



Public Health
Prevent. Promote. Protect.

Grand Forks Public Health

Grand Forks County Mental Health Epidemiological Profile 2019-2023



Shawn McBride

Public Health Epidemiologist

Grand Forks Public Health Department

Table of Contents

Foreword	3
Introduction.....	4
Guidelines for the Interpretation of Data	4
Small Numbers Data Reporting.....	4
Data by Race	5
COVID-19 Pandemic and Data.....	5
Profile Structure	5
Non-Specific Mental Health Wellness Data	6
Mental Health and Substance Use	6
United States Census Bureau	6
Grand Forks County Demographics	7
Age and Sex Distribution	7
Race Distribution.....	7
Social Characteristics	8
BRFSS	8
Poor Mental Health Days by Age.....	9
Poor Mental Health Days by Sex	10
Poor Mental Health Days by Income and Education	10
County Level BRFSS Estimates.....	12
Poor Mental Health Days	13
Prevalence of Depressive Disorders Diagnosis	13
Adverse Childhood Experiences (ACE)	14
County Health Rankings and Roadmaps	15
National Survey on Drug Use and Health	18
North Dakota Violent Death Reporting System	27
ND ESSENCE	28
Mental Health Visits	30
Sex	32
Age.....	33
Race.....	34
Anxiety.....	36
Sex.....	38

Age.....	39
Race.....	41
Depression.....	43
Sex.....	44
Age.....	45
Race.....	47
Suicidal Ideation	49
Sex.....	50
Age.....	51
Race.....	53
Suicide Attempts.....	54
Sex.....	55
Age.....	57
Race.....	59
Discussion.....	60
Acknowledgements	64
References	65
Glossary of Terms	67

Foreword

Hello Mental Health Advocates,

In July of 2024, the oversight of the Mental Health Matters program transitioned from the Grand Forks Police Department to Grand Forks Public Health. Mental Health Matters was established as a community collaborative in 2019 by the Grand Forks Public School District and the then Mayor's office, in response to the number of deaths by suicide in the community in 2018. The creation and continued support of Mental Health Matters gives testament to the importance the community of Grand Forks place on the collective wellness of our population.



Moranda Iverson, Mental Health Matters Coordinator

Since the program's inception Mental Health Matters has facilitated multiple community events including Back to School Back to You and various Wellness Workshops. Additionally, the program has participated in community efforts to improve mental health including the Community Health Improvement Plan and provided support to community members on their mental health journeys in pursuit of mental wellness. Mental Health Matters continues to collaborate and participate with multiple organizations to promote holistic mental health in the community across the age and wellness spectrum including Grand Forks Police Department, Grand Forks Public Schools, University of North Dakota, The Chamber, Community Violence Intervention Center, Together we Educate About the Realities of Suicide (TEARS), Altru, Grand Forks Housing Authority, Grand Forks Public Health, Aging Connections Network, and multiple other non-profit organizations and private businesses.

As the Mental Health Matters program looks to the future it aspires to create a culture of mental health through collaboration and conversation while addressing community mental health concerns. This includes continuing to cultivate relationships and develop programming with community stakeholders to benefit the Grand Forks community as a whole. This will be achieved by meeting people where they are on the mental health spectrum and supporting the mission and vision of the program:

Mission: Promoting resilience, strength, and emotional well-being for people in the Grand Forks community through education and collaboration to increase awareness and access to mental health resources.

Vision: The Grand Forks community will be an emotionally healthy place to live where people receive the support they need to thrive and succeed!

It is our hope that this report will aid in facilitating essential mental health conversations by providing data relevant to the state of mental health needs in our community. By understanding the "who" and the "what," we can then work together on the "how" to make a positive difference.

Sincerely,

Moranda Iverson

Mental Health Matters Coordinator

Introduction

Mental health has routinely been identified in the Grand Forks County Community Health Assessment as a top priority. A critical initial step in responding to a community's health need is to be able to accurately describe and quantify the condition(s) of concern. The data contained within this report are descriptive and aim to describe the burden of mental health in Grand Forks County by dissecting it into its component parts. Understanding the component pieces, such as what age groups are most affected, can aid in the development of interventions as well as target the best use of limited resources. Descriptive epidemiology cannot identify causal factors for the mental health conditions described. However, it may provide measures which can be useful in validating implicated causal factors or risk factors associated with the described conditions.

Guidelines for the Interpretation of Data

To understand epidemiological data and draw accurate conclusions from the information in this report, it is important to understand various characteristics of the data including but not limited to the source of the data and the limitations inherent to the collection and analysis methods utilized. The following guidelines are intended to aid in the interpretation of the data presented in this report. Multiple data sources are utilized in this report; these data do not represent an exhaustive list of available sources, nor do they describe all mental health related conditions experienced by community members. The sources contained within this report were selected due to their robust methodology, common usage in public health population assessments, and/or because they add further context or perspective to other data sources utilized in this report. Each data source described employs a variety of methods in the collection and analysis of the data. As with all data, consideration for the methods and inherent limitations are necessary to make appropriate conclusions. The data presented in this report are current as of the time of publication. However, data may be variable as new information is received and may differ from other reports or sources. The following data sources are used:

- Behavioral Risk Factor Surveillance System (BRFSS)
- County Health Rankings and Roadmaps (CHR&R)
- National Survey on Drug Use and Health (NSDUH)
- North Dakota Violent Death Reporting System (NVDRS)
- North Dakota Electronic Surveillance System for Early Notification of Community-Based Epidemics (ND ESSENCE)

Small Numbers Data Reporting

To preserve confidentiality and provide reliable estimates for data at a county level any stratified data which results in a number less than six will be suppressed and absent from tables or graphs. This is consistent with the North Dakota Department of Health and Human Services suicide data reporting practices and has been extended to all mental health conditions in this report. Charts will omit those data points which may result in a gap in a line graph or a column or bar being absent from the chart and years where data is not reported will be denoted with an asterisk. If a group such as age or race

do not have data for any years within a chart or table, those groups are omitted from the chart or table.

In some data sets a cumulative incidence or cumulative incidence rate per 10,000 is utilized to allow for aggregation of small numbers into a meaningful and reportable measure. In those instances, annual incidence or incidence rates may not be reportable or provide reliable estimates and thus are not included in the report. Cumulative rates can be used in comparison to other cumulative rates within the data set. They should not be compared to annual rates in this report or from other sources.

Due to the survey sampling and analysis methodologies of BRFSS, NSDUH, etc., data stratification by age groups, sex, or race are often only available at a broader geographic level to ensure statistical accuracy and reliability. For ND BRFSS, values less than five are suppressed from reporting in accordance with ND BRFSS practices. Valid conclusions can be drawn regarding county residents from state or regional estimates for those surveys.

Data by Race

Race data are included in this report to better understand the health disparities experienced by minority groups. It is an important component of working towards equitable health outcomes for all groups. US census data tracks race as “alone” or “in combination.” Individuals categorized as white are white alone, individuals categorized as Black or African American, American Indian and Alaskan Native, Asian, or Hawaiian and Other Pacific Islander are categorized using US Census methodology and includes individuals reporting the respective race in combination with any other. The rationale for this method of racial categorization is to best capture an individual’s lived experience which may be associated with health disparity experienced and attributed to those racial groups.

A note of consideration is needed when reviewing race data. Grand Forks County has small minority populations, where a single incidence of disease can have a larger impact on incidence rates than that of a case in the majority population. This small numbers effect can contribute to larger fluctuations year to year in annual incidence rates by race.

For this report when incidence values are below six, five-year cumulative incidence rates are used when stratifying by race in order to provide valid estimates and evaluate health disparities. GFPH is committed to addressing health disparity through programs, practice, and policies alongside our public and private healthcare partners and community partners and agencies.

COVID-19 Pandemic and Data

Caution is advised when interpreting data from 2020 and 2021 due to the COVID-19 pandemic and its impact on typical data collection practices by many of the health-related data sources utilized in this report. Additionally, health behaviors and healthcare utilization differed during and after the pandemic from prior years.

Profile Structure

The profile is structured as to report data by the data source rather than a specific condition or health status. Each heading will describe the data source along with a summary of the methodology and limitations specific to the data source being described. The report will then proceed through the data

available from the respective data source. It will progress from general mental health to more condition specific data, if any are available. The intent of this structure is to highlight the methods and limitations of the data source within each section to better guide conclusions and avoid confusion related to the various data sources' methodologies and limitations as well as avoid the need to restate these methodologies and limitations each time data from a different data source is presented.

Non-Specific Mental Health Wellness Data

A variety of data sources do not assess the prevalence of specific mental health diagnosis. Rather, they evaluate the prevalence of mental health related conditions of any kind. This approach can be useful in understanding the overall burden of the multitude of mental health conditions that may be present in the community at a given time, as well as associated trends in prevalence over time. However, these data do not provide information as to what specific mental health conditions compose prevalence estimates.

Mental Health and Substance Use

Many surveys which assess mental health related conditions also seek to assess and describe the burden of substance use within the survey population. Around 1 in 4 individuals who have a serious mental illness (SMI) also have a substance use disorder (SUD).¹ Additionally, 43% of individuals in SUD treatment for nonmedical use of prescription opioids have a diagnosis or symptoms of mental health disorders, particularly depression and anxiety (Goldner, Lusted, Roerecke, Rehm, & Fischer, 2014). Grand Forks Public Health (GFPH) recognizes the importance of the interplay between substance use and mental health and that the two are inextricably linked, however, this report does not include substance use data. For this report, readers should consider a proportion of individuals counted within mental health prevalence estimates or incidence also experience some form of problematic substance use.

United States Census Bureau

The Census Bureau collects and provides up-to-date population and economic estimates down to a county level. Census data on population size and demographic makeup are used in this report. Census data are publicly available and can be found at www.census.gov.

Annual incidence rates are calculated using the annual incidence and the July census estimates for that year for race and sex. Cumulative incidence rates are calculated using the most recent July 2023 US Census population estimates for Grand Forks County.

Age group rates are calculated using 2020 age group estimates from the US Census Bureau. The 12-17 year old age group uses a "best fit" age group of 12-18 years of age as the denominator in rate calculations. This method does not change the conclusion of those data points where it is utilized and most likely underestimates rates.

¹ NIDA. 2022, September 27. Part 1: The Connection Between Substance Use Disorders and Mental Illness.

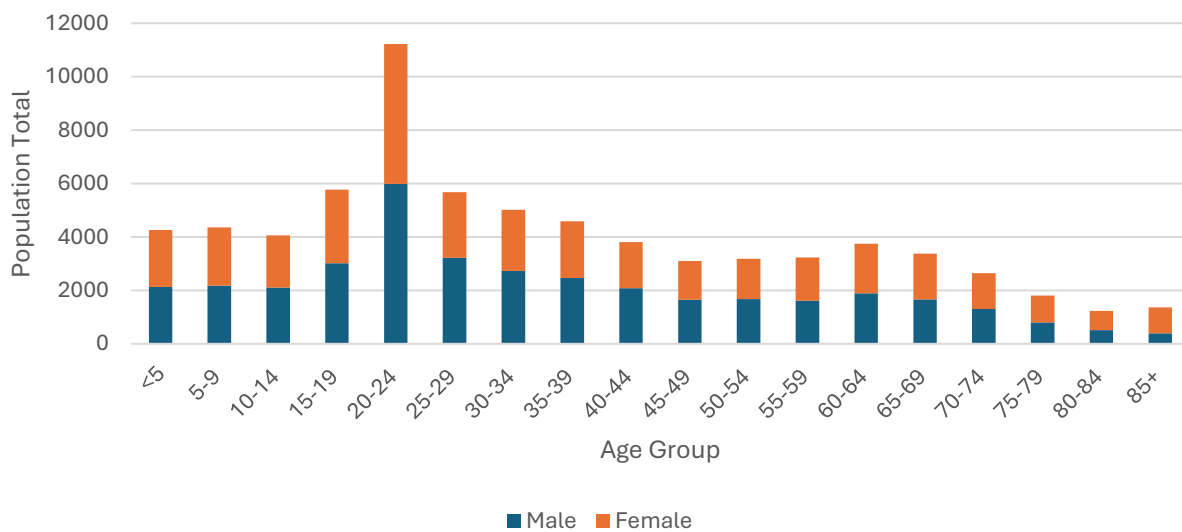
Grand Forks County Demographics

Grand Forks County is the third most populated county in North Dakota with a total population of 72,708 people. Grand Forks County covers 1,436 square miles with a population density of 50.9 individuals per square mile. The City of Grand Forks acts as the urban center of the county and serves as the county seat.

Age and Sex Distribution

The Grand Forks County population is 52% male and 48% female. 14% of the population are 65 or older. The largest representative age group are individuals 20-24 years of age comprising 15% of individuals below the age of 65.

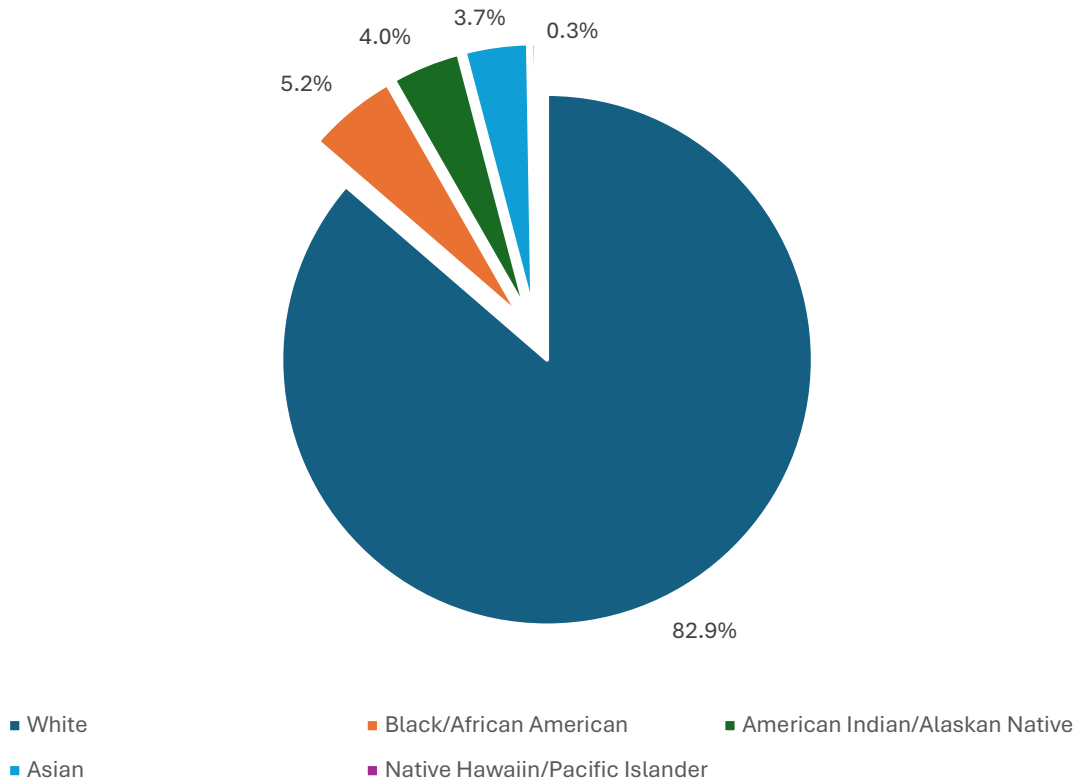
Figure 1: Grand Forks County Population by Age and Sex, 2023 US Census Bureau Estimates



Race Distribution

Most of Grand Forks County population reports White alone (82.9%) as their race. The largest minority group are those who report as Black or African American at 5.2% of the total population. The next largest minority group are those who report as American Indian and Alaskan Native at 3.7%.

Figure 2: Grand Forks County by Race, 2023 US Census Estimates



Social Characteristics

The social characteristics estimates include education, place of birth, and poverty level. In Grand Forks County 95.6% of the population 25 years or older have graduated high school. 6.1% of Grand Forks County residents were born in a foreign country. The median household income is \$64,698. 13.4% of the population live in poverty and 8.7% are without health insurance.

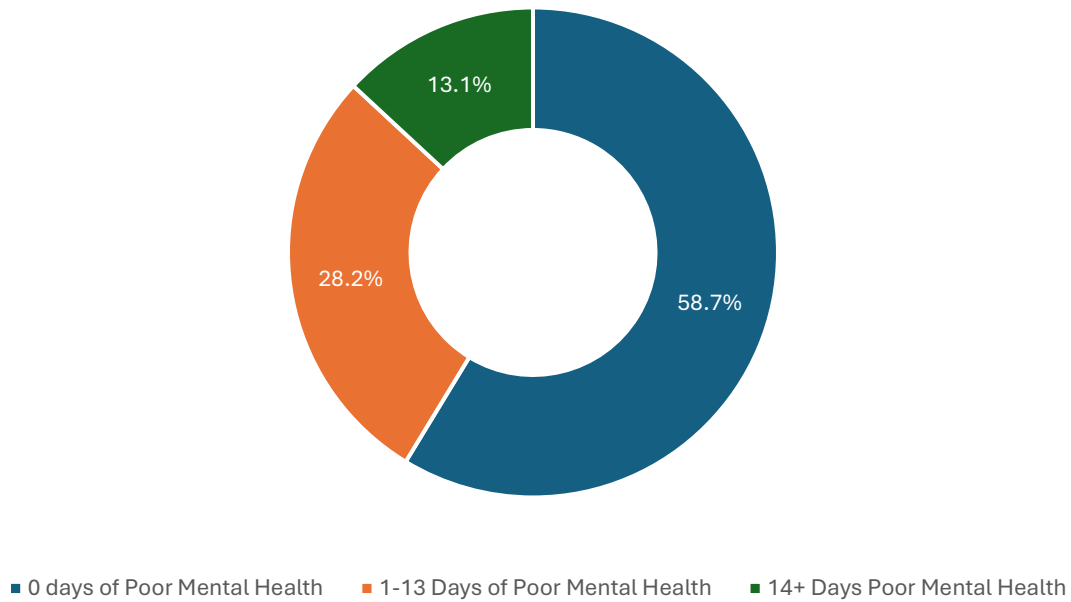
BRFSS

The Behavioral Risk Factor Surveillance System (BRFSS)² collects state data about U.S. residents regarding their health-related risk behaviors, chronic conditions, and use of preventive services. BRFSS data has been provided by NDHHS where indicated. Data from BRFSS are for the state of North Dakota unless otherwise specified. Stratification by age, sex, or income are not available at a county level, however state level data are reliable indicators for counties within North Dakota.

According to 2023 BRFSS data, 41% of North Dakotans reported at least one day where their mental health was not good in the last 30 days, with 13% reporting they experienced 14 or more days where their mental health was not good in the last 30 days.

² Centers for Disease Control and Prevention. (n.d.). About BRFSS.

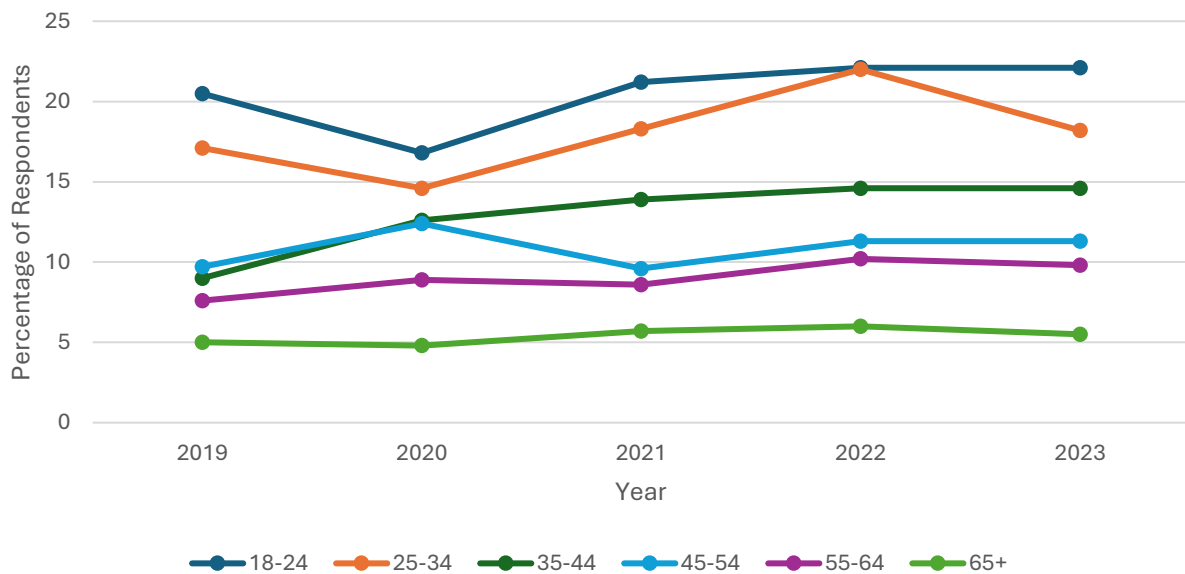
Figure 3: Number of days when mental health was not good in the last 30 days, North Dakota, 2023, BRFSS



Poor Mental Health Days by Age

When stratifying BRFSS poor mental health days by age group, individuals 18-24 years of age report the greatest prevalence of 14 or more days where mental health was not good in the last 30 days.

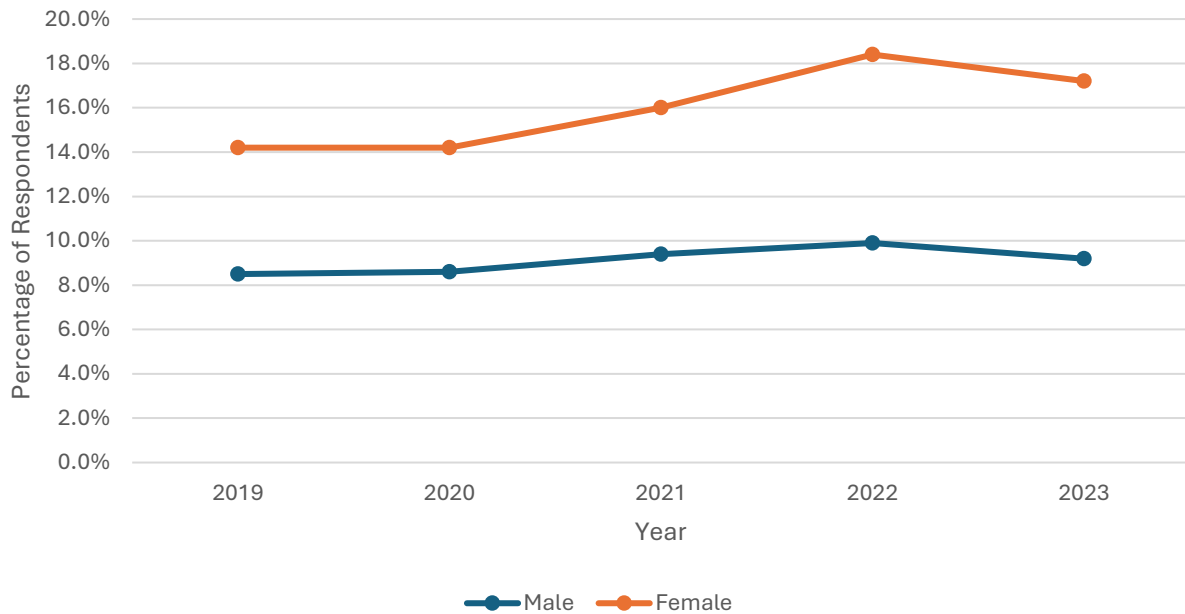
Figure 4: 14 or more days when mental health was not good in the last 30 days by age group in North Dakota, 2019-2023, BRFSS.



Poor Mental Health Days by Sex

When stratifying by sex a difference is observed between male and female respondents for those experiencing 14 or more days in the last 30 where their mental health was not good. In 2023, nearly 50% of female respondents reported having at least one day where their mental health was not good compared to 33% of males in North Dakota.

Figure 5: 14 or more days when mental health was not good in the last 30 days by sex in North Dakota 2019-2023, BRFSS.

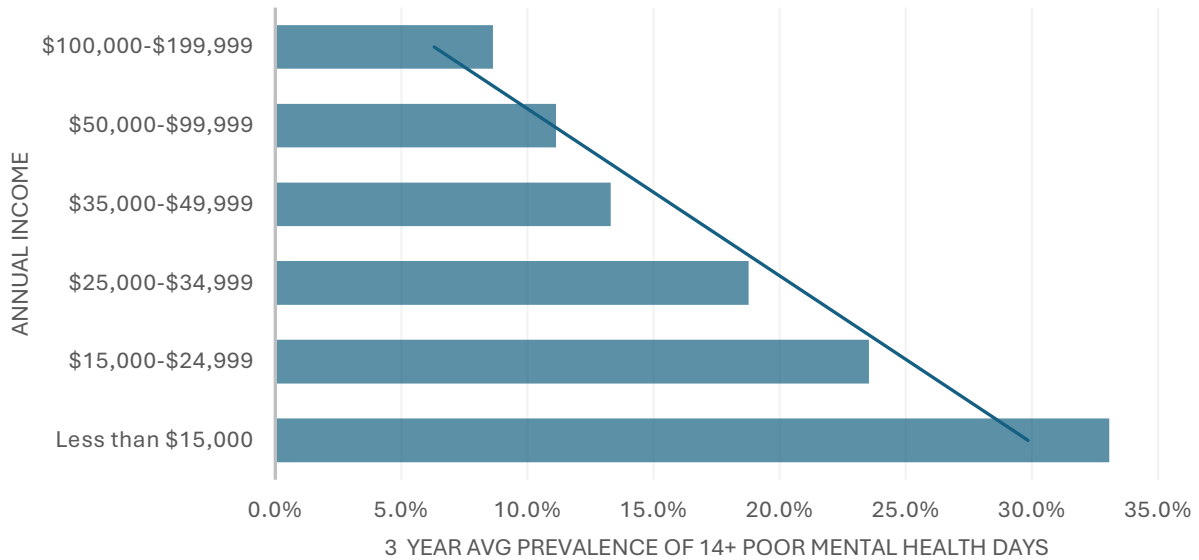


Poor Mental Health Days by Income and Education

A three-year average was used to estimate prevalence by income level. Income ranges changed in the 2021 BRFSS, so earlier data were not used to generate the average prevalence estimates.

Lower income levels are associated with higher prevalence of respondents reporting 14 or more days in the last 30 days where their mental health was not good.

