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Health and Well-Being in North Dakota CLOSEUP

Featuring Health and Well-Being Issues
from a Social Determinants of Health Perspective

CSR | Center for Social Research at NDSU

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A Focus on Maternal Health & Well-Being in North Dakota

A SOCIAL DETERMINANTS OF HEALTH PERSPECTIVE

People's health and well-being are essential building blocks to personal fulfillment and thriving communities. Healthy communities, in turn, affect quality of life and overall well-being. Repeated studies have found that the conditions in which we live have an enormous impact on our health, long before we see a doctor. These conditions where we are born, live, work, play, and age are referred to as social determinants of health (SDOH) – and they affect a wide range of health and quality-of-life outcomes. SDOH measures are grouped into five domains, including economic stability, education, health care access, physical environment, and social and community context (U.S. Department of Health & Human Services, 2022). Understanding these factors that contribute to overall health is essential to improving health and quality of life. In particular, this first edition of the *CLOSEUP* focuses on the health of women and mothers in North Dakota – and factors contributing to their overall health and well-being.

A FOCUS ON MATERNAL HEALTH & WELL-BEING

The health and well-being of mothers is vital to healthy families and healthy communities. Their well-being impacts the health of future generations and can impact future public health challenges for families, communities, and the health care system. Critical to the health of women and children is having access to needed health care services. Having access to health care is important for promoting and maintaining health, preventing and managing disease, and reducing unnecessary disability and death. Attaining access to health care means having adequate and continuous health insurance coverage, timely access to preventive and needed care (both physical and mental health care), and a usual and convenient source of care. This edition of the *CLOSEUP* presents select measures that provide a better understanding of the factors impacting maternal and child health and associated maternal health outcomes in North Dakota.

FACTORS AFFECTING MATERNAL AND CHILD HEALTH

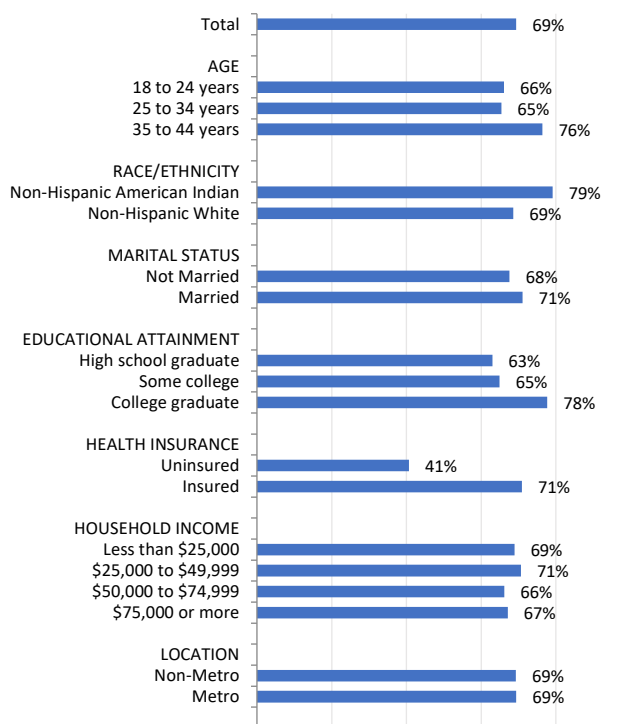
Preventive Care. Preventive health is essential to staying healthy and detecting health problems before they lead to other issues or become more difficult to treat. Access to health services such as regular checkups, immunizations, and screenings can help individuals live longer, healthier lives. For mothers and women of childbearing age, the importance of quality, on-time care impacts not only their health, but the health of future generations (Centers for Disease Control and Prevention, 2023).

In North Dakota, there are approximately 139,000 women in their reproductive years, ages 18 through 44 (U.S. Census Bureau, 2022). Of these women, two-thirds had a preventive medical visit in 2021 (69%) – a rate relatively unchanged over the past four years, and similar to the national average of 70 percent in 2021 (Centers for Disease Control and Prevention, 2022).

When compared to other states, only 14 had a lower percentage of women ages 18 through 44 with a preventive care visit than North Dakota in 2021. Rhode Island and Virginia had the highest rates of preventive care for women of reproductive age (78% and 79%, respectively) (Centers for Disease Control and Prevention, 2022).

