

The Health of American Indian Families in Minnesota: A Data Book

A SUMMARY OF AVAILABLE AMERICAN INDIAN FAMILY HEALTH DATA The Health of American Indian Families in Minnesota: A Data Book

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Background/context

This data book provides a snapshot of data to inform policies and programs that serve American Indian families. Investment in American Indian families is essential to address the systemic racism and structural (social, economic, political, and environmental) inequities which have resulted in poor health outcomes across generations.

There are 11 federally recognized tribes in Minnesota: seven Anishinaabe (Ojibwe) tribes and four Dakota (Sioux) tribes. Members of these tribes and their ancestors have lived in Minnesota for thousands of years; long before Minnesota was established as a state. American Indians represent 2.7% of the total population of Minnesota and yet experience the worst disparities in the state.¹ Approximately 22% live in Hennepin and Ramsey counties, with 28% living in other counties across the state. Approximately 23% live on a reservation, while 27% live in a county adjacent to a reservation. Approximately 22% live in Hennepin and Ramsey counties, with 28% living in other living in other counties across the state.

The legacy of the American Indian family is one of great strength and resilience. American Indian culture, families, and communities are built on values that focus on thriving for generations, such as a model of care that considers the livelihood of past, present, and future generations. In addition, the American Indian community embraces holistic wellness that considers attention to the physical, mental, emotional, and spiritual well-being of oneself and others. There is also a focus on the community and reciprocal relationships that respect and honor non-human relatives including animals, water, and land. The presence of and cultivation by Dakota and Anishinaabe (Ojibwe) American Indian populations of Mni Sota Makoce (Minnesota) led to prosperous and abundant food systems in partnership with the local natural resources and wildlife, as well as supportive community and family systems that contributed to vibrant health and wellness.

But today due to historical injustice and trauma, Minnesota's American Indian people experience the worst health disparities in the Minnesota. The early 1600s brought disruptions

to these thriving ecologies, communities, systems, and tribal cultures. The disruptions occurred through forced migration, contact with European cultures and diseases. The history between tribes and European colonizers included coerced partnerships that often led to treaties that were later broken. The presence of European colonizers in the Great Lakes region resulted in the intentional and systematic violation of the rights of Mni Sota Makoce American Indian communities. Consider what the American Indian family has had to overcome to survive in Minnesota. The list includes the mass extinction of men, women, and children and the forced removal of American Indian children from their families into boarding schools for assimilation. Boarding school policies and practices that were relatively recent resulted in many children never seeing their families again. Families also contended with the breaking of ties to land and culture through assimilation and land theft, as well as forced migration onto reservations and uninhabitable land.

Impact of trauma

This history still affects and harms the health of American Indians in Minnesota. Systemic racism and inequities spanning generations have resulted in poor outcomes for American Indian mothers and their children. These structural inequities have created living conditions that in totality have a greater influence on health outcomes than individual choices or access to health care.

"Historical trauma refers to the collective emotional and psychological injury from this cataclysmic history over the life span, across generations, and continuing today. Encounters between the original inhabitants of Minnesota and European settlers were often violent and cruel, and included military action, displacement, forcibly separating children, and parents, even genocide. This history still affects and seriously threatens the health of American Indians in Minnesota today. For example:

American Indians living in Minnesota are more likely to live in poverty.

American Indian youth are less likely to graduate from high school in four years.

Young American Indians are more likely to attempt suicide.

It is important to recognize that the trauma of various historical events also affects other race/ethnicity minority groups and other populations. During these challenges, American Indian culture and values are sources of strength and resilience for families and tribes as they work to change the systems and structures that continue to oppress their communities."²

The trauma experienced as part of first contact with Europeans has been reinforced and repeated through government policies, racism and oppression, and economic systems that purposefully denied access to safety, health care, food, education, employment, and dignity.³ "Repeated and ongoing violation, exploitation, and deprivation have a deep, lasting traumatic impact, not just at the individual level but on whole populations, tribes, and nations. This is what is known as collective trauma, historic trauma, intergenerational trauma."³

While traumatic events may have begun decades ago, research shows that trauma and stress can impact second and third generations. This is important because children exposed to early and repeated trauma are more likely to develop physical, behavioral, and emotional disorders.

"... Many women and families have unmet trauma and are surviving. They need to recover with education and support that they can connect with culturally." – American Indian Needs Assessment Discovery survey respondent

The health of America Indian women, birthing persons, children, and families is in critical danger as harmful practices and policies continue to impact American Indians today. There is a responsibility to ensure American Indian women, birthing persons, children, and their families are not only seen, but also have the support and sovereignty needed to guide their healing and recovery.

"Everyone has a responsibility in making things right. Everyone has a role in the process of healing, regardless of whether they caused or received more harm. All our suffering is mutual. All our healing is mutual. All our thriving is mutual." – Edgar Villanueva

American Indian women, birthing persons, children, and families experience worse outcomes than other populations in Minnesota. These disparities are caused by historical trauma, racism and colonial practices and policies that continue to be barriers to opportunity and thriving.

Repeating mistakes and expecting different results

Data has shown significant disparities affecting American Indians for hundreds of years and the approach was always driven by non-American Indian strategies that haven't improved their health outcomes. We must acknowledge that American Indian people carry cultural knowledge and wisdom that has sustained their communities and nations for generations, and that only through authentic engagement and partnership that supports Tribal sovereignty and leadership will we see change. Mainstream approaches and strategies have not resulted in optimal help. Too often, public health and others have elevated 'diversity' and 'equity' by bringing different kinds of people to the table, but then expected them to assimilate into a dominant white culture and mainstream framework. This has not resulted in optimal health for the families we serve, and things need to be done differently. In particular:

- Approaches need to be guided by the communities most affected, and we need to support their efforts and give them enough time and resources to see change.
- It will take public will, community health board engagement, and state and federal partnerships with American Indian communities to make meaningful change.