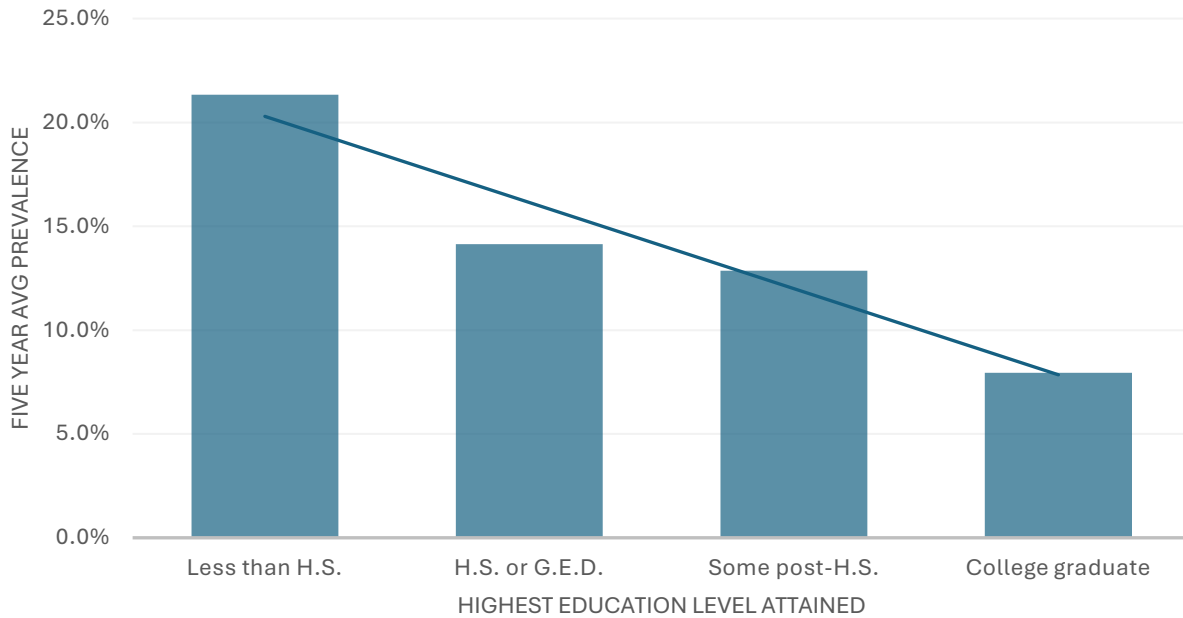
Figure 6: Three-year average prevalence of 14 or more poor mental health days in the last 30 days by income level, 2021-2023, North Dakota, BRFSS



	Less than \$15,000	\$15,000-\$24,999	\$25,000-\$34,999	\$35,000-\$49,999	\$50,000-\$99,999	\$100,000-\$199,999
3-year average prevalence	33.1%	23.5%	18.8%	13.3%	11.1%	8.6%
95% Confidence Interval	24.8-41.3	17.1-29.9	12.9-24.6	8.2-18.4	7.8-14.3	4.6-12.5
n	126	167	172	171	360	193

A five-year average prevalence was used to assess the relationship between educational attainment and prevalence of 14 or more poor mental health days in the last 30 days. A very similar trend was observed as to that of income and poor mental health days. Lower educational attainment was associated with higher prevalence of 14 or more poor mental health days in the last 30 days.

Figure 7: Five-year average prevalence of 14 or more poor mental health days in the last 30 days by educational attainment, 2019-2023, North Dakota, BRFSS



	Less than H.S.	H.S. or G.E.D.	Some post-H.S.	College graduate
5 Year Avg	21.3%	14.1%	12.9%	7.9%
95% Confidence Interval	14.6-28.1	11.6-16.7	10.6-15.2	5.8-10.0
n	142	709	820	623

These data do not provide an answer to why this trend is observed. Potential explanations present a chicken or egg type problem. Is higher educational attainment or higher income attainable due to lower prevalence of mental health challenges and individuals self-sort to some degree or does a lower income or educational attainment lead to greater or more frequent life stressors which exacerbate or cause the emergence of mental health conditions and more poor mental health days? The answer is likely to be a complex interplay of reasons with various degrees of impact at the individual level. However, from a public health perspective, what can be concluded is that those who most often experience frequent poor mental health days are those least likely to be able to afford or access care.

County Level BRFSS Estimates

The data tables in this section are unweighted estimates from the North Dakota Behavioral Risk Factor Surveillance System (BRFSS). Estimates are combined from datasets during the 5-year period 2019-2023 where possible to increase sample size. Survey years for each measure are noted in the table title. All county-level estimates using BRFSS data should be interpreted carefully and consider 95% confidence intervals. Response categories with five or less respondents are suppressed due to unstable estimates. Additional considerations should be taken into account as the sensitivity of

these measures to detect intervention impacts are extremely limited and as such these measures should not be used to evaluate the effectiveness of programs or interventions. Trends noted within the state BRFSS section are also observed at the county level. Additional measures are included within the county section that are not included in the state BRFSS section.

Poor Mental Health Days

At the county level, trends and disparities are like those observed in the state level BRFSS data. Females experience more frequent poor mental health days than males. Age groups differ from each other and the age groups reporting greater frequency of poor mental health days are like those observed in the state BRFSS data. When comparing local data to state level data, confidence intervals overlap indicating there may not be a statistical difference between the county and state level measures.

Table 1: Respondents that indicated that during the past 30 days their mental health was not good for 7 or more days* (2019-2023), NDHHS, BRFSS

	Grand Forks County <i>Percent (95% CI)</i>	North Dakota <i>Percent (95% CI)</i>
Overall	16.7 (14.9-18.5)	13.3 (12.8-13.7)
Sex		
Male	12.5 (10.2-14.8)	10.6 (10.1-11.2)
Female	20.9 (18.1-23.7)	15.8 (15.2-16.4)
Age Group (in years)		
18-24	29.8 (22.5-37.1)	29.7 (27.3-32.0)
25-34	24.6 (18.4-30.8)	24.5 (22.8-26.2)
35-44	19.1 (13.5-24.8)	18.5 (17.1-19.9)
45-54	18.0 (12.5-23.5)	15.0 (13.8-16.3)
55-64	14.5 (10.4-18.6)	11.9 (11.0-12.8)
65+	10.6 (8.1-13.1)	7.1 (6.6-7.6)

*Uses the variable MENTHLTH and created a risk factor of 7 or more days in the past 30 days

Prevalence of Depressive Disorders Diagnosis

Sex differences persist for individuals reporting they have been diagnosed with a depressive disorder both at the county and state level. Confidence interval overlaps occur when comparing the same sex from the county level to the state level, indicating there may not be a difference between what is observed at the county level and the state level. There is a difference that emerges between the county and state when looking at age groups. At the county level the age group with the highest self-reported prevalence are those in the 45–54-year-old age group. Interestingly, despite the issues associated with the confidence intervals, this data point is supported by syndromic data from ND ESSENCE presented later in this report.

Table 2: Respondents indicating that they have ever been diagnosed with a depressive disorder (2019-2023)*, NDHHS, BRFSS

	Grand Forks County Percent (95% CI)	North Dakota Percent (95% CI)
Overall	19.4 (17.5-21.4)	16.6 (16.1-17.0)
Sex		
Male	13.7 (11.3-16.0)	11.5 (10.9-12.0)
Female	25.3 (22.3-28.3)	21.6 (20.9-22.3)
Age Group (in years)		
18-24	22.1 (15.5-28.8)	25.2 (23.0-27.4)
25-34	24.7 (18.6-30.9)	22.7 (21.0-24.3)
35-44	20.5 (14.8-26.3)	20.8 (19.4-22.3)
45-54	26.7 (20.4-33.0)	19.9 (18.4-21.3)
55-64	22.7 (17.9-27.6)	17.0 (15.9-18.0)
65+	13.5 (10.8-16.2)	12.0 (11.4-12.6)

*Uses the variable ADDEPEV3

Adverse Childhood Experiences (ACE)

North Dakota has included the ACE module in the BRFSS since 2019. A growing body of evidence implicates these experiences with poorer physical and mental health outcomes.³ Understanding who experiences adverse childhood events can help target intervention and prevention strategies. These data are included in this report because they also serve as an indirect measure of prevalence for mental health conditions by measuring how many people have lived with someone effected by a mental health condition.

³ Merrick, M. T., Ford, D. C., Ports, K. A., Guinn, A. S., Chen, J., Klevens, J., Metzler, M., Jones, C. M., Simon, T. R., Daniel, V. M., Ottley, P., & Mercy, J. A. (2019). *Vital signs: Estimated proportion of adult health problems attributable to adverse childhood experiences and implications for prevention—25 states, 2015–2017*. MMWR. Morbidity and Mortality Weekly Report, 68(44), 999–1005.

Table 3: Respondents indicating that they lived with anyone during their childhood who was depressed, mentally ill, or suicidal (2019-2022), * NDHHS, BRFSS

	Grand Forks County <i>Percent (95% CI)</i>	North Dakota <i>Percent (95% CI)</i>
Overall	16.7 (14.5-18.9)	14.0 (13.5-14.5)
Sex		
Male	12.1 (9.3-14.8)	11.4 (10.8-12.1)
Female	21.0 (17.7-24.3)	16.4 (15.7-17.2)
Age Group (in years)		
18-24	28.4 (20.0-36.9)	32.8 (29.8-35.8)
25-34	27.0 (19.2-34.9)	27.3 (25.0-29.5)
35-44	24.6 (16.9-32.2)	23.1 (21.2-25.0)
45-54	23.2 (15.8-30.6)	15.9 (14.3-17.5)
55-64	15.2 (10.2-20.3)	12.5 (11.4-13.6)
65+	7.4 (4.9-9.9)	7.1 (6.5-7.7)

*Uses the variable ACEDEPRS

County Health Rankings and Roadmaps

County Health Rankings and Roadmaps (CHR&R) is a program from the University of Wisconsin Population Health Institute. The program is designed to draw attention to differences in health within and across communities. It also highlights policies and practices which can help communities improve health for all.⁴ The CHR&R measures have been utilized in the Grand Forks County Community Health Assessments (CHA) and are the source of the sole mental health-related data point within the CHA. CHR&R uses an average of mentally unhealthy days reported in the past 30 days from BRFSS data. It uses an age adjusted rate to allow for comparison across populations with differing age structures. Due to methodology changes in 2021, these measures should not be used to make comparisons over time. For this reason, the data are presented as a scatter plot rather than as a line graph. Additionally, due to the aggregation of multiple years of BRFSS data used to create this specific CHR&R measure, it should not be used to evaluate local intervention or program work as the measure lacks sensitivity. More details about the methodology for creating county health rankings are available on its website.

⁴ County Health Rankings & Roadmaps. (n.d.). About Us.

Figure 8: Comparison of three North Dakota counties' average number of poor mental health days, 2020-2024, County Health Rankings and Roadmaps

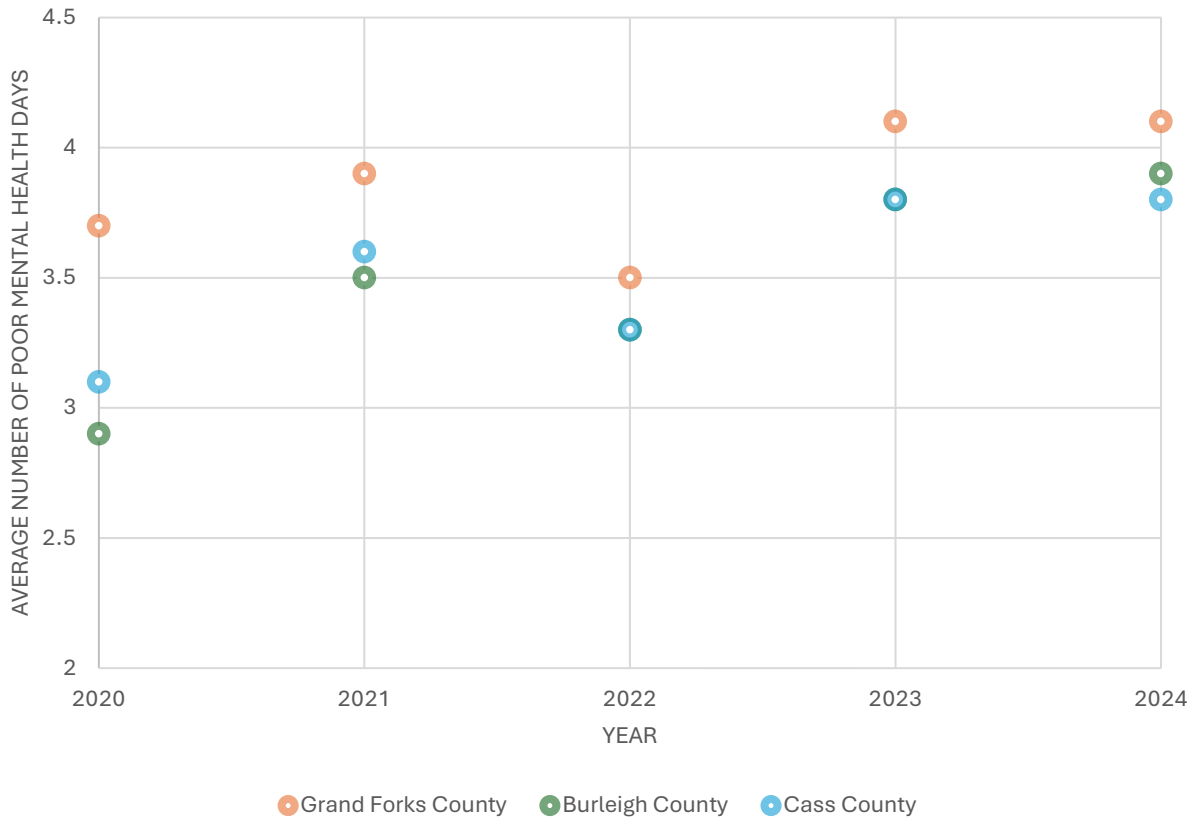
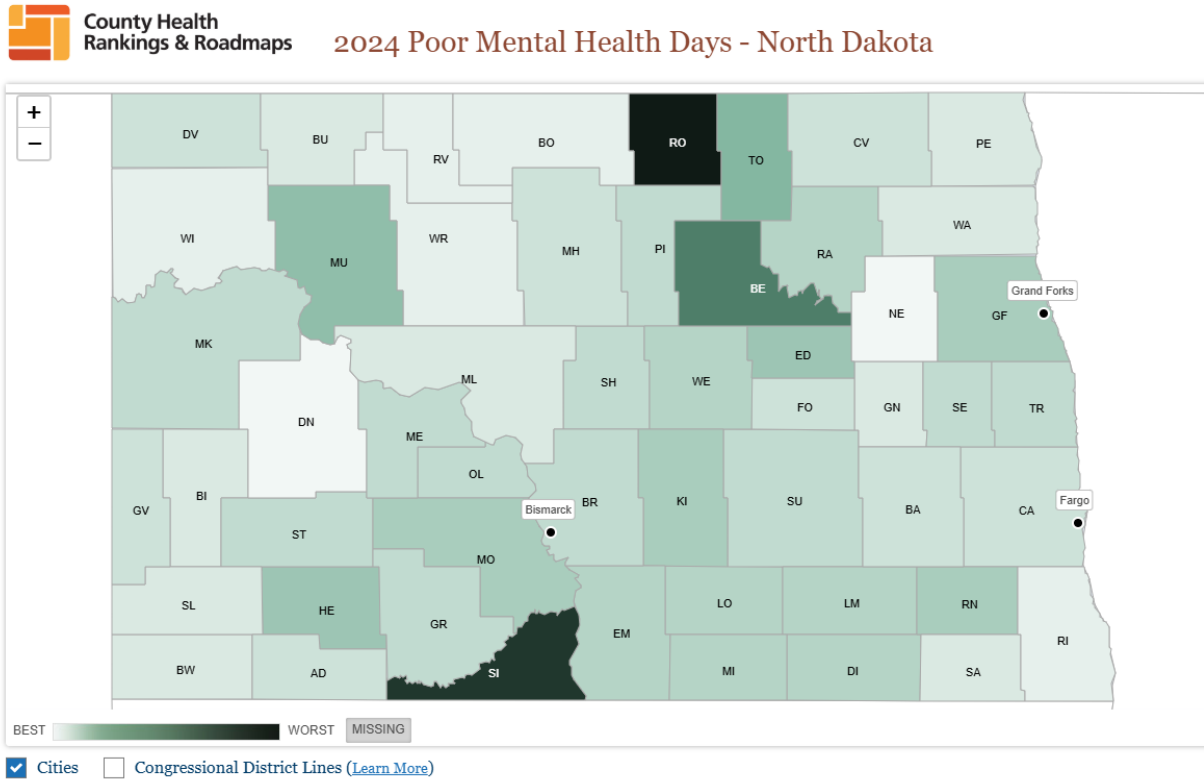


Table 4: Comparison of three North Dakota counties' average number of poor mental health days, 2020-2024, County Health Rankings and Roadmaps

Year	Grand Forks County	GF Error Margin	Burleigh County	Burleigh Error Margin	Cass County	Cass Error Margin
2020	3.7	3.5-3.8	2.9	2.8-3.0	3.1	3.0-3.2
2021	3.9	3.5-4.2	3.5	3.2-3.9	3.6	3.2-4.0
2022	3.5	3.2-3.7	3.3	3.1-3.6	3.3	3.0-3.5
2023	4.1	3.9-4.4	3.8	3.5-4.1	3.8	3.5-4.1
2024	4.1	3.5-4.8	3.9	3.3-4.7	3.8	3.2-4.5

In comparing the CHR&R average number of poor mental health days across comparable counties in North Dakota, Grand Forks measures above Burleigh County and Cass County each year of the sample (2020-2024). However, it should be noted that only the 2020 measure does not have some margin of error overlap with the other counties. In essence, there may be consistently higher measures in Grand Forks County, but those differences may not be of statistical significance.

Figure 9: Average number of poor mental health days by county, ND, 2024, County Health Rankings and Roadmaps



Mental healthcare access is not a focus of this report, however access to care is a critical component of understanding a community’s ability to meet a health need. To provide some insight into mental healthcare availability CHR&R uses the CMS National Provider Identification Registry to create an estimate of the number of residents to number of mental healthcare providers.⁵ Grand Forks County has one mental health provider for every 280 registered residents. It should be noted that this measure should not be used to track progress, there are limitations in how the data are collected and maintained, which may lead to an overestimation of providers. More accurate local data are needed to generate a measure with greater accuracy and utility.

⁵ County Health Rankings & Roadmaps. (n.d.). Access to care: Mental health providers.

observed and for comparisons between regions to be more easily made. Please note the Y axis scale when reading charts in this section as they do not start at 0.

According to 2021-22 NSDUH substate estimates, 23% of North Dakotans experienced any mental illness (AMI) in the last 12 months and 5% experienced serious mental illness (SMI). Nearly one in four (24%) North Dakotans have received mental health treatment in the last year.

Data presented below are a comparison between the Northeast region of North Dakota (the smallest substate region available), North Dakota, and the United States.

Figure 11: Prevalence of any mental illness in the last 12 months, Northeast ND, ND, US, 2008-2018, NSDUH

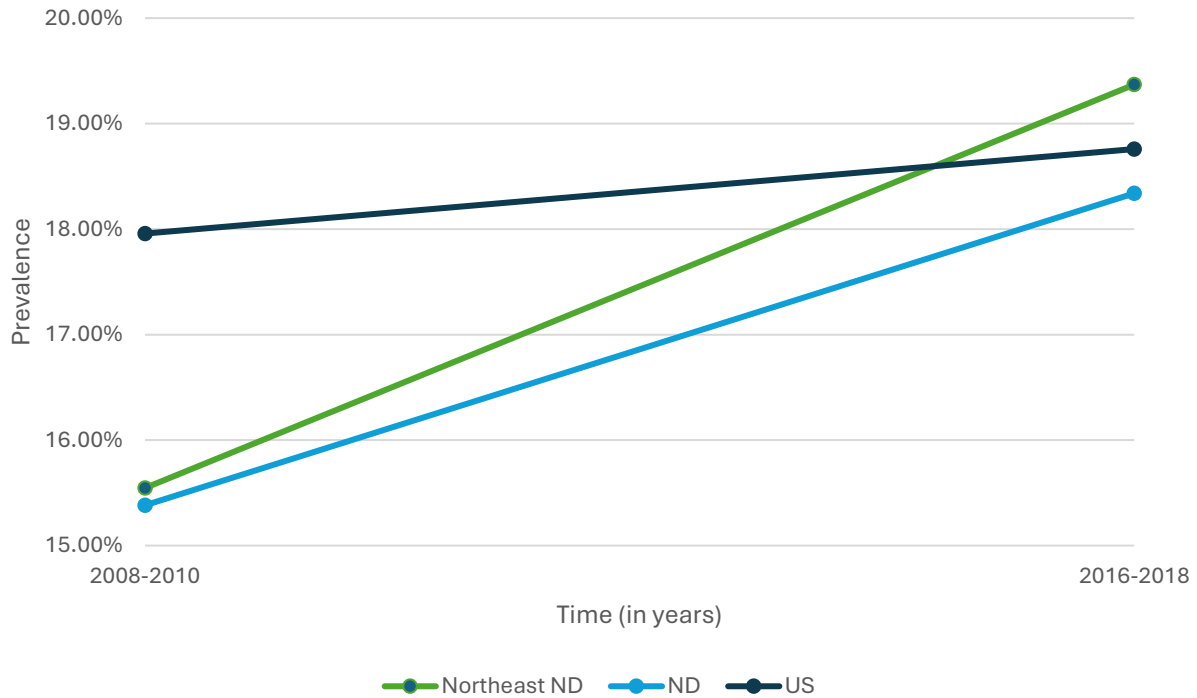


Table 5: Any mental illness (AMI) prevalence in the last 12 months Northeast ND, ND, US, 2008-2018, NSDUH

Year Pair	Northeast	95% Confidence Interval	ND	95% Confidence Interval	US	95% Confidence Interval
2008-2010	15.55%	12.98-18.52	15.38%	13.68-17.62	17.96%	17.62-18.31
2010-2012	17.54%	14.69-20.81	16.50%	14.66-18.51	18.13%	17.79-18.48
2012-2014	16.90%	14.41-19.72	16.45%	14.78-18.26	18.39%	18.07-18.72
2014-2016	17.47%	14.89-20.38	16.94%	15.42-18.58	18.09%	17.80-18.38
2016-2018	19.37%	16.33-22.82	18.34%	16.71-20.08	18.76%	18.46-19.06

Figure 12: Prevalence of serious mental illness in the last 12 months, Northeast ND, ND, US, 2008-2018, NSDUH

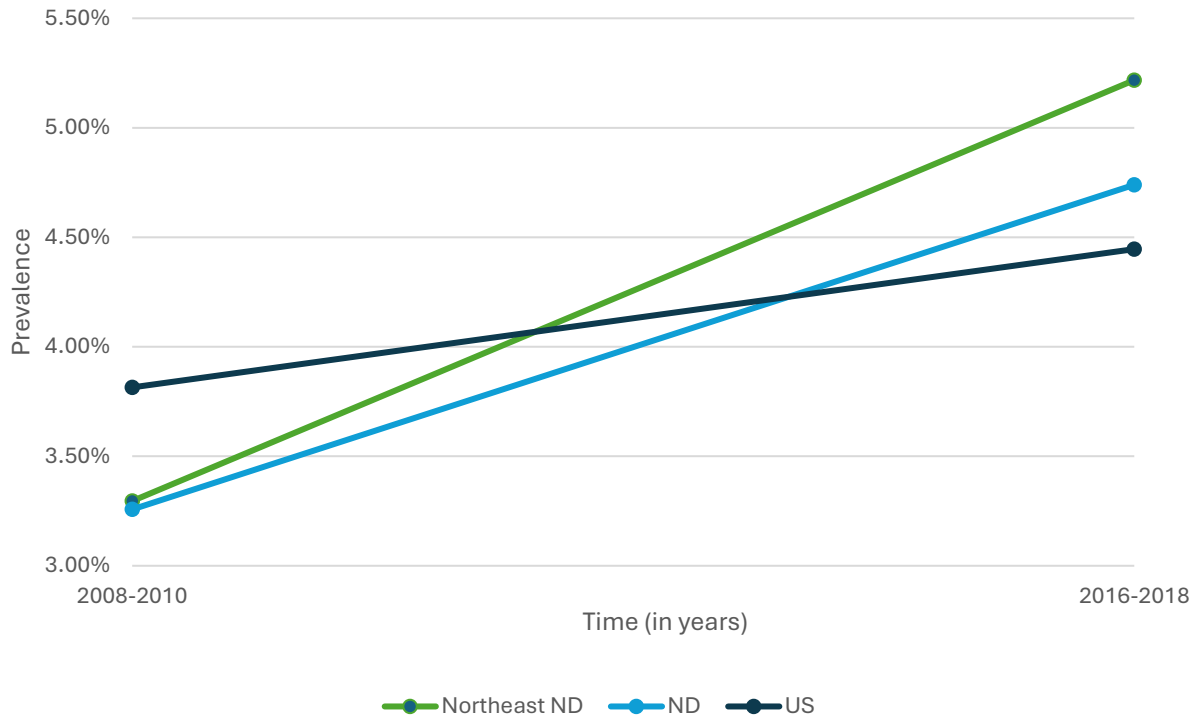


Table 6: Prevalence of serious mental illness in the last 12 months, Northeast ND, ND, US, 2008-2018, NSDUH

Year Pair	Northeast	95% Confidence Interval	ND	95% Confidence Interval	US	95% Confidence Interval
2008-2010	3.30%	2.41-4.48	3.26%	2.60-4.07	3.81%	3.65-3.99
2010-2012	3.85%	2.73-5.41	3.87%	3.10-4.81	3.99%	3.83-4.16
2012-2014	4.28%	3.28-5.56	4.04%	3.34-4.88	4.13%	3.97-4.29
2014-2016	4.55%	3.47-5.95	3.90%	3.28-4.64	4.12%	3.98-4.26
2016-2018	5.22%	4.08-6.65	4.74%	4.07-5.51	4.45%	4.30-4.59

Figure 13: Prevalence of major depressive episodes, Northeast ND, ND, and US, 2008-2018, NSDUH

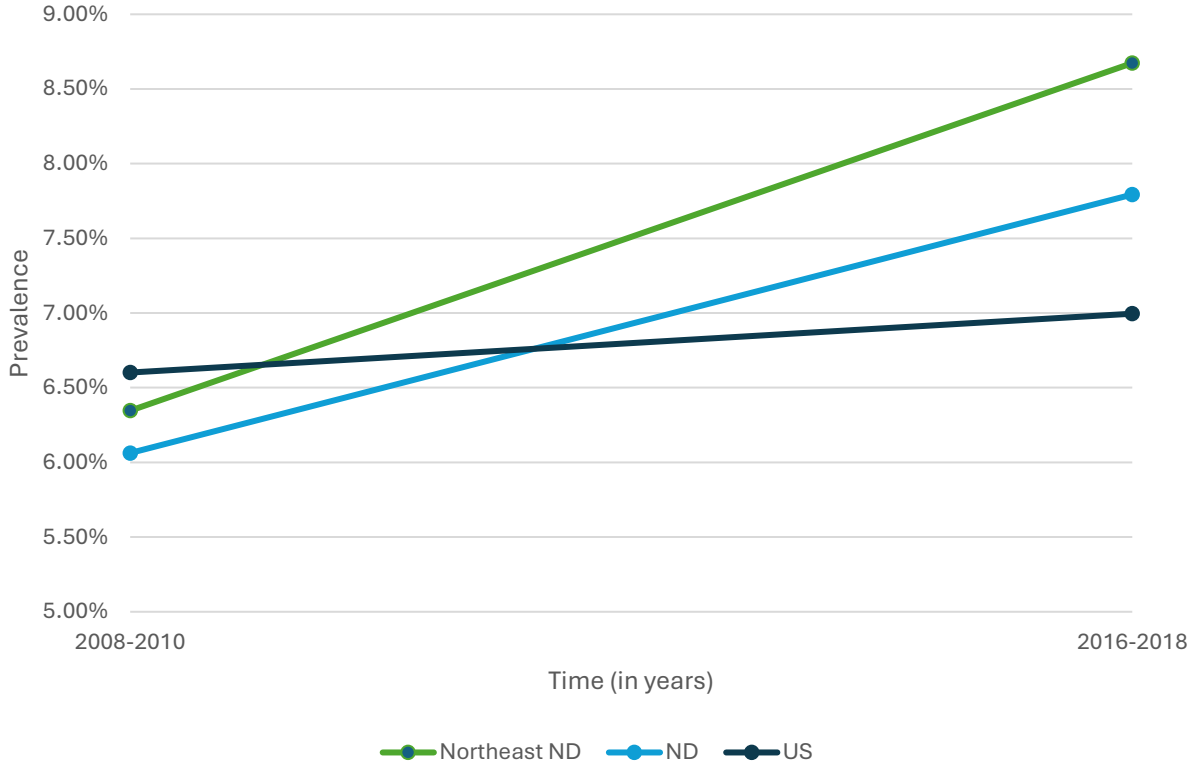


Table 7 Prevalence of major depressive episodes, Northeast ND, ND, and US, 2008-2018, NSDUH