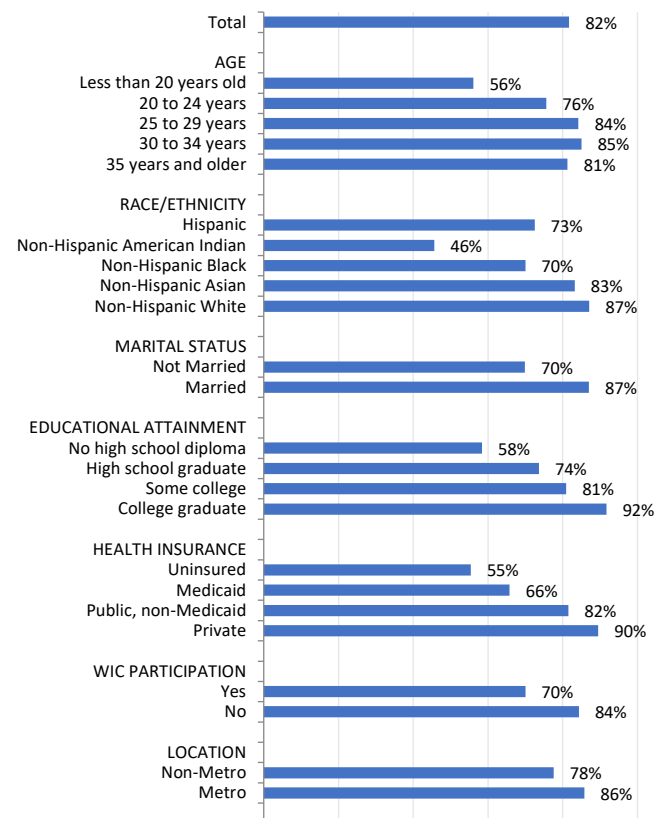
Health insurance, age, race, and educational attainment were important demographic factors in whether women received preventive care in North Dakota. In 2021, North Dakota women with a college degree were more likely to have received a preventive visit in the past year than women with less education; women with health insurance were more likely than those without, older women (ages 35 through 44) were more likely than younger women, and American Indian women were more likely than white women. Marital status, metropolitan status, and household income showed little impact.

Figure 1. Women Ages 18 through 44 in North Dakota with a Preventive Medical Visit in the Past Year by Characteristic, 2021
 Percentage of women, ages 18 through 44, with a preventive medical visit in the past year



Source: (Centers for Disease Control and Prevention, 2022)

Figure 2. Early Prenatal Care in North Dakota by Characteristic, 2021
 Percentage of women giving birth (for which prenatal care is known) who received early prenatal care, in the first trimester



Source: (Centers for Disease Control and Prevention, 2022b)

Early Prenatal Care. A healthy mother is important to the health of a child. Prenatal care can improve birth outcomes and is more likely to be effective if begun early in pregnancy (U.S. Department of Health & Human Services, 2017).

Of the 9,821 North Dakota births in 2021 (for which the mother’s access to prenatal care in known), 82 percent were to mothers receiving early prenatal care (i.e., in the first trimester) – which is a significant improvement from 73 percent ten years prior in 2011 (Centers for Disease Control and Prevention, 2022b).

The percentage of women receiving early prenatal care in North Dakota (82%) was higher than the national average (78%) in 2021 and ranked 16th among states, meaning that 15 states had a higher rate of early prenatal care.

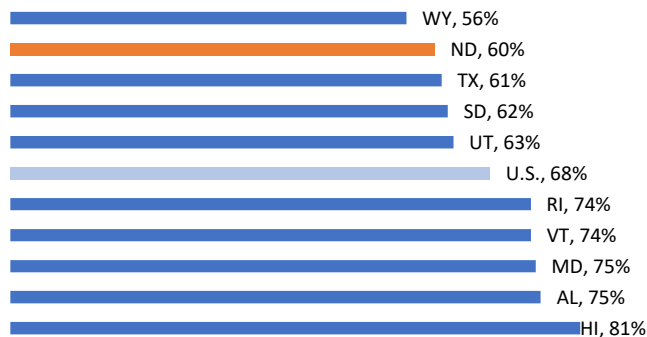
Disparities in accessing prenatal care exist across demographics. Women who are younger (teenagers), American Indian, Black, Hispanic, not married, uninsured, lower income, and have less education (and to a lesser degree, women living in non-metro areas) are less likely to receive early prenatal care in North Dakota (Centers for Disease Control and Prevention, 2022b).