"We've had high rates. We continue to have high rates—and we've had resources (although not enough to really address the issues) but those resources are attached to a set of criteria and/or activities that do not work for us. For example, evidence-based programs are predominantly normed on a mainstream population, and we have no other options but to use an outside approach or not receive the resources, both of which are inequitable." – Jackie Dionne, Former Director of American Indian Health at the Minnesota Department of Health

Limitations of the data & methods

- In state and local public health work there is a lack of appropriate evaluation and measurement methods; those that are meaningful to the American Indian communities and tribal nations.
- "Evidence-based practices" are generally based on research of white populations; time and resources have not been given to 'prove' the effectiveness of American Indian-specific traditional methods and practices (versus mainstream methods and practices).
- At the state and local levels, we often suppress American Indian data due to their smaller population size in Minnesota. Small numbers are suppressed for two main reasons: 1) we are required to protect privacy and confidentiality, so must ensure that individuals cannot be identified in the data we report; and 2) percentages and rates based on small numbers can fluctuate dramatically over time. These observed differences may appear large but can be due to random variation alone and therefore, not meaningfully (or statistically) different. However, data suppression means we often don't report on American Indian outcomes at all. This contributes to the forced invisibility of an entire population of people. See Twice Invisible: Understanding Rural Native America.
- Non-Hispanic white populations often serve as the 'comparison' or 'reference' group, without explanation as to why. This practice can perpetuate thinking that drives inequities. In this report, comparisons between American Indians and white populations, is because whites have historically been the largest population group as well as the population benefiting from structural racism.
- We recognize that not all people who become pregnant in Minnesota identify as women and they may not identify as a mother or father after the birth of the child. To honor all those in our communities who experience pregnancy, we will incorporate gender inclusive language such as pregnant person throughout this document. However, 'mother' or 'women' may still be used when referring to some statistics to accurately reflect the terms used at time of data collection.

This Health of American Indian Families in Minnesota data book provides a snapshot of data to inform decision-making around policies and programs that serve American Indian families. Investment in American Indian families is essential to address the systemic racism and structural (social, economic, political, and environmental) inequities which has resulted in poor health outcomes across generations. All people living in Minnesota benefit when we reduce health disparities.

Health before pregnancy and prenatal care

Research supports that exposure to chronic stressors, such as discrimination and racism, can negatively impact physical and mental health. Additionally, there is a strong link between health before pregnancy and maternal and child health outcomes. For example, studies, examining how conditions, such as depression before pregnancy, influence the immediate and long-term outcomes of both birthing parent and baby have found that preconception mental health is the most significant risk factor for pregnancy complications.⁴

Health conditions before pregnancy

Figure 1 shows the percent of Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) respondents who reported experiencing various health conditions three months before pregnancy. PRAMS is a surveillance project conducted by Centers for Disease Control and Prevention's Division of Reproductive Health in collaboration with the Minnesota Department of Health (MDH). The PRAMS survey asks new moms about maternal behaviors, attitudes, and experiences before, during, and shortly after their pregnancies. Participants are residents who recently gave birth within Minnesota to a live-born infant during the surveillance year. Birthing people are sampled between 2 and 6 months after giving birth.

In Minnesota, 40% of American Indian birthing parents reported experiencing depression and 51% reported experiencing anxiety in the months before pregnancy, the highest of any racial/ethnic group.

Figure 1: Prevalence of Reported Health Conditions Three Months Before Pregnancy by Race/Ethnicity, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Early prenatal care

It is important that pregnant people receive both early prenatal care, starting in the first trimester, and adequate prenatal care, having the appropriate number of prenatal care visits at the appropriate intervals throughout the pregnancy. Babies of pregnant people who are exposed to systemic barriers that prohibit them from getting care are born with low birthweight at rates three times greater, and die at rates five times greater, than babies born to pregnant people who are not exposed to these systemic barriers and do receive prenatal care.⁵ An American Indian birthing parent is a parent who has given birth. In Minnesota, American Indian birthing parents were less likely to start early prenatal care (Fig. 2) and less likely to receive adequate/intensive care compared to state average (Fig. 3).



Figure 2: Percent of Births Where Prenatal Care Began in First Trimester, Minnesota 2013-2022

Source: Minnesota Resident Final Birth File



Figure 3: Percent of Births with Adequate or Intensive Prenatal Care Use, Minnesota 2018-2022

Source: Minnesota Resident Final Birth File

■ 2018 ■ 2019 ■ 2020 ■ 2021 ■ 2022

MN State Average

Barriers to prenatal care

American Indian

40% 30% 20% 10% 0%

Data from MN PRAMS shows the percentage of birthing parents who received prenatal care as early as they would have liked (Fig. 4). Most American Indian birthing parents (78%) reported

receiving prenatal care as early as they wanted compared to 90% of all MN PRAMS respondents.



Figure 4: Prevalence of those who Received Prenatal Care as Early in their Pregnancy as they Wanted, MN PRAMS 2016-2021

Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS)

MN PRAMS data also provides insights into why some American Indian birthing parents did not receive prenatal care as early as they would have liked (Fig. 5). The top five barriers included not knowing they were pregnant (51%), had too many other things going on (44%), not having transportation to get to the clinic or to the doctor's office (32%), not being able to get an appointment when wanted (24%), and wanting to keep the pregnancy a secret (21%).