Year Pair	Northeast	95% Confidence Interval	ND	95% Confidence Interval	US	95% Confidence Interval
2008-2010	6.35%	4.90-8.18	6.06%	5.13-7.15	6.60%	6.39-6.82
2010-2012	6.03%	4.55-7.95	5.86%	4.90-7.00	6.74%	6.53-6.95
2012-2014	6.18%	4.90-7.76	6.03%	5.14-7.06	6.71%	6.51-6.91
2014-2016	7.21%	5.79-8.94	6.50%	5.64-7.48	6.66%	6.49-6.84
2016-2018	8.67%	6.98-10.73	7.79%	6.85-8.86	7.00%	6.82-7.17

Figure 14: Prevalence of serious thoughts of suicide, Northeast ND, ND, and US, 2008-2018, NSDUH

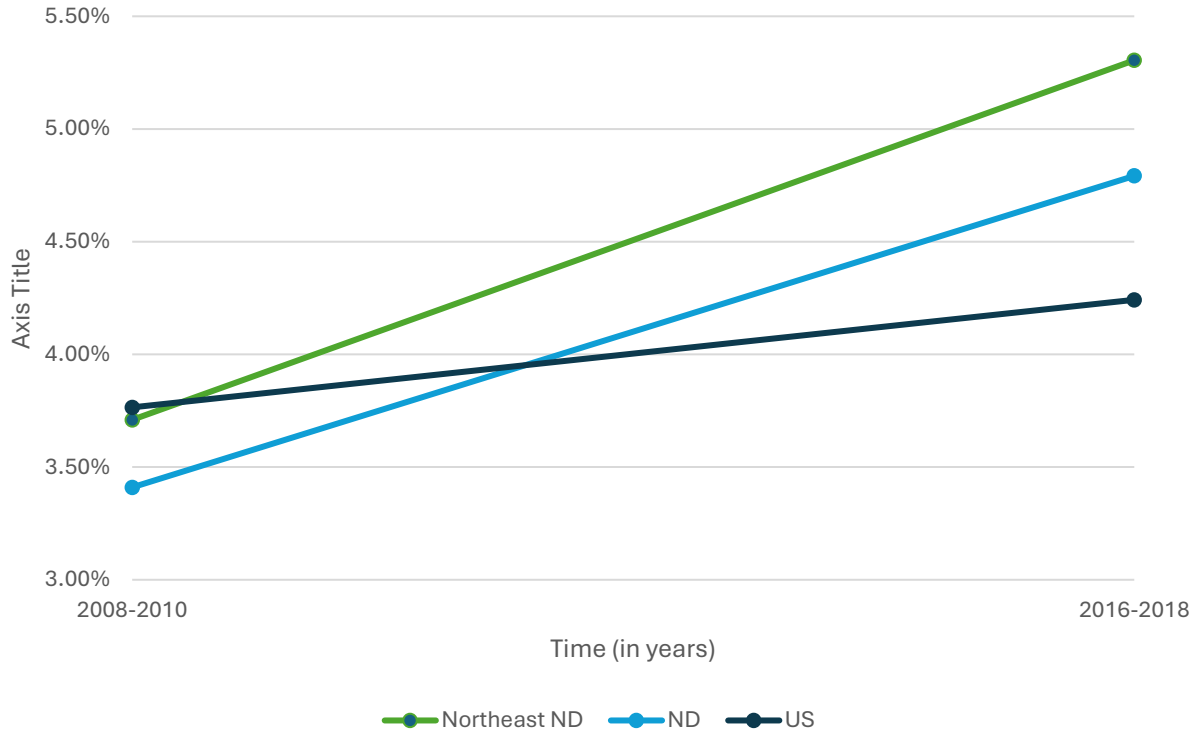


Table 8: Prevalence of serious thoughts of suicide, Northeast ND, ND, and US, 2008-2018, NSDUH

Year Pair	Northeast	95% Confidence Interval	ND	95% Confidence Interval	US	95% Confidence Interval
2008-2010	3.71%	2.81-4.88	3.41%	2.78-4.18	3.76%	3.61-3.92
2010-2012	4.01%	3.07-5.22	3.64%	2.97-4.44	3.78%	3.63-3.93
2012-2014	4.42%	3.49-5.59	3.93%	3.34-4.61	3.91%	3.76-4.06
2014-2016	4.68%	3.68-5.94	4.02%	3.41-4.73	4.01%	3.88-4.14
2016-2018	5.30%	4.20-6.69	4.79%	4.06-5.64	4.24%	4.11-4.38

NSDUH substate estimates do not allow stratification by age, gender, race, or other social or demographic characteristics. State level estimates do allow for comparison by pre-defined age groups; however, data are not available for other social or demographic characteristics. Statewide measures are included to allow for evaluation of age group analysis. The age group for those aged 12-17 years are not available for all measures. The state level prevalence estimates are reliable indicators for counties within North Dakota and can provide insight into the age groups that may be the primary drivers of the increases observed within the substate estimates.

Figure 15: Any mental illness (AMI) prevalence in the last 12 months by available age groups, ND, 2008-2018, NSDUH

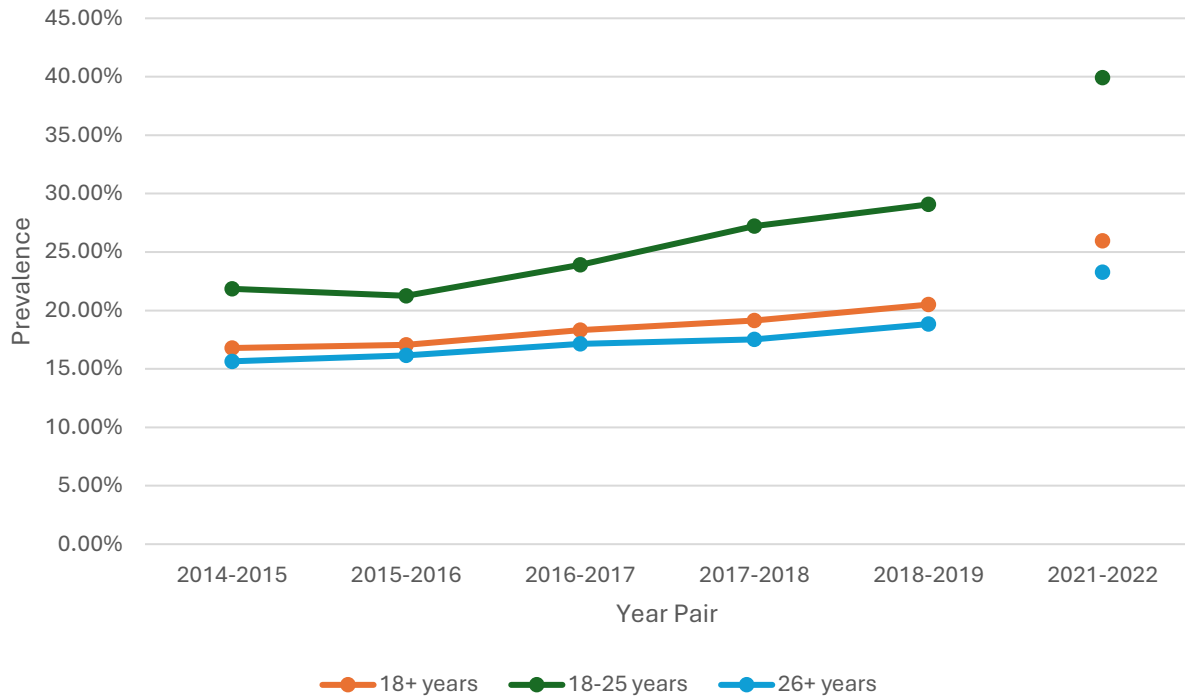


Table 9: Any mental illness (AMI) prevalence in the last 12 months by available age groups, ND, 2008-2018, NSDUH

Year Pair	18+ years	95% Confidence Interval	18-25 years	95% Confidence Interval	26+ years	95% Confidence Interval
2014-2015	16.78%	15.14-18.56	21.85%	19.04-25.04	15.65%	13.83-17.65
2015-2016	17.06%	15.26-19.01	21.25%	18.46-24.33	16.14%	14.19-18.30
2016-2017	18.30%	16.45-20.30	23.90%	20.84-27.25	17.15%	15.04-19.49
2017-2018	19.13%	17.21-21.19	27.22%	23.98-30.70	17.51%	15.38-19.87
2018-2019	20.50%	18.43-22.73	29.07%	25.73-32.27	18.83%	16.58-21.31
2021-2022	25.95%	23.11-28.90	39.89%	34.70-45.33	23.28%	20.09-26.80

Figure 16: Prevalence of Serious Mental (SMI) in the last 12 months by available age groups, 2014-2022, ND, NSDUH

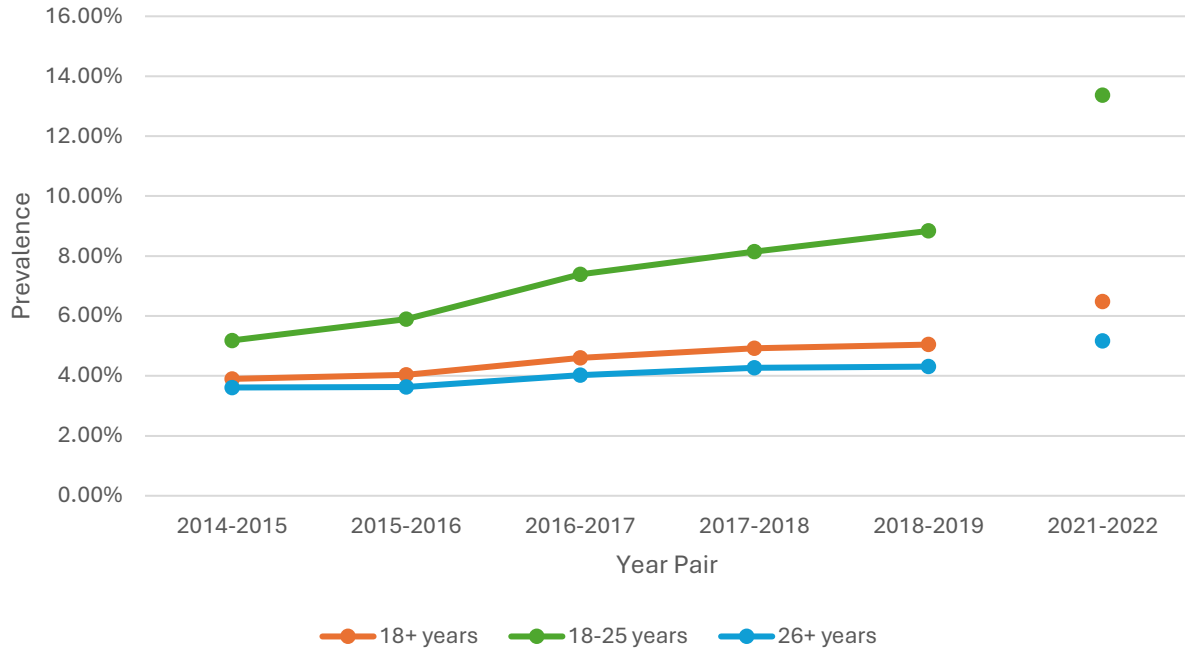


Table 10: Prevalence of SMI in the last 12 months, 2014-2022, ND, NSDUH

Year Pair	18+ years	95% Confidence Interval	18-25 years	95% Confidence Interval	26+ years	95% Confidence Interval
2014-2015	3.90%	3.20-4.74	5.18%	4.00-6.69	3.61%	7.65-11.67
2015-2016	4.03%	3.31-4.90	5.89%	4.61-7.49	3.63%	8.50-12.50
2016-2017	4.61%	3.85-5.50	7.39%	5.88-9.25	4.03%	9.73-14.37
2017-2018	4.92%	4.11-5.87	8.15%	6.58-10.04	4.27%	11.71-16.76
2018-2019	5.04%	4.22-6.02	8.84%	7.08-10.98	4.31%	12.88-18.05
2021-2022	6.48%	5.30-7.91	13.36%	10.60-16.71	7.83%	19.23-2.83

Figure 17: Prevalence of major depressive episodes in the last 12 months by available age groups, 2014-2022, ND, NSDUH

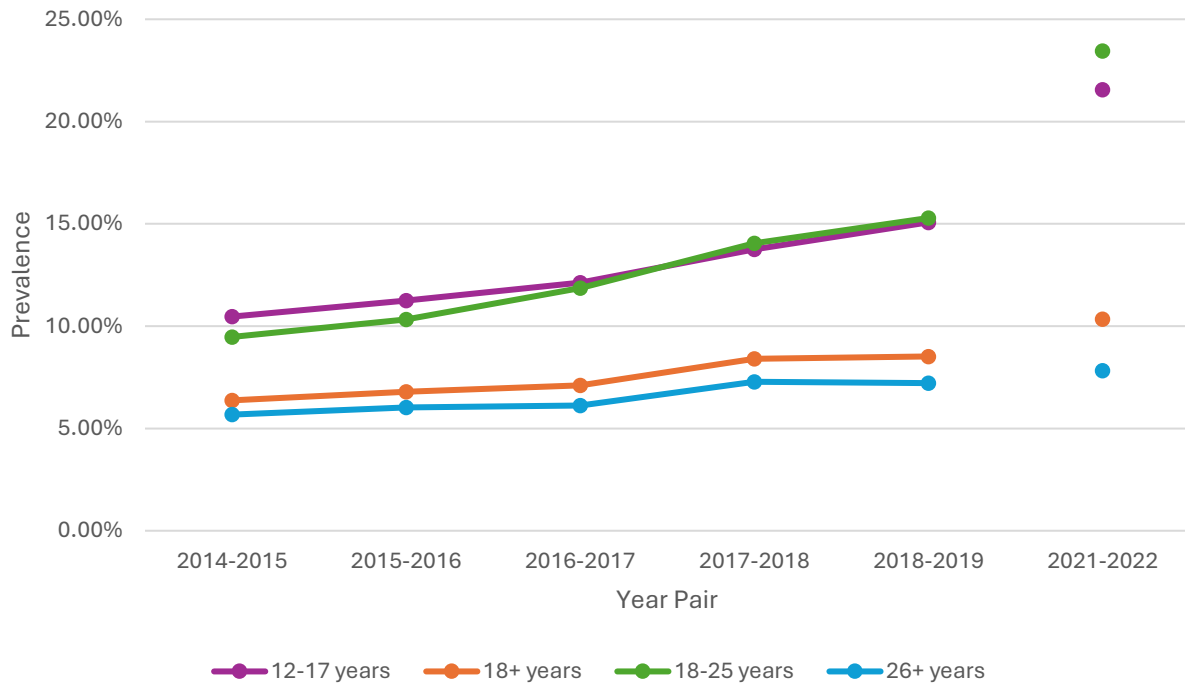


Table 11: Prevalence of major depressive episodes in the last 12 months by available age groups, 2014-2022, ND, NSDUH

Years	12-17 years	95% Confidence Interval	18+ years	95% Confidence Interval	18-25 years	95% Confidence Interval	26+ years	95% Confidence Interval
2014-2015	10.47%	8.65-12.60	6.37%	5.41-7.49	9.47%	7.70-11.67	5.68%	4.64-6.94
2015-2016	11.25%	9.24-13.64	6.80%	5.80-7.95	10.33%	8.50-12.50	6.03%	4.90-7.39
2016-2017	12.13%	10.30-14.28	7.10%	6.08-8.29	11.86%	9.73-14.37	6.13%	5.01-7.47
2017-2018	13.75%	11.60-16.23	8.40%	7.20-9.77	14.05%	11.71-16.76	7.28%	5.98-8.84
2018-2019	15.07%	12.81-17.65	8.52%	7.36-9.84	15.29%	12.88-18.05	7.21%	6.00-8.65
2021-2022	21.56%	17.71-25.98	10.34%	8.80-12.14	23.45%	19.22-28.28	7.83%	6.20-9.84

Figure 18: Prevalence of serious thoughts of suicide by available age groups, 2014-2022, ND, NSDUH

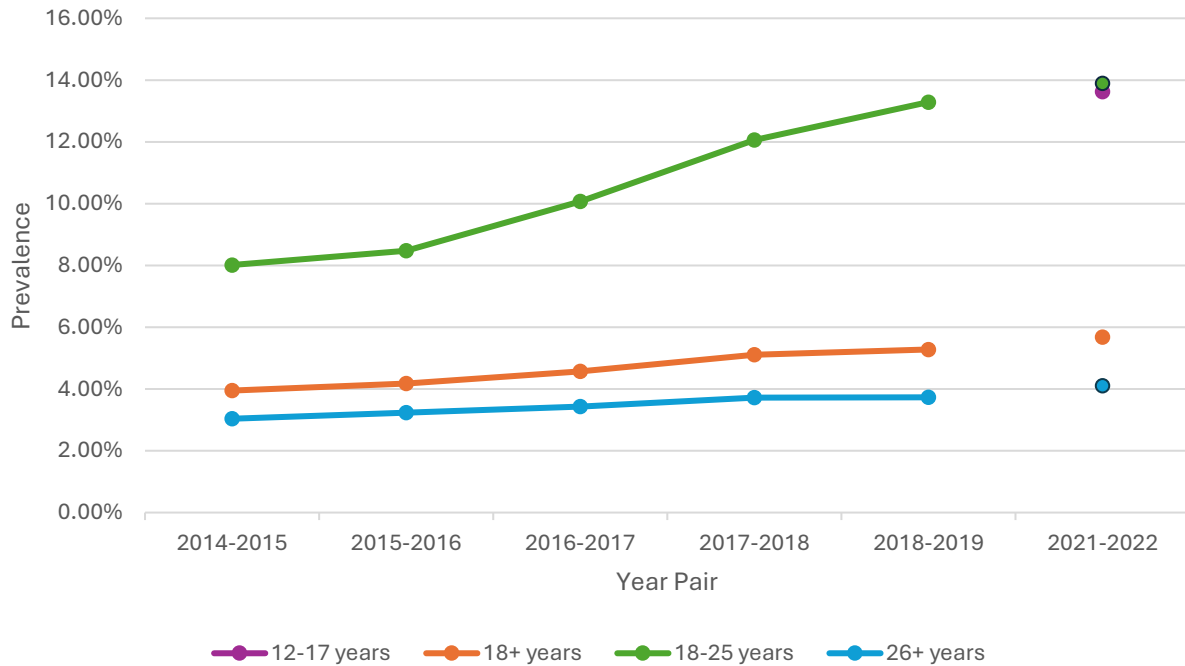


Table 12: Prevalence of serious thoughts of suicide by available age groups, 2014-2022, ND, NSDUH

Year Pair	12-17 years	95% Confidence Interval	18+ years	95% Confidence Interval	18-25 years	95% Confidence Interval	26+ years	95% Confidence Interval
2014-2015	-	-	3.95%	3.31-4.71	8.01%	6.53-9.80	3.04%	2.39-3.85
2015-2016	-	-	4.17%	3.42-5.08	8.47%	6.81-10.50	3.24%	2.50-4.18
2016-2017	-	-	4.57%	3.77-5.52	10.07%	8.21-12.30	3.43%	2.65-4.44
2017-2018	-	-	5.11%	4.26-6.12	12.06%	10.01-14.47	3.72%	2.90-4.77
2018-2019	-	-	5.28%	4.41-6.30	13.29%	11.00-15.60	3.73%	2.93-4.74
2021-2022	13.63%	10.95-16.83	5.68%	4.73-6.79	13.89%	10.98-17.42	4.11%	3.19-5.27

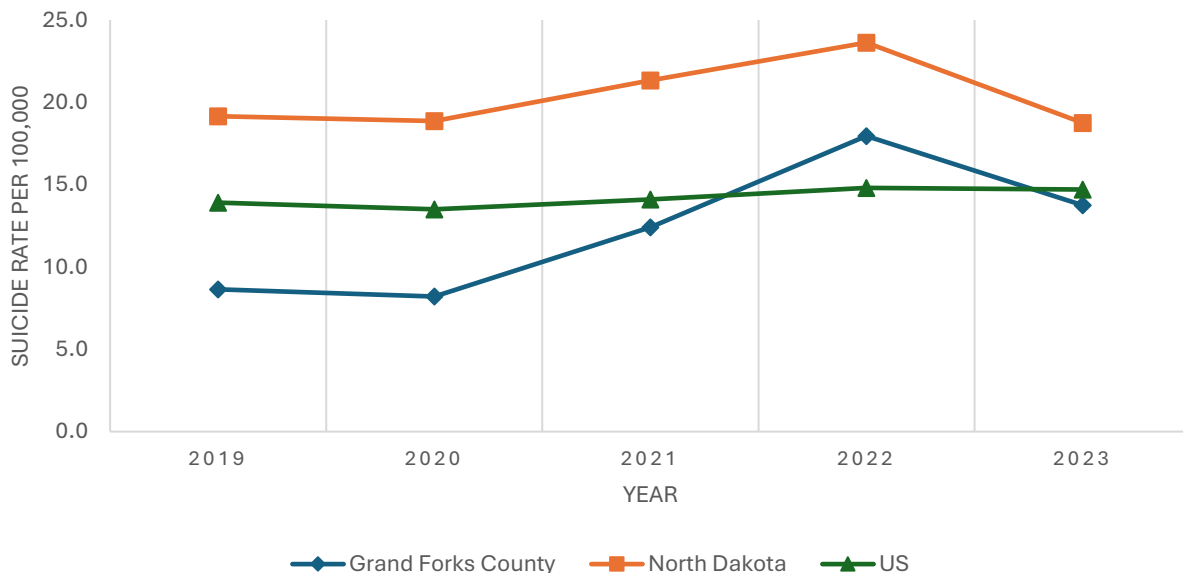
In general, NSDUH data corroborates other data within this report, specifically the increases noted in the prevalence of mental health conditions and associated events. This corroboration further adds to the certainty of the conclusions which can be drawn from the data presented, which is that mental health conditions, challenges, or related events are increasing and are occurring with greater prevalence in young people. North Dakota outpaces the national trend in these categories and the Northeast region typically mirrors North Dakota’s upward trend.

North Dakota Violent Death Reporting System

North Dakota participates in the National Violent Death Reporting System, which collects information about violent deaths including homicides, suicides, and deaths caused by law enforcement in the line of duty. NVDRS collects facts from death certificates, coroner/medical examiner reports (including toxicology), and law enforcement reports into one anonymous database. Data elements collected provide valuable context about violent deaths, such as relationship problems, mental health conditions and treatment, toxicology results, and life stressors, including recent money- or work-related or physical health problems.⁸

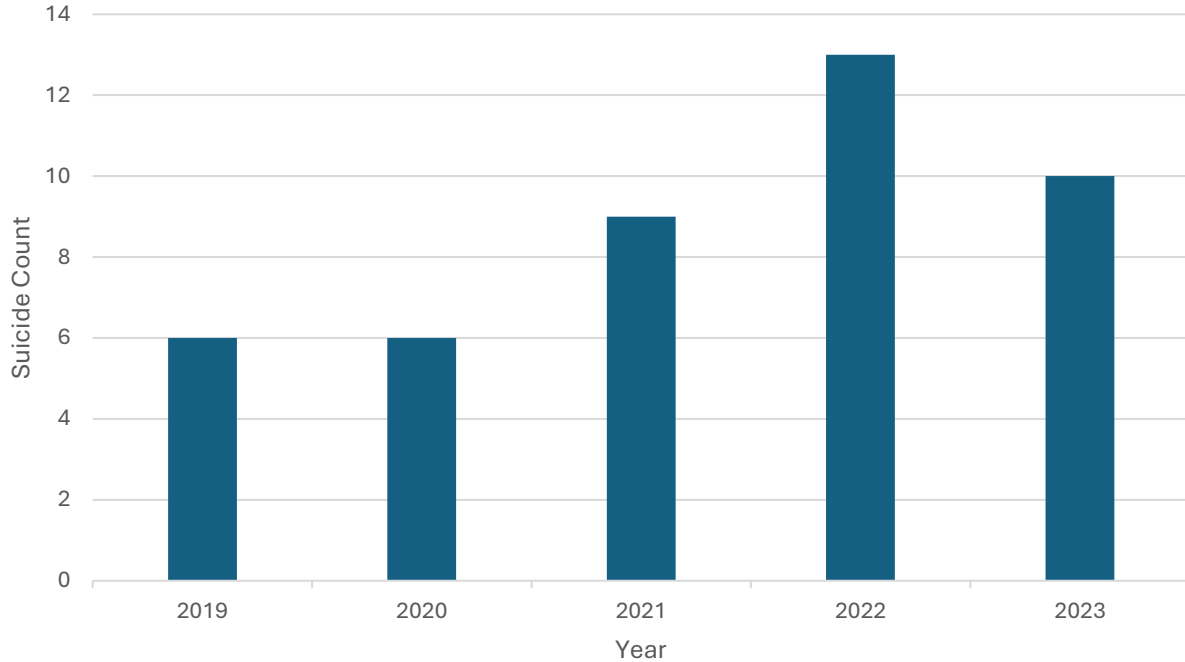
Data on suicide for Grand Forks County and North Dakota are from the ND Violent Death Reporting System (NDVDRS). National data are from the National Vital Statistics (NVS). To allow for rate comparison with national reported rates, county and state rates are reported per 100,000 individuals. Please note, rates reported in other sections are per 10,000.

Figure 19: Suicide rates for Grand Forks County, North Dakota, and the United States 2019-2023, NVDRS and NVS.



⁸ Centers for Disease Control and Prevention. (n.d.). About the National Violent Death Reporting System (NVDRS).