Health Care Insurance Coverage. Most people need some form of medical care in their lives. Having health insurance helps to cover those medical costs and offers other benefits as well. In fact, research has shown that having health coverage is associated with better health-related outcomes – and a lack of insurance is associated with less medical care and less timely care, worse health outcomes, and financial strain for the uninsured and their families (Bovbjerg & Hadley, 2007).

In 2022, 7 percent of all children in North Dakota lacked health insurance coverage (U.S. Census Bureau, 2023). However, in an effort to gain a better understanding of the quality and consistency of health care coverage children have, the National Survey of Children’s Health asks parents whether their children are adequately and continuously insured. According to 2020-2021 data, 60 percent of children were adequately and consistently insured in North Dakota – the second lowest rate of coverage behind Wyoming at 56 percent. Nationally, 68 percent of children had adequate and continuous coverage; Hawaii reports the best coverage at 81 percent in 2020-2021 (Child and Adolescent Health Measurement Initiative, 2022).

Figure 3. Percentage of Children Ages 0 through 17 Who are Continuously and Adequately Insured by State, 2020-2021

Bottom five and top five states compared to the national average



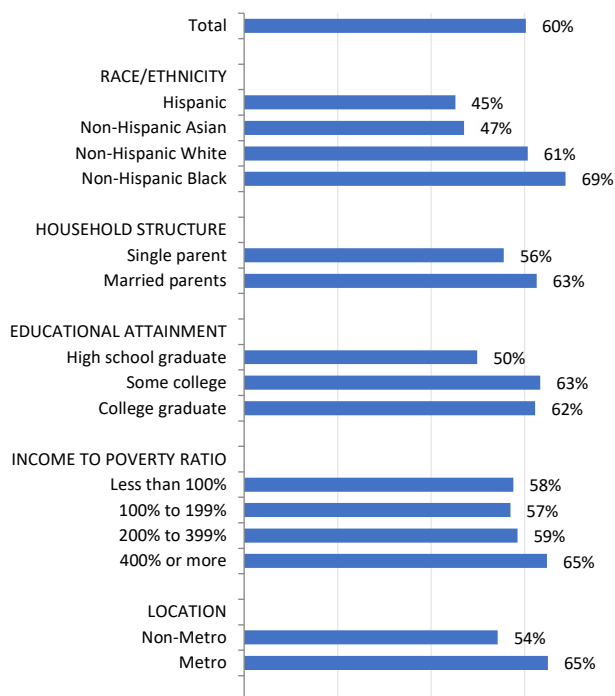
Note: Adequate and continuous coverage is defined as children who 1) have continuous insurance in the past 12 months, and 2) have current insurance which is adequate for the child's health care needs. The child's current insurance was considered adequate when the following criteria were met: (a) the child currently has health insurance coverage, AND (b) benefits usually or always meet child's needs, AND (c) the insurance usually or always allows the child to see needed providers, AND (d) the insurance either has no out-of-pocket expenses or out-of-pocket expenses are usually or always reasonable.

Source: (Child and Adolescent Health Measurement Initiative, 2022)

North Dakota children who are more likely to have adequate and continuous health coverage live with parents who are black or white, married, have education beyond high school, have higher household incomes (at four times the poverty rate), and reside in metro areas.

Figure 4. Children with Adequate and Continuous Health Insurance in North Dakota by Characteristic, 2020-2021

Percentage of children ages 0 through 17 who are continuously and adequately insured



