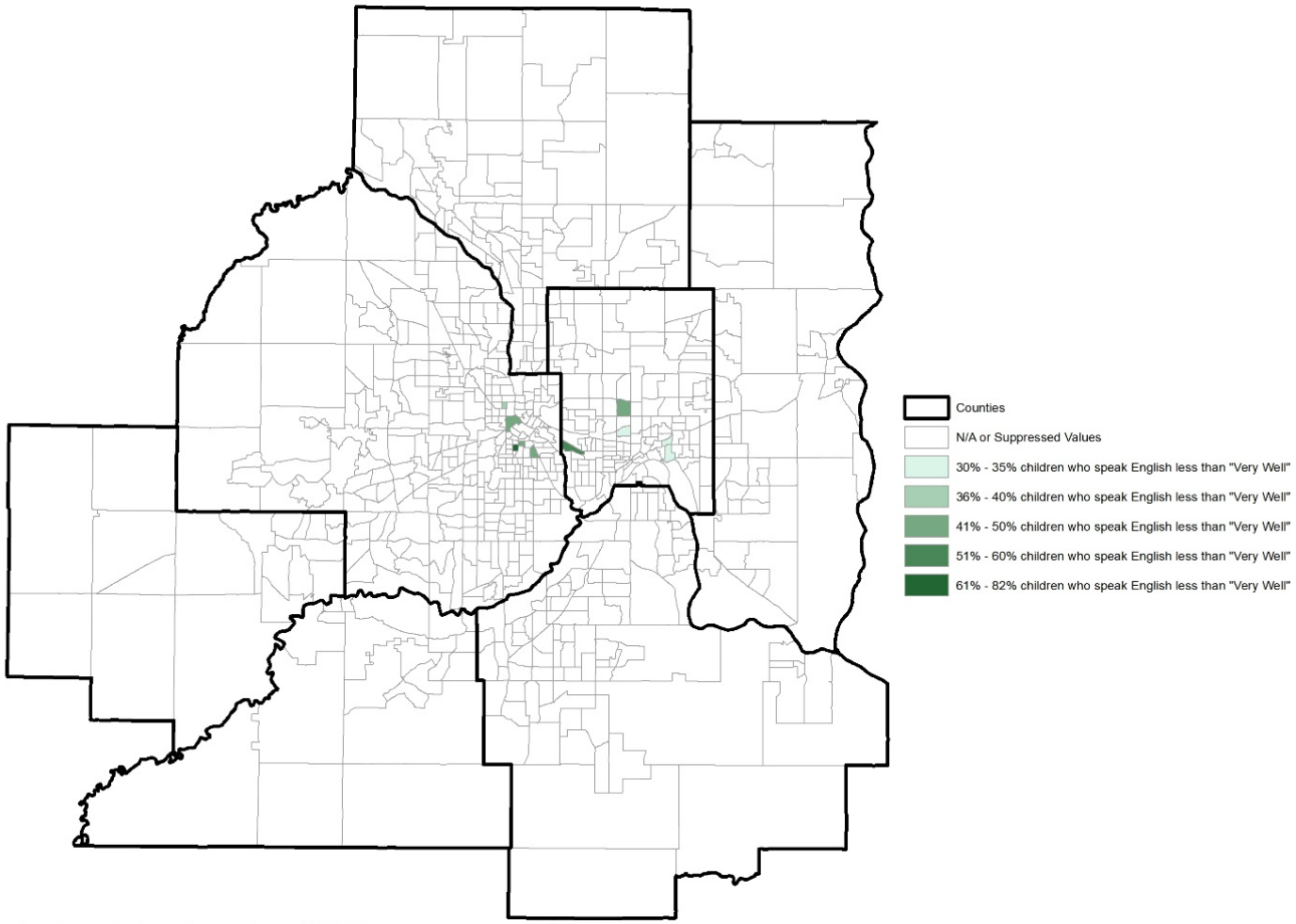
70. Percentage of children who are white, by census tract (2017)



Source: American Community Survey 5-year estimates (2013-17)