Figure 20: Incidence of Suicide, Grand Forks County, NDVDRS



ND ESSENCE

The Electronic Surveillance System for Early Notification of Community-Based Epidemics (ND ESSENCE) is a syndromic health data surveillance system in North Dakota which is used to detect, understand, and monitor health threats in real time. The data are from emergency departments, urgent care clinics, and other outpatient ambulatory care settings. The bulk of the data reported are from emergency departments. Syndromic data can serve as an early warning system to protect citizens from respiratory viruses, environmental threats, avoidable injuries, emerging diseases, and more.⁹ In this report, ND ESSENCE was utilized to evaluate mental health related conditions for residents of Grand Forks County. The data presented below utilizes syndromic surveillance data from the ND ESSENCE system to describe the incidence of suicide, suicide attempts, suicidal ideation, anxiety, depression, and non-specific mental health events. Syndrome definitions are available within the appendix. While these data are helpful and can provide real time insight into health events, there are limitations or caveats which should be considered when interpreting the data.

1. These numbers represent a syndrome definition that utilizes both ICD-10 codes and chief complaint which looks for key words. These should not be considered a true “number of cases.” Syndromes may also contain “noise” meaning that the syndrome data may count actual non-related events.

2. NOT every hospital submits both ICD and chief complaint so some visits may be missing.

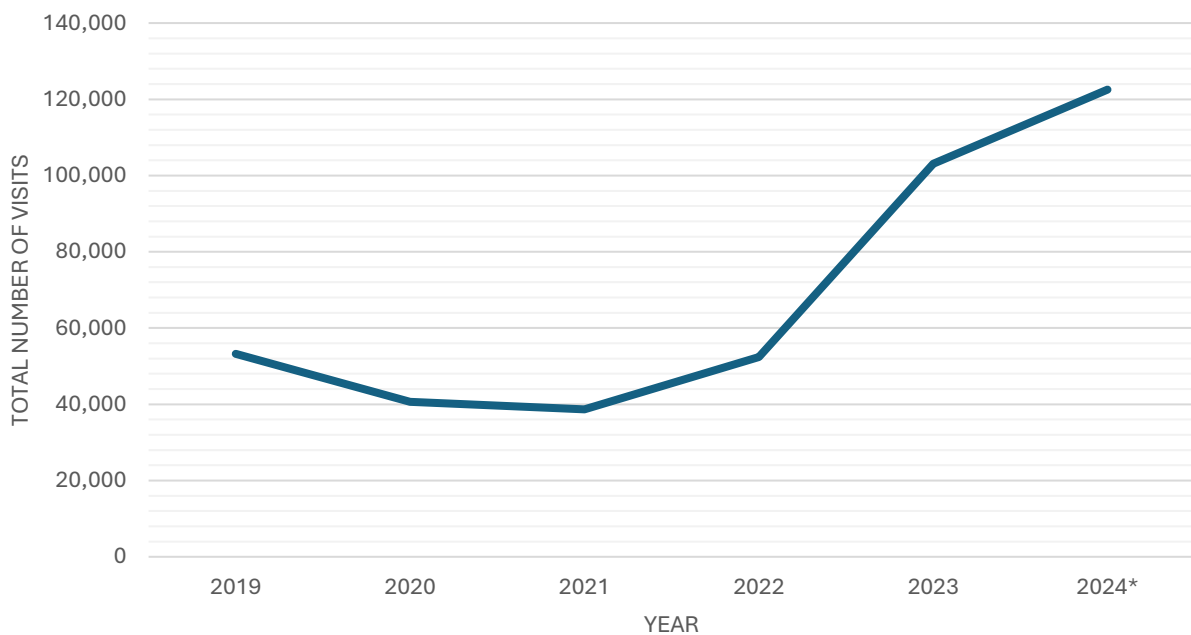
⁹ Centers for Disease Control and Prevention. (n.d.). About the National Syndromic Surveillance Program (NSSP).

3. Some hospitals only submit data on ND residents. Transient populations may not be included; therefore, underestimating the impact.

The data included are for residents of Grand Forks County and does not necessarily reflect the location of the event or medical provider. The data represents visits, and a single individual may account for more than one visit. This may exert disproportionate influence in groups where there are low visit counts. Tables with five-year cumulative incidence are provided in the race data sections due to instances of low visit counts and to provide context to rate calculations.

From 2019 through present, visits of all types for Grand Forks County residents in settings that report data to ND ESSENCE increased.

Figure 21: Total visits of all types for Grand Forks County residents, 2019-2024,* NDHHS



*2024 data are preliminary and do not include October-December data.

These increases are likely due to a combination of factors. Firstly, NDHHS has continued to increase the number of participating clinic locations and settings. Unfortunately, historical counts of the clinics added and the individual location's contributions to the data set are not available, so the degree to which the additional settings attribute to the visit increases observed in the data is unknown. The data have been deidentified and facility location was one characteristic removed in deidentification since Grand Forks County currently has only one large hospital emergency department. Due to these factors, it is difficult to determine to what degree additional facilities, improved reporting, improved data quality, etc. contribute to the increases observed.

These data are reported based upon the patient's county of residence, which means they may have been seen outside Grand Forks County and included in the data set. This characteristic was chosen over location of the facility since this report is describing the population of Grand Forks County and not the healthcare burden of mental health on medical facilities. It is likely these two aspects align

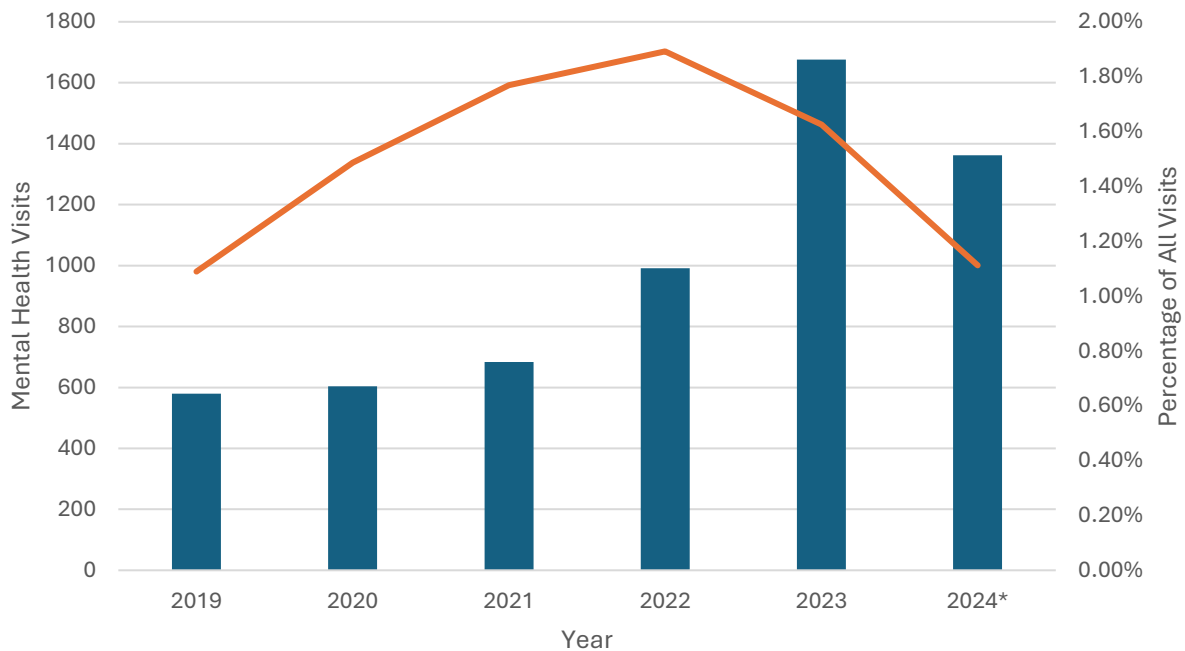
closely; however, it complicates conclusions about the growth of visits included in the data between 2019 and 2024.

As a means of differentiating from increases in the syndromes included within this section of the report, the percentage of visits data points are provided. These data can help determine if there is an increase in the condition or if the increase is a result of an overall increase in all visit types. The annual total incidence of each syndrome is included with percentage of visits. Please note, the percentage of visits data points are aligned to a secondary y-axis on the right of each chart.

Mental Health Visits

CDC's Mental Health Volume 1 looks at healthcare visits among persons experiencing mental illness in emergency department and ambulatory healthcare settings. It includes visits where there are acute mental health crises (i.e., the sole or primary reason for the visit is only related to mental health) as well as visits where mental health conditions are present but may not be the sole reason for the visit. Mental health related visits for Grand Forks County residents increased 186% between 2019 and 2023.

Figure 22: Annual incidence of mental health visits and incidence as a percentage of all visits, 2019-2023, Grand Forks County, NDHHS



*2024 data are preliminary and do not include data from September-December

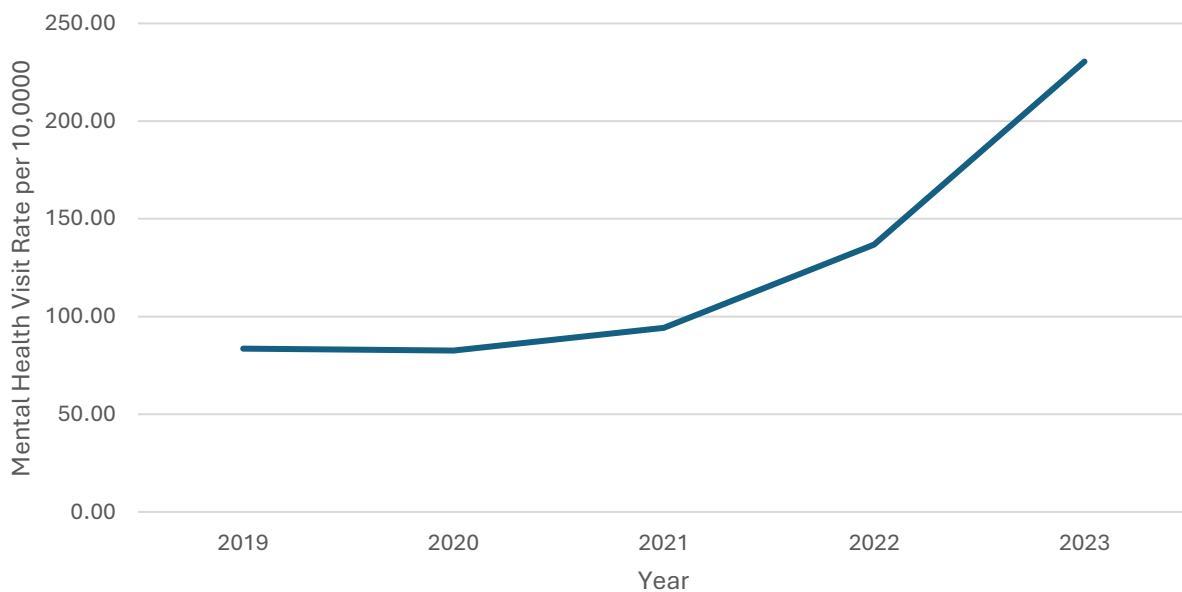
The percentage of visits related to mental health appears to have peaked in 2022. Preliminary data for 2024 continues the decline to near 2019 levels. These data do not include September through December 2024 and it should be noted the holiday season can be a time of increased difficulty;¹⁰

¹⁰ Substance Abuse and Mental Health Services Administration. (n.d.). Supporting your mental health during the holiday season.

therefore, these missing months may distort the observed trend for 2024 preliminary data. Ideally, individuals who are in need of mental healthcare services for diagnosed conditions would have an established care provider and have their condition well enough managed to not need emergency or urgent care services, which are the setting locations that make up the majority of ND ESSENCE syndromic data reporting. Much like an individual with high blood pressure would have the condition managed by an established care provider thus preventing the need for emergency services for a cardiac event from a poorly managed cardiovascular condition.

An increase in the percentage of visits attributed to mental health events may indicate fewer individuals receiving the care they need until an emergency event occurs. These data do not differentiate between true emergency events for mental healthcare and events that could be managed in a non-emergent or non-urgent care setting like a primary care provider or an established mental healthcare provider. However, primary mental healthcare providers do not contribute to the ND ESSENCE syndromic data, so it may be safe to conclude the visits within this report which may not be of an emergent nature are being managed in a setting that would not be the preferential source of mental healthcare. Additionally, regular care would ideally prevent an individual from having an emergency mental health event, so even if the events are true emergency or urgent care events, we can conclude these conditions may not have been adequately managed prior to the event represented in the data. Improving the mental health care system through strategies that improve capacity, and access has been shown to reduce youth mental health care visits in emergency settings (Grez-Ardila & Zavala, 2024). Reducing unnecessary mental healthcare related visits in emergency or urgent care settings could reduce healthcare costs and improve patient outcomes.¹¹

Figure 23: Rate of mental health events per 10,000, 2019-2023, Grand Forks County residents, NDHHS



¹¹ American Journal of Managed Care. (n.d.). Reducing avoidable ED visits for mental health could cut billions in costs, improve patient outcomes. American Journal of Managed Care.

Sex

For the years from 2019 to 2023 females made up 55% of the mental health events reported to ND ESSENCE.

Figure 24: Incidence of mental health events 2019-2023 by sex, Grand Forks County residents, NDHHS

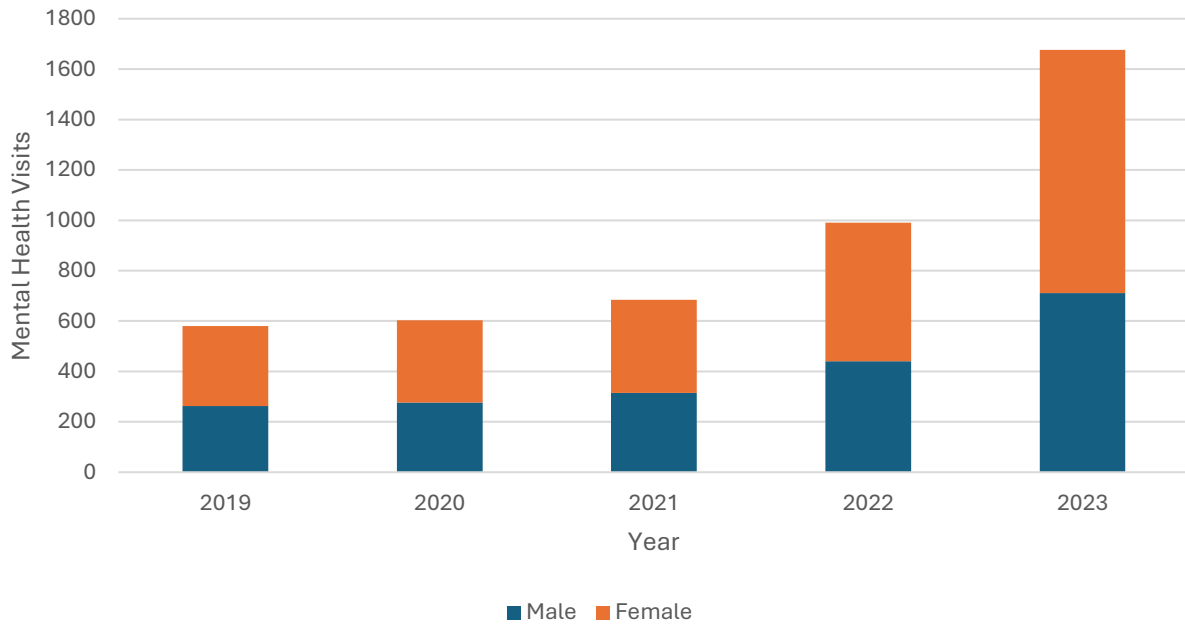


Figure 25 Annual mental health visits rate per 10,000 by sex, 2019-2023, Grand Forks County residents, NDHHS

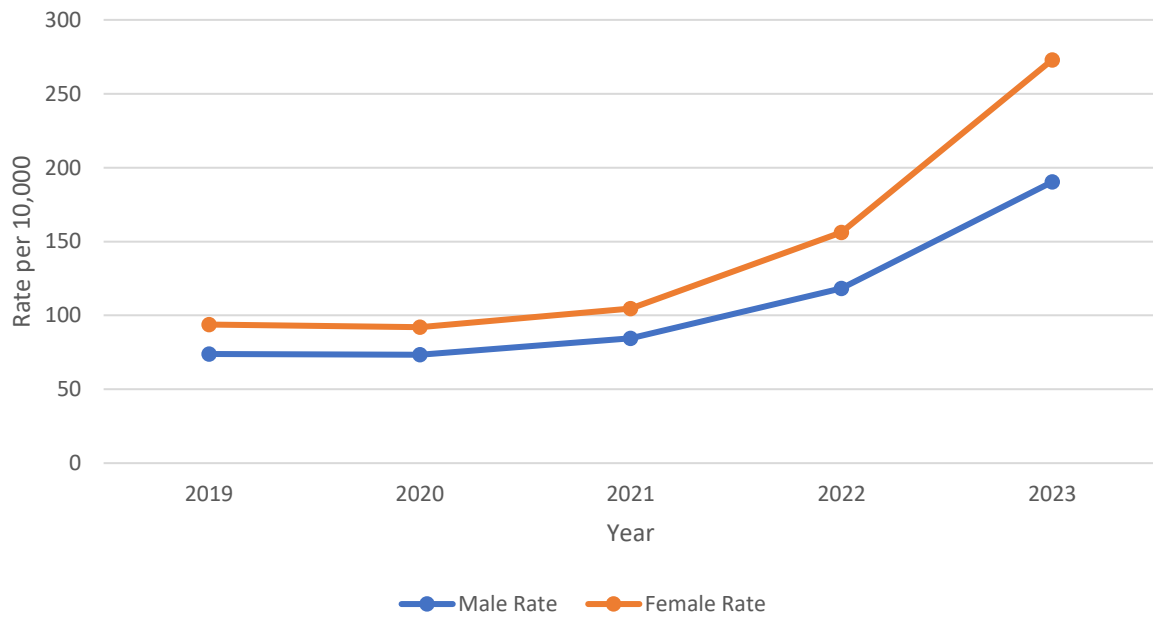
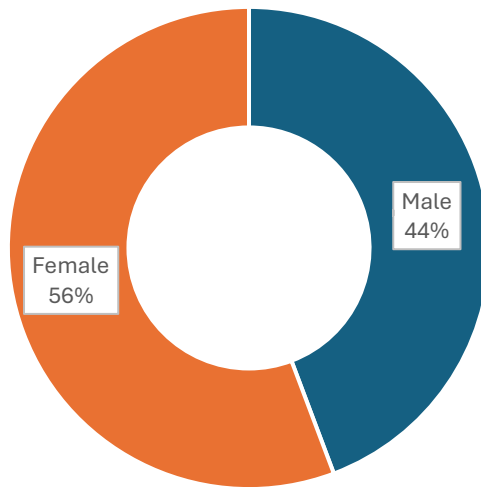


Figure 26: Cumulative incidence by sex, 2019-2023, Grand Forks County residents, NDHHS



Age

Increases in mental health events are observed in all age groups from 2019 to 2023. In 2023 individuals aged 25-34 accounted for the most mental health events with 314 in 2023. Those aged 55-64 years old had the largest percentage increase of 374%.

Figure 27: Mental health visits by age group, 2019-2023, Grand Forks County residents, NDHHS

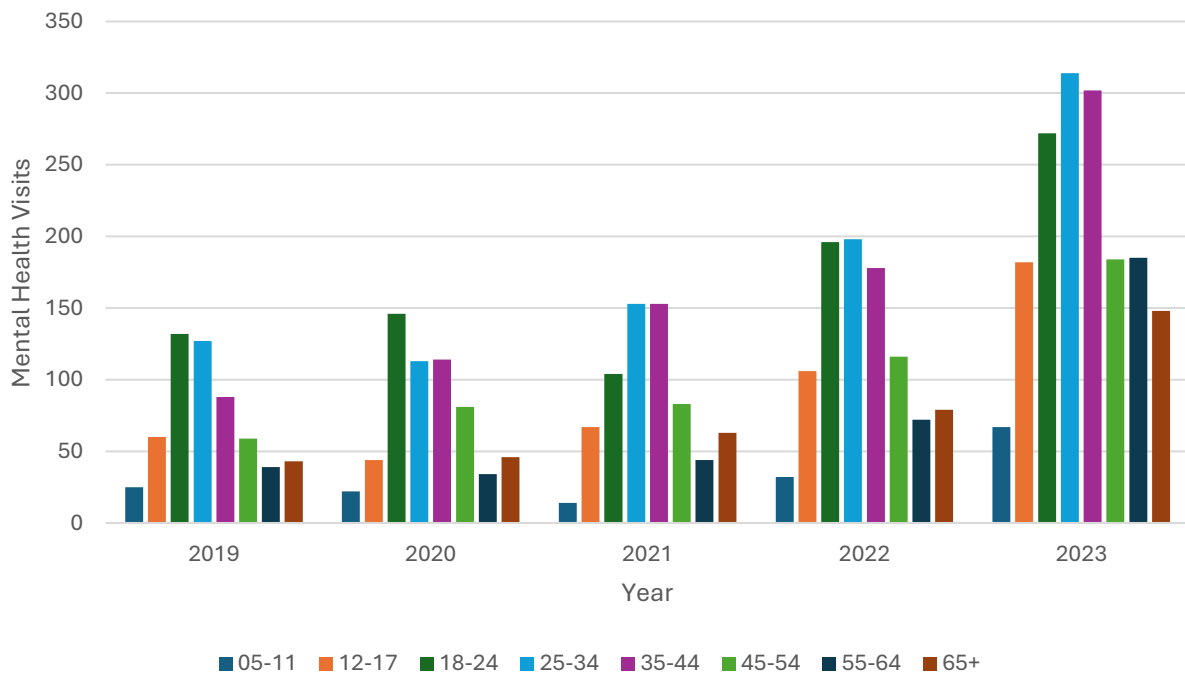
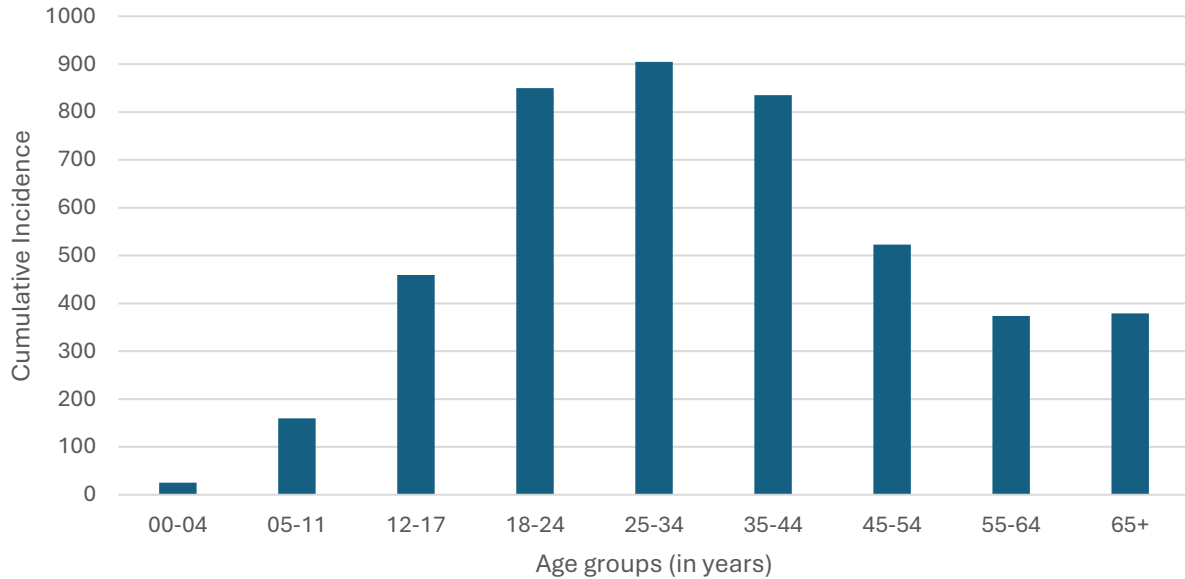
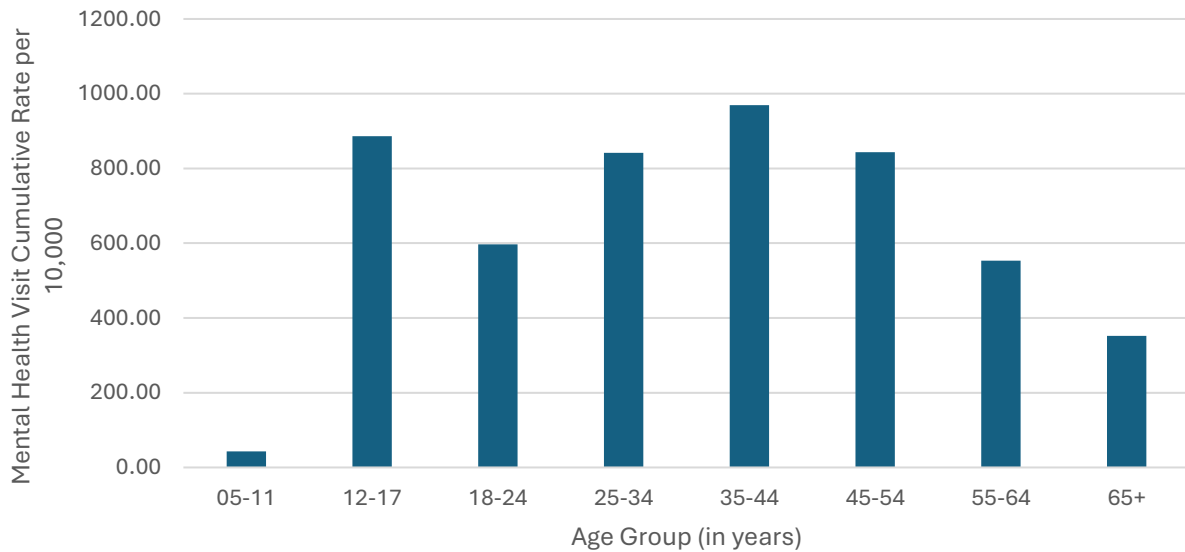


Figure 28 Cumulative Incidence of Mental health visits by age group, 2019-2023, Grand Forks County residents, NDHHS



When we look at cumulative incidence rates of mental health events, a noticeable disparity emerges among individuals aged 12-17 years. Individuals aged 35-44 years have the highest five-year cumulative incidence rate of any age group.