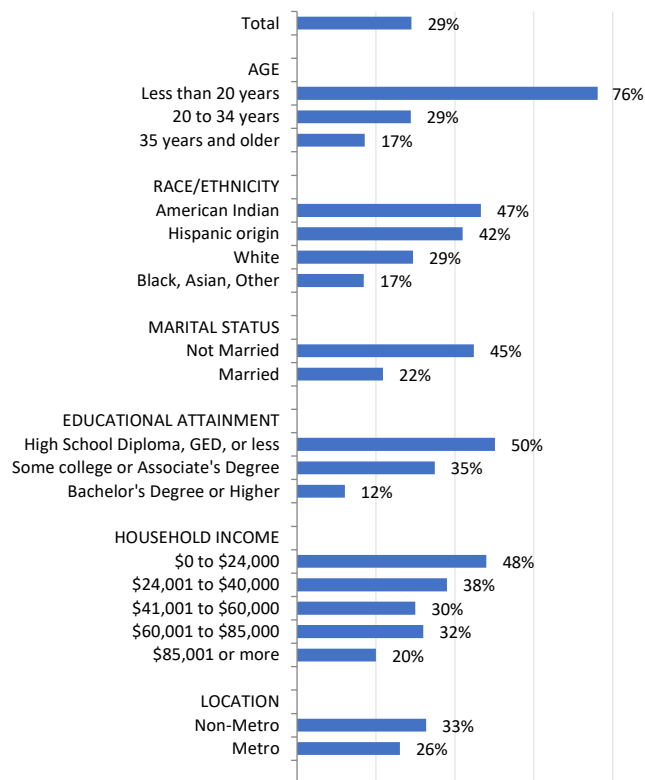
Source: (Child and Adolescent Health Measurement Initiative, 2022)

Maternal Adverse Childhood Experiences. Adverse childhood experiences, or ACEs, are experiences with the potential to harm children's physical, social, and emotional development. These experiences can include abuse or neglect, witnessing domestic violence, and growing up in a household with substance abuse, mental illness, or instability because of parental separation or incarceration. Maternal ACEs are of special interest since these potentially traumatic experiences as children can impact the health of both mothers and their babies – affecting the next generation.

In 2021, 41 percent of mothers giving birth in North Dakota reported no adverse experiences during childhood, which means that the majority of mothers experienced at least one ACE (59%). Research has shown that experiencing a single serious event in childhood may have few or no long-term consequences. But multiple forms of adversity in childhood is a predictor of multiple health problems in adulthood. In North Dakota, 29% of mothers reported three or more ACEs. Mothers giving birth who were most likely to have multiple ACEs (three or more) included those who were younger, unmarried, and American Indian or of Hispanic origin, as well as those who had less education,

Figure 5. Prevalence of Three or More ACEs among Women Giving Birth in North Dakota by Characteristic, 2021

Percentage of women giving birth who experienced at least three adverse experiences as children



Source: (North Dakota Health and Human Services Agency, 2023)

lower household incomes, and who lived in non-metropolitan areas (North Dakota Health and Human Services Agency, 2023).

Women giving birth in 2021 who experienced three or more adverse experiences as children were more likely to have an unintended pregnancy, depression (before, during and after pregnancy), and experience physical abuse (North Dakota Health and Human Services Agency, 2023).

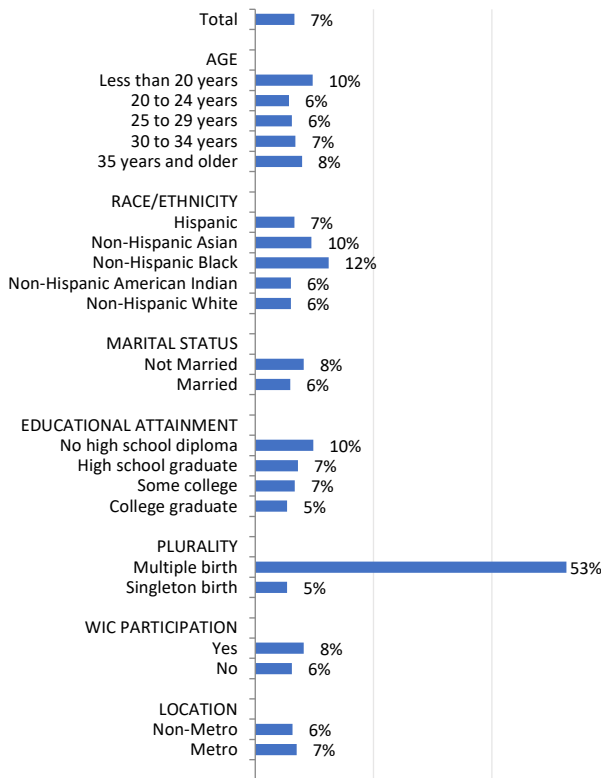
MATERNAL HEALTH OUTCOMES

Low Birthweight. For babies born with a low birthweight (less than 5.8 pounds or 2,500 grams), there is an increased risk for physical, cognitive, and emotional problems that can persist into adulthood. The costs associated with a low birthweight are numerous and may include higher health care, special education, and social service expenses — and decreased productivity in adulthood (Anil, Basel, & Singh, 2020).