Figure 5: Top Five Barriers American Indian Respondents Reported to Accessing Prenatal Care, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS)

Experiences before, during, and after pregnancy

The life course perspective recognizes that experiences throughout one's life can alter the health trajectory over time. Further, adversity early in life may increase one's vulnerability to illness and even to future adversity. Racism is stressful and can impact health in many ways. The racism American Indian birthing parents experience before and during pregnancy likely contributes to the increased risk of preterm delivery and other poor birth outcomes documented in these populations.

Socioeconomic factors are also linked to birth outcomes through reducing access to care, increased environmental exposures, and through chronic stress which all take a toll on health.⁶

Stress before pregnancy

Figure 6 shows the percentage of MN PRAMS respondents who experienced five or more stressors in the year before their baby was born. The stressors measured in PRAMS include: financial-related stress, such as having lost a job while pregnant; emotional stress, such as someone close to them dying; partner-related stress, such as being separated or divorced from husband or partner; and traumatic stress such as experiencing homelessness. Twenty-nine percent of American Indian birthing parents reported experiencing five or more stressors compared to 7% of overall MN PRAMS participants. Nearly half (48%) of American Indian birthing parents in the year before their babies were born—the highest of all racial/ethnic groups (Fig. 7).





Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Figure 7: Prevalence of Experiencing Trauma-Related Stress 12 Months Before Baby was Born, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race, # Data suppressed for counts < 30

Food insecurity, vitamin use, WIC

Access to nutritious food is critical to maintaining optimum health, especially during pregnancy. Figure 8 shows that 32% of American Indian birthing parents struggled to obtain nutritious food and reported receiving emergency food in the 12 months before their babies were born. Further, 51% of American Indian birthing parents received food stamps during their most recent pregnancy (Fig. 9) and 69% received WIC services (Fig. 10).

Figure 8: Prevalence of Receiving Emergency Food 12 Months before Baby was Born, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Figure 9: Prevalence of Receiving Food Stamps/Money to Buy Food During Most Recent Pregnancy, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race



Figure 10: Prevalence of Receiving WIC during Most Recent Pregnancy, MN PRAMS 2016-2021

Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

When access to nutritious food is limited, the additional cost of beneficial supplements, such as prenatal vitamins and folic acid, may also be overwhelming. Optimum levels of folic acid prepregnancy are important and have been shown to reduce the risk of neural tube defects by 50-70%. In a study of low-income, urban, women of color, very low use of prenatal vitamins in the months before pregnancy was documented.⁷ In Minnesota, 66% of American Indian PRAMS respondents noted not taking any multi-vitamins, prenatal vitamins, or folic acid supplements before pregnancy (Fig.11).

Figure 11: Prevalence of Multivitamin, Prenatal Vitamin, or Folic Acid Vitamin Use before Pregnancy, MN PRAMS 2016-2021



Racism, discrimination, and postpartum checkup

Structural racism is a root cause within systems, policies, and practices that has historically perpetuated inequalities, with exposure to discriminatory practices and racism damaging not only overall health, but also maternal and infant health outcomes. Figure 12 shows the percentage of MN PRAMS respondents who reported being emotionally upset because of how they were treated based on their race in the year before their babies were born. American Indian birthing parents reported a high percentage (24%) compared to the state overall (7%).



Figure 12: Prevalence of Being Emotionally Upset Because of Racial Discrimination 12 Months Before New Baby was Born, MN PRAMS 2016-2021

Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Postpartum care is important because birthing people are at risk of serious, possibly lifethreatening conditions after childbirth or the loss of a child. Ideally, checkups would be ongoing with the first visit occurring within 3 weeks of giving birth.⁸ Data from MN PRAMS shows that 80% of American Indian respondents received a postpartum checkup after childbirth (Fig. 13), which is lower than the state overall (92%).



Figure 13: Percent of Respondents who Received a Postpartum Checkup, MN PRAMS 2016-2021

In an analysis of MN PRAMS data that includes everyone who reported being emotionally upset because of how they were treated based on their race in the year before their baby was born, a higher percentage (22%) also reported not receiving a postpartum checkup when compared to those who were not upset because of how they were treated based on their race (7%) (Fig. 14).

Figure 14: Prevalence of Being Emotionally Upset because Racial Discrimination 12 Months before Baby was Born and Received a Postpartum Checkup, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS)

Experiences of discrimination during prenatal care, labor, or delivery may also impact whether a postpartum visit occurs. Data from MN PRAMS shows that a higher percentage of respondents who reported experiencing discrimination during prenatal care, labor, or delivery also reported not receiving a postpartum checkup (13%) compared to those who did not experience discrimination (8%) (Fig. 15).

Figure 15: Prevalence of Respondents who Experienced Racial Discrimination During Prenatal Care, Labor, or Delivery and Received a Postpartum Checkup, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS)

Depression, postpartum depression

Forty percent of American Indian MN PRAMS respondents reported experiencing depression three months before conception (Fig. 16) and 22% experienced self-reported postpartum depression (Fig. 17).





Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race





Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

In an analysis of MN PRAMS data that includes everyone who reported being emotionally upset because of how they were treated based on their race in the year before their baby was born, a higher percentage (29%) also self-reported experiencing postpartum depression compared to those who did not report feeling upset based on how they were treated based on race (10%) (Fig. 18).

Figure 18: Prevalence of Birthing Parents who were Emotionally Upset because of Racial Discrimination 12 Months before Childbirth who also Reported Postpartum Depression, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS)

Additionally, MN PRAMS respondents who reported experiencing discrimination during prenatal care, labor, or delivery also reported higher percentages (27%) of postpartum depression compared to those who did not experience discrimination (11%) (Fig. 19).