Figure 29: Mental health visits cumulative incidence rates per 10,000 by age group, 2019-2023, Grand Forks County residents, NDHHS



Race

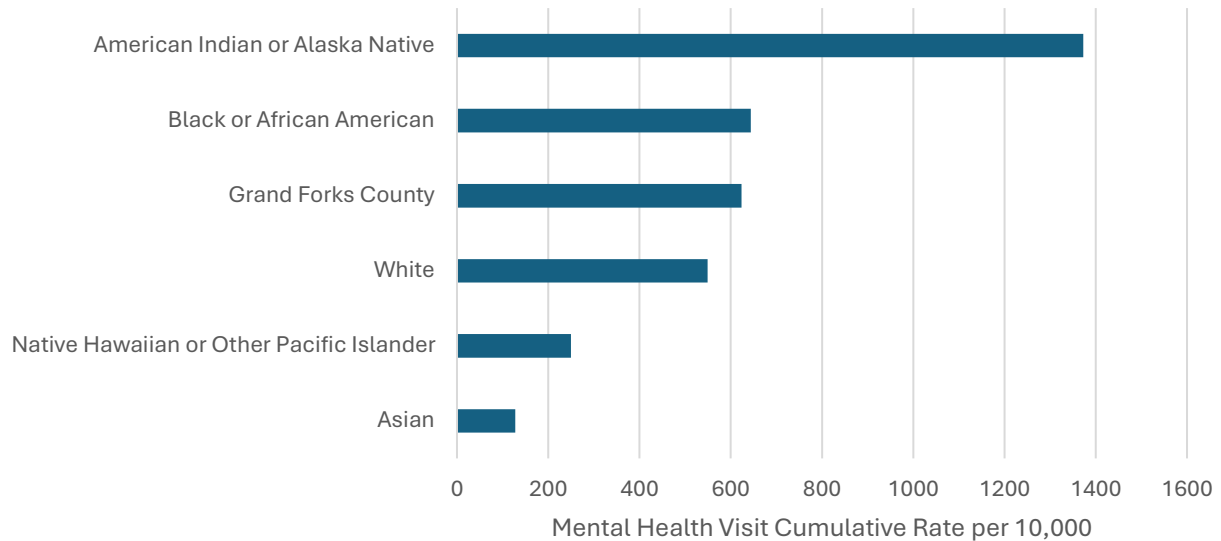
Mental health associated visits were analyzed by race in order to identify potential mental health disparities impacting racial groups in Grand Forks County. These data are important to address inequity in health outcomes.

When analyzing by race, annual incidence rates reveal a significant health disparity for indigenous people.

Table 13: Cumulative incidence of mental health associated visits by race, 2019-2023, Grand Forks County Residents, NDHHS

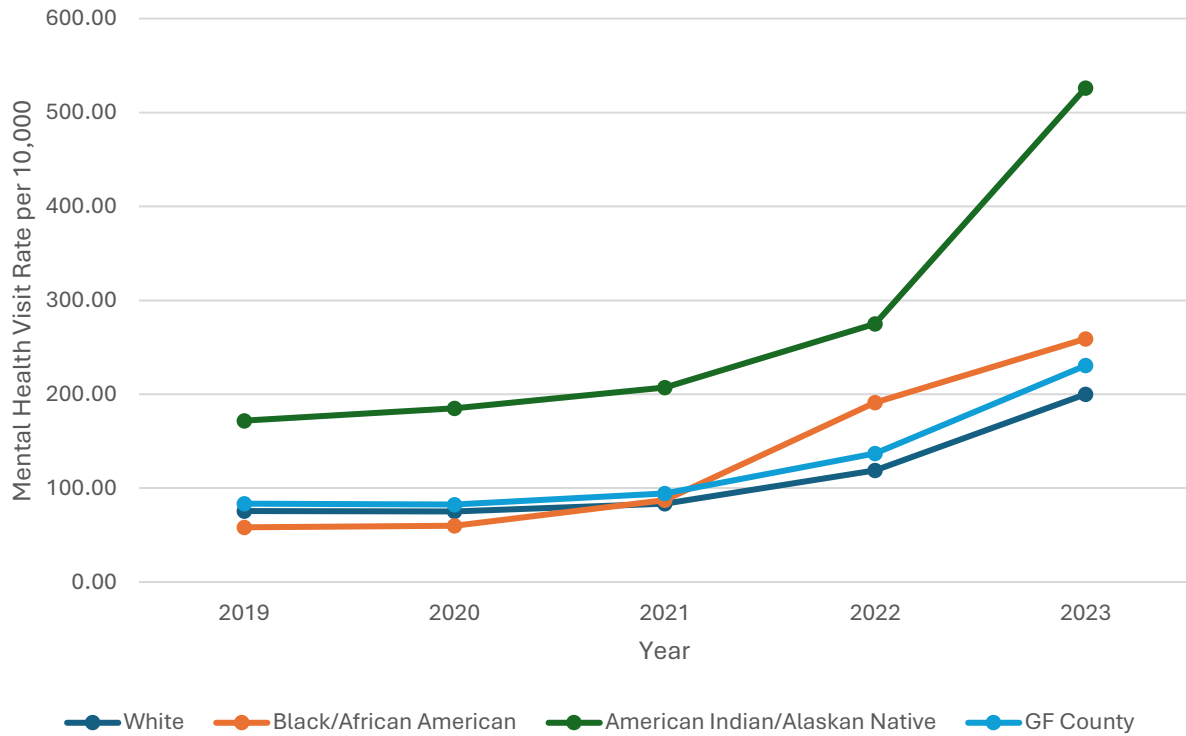
Race	Cumulative Incidence
Native Hawaiian or Other Pacific Islander	6
Asian	35
Black/African American	251
American Indian/Alaskan Native	415
White	3473

Figure 30: Cumulative incidence rates per 10,000 of mental health associated visits by race, 2019-2023, Grand Forks County residents, NDHHS



Additionally, if this disparity is analyzed by annual incidence rates, the difference increases over time.

Figure 31: Annual incidence rates per 10,000 of mental health related visits by race, 2019-2023, Grand Forks County residents, NDHHS

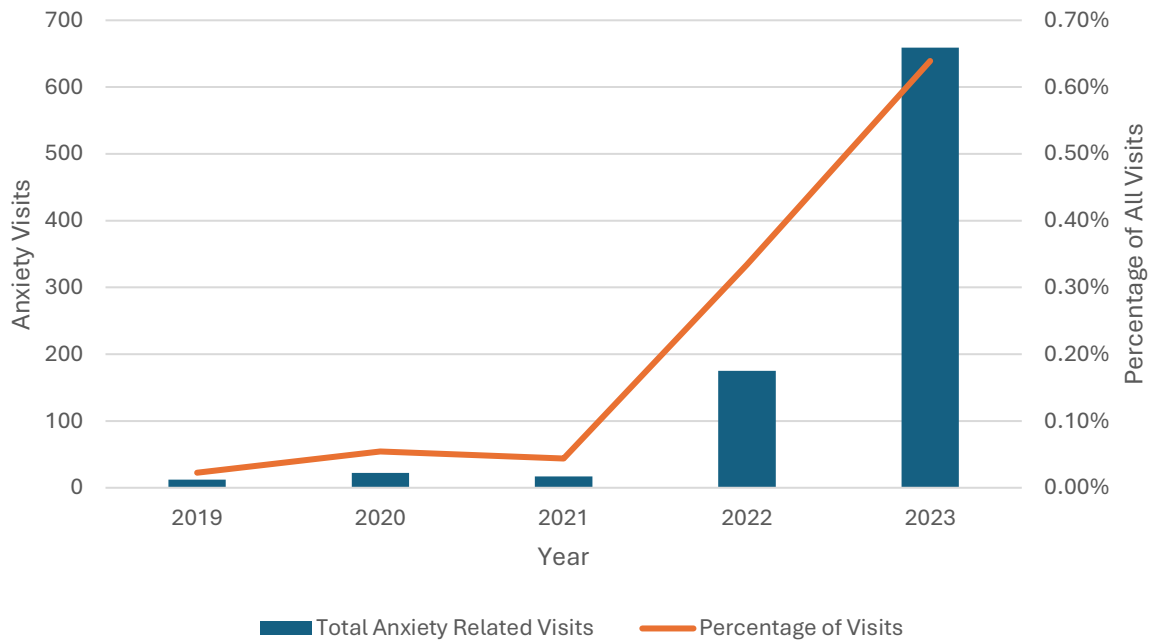


Anxiety

Occasional worry is a normal part of life. People who suffer from anxiety disorder experience anxiety to the degree that it interferes with daily life which can negatively affect a person’s well-being.¹² ND ESSENCE was used to review instances where individuals’ primary complaint or discharge diagnosis indicated anxiety as a primary contributor to the reason for the visit from 2019-2023.

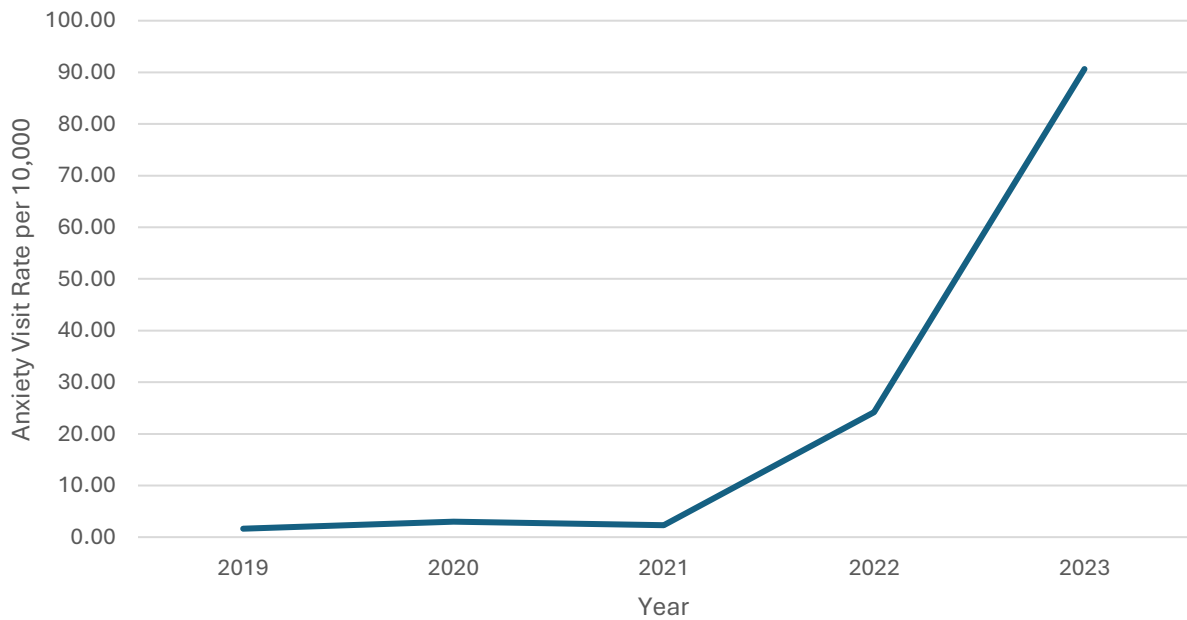
¹² Centers for Disease Control and Prevention. (n.d.). Worry.

Figure 32: Total annual visit counts for anxiety and percentage of all visits, Grand Forks County, 2019-2023, NDHHS



Total visits to ambulatory care settings for anxiety increased considerably from 2019 to 2023. The percentage of anxiety-related visits also increased, indicating this growth is in part due to a greater prevalence of these conditions occurring or being diagnosed in the reporting care settings.

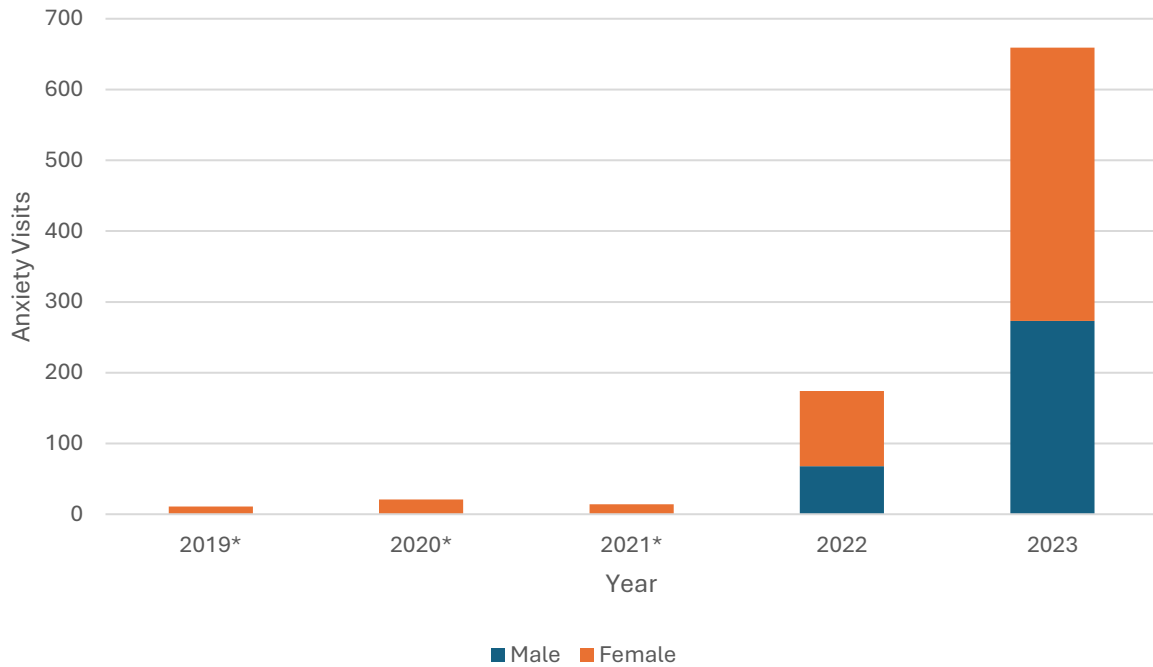
Figure 33: Anxiety rate per 10,000, Grand Forks County Residents, 2019-2023, NDHHS



Sex

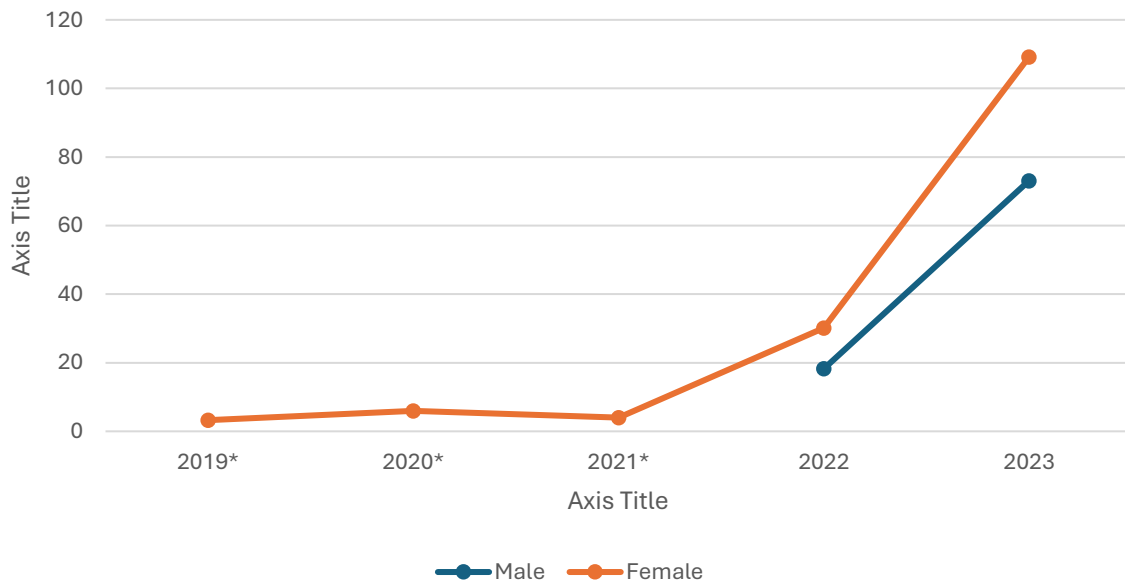
Anxiety related conditions reported to ND ESSENCE by sex mirrors other mental health related data points by sex, with a greater incidence among females.

Figure 34: Total annual visits for anxiety, 2019-2023, Grand Forks County, NDHHS



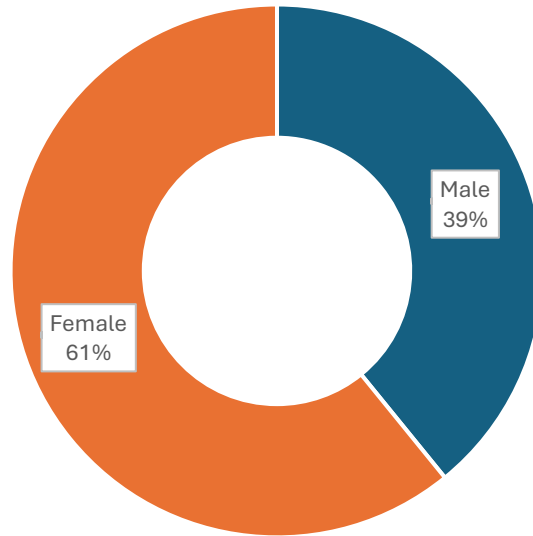
*Male data points are not reportable due to visit counts below 6.

Figure 35: Annual anxiety visits rate per 10,000 by sex, 2019-2023, Grand Forks County, NDHHS



*Male data points are suppressed due to visit counts below 6.

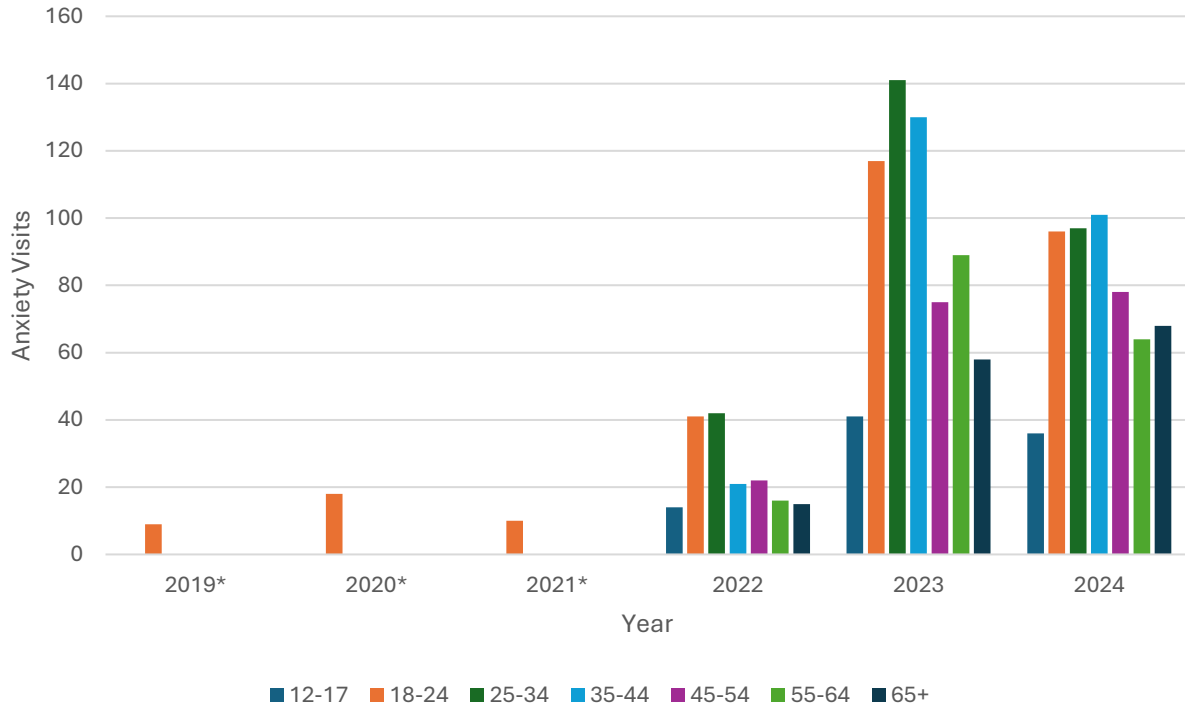
Figure 36: Cumulative incidence of anxiety events by sex, 2019-2023, Grand Forks County Residents, NDHHS



Age

Like sex, differences by age group are consistent with other data found in this report. Younger age groups have a greater incidence. For anxiety, this difference skews towards those aged 26–34 years and 35–44 years. From 2019 to 2021 people aged 18–25 years are the only group represented in the data. While increases in all age groups are observed, the emergence of other age groups within the data set correlates with the overall increase in anxiety-related visits. The reasons for these age groups' emergence are unknown from this data. It is possible older individuals changed how they sought healthcare or access to mental healthcare changed. It is also possible that data quality improvements led to better identification of these events or that older individuals self-reported anxiety related conditions more often or that medical providers identified and diagnosed anxiety related conditions more often.

Figure 37: Anxiety by age groups, Grand Forks County, 2019-2023, NDHHS



*Data are not suppressed due to visit counts below 6.

Figure 38: Cumulative incidence of anxiety by age group, 2019-2023, Grand Forks County residents, NDHHS

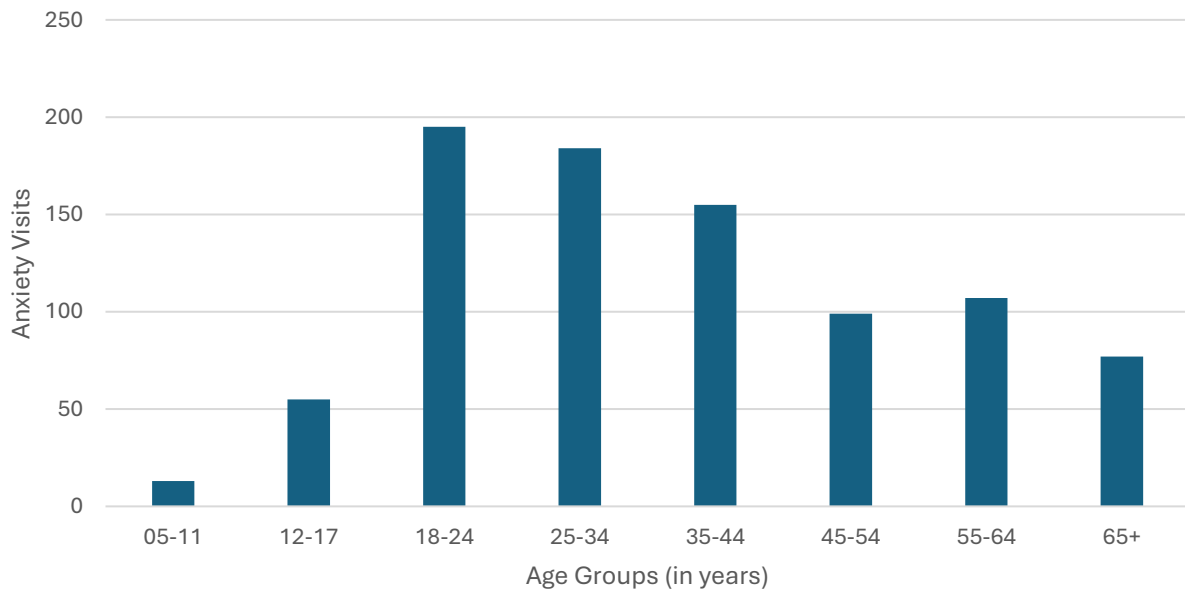
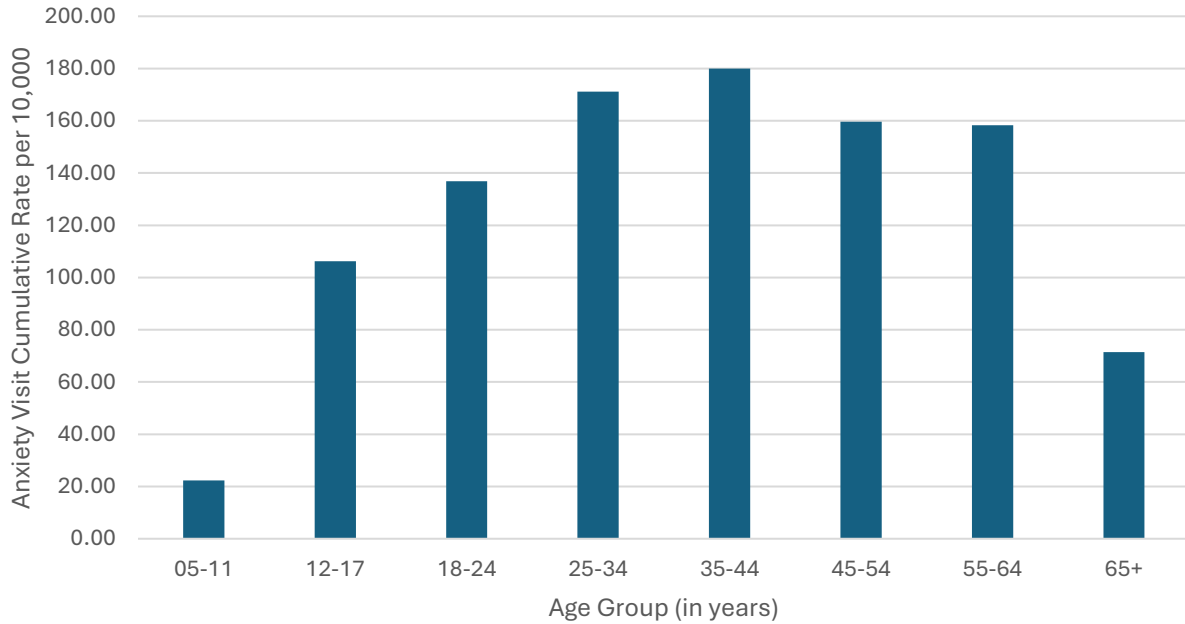


Figure 39: Cumulative incidence rates per 10,000 by age group, 2019-2023, Grand Forks County residents, NDHHS



People aged 18–24 years represent the largest incidence count of anxiety related visits; however, this is also the largest age group in Grand Forks County. Age groups were analyzed by cumulative incidence rates to allow for age group comparisons. When this is done, 35–44-year-olds emerge as having the greatest rate of anxiety related visits.

Race

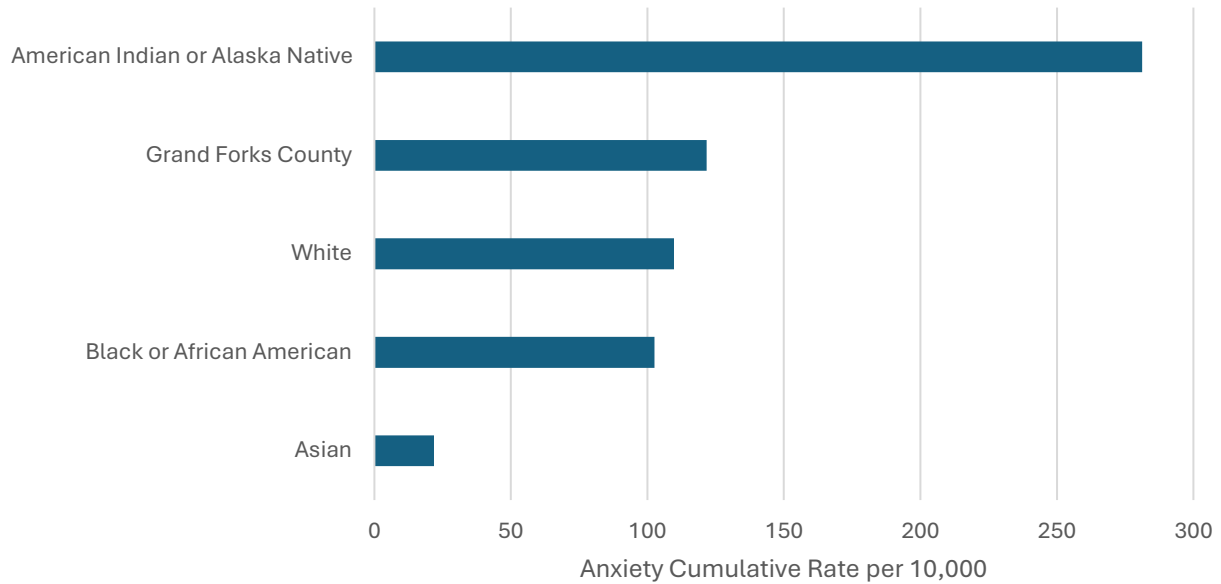
Race data are reported as an annual rate per 10,000 and as a cumulative incidence rate. Rates are useful when comparing populations of different sizes. The inclusion of the annual rate is to visualize the acceleration of racial disparity for the American Indian or Alaska Native population in Grand Forks County. Low incidence counts for some years lead to data not being reported for some groups for those years.