Mapping of children in the Twin Cities metro, by language skill and census tract

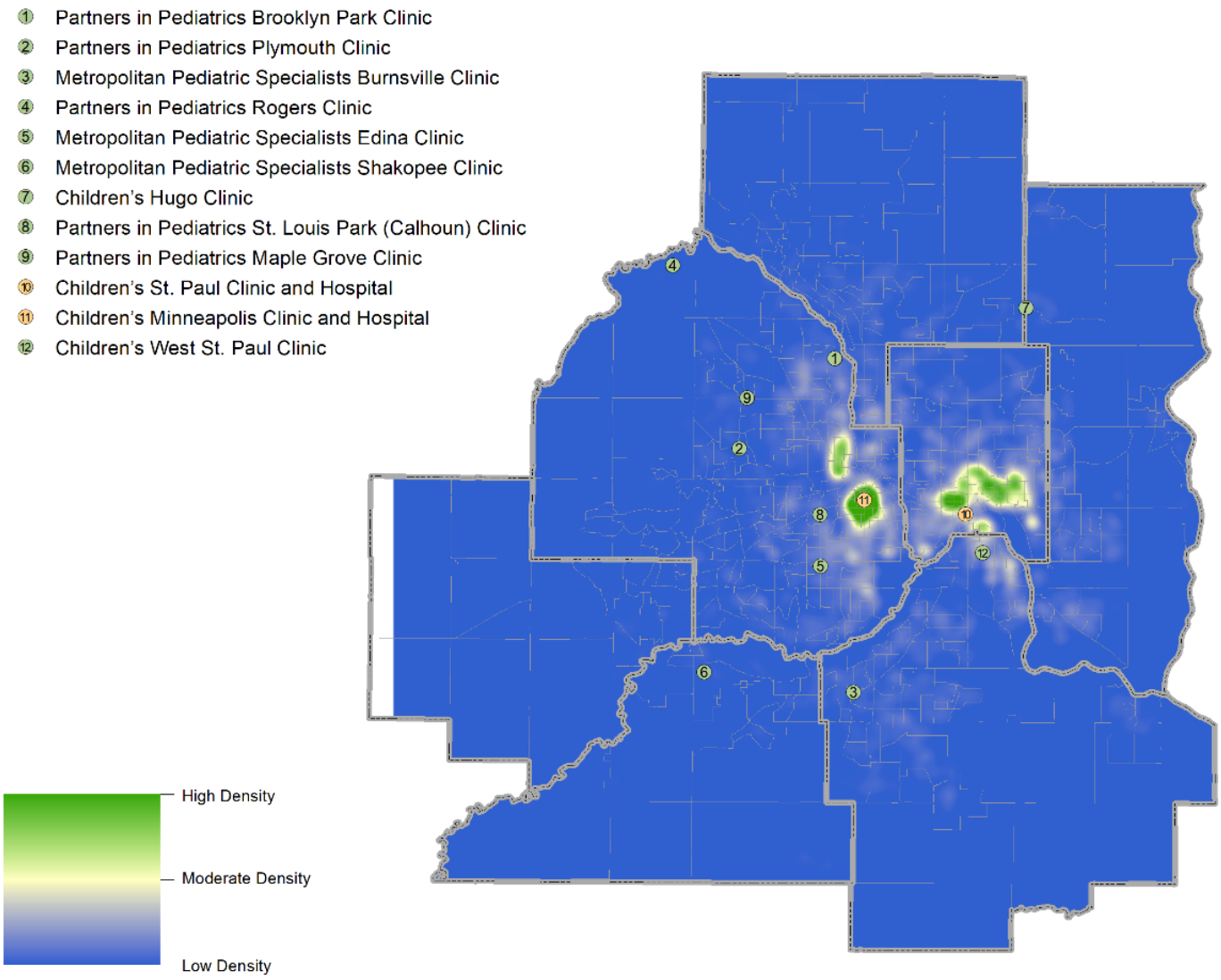
71. Percentage of children who speak English less than "very well", by census tract (2017)



Source: American Community Survey 5-year estimates (2013-17)