Figure 19: Prevalence of Respondents who Experienced Discrimination During Prenatal Care, Labor, or Delivery and had Postpartum Depression, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS)

Interpersonal violence and abuse

Figure 20 shows the percentage of birthing parents who were pushed, hit, slapped, kicked, choked, or physically hurt by their current husband/partner 12 months before their most recent pregnancy. American Indian birthing parents reported the highest percentage of physical abuse caused by their current partners (8%). Additionally, 8% of American Indian respondents reported physical abuse by their ex-husband/ex-partner before pregnancy (Fig. 21).

Figure 20: Prevalence of Respondents who Were Pushed, Hit, Slapped, Kicked, Choked, or Physically Hurt by Their Current Husband or Partner 12 Months Before Most Recent Pregnancy, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race





Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Five percent of American Indian respondents reported physical abuse by their husband/partner during their most recent pregnancy (Fig. 22).

Figure 22: Prevalence of Respondents who Were Pushed, Hit, Slapped, Kicked, Choked, or Physically Hurt by Their Current Husband or Partner During Most Recent Pregnancy, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Threats to safety continued after their babies were born. Figure 23 shows that 7% of American Indian respondents reported that their husband or partner threatened them or made them feel unsafe in some way.





Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race, # Data suppressed for counts < 30

Breastfeeding

Figure 24 presents the percentage of birthing parents who were still breastfeeding their children at the time they completed the survey, which for most MN PRAMS respondents was approximately 4-5 months after childbirth. Forty-nine percent of American Indian respondents were still breastfeeding their baby when they completed the MN PRAMS survey.

Figure 24: Prevalence of Respondents who were Breastfeeding or Feeding Pumped Milk to their Newborn, MN PRAMS 2016-2021



Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

WIC families, and their breastfeeding rates, have been impacted by many factors. Many WIC parents report having to return to work shortly after birth to workplaces that don't support breastfeeding. The pandemic also disproportionately impacted WIC families and their

breastfeeding initiation rates. For example, mental health concerns and stress exacerbated by pandemic circumstances impacted initiation and duration of breastfeeding. Lack of support was another factor. With in-person and community support groups shut down, limited contact with family and friends, and earlier hospital discharges, many families did not have anyone to talk to about breastfeeding challenges. Lastly, decreased prenatal education could be reducing successful breastfeeding. Many WIC agencies report pregnant women entering the program later in pregnancy, not attending prenatal classes, and not seeing health care providers as often during pregnancy. Breastfeeding initiation rates among American Indian WIC participants increased in 2020 when compared to 2019 rates but declined in 2021 (Fig. 25).

Figure 25: Breastfeeding Initiation Rates 2019 to 2021 comparing WIC participants to non-participants, by Race/Ethnicity and Selected Cultural Identities



https://www.health.state.mn.us/people/wic/localagency/reports/bf/unduppublic.html#data

Drinking and smoking during pregnancy

Data from MN PRAMS shows that 97% of American Indian respondents abstained from alcohol in the last three months of pregnancy—the highest percentage of all racial/ethnic groups (Fig. 26).





Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

While 34% of American Indian birthing parents reported smoking in the last three months of pregnancy (Fig. 27), a high percentage also reported a change in their smoking behavior during their pregnancy. Twenty percent of American Indian birthing parents reported quitting smoking completely during pregnancy (Fig. 28).









Figure 28: Prevalence of Respondents who Changed Smoking Status during Pregnancy, MN PRAMS 2016-2021

Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Maternal mortality and severe maternal morbidity

Maternal mortality

Maternal mortality, while relatively rare in Minnesota, still has devastating impacts on families and communities. Figure 29 shows the overall pregnancy-associated deaths, as determined by the Maternal Mortality Review Committee (MMRC). Because of the small number of deaths within each racial/ethnic group during in this three-year period, mortality rates by race/ethnicity are not calculated. However, the percentage of deaths within each racial/ethnic group can be compared with the corresponding percentage of births to identify disparities. There is a higher percentage of deaths among American Indian and Non-Hispanic Black birthing people when compared to percent births contributed for each group. Data for pregnancyrelated deaths are not displayed by race/ethnicity due to the small number of pregnancyrelated deaths in each racial/ethnic category.



Figure 29: Pregnancy Associated Deaths by Race/Ethnicity, Minnesota 2017-2019

Source: Minnesota Maternal Mortality Review Information Application (MMRIA) data <u>Minnesota Maternal Mortality Update: Reporting for 2017-2019</u> <u>https://www.health.state.mn.us/people/womeninfants/maternalmortality/maternalmortreport.pdf</u>

Severe maternal morbidity

Pregnant people experiencing severe maternal morbidity (SMM) is far more common than maternal mortality. Nationally, American Indian birthing people have 1.8 times the risk of severe maternal morbidity compared to non-Hispanic white birthing people.⁹ The most recent severe maternal morbidity analyses using Minnesota was completed spring 2020 and was sourced from the maternal and child health linked birth/hospital discharge dataset. Data from 2018 showed that the overall SMM rate for the state was 160.7 per 10,000 delivery hospitalizations and was higher than any time since 2011.

Combining years from 2016-2018 allows examination of SMM rates by race/ethnicity (Table 1). The highest rates of overall SMM are among our populations of color, including US-born Black, African, foreign-born Asian, and Hispanic populations. American Indian birthing people also experienced a higher rate of SMM compared to MN birthing people overall.