Table 14: Cumulative incidence of depression associated visits by race, 2019-2023, Grand Forks County Residents, NDHHS

Race	Cumulative Incidence of Anxiety Associated Visits
Asian	6
Black or African American	40
American Indian or Alaska Native	85
White	694

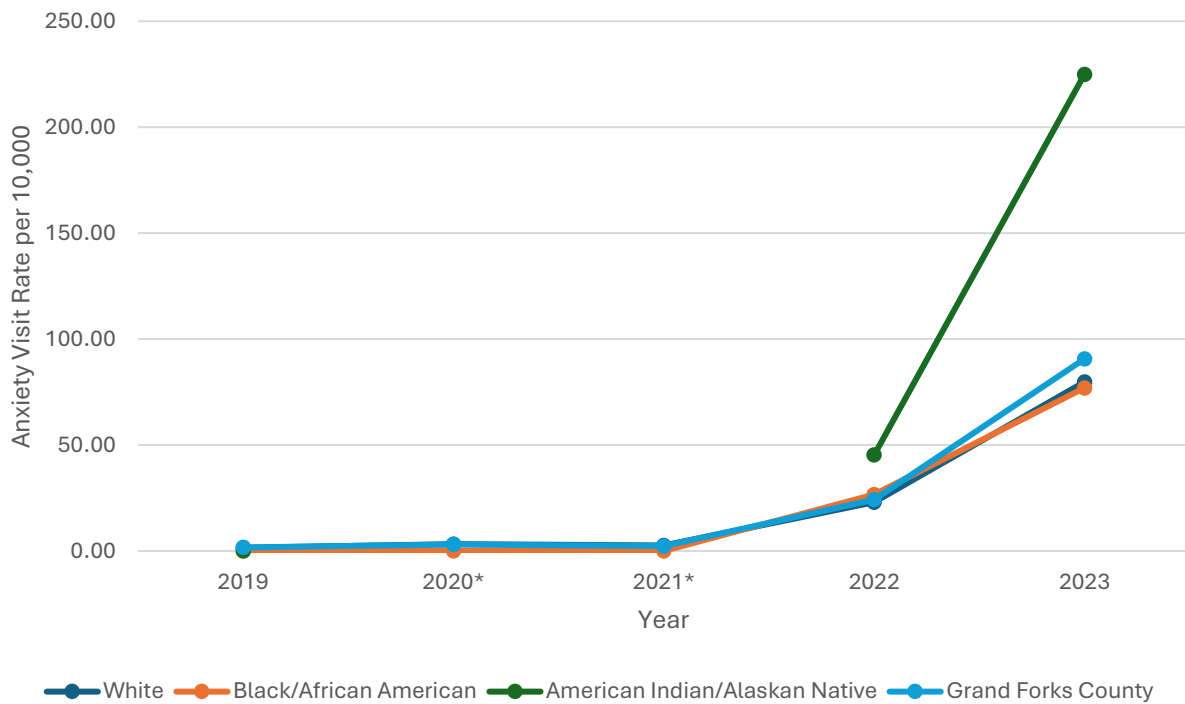
Cumulative incidence shows significant disparity between American Indian or Alaska Natives and other groups in Grand Forks County.

Figure 40: Cumulative incidence rate per 10,000 of anxiety associated visits by race, Grand Forks County, 2019-2023, NDHHS



Annual rates show this disparity is increasing over time and outpacing increases among other groups.

Figure 41: Annual incidence rate of anxiety associated visits per 10,000 by race, 2019-2023, Grand Forks County, NDHHS



*Data are suppressed due to visit counts below 6.

Depression

Clinical depression can have significant impacts on the daily lives of those who experience it. The purpose of CDC's Depressive Disorders Volume 1 query is to identify visits among persons experiencing mental illness in emergency departments and ambulatory healthcare settings. This includes capturing visits where there are acute mental health crises (i.e., the sole or primary reason for the visit is only related to mental health) as well as visits where mental health conditions are present (defined as coded in the discharge diagnosis or mentioned in the chief complaint text) but may not be the sole reason for the visit. Depression data from ND ESSENCE data from 2019-2023 were analyzed to identify trends in those who suffer from depression.

Depression related visits as a primary diagnosis or chief complaint increased from 2019 to 2023.

Figure 42: Annual incidence of depression and annual percentage of all visits, 2019-2023, Grand Forks County Residents, NDHHS

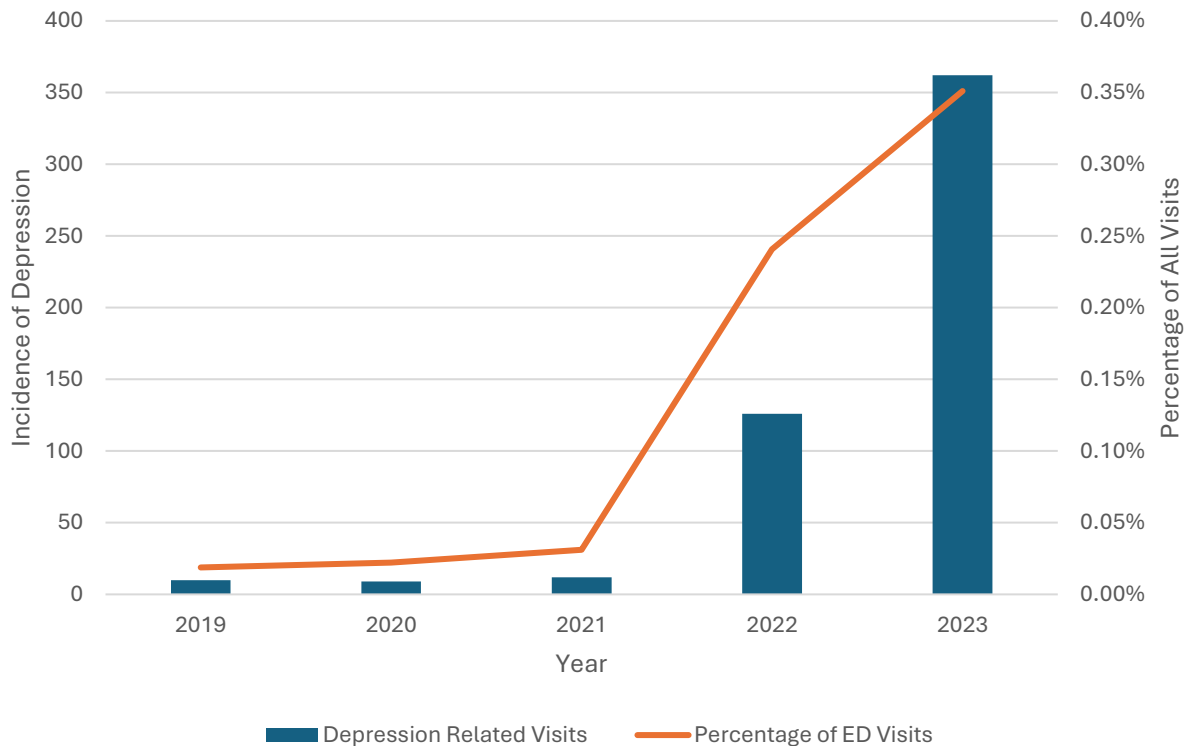
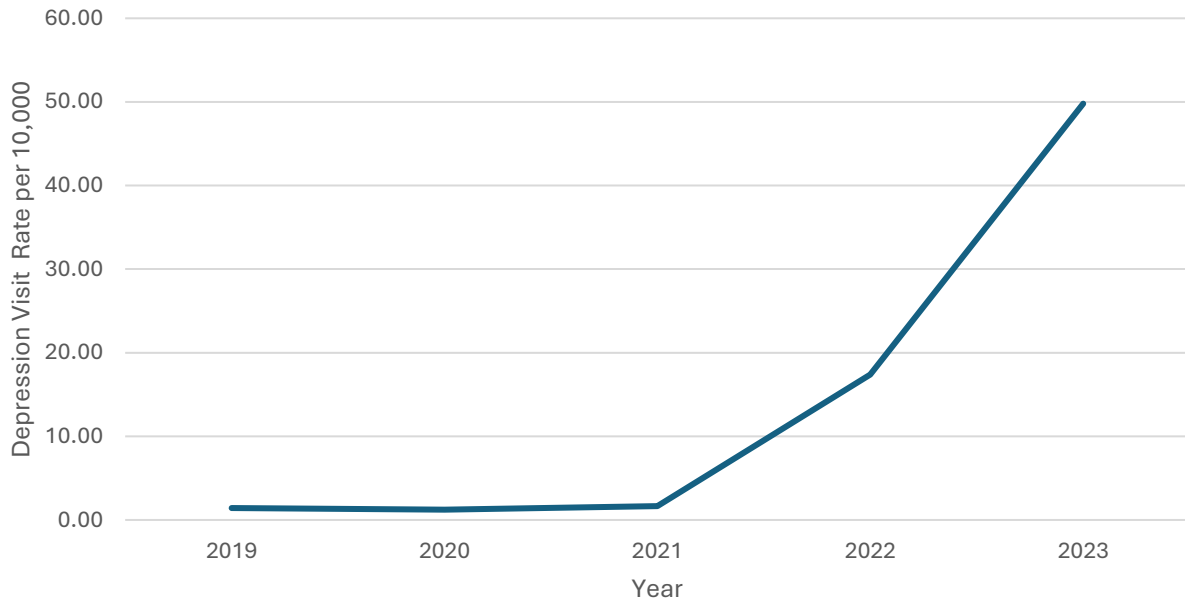


Figure 43: Annual rate per 10,000 of depression, 2019-2023, Grand Forks County residents, NDHHS



Sex

Trends and patterns observed elsewhere continue when analyzing depression by sex. Females represent 60% of depression related visits for Grand Forks County residents between 2019 and 2023.

Figure 44: Annual incidence of depression by sex, 2019-2023, Grand Forks County residents, NDHHS

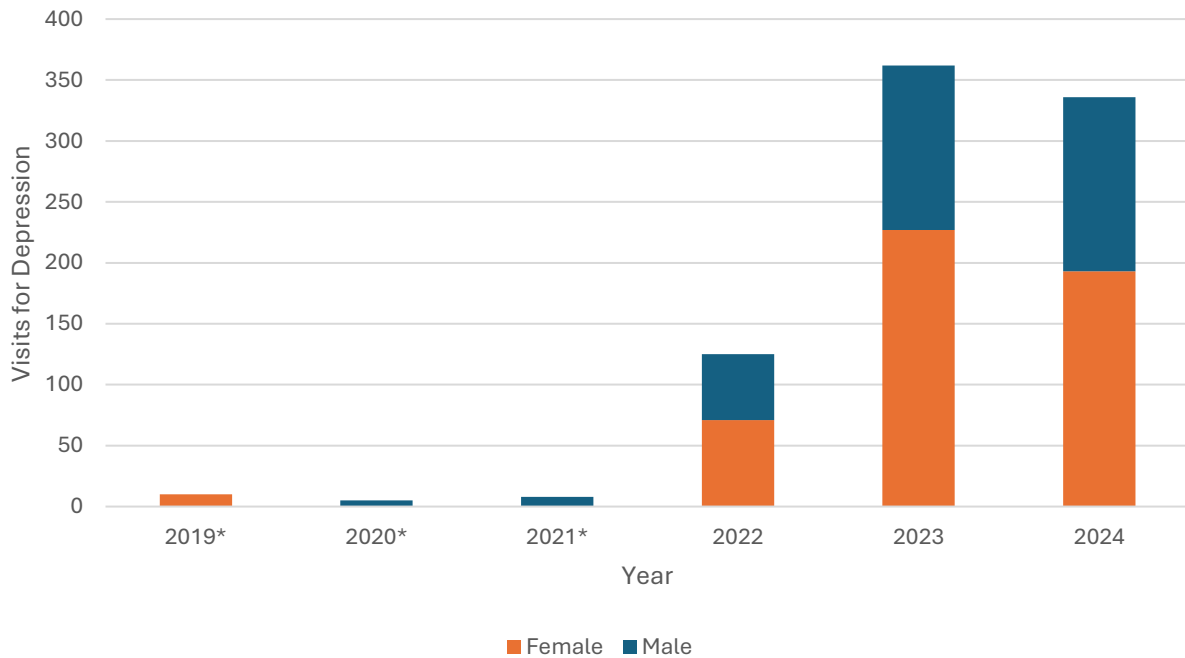
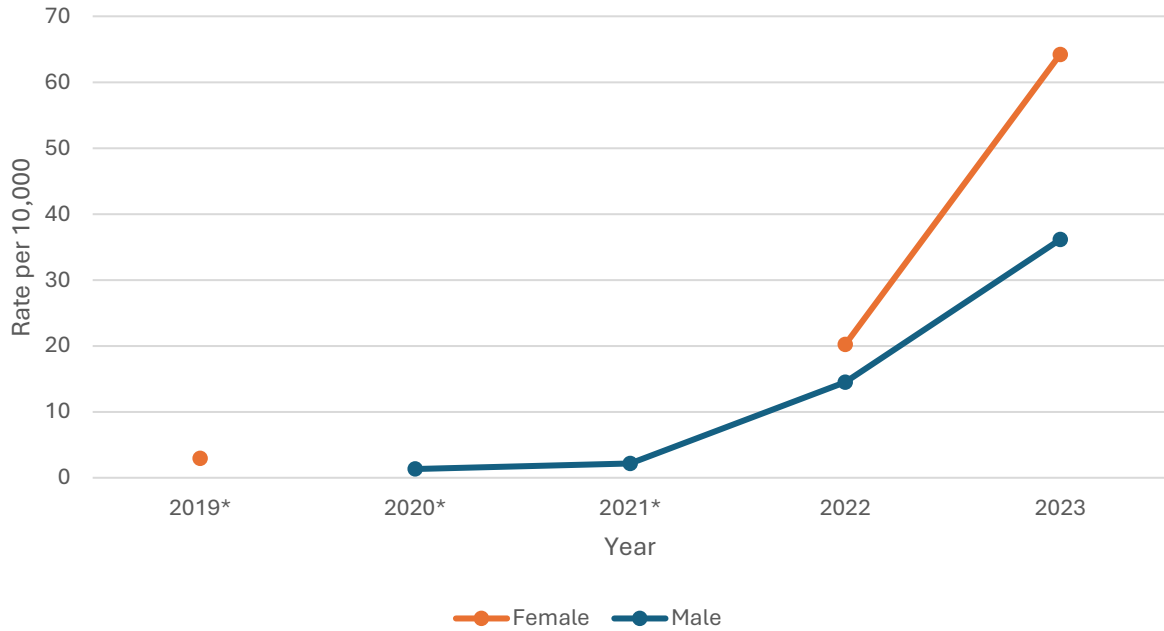
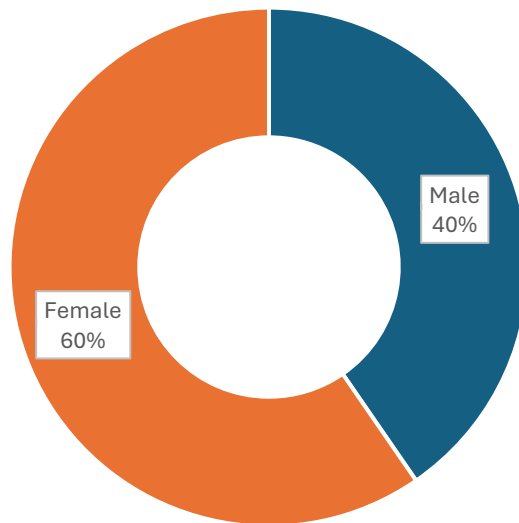


Figure 45: Annual depression visit rate per 10,000 by sex, 2019-2023, Grand Forks County residents, NDHHS



*Data are suppressed due to visit counts below 6.

Figure 46: Cumulative incidence of depression visits by sex, 2019-2023, Grand Forks County residents, NDHHS



Age

Depression related visits by age group were analyzed for comparison. Two age groups saw a considerable increase in the data: individuals aged 12-17 years and 18-24 years.

Figure 47: Depression associated visits by age group, 2019-2023, Grand Forks County residents, NDHHS

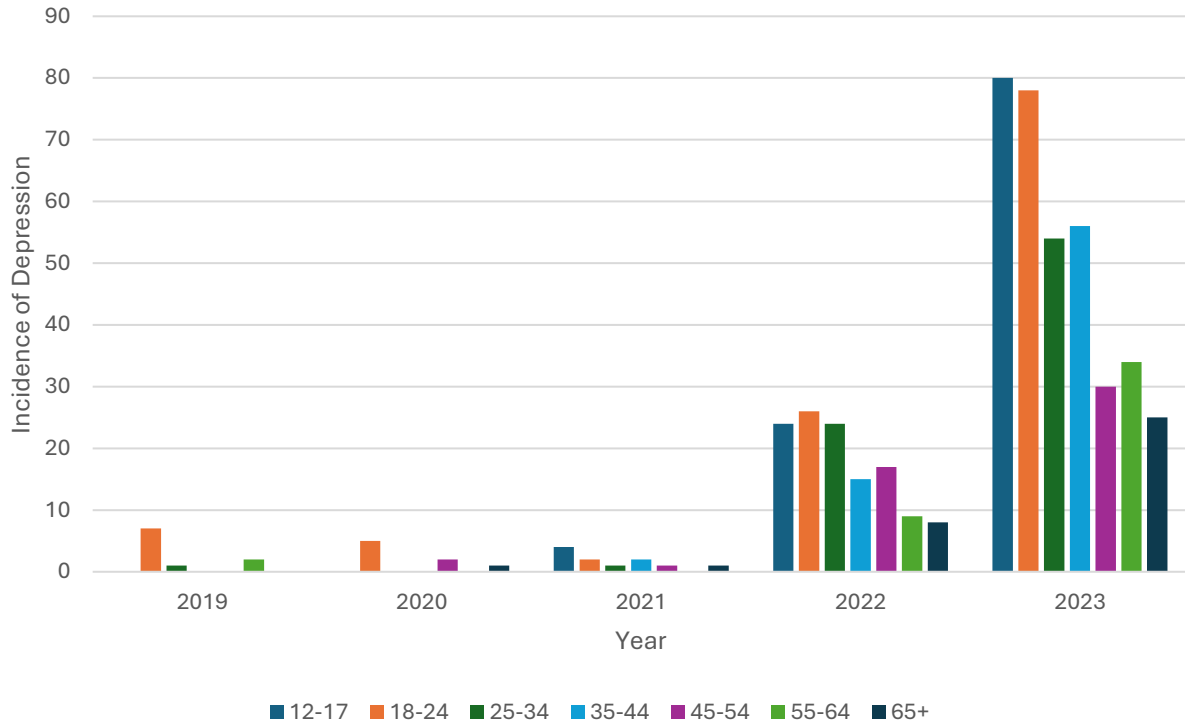


Figure 48: Cumulative incidence of depression associated visits by age group, 2019-2023, Grand Forks County residents, NDHHS

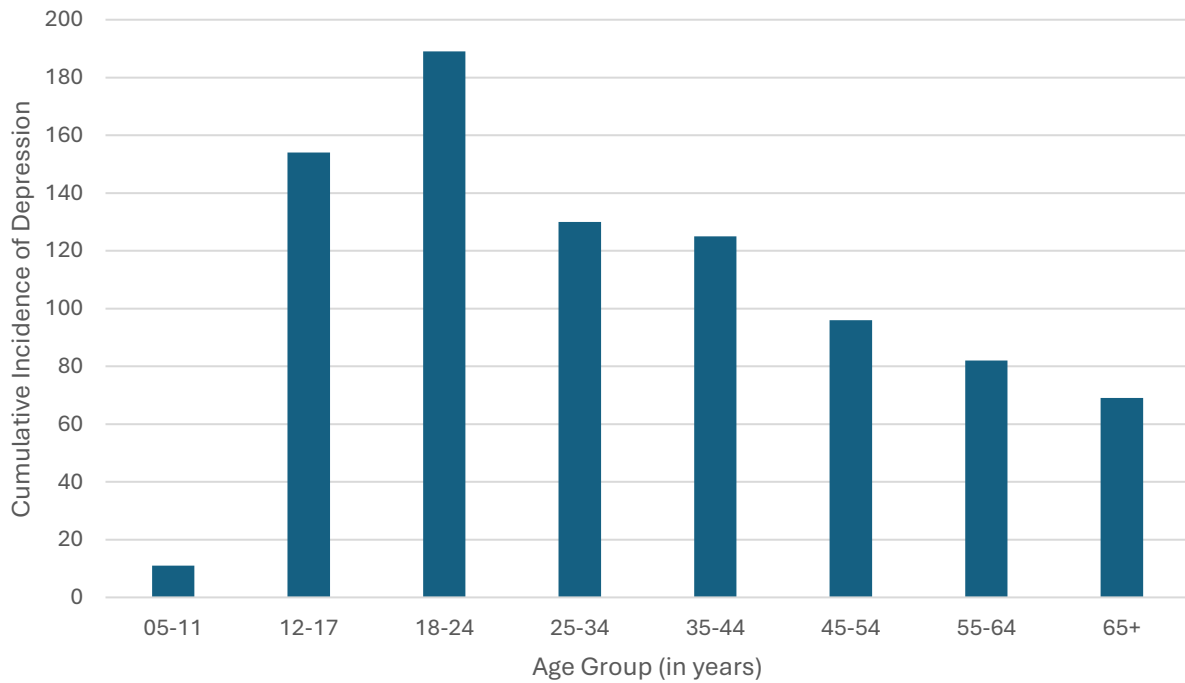
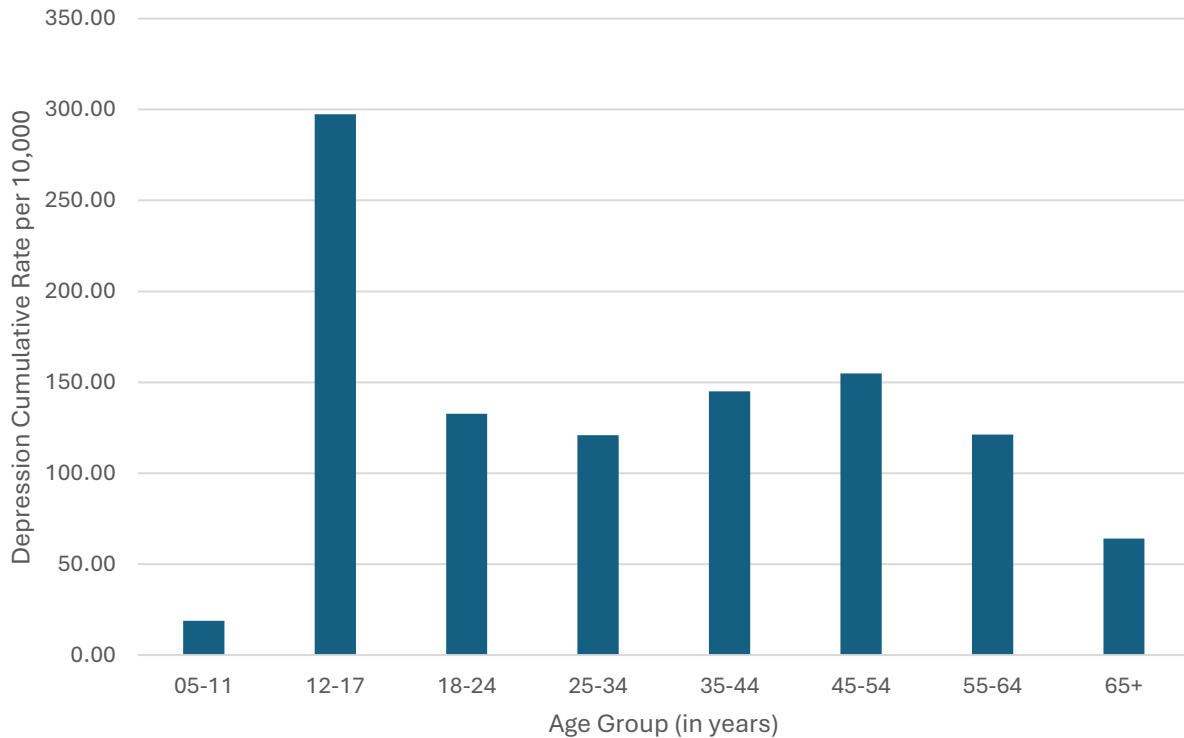


Figure 49: Cumulative incidence rate per 10,000 of depression associated visits by age group, 2019-2023, Grand Forks County residents, NDHHS



People aged 18-24 years account for the largest incidence count. However, when incidence rates are compared by age group individuals aged 12-17 years experience depression related visits at nearly twice the same rate as the next highest age group, those aged 45-54 years. Interestingly, people aged 45-54 years were found to have the highest prevalence of self-reported depression within the county level BRFSS measure related to depression. The ND ESSENCE data appears to corroborate this finding and supports the accuracy of the BRFSS county level estimate.

Race

Depression associated visits were analyzed by race to identify groups disproportionately impacted by depression. As has been the case for Grand Forks County, Indigenous people experience depressive visits at ambulatory care settings at a greater rate than all other groups. Increases have been observed in all groups and similar rates of increases are seen among all groups between 2022 and 2023. Racial groups with cumulative incidence counts below six are not reported and thus excluded from the racial data reported in this section.