Mapping of Children's Minnesota Patient Visits

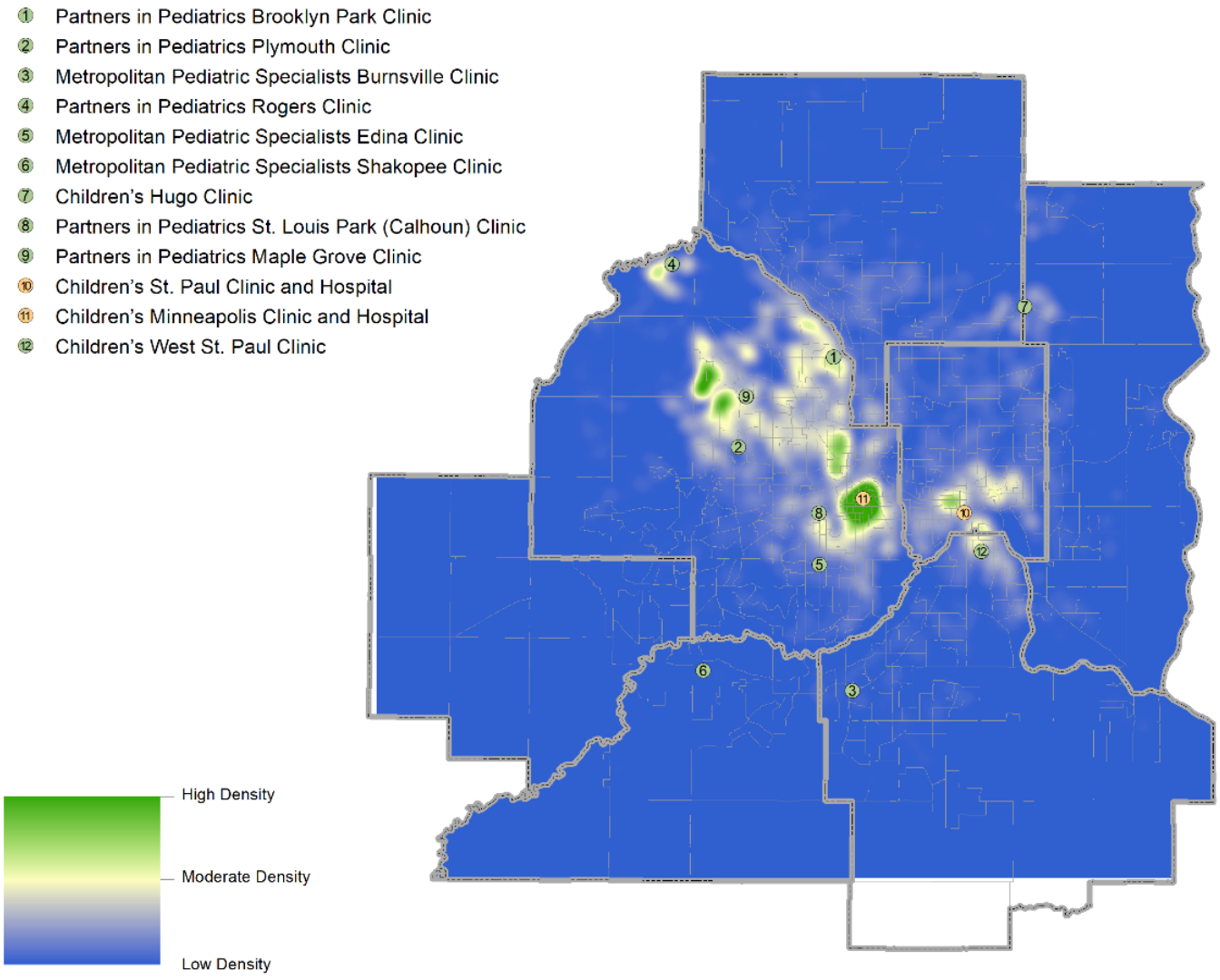
72. Children served by Children's emergency departments: Areas of high patient density (2018)



Source. Children's Minnesota. Mapping and analysis by Wilder Research using 2010 census tracts.

Notes. The most recent residence was selected for each child who had at least one visit at Children's Minnesota emergency departments between January 1, 2018 and December 31, 2018. 49,523 unique patients are represented in this map. Emergency departments are located at the Minneapolis and Saint Paul hospital campuses (10 and 11 on the map).

73. Children served by Children's primary care clinics (12 locations): Areas of high patient density (2018)



Source. Children's Minnesota. Mapping and analysis by Wilder Research using 2010 census tracts.

Notes. The most recent residence was selected for each child who had at least one visit at a Children's Minnesota primary care clinic between January 1, 2018 and December 31, 2018. 49,215 unique patients are represented in this map. Children's Minnesota primary care clinics are located across the Twin Cities metro, and include clinics located at the Minneapolis and Saint Paul hospital campuses (10 and 11 on the map). Patients who were seen only at one or more of the Metropolitan Pediatric Specialists clinics (located in Burnsville, Edina, and Shakopee) are not included in this map.

Wilder Research, a division of Amherst H. Wilder Foundation, is a nationally respected nonprofit research and evaluation group. For more than 100 years, Wilder Research has gathered and interpreted facts and trends to help families and communities thrive, get at the core of community concerns, and uncover issues that are overlooked or poorly understood.

451 Lexington Parkway North
Saint Paul, Minnesota 55104
651-280-2700 | www.wilderresearch.org

Wilder Research®
Information. Insight. Impact.