	All SMM (n)	All SMM (rate per 10,000 delivery hospitalizations)	Transfusion Only (rate per 10,000 delivery hospitalizations)	SMM (excluding transfusion) * (rate per 10,000 delivery hospitalizations)
MN Overall	2562	134.5	66.6	68.0
American Indian	49	151.4	83.4	68.0
Non-Hispanic White	1467	111.5	52.1	59.4
African American/Black	228	227.9	140.0	88.0
African	310	212.9	99.6	113.3
US-born Asian/PI	47	99.5	48.7	50.8
Foreign-born Asian/PI	162	142.7	59.0	83.7
Hispanic	248	203.1	129.4	73.7
Other/Unknown	51	183.4	82.7	100.7
Maternal Residence County 7-county metro	1715	152.5	79.8	72.6
Rural	847	108.6	47.5	61.2

Table 1: Severe Maternal Morbidity Rates by Race/Ethnicity and Maternal Residence,Minnesota 2016-2018

Source: MDH Maternal and Child Health Section, analysis of linked Birth Record/Hospital Discharge Data *NOTE: SMM, Excluding Transfusion may contain transfusions that occur along with another morbidity

Infant and child health

Human brains grow faster between the ages of 0-3 than any other point in life, forming more than one million new neural connections every second.¹⁰ The quality of babies' early nurturing and learning experiences has a lasting impact on their life-long learning and success. When we invest in infants, toddlers, and their families, we ensure a strong future for us all.

Children remain the poorest age group in Minnesota, with almost 150,000, 11.2 percent of all children, living in poverty in 2019.¹¹ Policies and practices rooted in structural racism have prevented Black, Indigenous, and People of Color (BIPOC) from having a fair start and this continues to be reflected in the disparities seen in today's poverty rate - 37 % of American Indian children are living in poverty comparted with only 6 % of white children.

Infant mortality

Health inequities start early in Minnesota, as demonstrated by the significantly higher infant mortality rates experienced by American Indian families.

Infant mortality is widely used as an international measure of overall population health. Infant mortality is a multifactorial societal problem that is often linked to an individual's physical and mental well-being. When an infant is lost, families may suffer from long-term psychological distress.

In Minnesota, American Indians and African Americans have the highest infant mortality rates in the state (Fig. 30).



Figure 30: Infant Mortality Rates by Race/Ethnicity of Birthing Person, Minnesota 2012-2022

Source: Linked Birth-Infant Death Minnesota Resident Period Cohort File; Data Reported as Five-Year Averages

The neonatal mortality rate refers to the number of deaths of infants aged 0–27 days per 1,000 live births. The postneonatal mortality rate refers to the number of deaths of infants aged 28 days through 11 months per 1,000 live births. At a national level, low birthweight accounted for the highest rate of neonatal mortality, whereas congenital malformations and sudden infant death syndrome accounted for the highest rates of postneonatal deaths.¹² The highest rate for American Indian babies (5.9 per 1,000 births) occurred in the postneonatal period, with rates approximately four times higher than recorded in the state for all racial/ethnic groups (Table 2).

Race/Ethnicity	Neonatal Mortality (birth to 28 days)	Postneonatal Mortality (28 days to 1 year)
American Indian (NH)	3.2 per 1,000	6.2 per 1,000
Black/African American (NH)	5.8 per 1,000	3.0 per 1,000
Asian/Pacific Islander (NH)	3.5 per 1,000	1.1 per 1,000
Hispanic	3.3 per 1,000	1.3 per 1,000
Non-Hispanic White	2.4 per 1,000	1.1 per 1,000
Two or More Races (NH)	3.7 per 1,000	2.5 per 1,000
All Race/Ethnicities	3.1 per 1,000	1.5 per 1,000

Table 2: Minnesota Infant Mortality Rates by Timing of Death, 2018-2022

Source: Linked Birth-Infant Death Minnesota Resident Period Cohort File

Leading causes of infant death by race/ethnicity are presented in Figure 31. SIDS/SUID is the leading cause of infant death among the American Indian community, while prematurity is the leading cause of death overall.



Figure 31: Leading Causes of Infant Mortality by Race/Ethnicity, Minnesota 2018-2022

Source: Linked Birth-Infant Death Minnesota Resident Period Cohort File

Causes of death are listed in order of frequency. To be included there must be more than 5 deaths in the time period.

Low birth weight

Babies of low birth weight, less than 2,500 grams, are at increased risk of experiencing complications. Data from the 2022 Minnesota Resident Final Birth file found that 7.4% of singleton American Indian babies (meaning single births only, not including twins or multiple births) were born weighing less than 2,500 grams (Fig. 32).

Figure 32: Percent of Singleton Births to American Indian Pregnant People who were Low Birth Weight, Minnesota 2022



Source: Minnesota Resident Final Birth File

Preterm birth

Premature births are triggered by multiple factors, including maternal age, birth spacing, obesity, smoking, and health insurance coverage.¹³ Babies who survive an early birth often face increased risk of lifetime health challenges in addition to increased risk for infant mortality. Data tells us that the earlier a baby is born, the greater the risk of death, but even babies born just a few weeks too soon (born between 34 to 36 weeks gestation) have an infant mortality

rate three times higher than babies born full term.¹⁴ In 2022, 12.5% of singleton American Indian babies were born premature — significantly higher than the state average (Fig. 33).



Figure 33: Percent Timing of Singleton Births by Race/Ethnicity, Minnesota 2022

Early term refers to births at 37- and 38-weeks gestation. While early term births are not considered premature, data suggests that there remains an increased risk of adverse health outcomes such as respiratory morbidities, admission to neonatal intensive care units, developmental delay, and increased hospitalizations up to age 18.¹⁵ In 2022 in Minnesota, 29.8% of singleton American Indian babies were early term births (Fig. 33).