Table 15: Cumulative incidence of depression associated visits by race, 2019-2023, Grand Forks County residents

Race	Cumulative Incidence
Black/African American	32
American Indian/Alaskan Native	40
White	386

Figure 50: Cumulative incidence rate per 10,000 of depression associated visits by race, 2019-2023, Grand Forks County residents, 2019-2024

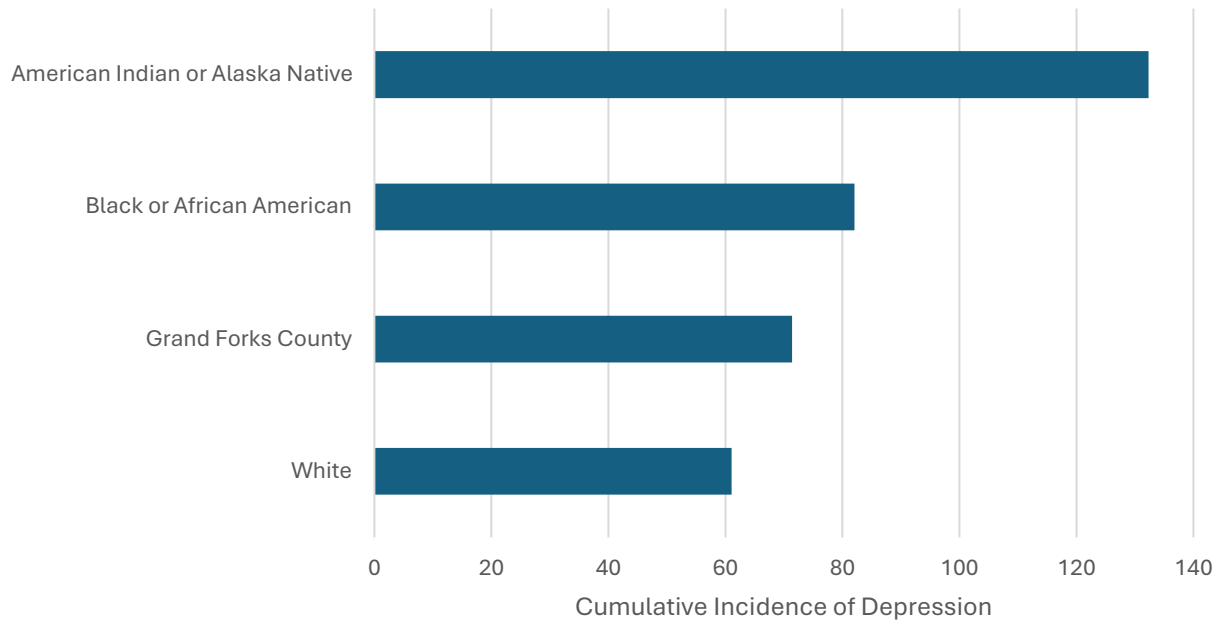
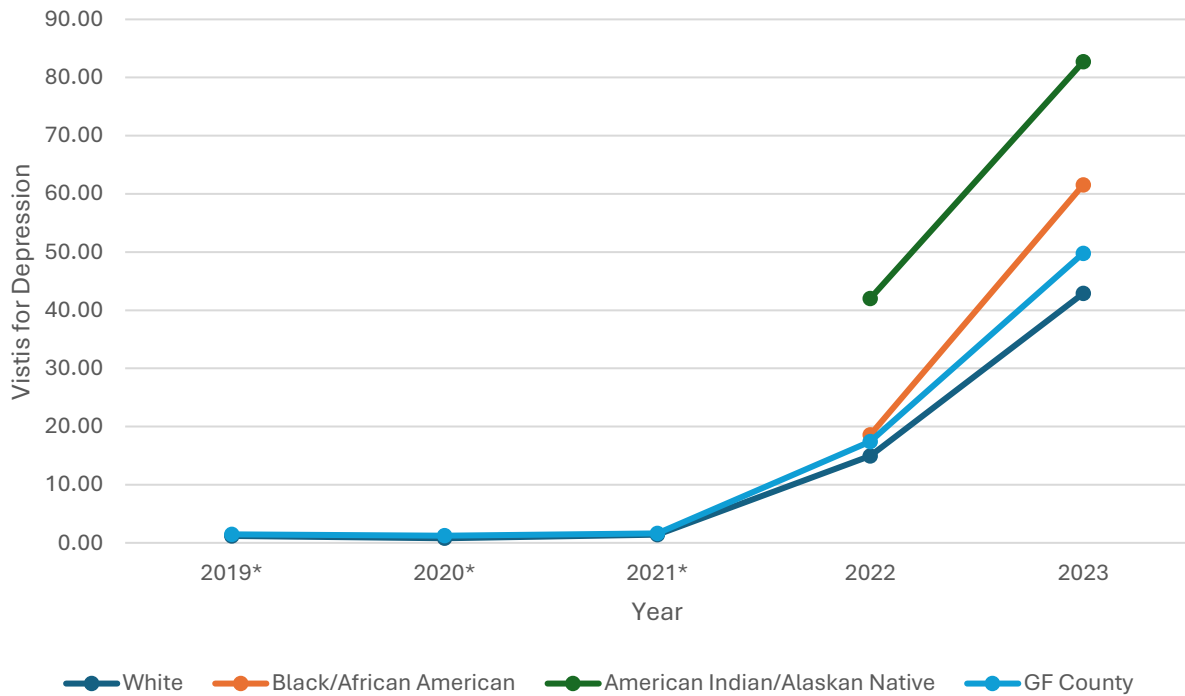


Figure 51: Annual incidence rates of depression associated visits by race, 2019-2023, Grand Forks County residents, NDHHS



*Data for some groups are suppressed due to visit counts below 6.

Suicidal Ideation

Suicidal ideation refers to persistent thoughts of death or suicide. ND ESSENCE was utilized to analyze ED and other ambulatory care visits associated with thoughts of suicide from 2019 to 2023. Suicidal ideation remained relatively consistent year to year with dips observed during the COVID-19 pandemic years (2020-2021). As a percentage of visits it also declined in 2023 to the lowest point observed in the data set.

Figure 52: Annual incidence of suicidal ideation associated visits and suicidal ideation as a percentage of all visit types, 2019-2023, Grand Forks County Residents, NDHHS

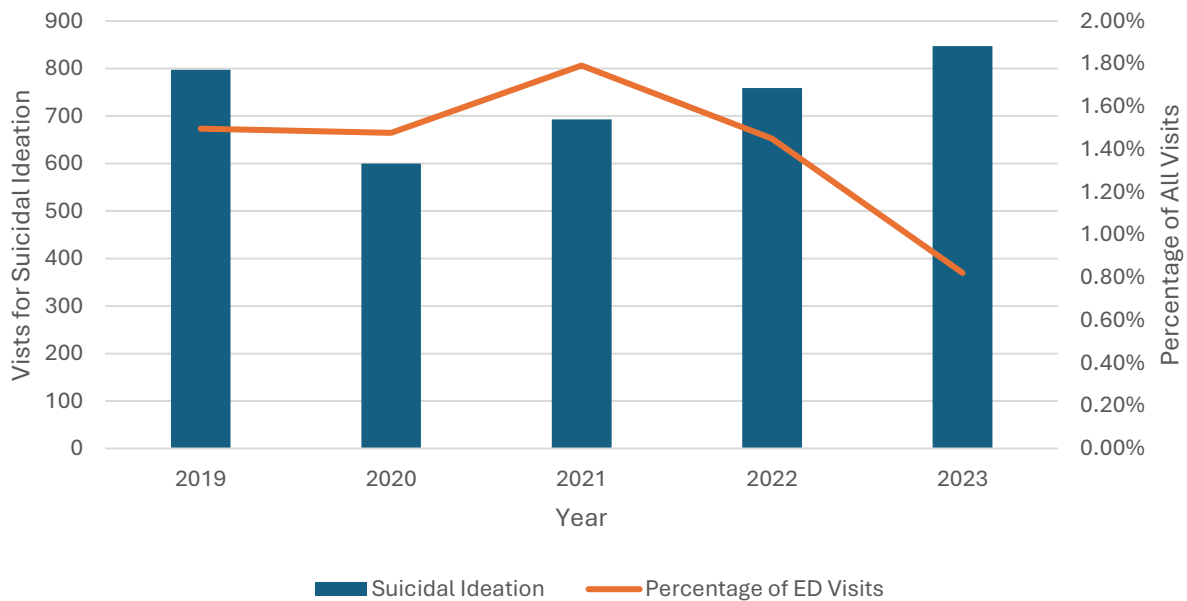
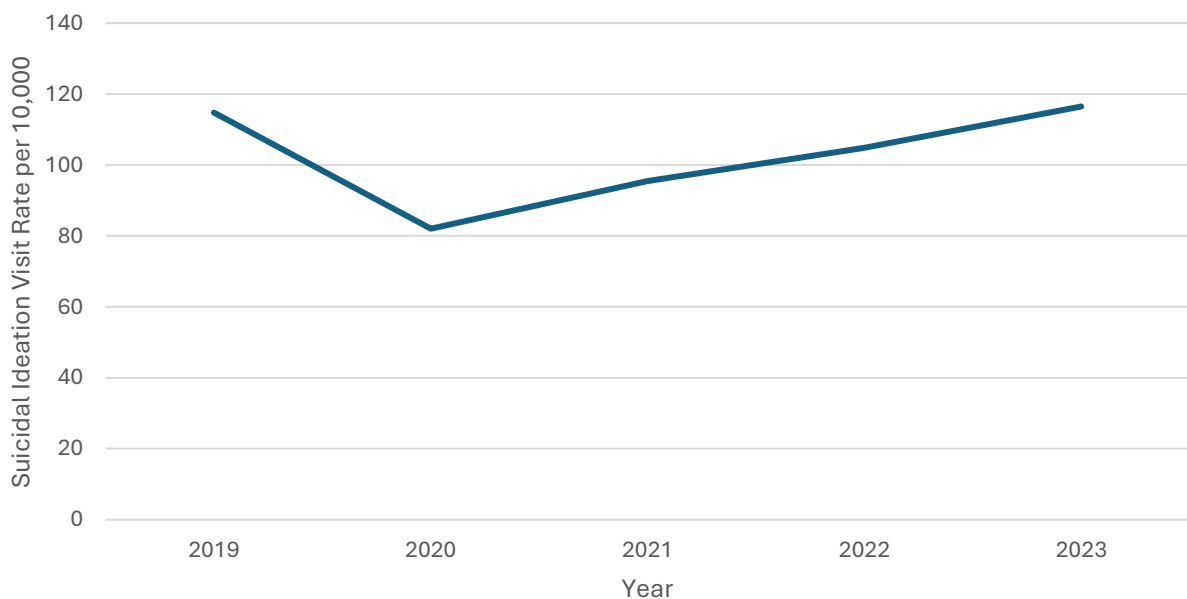


Figure 53: Suicidal ideation rate per 10,000, 2019-2023, Grand Forks County residents, NDHHS



Sex

Suicidal ideation differs from the other mental health events in the data set when stratified by sex. Males represent a slightly greater portion of visits at 52%.

Figure 54: Annual incidence of suicidal ideation associated visits by sex, 2019-2023, Grand Forks County residents, NDHHS

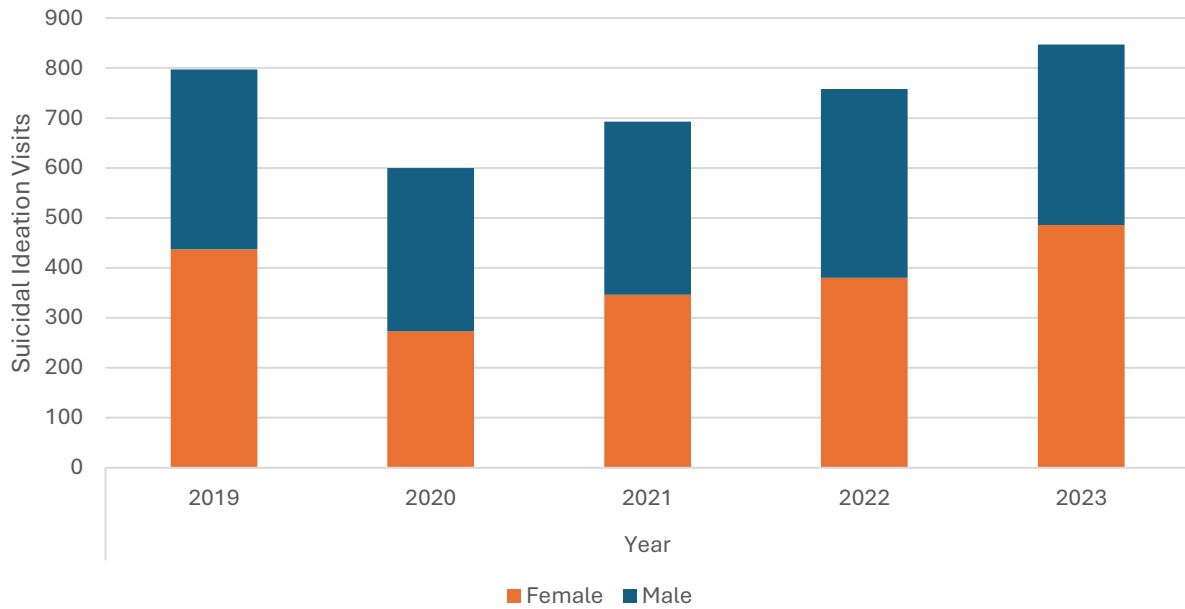


Figure 55: Suicidal ideation visit rate per 10,000 by sex, 2019-2023, Grand Forks County residents, NDHHS

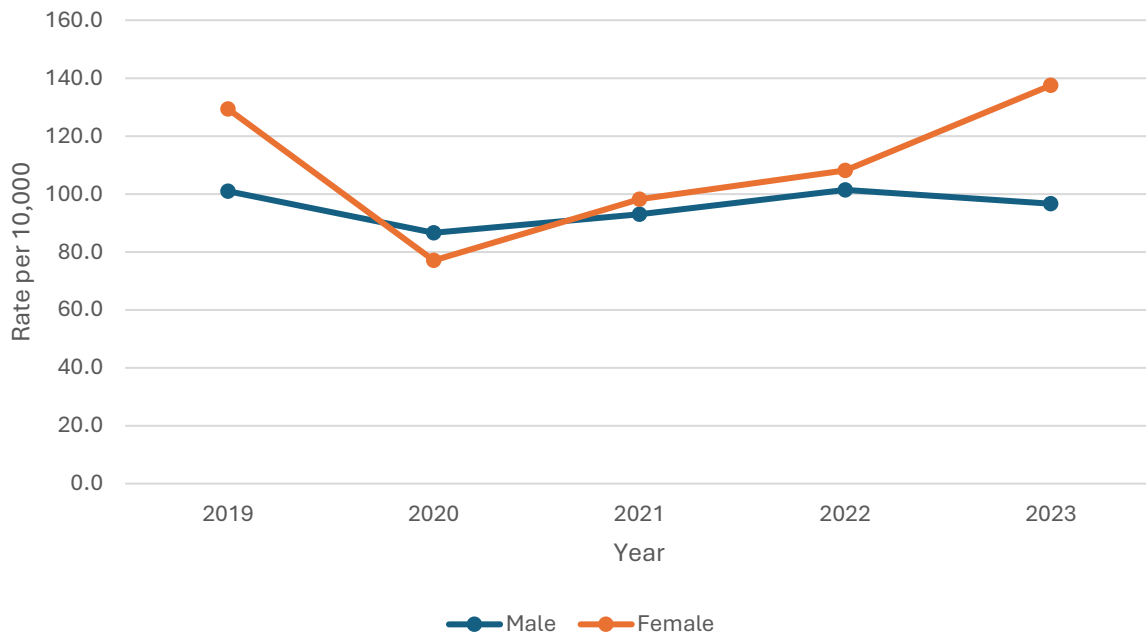
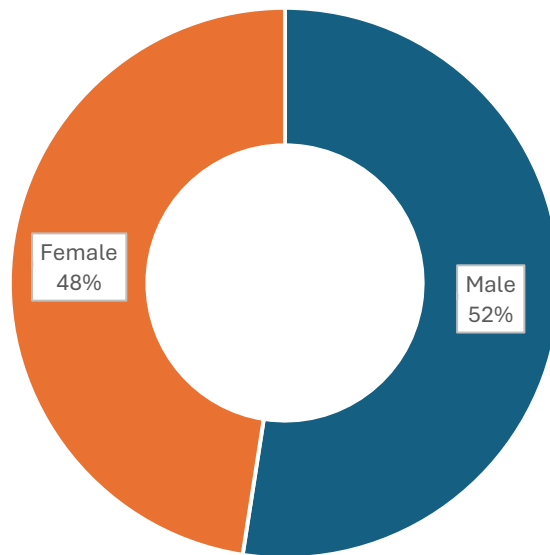


Figure 56: Cumulative incidence of suicidal ideation by sex, 2019-2023, Grand Forks County residents, NDHHS



Age

Visits associated with suicidal ideation were analyzed by age groups.

Figure 57: Annual incidence of suicidal ideation associated visits by age group, 2019-2023, Grand Forks County residents, NDHHS

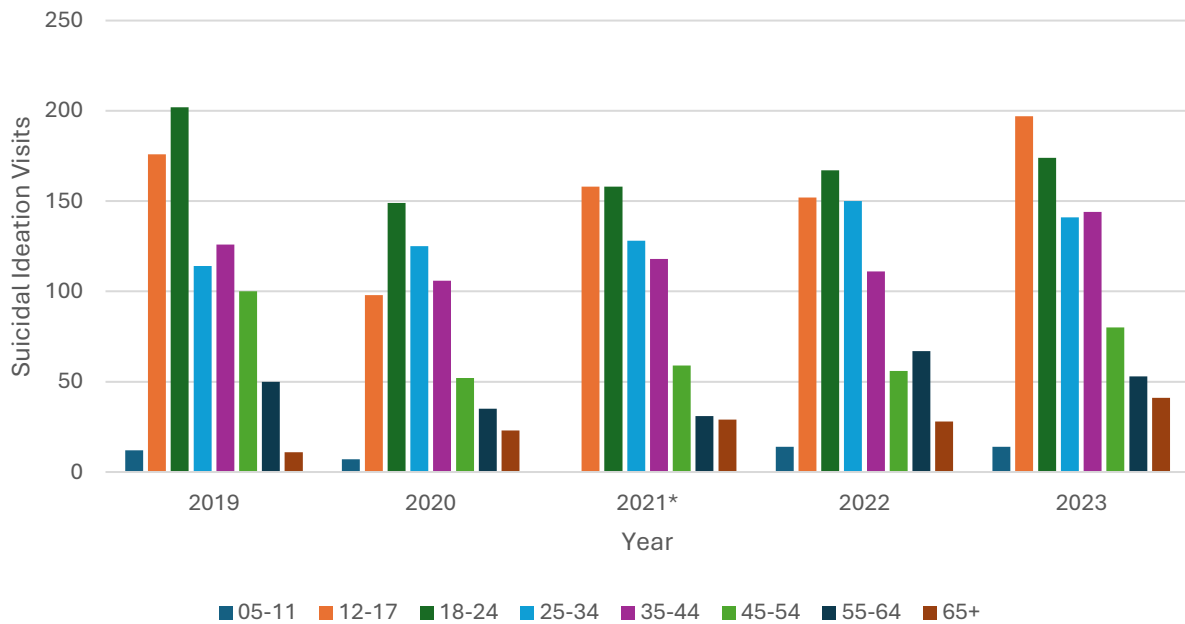
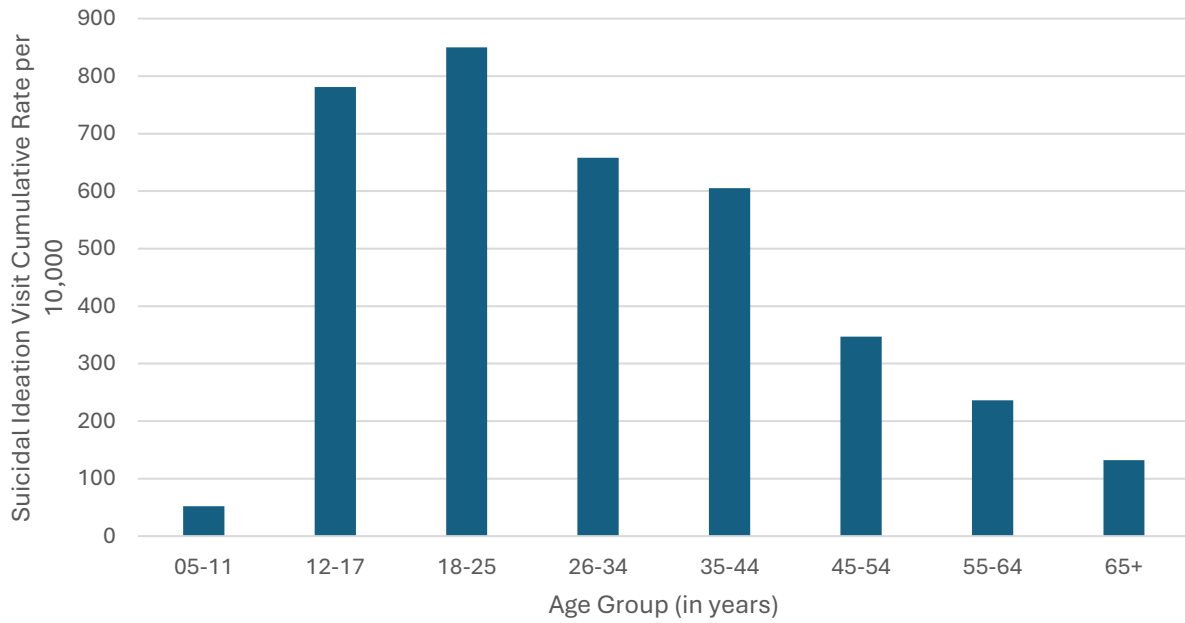
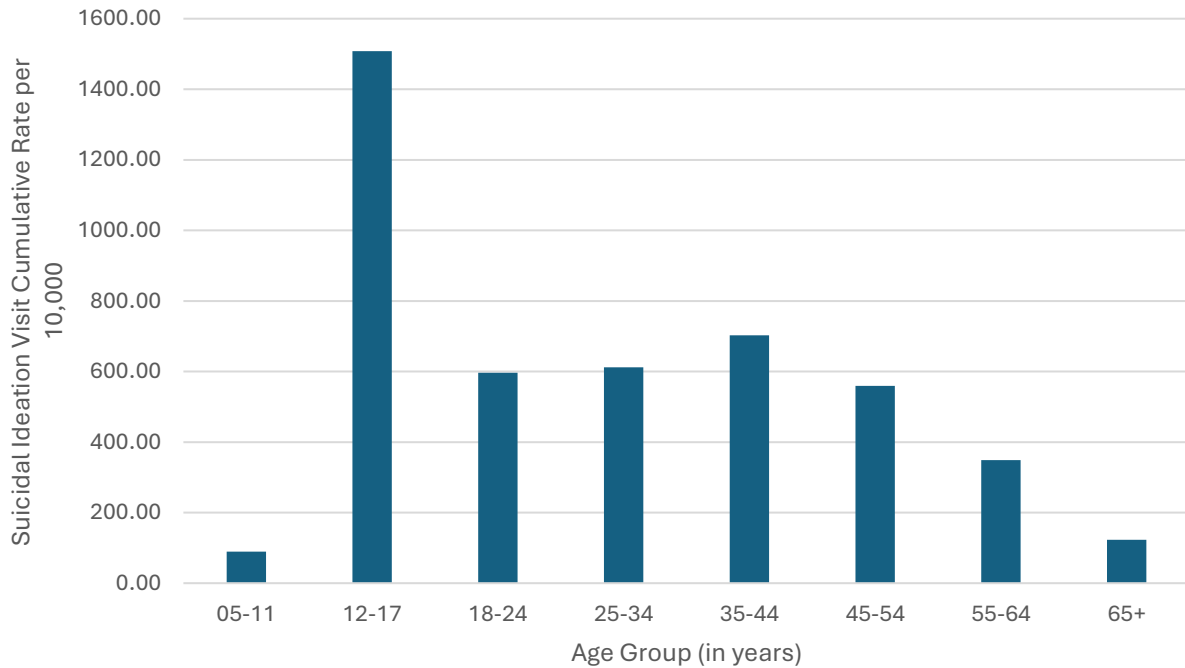


Figure 58: Cumulative incidence of suicidal ideation associated visits by age group, 2019-2023, Grand Forks County residents, NDHHS



When analyzing age groups by cumulative incidence rates for suicidal ideation, the individuals aged 12-17 years far exceed other age groups.

Figure 59: Cumulative incidence rate per 10,000 for suicidal ideation associated visits, 2019-2023, Grand Forks County residents, NDHHS



Race

Suicidal ideation data from ND ESSENCE were analyzed by race. Similar patterns emerged as observed in other data sources and conditions.

Table 16: Cumulative incidence of suicidal ideation associated visits, 2019-2023, Grand Forks County residents, NDHHS

Race	Cumulative Incidence
Asian	32
Black or African American	234
American Indian or Alaska Native	395
White	2697

Figure 60: Cumulative incidence rates per 10,000 for suicidal ideation by race, 2019-2023, Grand Forks County Residents, NDHHS

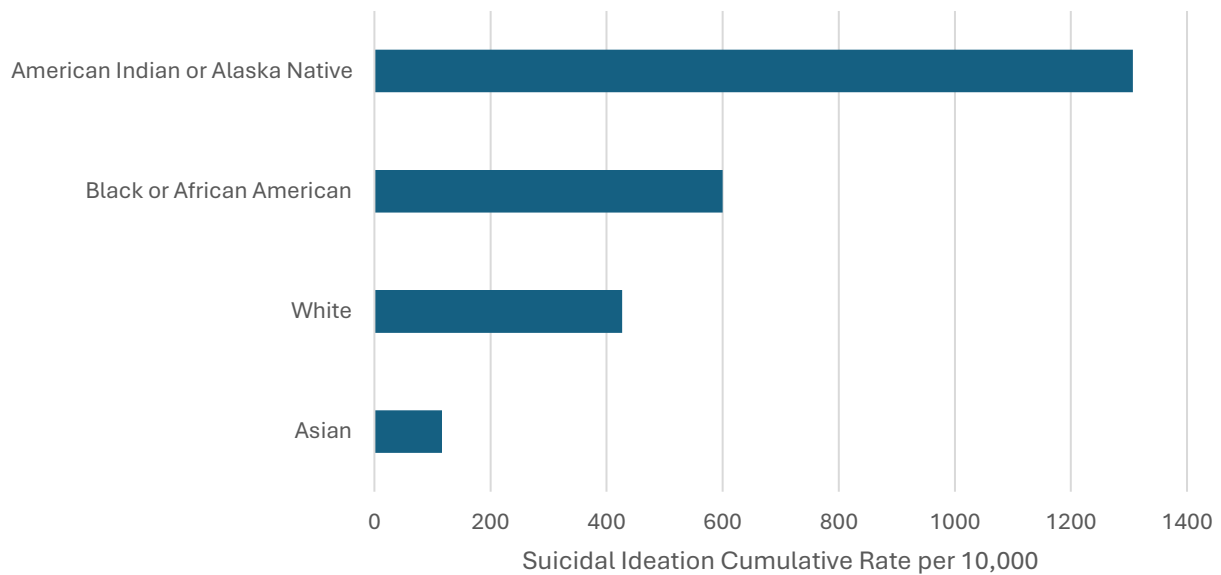
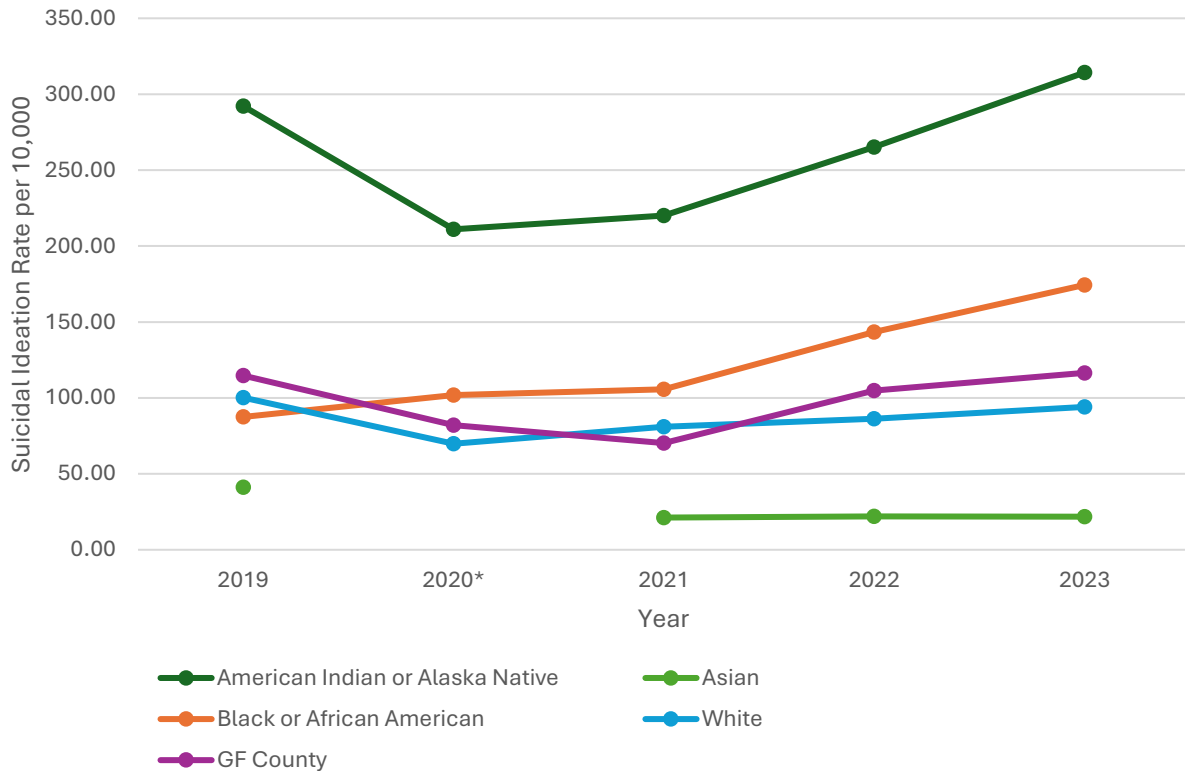


Figure 61: Annual suicidal ideation rate per 10,000 by race, 2019-2023, Grand Forks County residents, NDHHS



*Data for some years for some groups are suppressed due to visit counts below 6.