In 2021, 672 babies were born with a low birthweight, which is 6.6 percent of all births in North Dakota and the lowest percentage among states. Nationally, 8.5 percent of births were low birthweight in 2021 (Centers for Disease Control and Prevention, 2022b).

Figure 6. Low-Weight Births in North Dakota by Characteristic, 2021

Percentage of low-birthweight deliveries (<2,500 grams)



Source: (Centers for Disease Control and Prevention, 2022b)

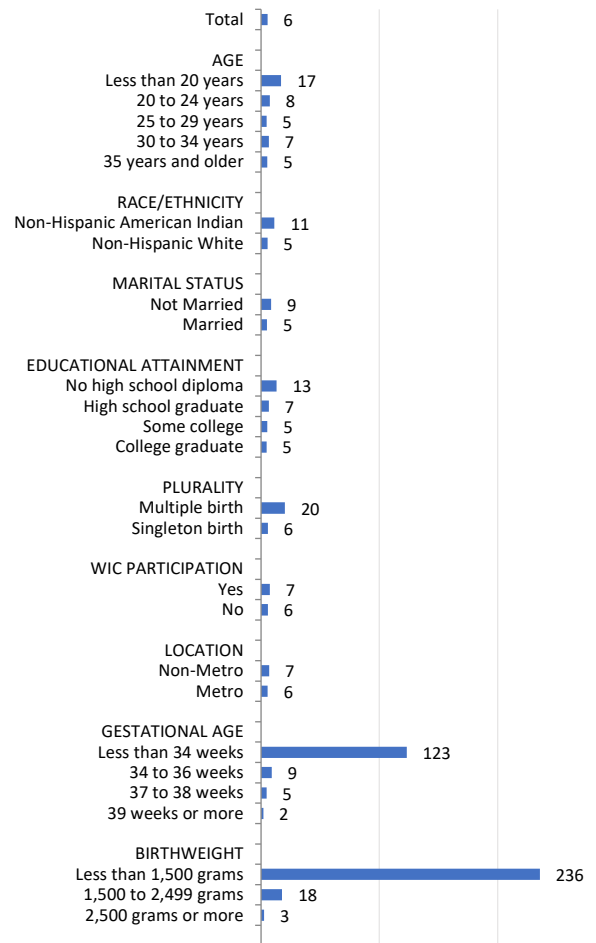
Despite North Dakota having the lowest rate of low-weight births nationwide in 2021, there has been relatively little change or improvement over the past 10 years. In addition, prevalence of low birthweight varies across maternal characteristics including age, educational attainment, marital status, race, and income. Most significantly, for North Dakota women giving birth to more than one baby, 53 percent of them had a low birthweight baby in 2021 compared to 5 percent for singletons (mothers giving birth to one baby).

Infant Mortality. The death of a child is a tragedy for family and friends, and a loss to the community. For every 1,000 babies born in 2020 in North Dakota, six died within that first year — a rate which is similar to the national average and a slight improvement from 7 per 1,000 in 2010 (Centers for Disease Control and Prevention, 2022b).

Weight and gestational age at birth are, by far, the largest factors impacting infant death in North Dakota. And, as

Figure 7. Infant Death Rate in North Dakota by Characteristic, 2018-2020

Infant deaths per 1,000 live births



Source: (Centers for Disease Control and Prevention, 2022b)