Infant safe sleep

Any baby can die while sleeping or napping and sleep-related infant deaths are preventable. The best way to prevent these deaths is to make sure that a baby's sleep environment and position is safe. Parents are encouraged to practice the ABCs of safe sleep: Alone—infants should always sleep or nap alone; Back-- always put a baby on their back to sleep nap; and Crib—babies should always sleep or nap in their own safety-approved crib or play yard, while keeping loose bedding, bumper pads, blankets, toys and pillows out of cribs.

Data from MN PRAMS reveals that 88% of American Indian birthing parents reported placing their babies on their back to sleep, among the highest of all racial/ethnic groups (Fig. 34).

Source: Minnesota Resident Final Birth File





Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Overall, fewer respondents report putting their babies down for sleep or naps on a separate approved sleep surface. Overall, 41% report using a separate approved sleep surface, while 28% of American Indian birthing parents report using a separate approved sleep surface (Fig. 35).



Figure 35: Prevalence of Infants Placed to Sleep on a Separate Approved Sleep Surface, MN PRAMS 2016-2021

Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Also low, are the percentage of birthing parents who report putting their babies down for sleep or naps without soft objects or loose bedding. Forty-one percent of American Indian birthing parents report placing babies down for sleep/naps without soft objects or loose bedding, compared with 58% for all MN PRAMS respondents (Fig. 36).



Figure 36: Prevalence of Infants Placed to Sleep without Soft Objects or Loose Bedding, MN PRAMS 2016-2021

Source: Minnesota Pregnancy Risk Assessment Monitoring System (MN PRAMS) Note: *Hispanic can be of any race

Neonatal abstinence syndrome

Neonatal abstinence syndrome (NAS) is a withdrawal syndrome that can occur in newborns who were exposed to substances or prescribed medications during pregnancy. It is estimated that between 55% and 94% of newborns exposed in utero, whose parent was either addicted to or treated with opioids while pregnant, will go on to develop NAS.¹⁶ While not all infants exposed to opioids or other substances in utero are diagnosed with NAS, more severe cases require intensive care and pharmacological interventions.¹⁷ From 2016 to 2022, there were 2,794 NAS hospital-visits in Minnesota – a statewide rate of 6.2 per 1,000 live births. The NAS hospital-visits rate varied by State Community Health Services Advisory Committee (SCHSAC) regions, with the rate considerably higher in the Northwest region (24.5 per 1,000 births; Fig. 37). However, the largest number and greatest proportion of NAS hospital-visits occurred in the Metro region (1,455 visits; 52% of total visits).





Source: Hospital Discharge Data, Injury and Violence Prevention Section, Minnesota Department of Health, 2016-2022

Kindergarten readiness

American Indian and children of color have fewer opportunities to succeed in school, and this starts with access to early childhood opportunities. In Minnesota, children are not guaranteed access to early childhood education, which means that this education is most often financed by parent's tuition payments to private programs. With large income disparities by race, this further disadvantages BIPOC children. The median family income in Minnesota for American Indian, Black, and Hispanic families with children is \$34,000 to \$52,900, compared to \$108,600 for white families with children.¹⁸ We also know that early childhood education is associated with greater school readiness. Minnesota's children experience racial disparities in school readiness at 62 % and 68 %, respectively.¹⁹ As of 2021, 25.2% of American Indian third graders were achieving reading standards²⁰

Poverty in childhood

Data from the Early Childhood Longitudinal Database (ECLDS) shows that, in 2019, 84.7 % of African American/Black and 79.4 % of American Indian/Alaska Native kindergarteners received economic assistance and/or food assistance, while only 23.3 % of white kindergartners received assistance. Economic assistance through the Minnesota Family Investment Program or Diversionary Work Program, and food assistance through the Supplemental Nutrition Assistance Program and/or free or reduced-price lunch program are indicators of income and display the inequities in financial stability in Minnesota's communities. Racism is embedded in our systems from the start.

Child mortality

Premature death among children is an enormous loss of potential life. Most child deaths are from preventable causes. In Minnesota, American Indian children have the highest mortality rate of 64.1 per 100,000 population (Table 3).

Race/Ethnicity	Mortality Rate (per 100,000 population)
Non-Hispanic American Indian/Alaska Native	64.1
Non-Hispanic White	11.8
Non-Hispanic Black	33.2
Hispanic	19.4*
Non-Hispanic Asian	11.9*
Non-Hispanic Native Hawaiian/Other Pacific Islander	#
Non-Hispanic Multiple Race	16.7*

Table 3: Minnesota Child Mortality, Age 1-9, 2019-2021

Source: National Vital Statistics System (NVSS), Title V Federally Available Data (FAD)

*Indicator has a numerator <20 and should be interpreted with caution; #Indicator has a numerator <10 and is not reportable

Adolescent health

Adolescence is the phase of life between childhood and adulthood where individuals experience rapid physical, cognitive, and psychosocial growth.²¹ During this phase, adolescents establish patterns of behavior and lay the foundations of good health. Behaviors they choose in adolescence that can protect their health and the health of others around them or put their health at risk now and in the future.

Despite being thought of as a healthy stage of life, there is significant death, illness, and injury in the adolescent years. Much of this is preventable or treatable.

Education

Education increases an individual's access to income through better jobs and higher earnings which results in more resources for improving health. Independent of income, education increases a person's health literacy and ability to navigate systems which can result in better health outcomes. Minnesota's complex school funding system creates inequities between schools and school districts, affecting the students that attend these schools. Historical, economic, and sociopolitical factors and policies structurally and systematically contribute to Minnesota's inequities²² Education inequities seen in Minnesota include differences in graduation rates, achievement levels, early childhood programs, dual credit (high school and college) course offerings, discipline rates, college enrollment, college persistence, college completion, and the diversity of teachers. Having access to high quality schools is connected to economic opportunities, environmental quality, and secure housing. These social determinants of health are inequitably distributed in Minnesota, with minority populations receiving less access to what they need to be healthy. American Indian students not being given the same opportunities has resulted in persistently lower high school graduation rates, with 61% of students graduating on time compared with 84% overall (Fig. 38).







The Minnesota Compass website also ranks states for on time graduation by each race/ethnicity. In 2020, Minnesota has one of the lowest on-time high school graduation rates for American Indian students – ranking 44 out of 50 states.²⁴

Mental health and well-being

Mental well-being is about having fulfilling relationships, contributing to community, and being resilient, which is the ability to bounce back after setbacks.²⁵ Many components are encompassed in mental well-being, including ten from the Minnesota Student Survey. These include positive identity, social competency, personal growth, empowerment, social integration, educational engagement, and positive family, community, teacher, and peer relationships. Figure 39 shows the percent of students in 8, 9, and 11 grade reporting each mental well-being components highlighting the differences of those who report being American Indian/Indigenous American and all students who don't in 2022. Mental well-being was worse across every component for students who identified as American Indian/Indigenous American by at least seven percentage points. However, the highest mental well-being components for American Indian students included strong family relationships, strong peer relationships and having opportunities for personal growth.



Figure 39: Mental Well-Being Components for American Indian/Indigenous American Percentage of Students (Grades 8, 9, 11), 2022

HEALTH OF AMERICAN INDIAN FAMILIES IN MINNESOTA

Source: Minnesota Student Survey

With so many factors that make-up mental well-being it is difficult to succinctly answer questions about population mental well-being with existing data, especially when examining the intersectionality of Minnesota's youth. There are multiple composite measures of mental well-being proposed in the research.²⁶ Minnesota Student Survey questions do not mirror any single validated mental well-being assessment tool, but the data includes many components of mental well-being captured in these measures.

One method to assess overall mental well-being, or whether Minnesota youth are thriving, is a simple cumulative score of the ten mental well-being components captured in the Minnesota Student Survey. Mental well-being is measured in Minnesota Student Survey by combining multiple components of well-being to create an overall well-being score. Eighteen percent of students who identified as Dakota/Lakota reported high mental well-being, followed by 16.8% for those of other tribal affiliation, 14.1% Anishinaabe/Ojibwe and 9.8% with multiple tribal affiliations (Fig. 40).

Figure 40: American Indian/Indigenous American Youth reporting High Mental Well-Being (8-10 Components), Percentage of Students (Grades 8, 9, 11), 2022





Bullying

Bullying is increasingly recognized as a significant social problem facing our youth. These behaviors are typically repetitive and often inflict distress or harm on the adolescent's health including psychological, social, and/or educational harm.²⁷ In 2022, students who identified as American Indian only had the highest rates of experiencing any type of bullying or harassment in the past 30 days and frequent bullying/harassment (60.1% and 29.2% respectively; Fig. 41).



Figure 41: Experiences of Bullying in Minnesota Students (Grades 8, 9, & 11) by Race/Ethnicity, 2022

Source: Minnesota Student Survey, 2022

Bullying questions on the Minnesota Student Survey include questions around being harassed or bullied you for: race, ethnicity or national origin, religion, sex or gender, gender expression, being LGBTQIA+ (or because someone thought you were), a physical or mental disability, size, or weight, and/or physical appearance. It also asks about being cyberbullied, experiencing violent bullying (physically pushed, shoved, slapped, hit, or kicked), threatened to beat you up, spread mean rumors or lies about you, made sexual jokes, comments, or gestures towards you, or excluded you from friends, other students, or activities.

Adverse childhood experiences

Trauma can have a large impact on mental well-being in youth and can be understood with Adverse Childhood Experiences (ACEs). ACEs are defined by the Centers for Disease Control (CDC) as being potentially traumatic events that occur between the ages of 0-17 years of age (e.g., experiencing/witnessing violence).²⁸ Characteristics in the child's environment that undermine a sense of safety, stability and bonding (e.g., a family member with substance use problems) can also contribute to ACEs.²⁸ ACEs are linked to many problems in adolescence and adulthood, including chronic health issues, mental illness and substance use problems.

The Minnesota Student Survey asked students in 8, 9, and 11 grade about any ACEs they have endured, and American Indian/Indigenous American students fared worse when compared to other students. Figure 42 shows that there are double the amount of non-American Indian/Indigenous American students with an ACEs score of zero compared to American Indian/Indigenous American students. American Indian/Indigenous students are more likely to have a higher ACEs score than non-American Indian/Indigenous students.





Source: Minnesota Student Survey, 2022

The trauma seen in ACEs scores that affect American Indian/Indigenous American students is different than what affects non-American Indian/Indigenous American students. Figure 43 shows the leading ACEs for each of these groups. The most common ACE for American Indian/Indigenous American students is having a parent or guardian who has been to jail or prison with more than one-third of students reporting experiencing this ACE.