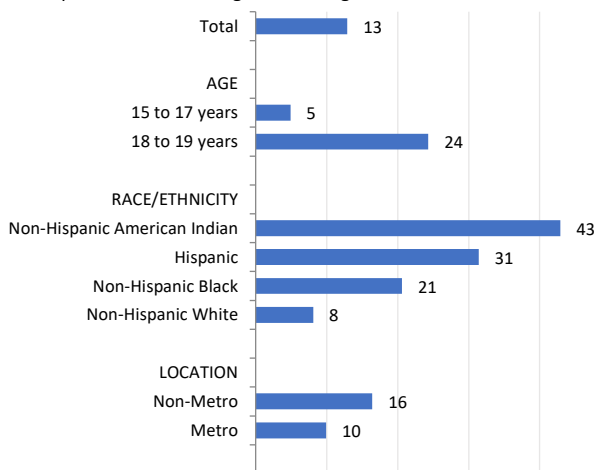
with other birth outcomes, disparities in infant mortality exist with respect to age of mother, her educational attainment, marital status, race, income, metropolitan status, and plurality (number of babies born at time of birth). Specifically, the infant death rate for North Dakota women giving birth to more than one baby was 20 per 1,000 live births in 2018-2020 compared to 6 per 1,000 for singletons (mothers giving birth to one baby). Likewise, the infant death rate for teenagers was nearly three times higher than the infant death rate for women 20 years and older.

Teen Births. Teen pregnancy and childbearing remains a reality for hundreds of teenage girls in North Dakota, despite recent declines in the overall teen birth rate (a drop of 7% per year, on average, since 2010) (Centers for Disease Control and Prevention, 2022b). Understanding the implications that teen births have on healthy youth development is important. Multiple studies have shown that children born to a teenager generally have poorer academic and behavioral outcomes than do children born to older mothers and are more likely themselves to initiate sex at an early age and to have a teen birth themselves (Centers for Disease Control and Prevention, 2021).

The teen birth rate in North Dakota dropped nearly continuously from 2010 through 2021, from a rate of 29 teen births per 1,000 females ages 15 through 19 down to 13 (which is similar to the national average of 14 in 2021). Despite this continued decline, the teen birth rate varies considerably by race, ethnicity, and location in the state. Specifically, the teen birth rate in North Dakota is 3 times higher for Black teens and 4 times higher for Hispanic teens than for their White counterparts (21 and 31 per 1,000, compared to 8 in 2021) - and 5 times higher for

Figure 8. Teen Birth Rate in North Dakota by Characteristic, 2021

Teen births per 1,000 females ages 15 through 19



Source: (Centers for Disease Control and Prevention, 2022b)

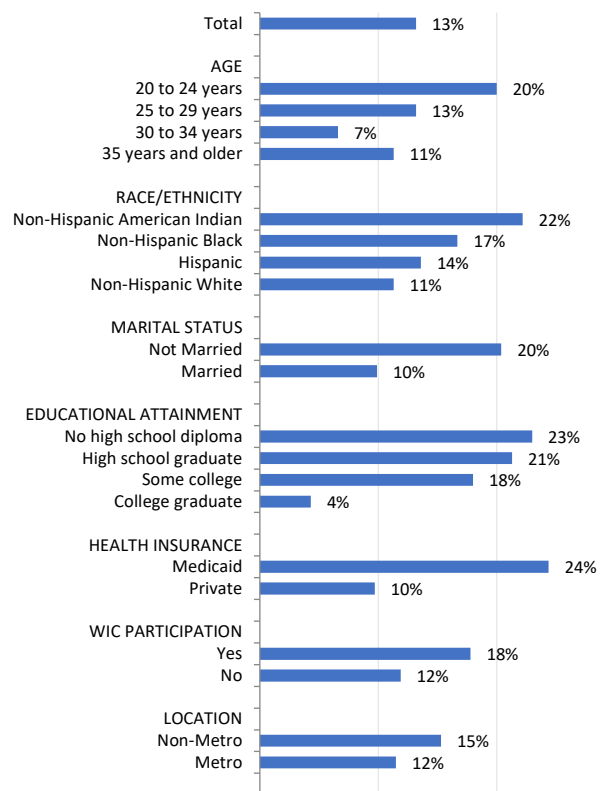
American Indian teens (43 per 1,000). Additionally, the teen birth rate is 1.7 times higher for teens living in non-metropolitan areas than for teens living in metro areas (16 per 1,000 compared to 10 in 2021) (Centers for Disease Control and Prevention, 2022b).

Postpartum Depression. A woman’s body and mind go through many changes during and after pregnancy. These changes can feel overwhelming and present symptoms similar to those of depression. For many women, these feelings go away in a few days. However, when sad and hopeless feelings don’t go away, they can interfere with daily living. And when these feelings last longer than two weeks, women may be experiencing postpartum depression — a serious mental health condition that involves the brain and affects behaviors and physical health. Left untreated, postpartum depression can affect the ability to parent and can affect the healthy development of the child (U.S. Department of Health & Human Services, 2023a).