Figure 43: Leading ACEs for American Indian/Indigenous American and non-AI Students (Grades 8, 9, 11), 2022



Source: Minnesota Student Survey, 2022

Economic hardship

Economic hardship through childhood and adolescence is a risk factor for adverse health outcomes. American Indian adolescents were two times more likely to have to skip meals because their family did not have enough money to buy food and to experience homelessness (6.8% versus 2.8%; Fig. 44). On the Minnesota Student Survey, the question around homelessness asks youth if they have stayed in a shelter, somewhere not intended as a place to live, or someone's else's home because they had no other place to stay, both with their parents or an adult, or on their own. American Indian students were more than twice as likely to have stayed in a shelter with a parent/adult and 3.4 times as likely having stayed in a shelter on their own.

Figure 44: Food Insecurity and Homelessness Experienced by American Indian and All Other Students (Grades 8, 9, & 11), 2022



Source: Minnesota Student Survey

Obesity

Obesity among children and adolescents can be impacted by access to safe, adequate, and affordable recreational opportunities and access to healthy foods. Body Mass Index (BMI) is a screening tool for overweight and obesity. When and individual is classified as overweight or obese on the BMI scale that means their weight that is higher than what is considered healthy for a given height and their corresponding sex- and age-specific BMI percentiles. American Indians and Native Hawaii/Pacific Islander have the highest rates of obesity reported by Minnesota youth (18.1% and 20.2% respectively; Fig. 45).





Source: Minnesota Student Survey, 2022

Teen pregnancy

Teen childbirth is a strong risk factor for poor outcomes for both infants and birthing parents, as well as being expensive for society. Teen pregnancy is closely linked to several critical social and public health issues such as intergenerational poverty and low educational attainment. From 2015 to 2017, pregnancy rates decreased among adolescents in all race groups except American Indian youth, which increased 8.4%.²⁹ The U.S. American Indian teen pregnancy rate in 2017 was 32.9 per 1,000; the Minnesota rate in 2017 was 57.8 per 1,000.^{30,31} More recently in 2020, the American Indian teen pregnancy rate dropped to 49.6 per 1,000 births (Table 4).

Race/Ethnicity	Pregnancy Rate (per 1,000 population)
American Indian / Alaska Native	49.6
Non-Hispanic White	7.6
Non-Hispanic Black	33.9
Hispanic	27.7
Asian/Pacific Islander	12.5

Table 4: Minnesota Teen Pregnancy (Age 15-19), 2020

Source: Minnesota Resident Death File and U.S. Census Data

Mental illness and suicide ideation

Minnesota students, who participated in the Minnesota Student Survey, reported healthier behaviors around commercial tobacco, alcohol, drugs, and sexual activity in 2022, while at the same time experiencing an unprecedented amount of long-term mental health, behavioral or emotional problems. Thirty one percent of American Indian students reported long-term mental health, behavioral, or emotional problems (Fig. 46). "These results indicate the pandemic fueled and worsened ongoing trends of our teens reporting long-term mental health problems. It will take more research to know the interplay of all the factors, but it is clear that this is a crisis, and Minnesotans, lawmakers and families need to focus resources and attention in and outside of schools to give our children and their families the connections, supports, stable environments and opportunities they need for a sense of well-being about their lives and futures." – Former Minnesota Commissioner of Health Jan Malcolm, 2022.





Source: Minnesota Student Survey, 2022 *All races are Non-Hispanic and are mutually exclusive.

Data from the Minnesota Student Survey also shows increases in suicidal thoughts. Reports of 11 graders having seriously considered suicide at some point in their life jumped to 28% in 2022, compared to 24% in 2019 and 23% in 2013. The numbers are even more troubling for lesbian, gay, bisexual, queer (LGBQ+) and transgender students. LGBQ+ students were about three times more likely than heterosexual students to report seriously considering suicide and four times more likely to attempt suicide than heterosexual students. Transgender students in the eleventh grade are most likely to attempt suicide and are more than four times more likely to attempt suicide and remore than four times more likely to attempt suicide and are more than four times more likely to attempt suicide and are more than four times more likely to attempt suicide and are more than four times more likely to attempt suicide and are more than four times more likely to attempt suicide and are more than four times more likely to attempt suicide and are more than four times more likely to attempt suicide than their cis-gender 11 grade peers. While the data specific to LGBQ+ and transgender American Indian students exists in the Minnesota Student Survey, the numbers are too small to discuss in detail within this report.

Adolescent mortality

Table 5 shows the adolescent mortality rate from 2019-2021. American Indian adolescents had the highest mortality rate in the state of 149.8 deaths per 100,000 population (Table 5).

Race/Ethnicity	Mortality Rate (per 100,000 population)
Non-Hispanic American Indian/Alaska Native	149.8
Non-Hispanic White	25.3
Non-Hispanic Black	65.1
Hispanic	30.2
Non-Hispanic Asian	22.3
Non-Hispanic Native Hawaiian/Other Pacific Islander	#
Non-Hispanic Multiple Race	31.1

Table 5: Minnesota Adolescent Mortality, Age 1-9, 2019-2021

Source: National Vital Statistics System (NVSS), Title V Federally Available Data (FAD) #Indicator has a numerator <10 and is not reportable

Suicide

Despite making up 2.2% of the total populations, American Indians represented 3.5% of all suicides in Minnesota. In 2020, the suicide rate among American Indians was 29.2 per 100,000. Americans Indians were 2-4 times more likely to die by suicide compared to their racial counterparts (Fig. 49).



Figure 49: Minnesota Suicide Counts vs. Suicide Rates by Race, 2020

Source: Minnesota Violent Death Reporting System (MNVDRS) Dashboard³² Note: Suicide rates are crude rates (number of deaths per 100,000) and not age-adjusted

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