According to the Pregnancy Risk Assessment Monitoring System (PRAMS), 13 percent of mothers giving birth in North Dakota had postpartum depression in 2021 – a rate

Figure 9. Postpartum Depression in North Dakota by Characteristic, 2021

Percentage of women who experience postpartum depressive symptoms following a recent live birth



Source: (Centers for Disease Control and Prevention, 2022a)

which is similar to the national average, and down from 16 percent in 2019 (Centers for Disease Control and Prevention, 2022a).

Although all pregnant women are at risk of developing postpartum depression after giving birth, prevalence varies by demographic characteristic. In 2021, postpartum depression was more prevalent among North Dakota women who were younger, had less than a college education, had lower household income, were unmarried, or were American Indian.

Maternal Mortality. The death of a woman during pregnancy, at delivery, or soon after delivery is a tragedy for families and their community. For every 100,000 births in North Dakota, there were 21 maternal deaths from 2017 through 2021 – a rate similar to the national average of 22 per 100,000 births (Centers for Disease Control and Prevention, 2022b). Due to the small number of events, characteristics of maternal deaths and trends over time are limited.

Severe Maternal Morbidity. Severe maternal morbidity (SMM), defined by the U.S. Centers for Disease Control and Prevention, includes unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman’s health. In addition to the health effects for the woman, SMM can result in increased medical costs and longer hospitalization stays (Centers for Disease Control and Prevention, 2023a).

More common than maternal death, there were 58 women in North Dakota who experienced SMM, or potentially life-threatening conditions or complications during labor or delivery in 2020. Presented as a rate, there were 62 women affected by SMM for every 10,000 hospital deliveries in North Dakota – a rate which is the fifth lowest when compared to other states. Nationally,

the rate of severe maternal morbidity was 88 per 10,000 hospital deliveries (U.S. Department of Health & Human Services, 2023).

Despite having the fifth lowest SMM rate when compared to other states, the rate of women experiencing SMM in North Dakota rose an average of 9 percent annually over the past 10 years (a growth rate three times faster than then national average).

SUMMARY

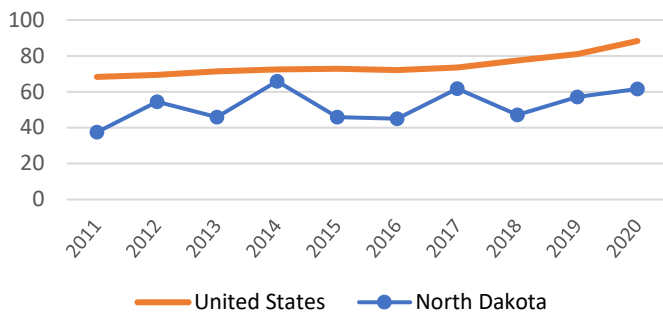
Overall, North Dakota women rank well nationally with regard to health and wellness. Most women receive preventive medical care annually – and most women giving birth receive prenatal care in the first trimester as recommended. As a result of this level of care, North Dakota also ranks well with regard to birth outcomes. Rates of low birthweight, infant death, teen birth, postpartum depression, maternal death, and severe maternal morbidity are all lower than or similar to the national average; with some measures showing improvement over the past few years.

Despite these positive trends, North Dakota has the second lowest rate of children who are adequately and continuously covered by health insurance – and prevalence rates in North Dakota vary considerably for each measure with regard to demographic and socio-economic characteristic. Mothers who are younger, unmarried, American Indian or have less education, lower household income, or live in non-metropolitan areas, in general, face far greater challenges in accessing appropriate, quality, and timely health care in North Dakota. As a result, these women are also at greater risk for experiencing negative health outcomes, which has the likelihood of impacting their children and future generations.

By understanding these data, trends, and disparities in maternal health and well-being, the development of solutions to address these challenges can be well informed and better positioned to help shape the future health of North Dakotans.

Figure 10. Severe Maternal Morbidity in North Dakota and the United States, 2011 to 2020

Rate of severe maternal morbidity per 10,000 hospital deliveries



Source: (U.S. Department of Health & Human Services, 2023)

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