Suicide Attempts

The suicide attempt query looks at visits related to suicide attempts, or self-directed and potentially injurious behavior with any intent to die as a result of the behavior. Unlike other syndromes analyzed in this report from ND ESSENCE, suicide attempts are the most likely to be assessed and treated within an emergency department. Annual changes in this data are thus less likely to be attributed to changes in the number of other facilities reporting like urgent care clinics or other ambulatory care settings, which may fluctuate from year to year as other care settings are added to syndromic data reporting. Suicide attempt incidence counts were at a five year high in 2023. As a proportion of all visits suicide attempts returned to the pre-pandemic level observed in 2019.

Figure 62: Annual incidence of suicide attempts and suicide attempts as percentage of all visits, 2019-2023, Grand Forks County residents, NDHHS

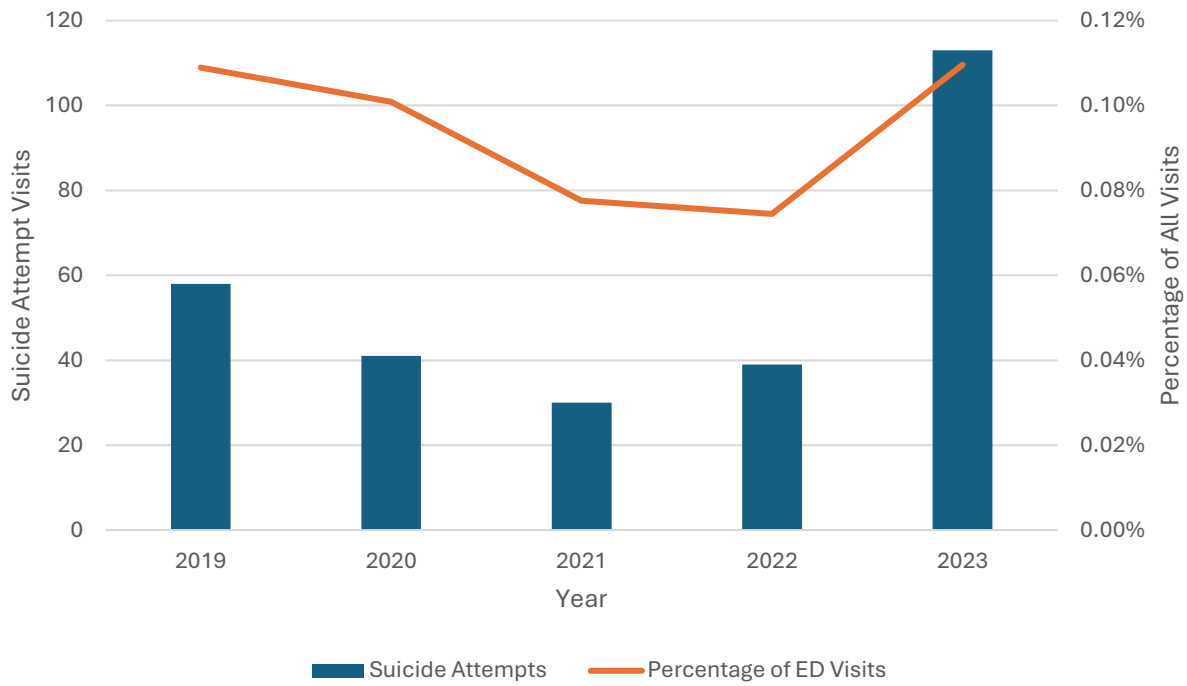
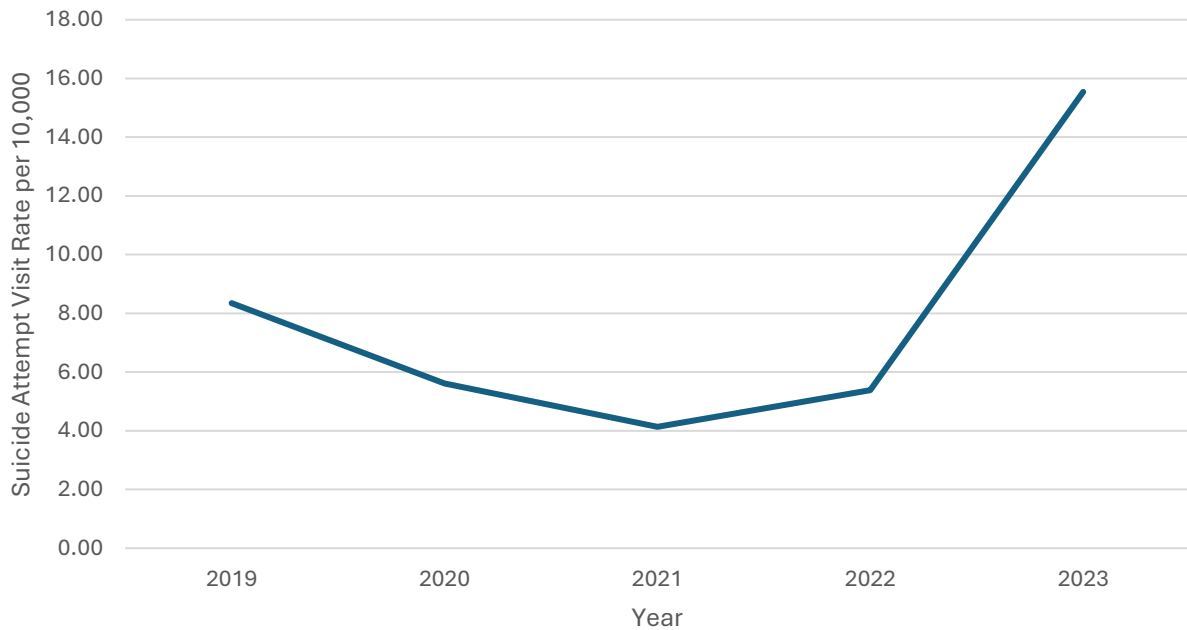


Figure 63: Annual rate per 10,000 of suicide attempts, 2019-2023, Grand Forks County residents, NDHHS



Sex

A contrast emerges from suicidal ideation and suicide attempts when analyzing by sex. Suicidal ideation skewed towards males (52%). However, suicide attempts skew towards females (65%).

Figure 64: Annual incidence of suicide attempts by sex, 2019-2023, Grand Forks County residents, NDHHS

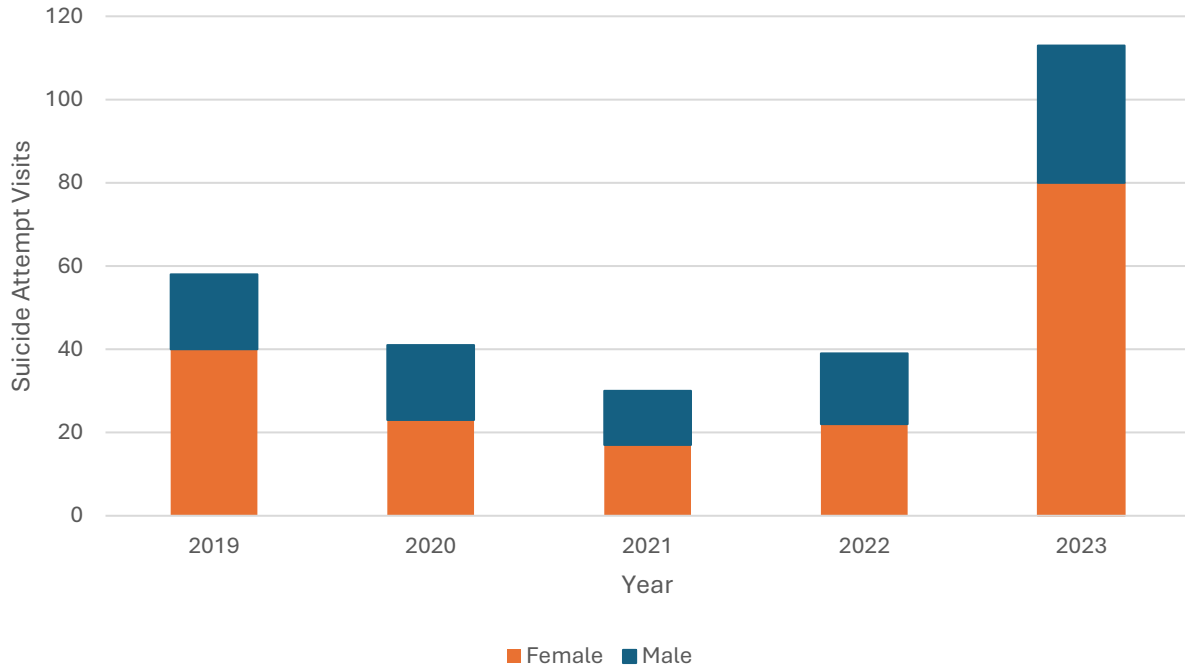


Figure 65: Suicide attempt visit rate per 10,000 by sex, 2019-2023, Grand Forks County residents, NDHHS

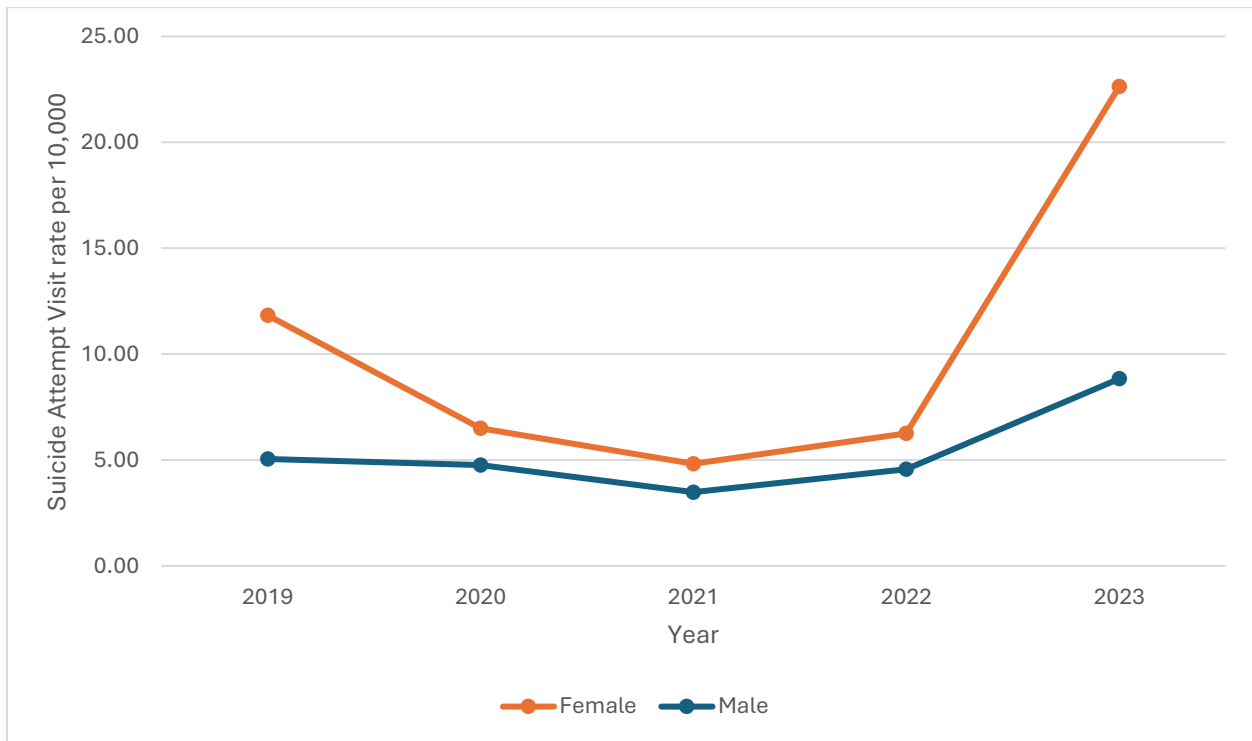
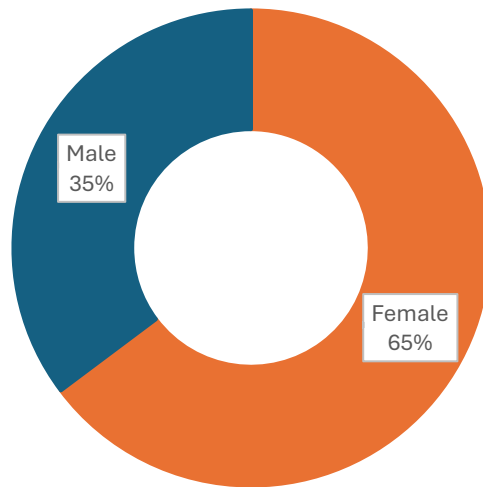


Figure 66: Cumulative incidence of suicide attempts by sex, 2019-2023, Grand Forks County residents, NDHHS

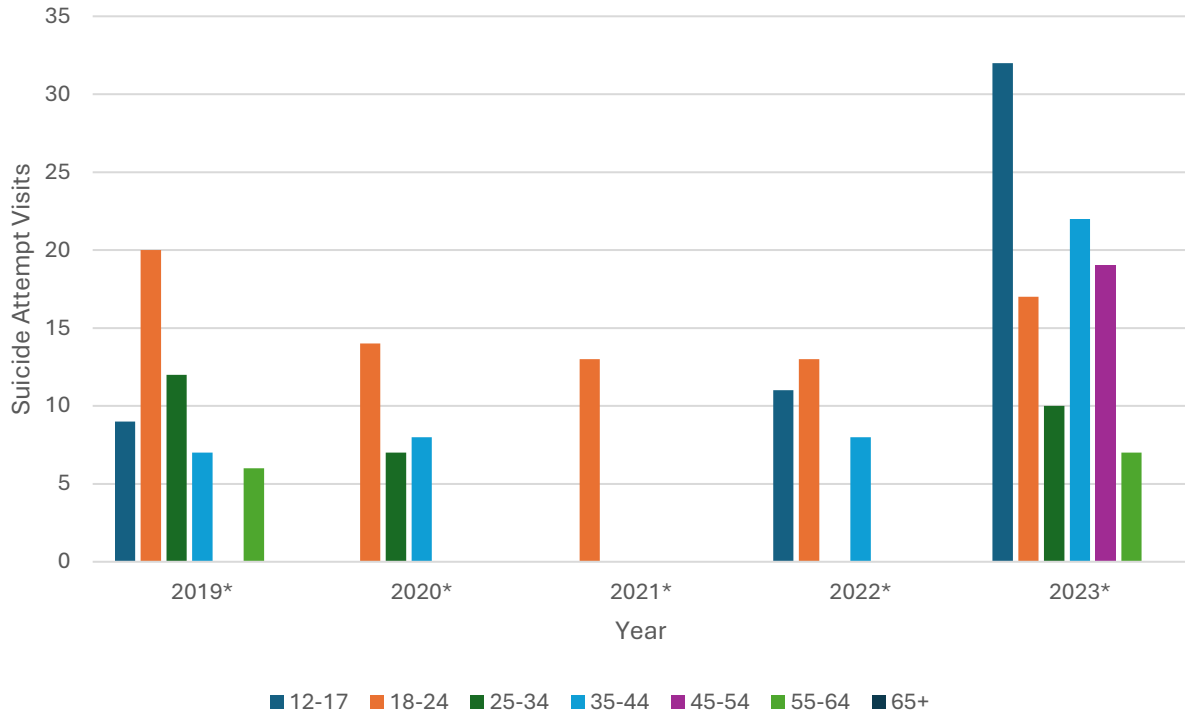


An annual incidence rate by sex was assessed to better understand this difference. Between 2022 and 2023, both sexes saw an increase in incidence, however females saw a steeper increase over that of males. The reasons for this are unknown, but this disparity should continue to be monitored for opportunities to identify potential drivers and to implement targeted interventions.

Age

Since suicide attempts are relatively rare events compared to other conditions analyzed within the ND ESSENCE dataset in this report, when stratifying into smaller age groups, some data do not meet the minimum reporting threshold of 6 events. Please note, missing groups from charts or tables are due to this practice.

Figure 67: Annual incidence of suicide attempts by age group, 2019-2023, Grand Forks County residents, NDHHS



*Data for these years are suppressed for some age groups due to visit counts below 6.

Figure 68: Cumulative incidence of suicide attempts by age group, 2019-2023, Grand Forks County residents, NDHHS

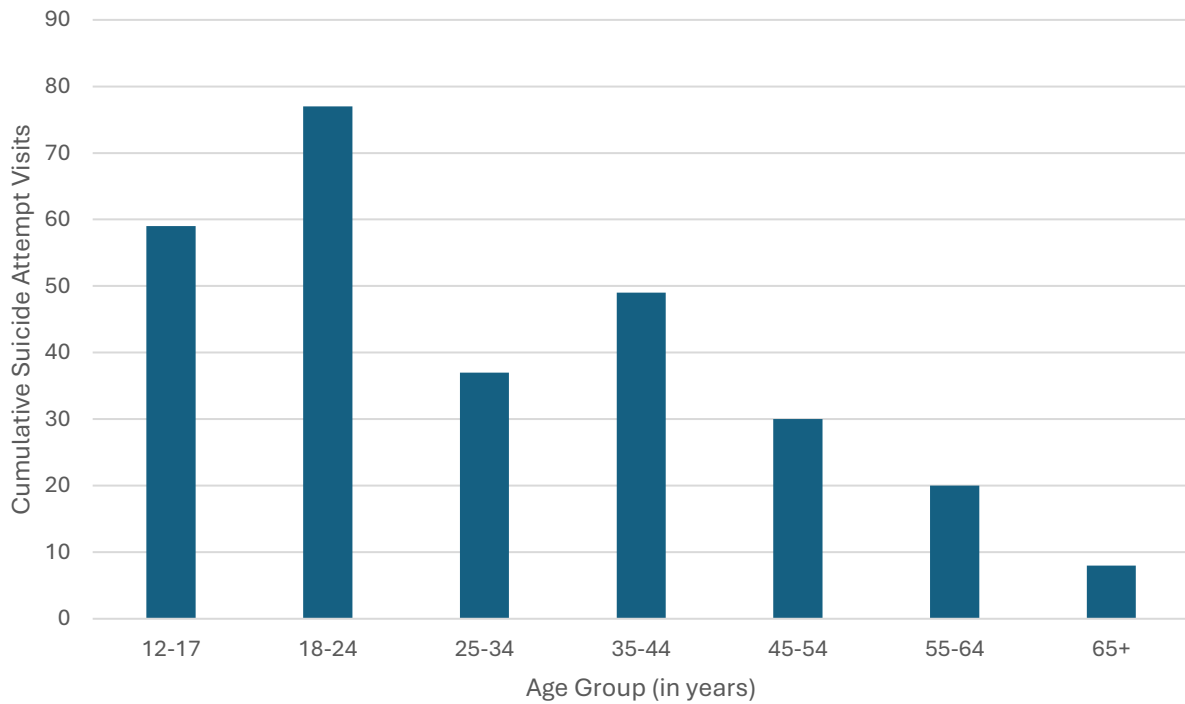
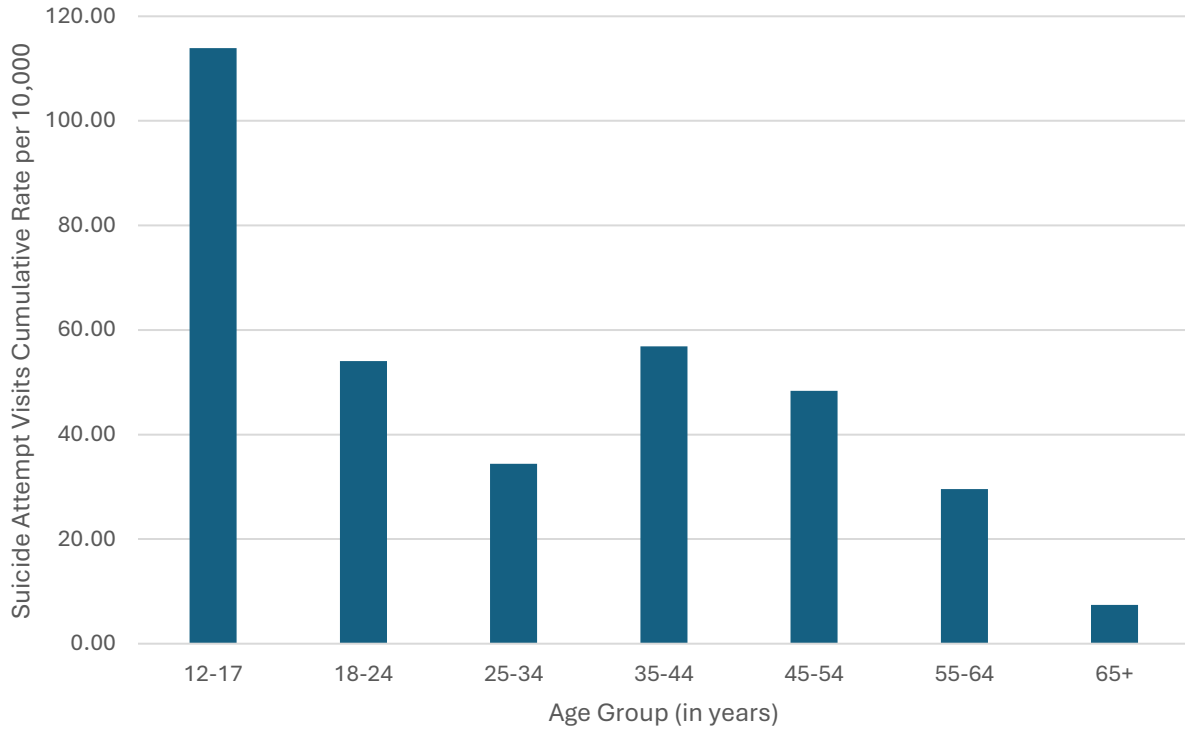


Figure 69: Cumulative incidence rate per 10,000 by age group, 2019-2023



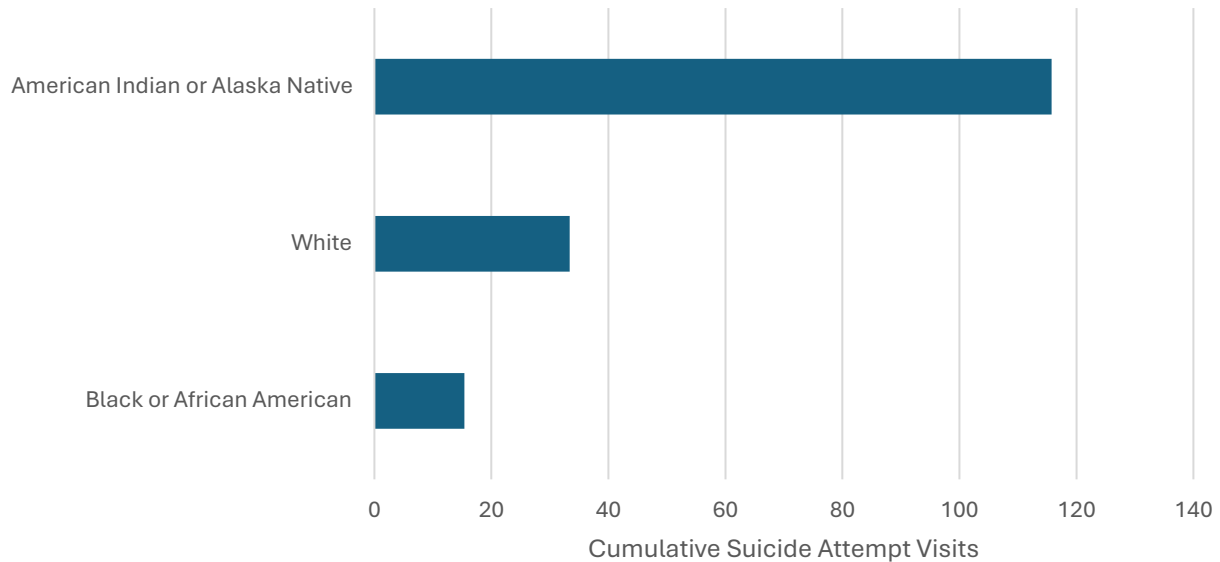
Race

Due to the low annual incidence of suicide attempts for most racial groups, annual incidence data are not presented as a chart like other conditions. Groups not found within charts or tables are due to values below six.

Table 17: Cumulative incidence of suicide attempts, 2019-2023, Grand Forks County residents, NDHHS

Race	Cumulative Incidence
Black or African American	6
American Indian or Alaska Native	35
White	211

Figure 70: Cumulative incidence rate per 10,000 for suicide attempts by race, 2019-2023, Grand Forks County residents, NDHHS



While incidence counts are low for the included racial groups, it should be noted the cumulative incidence rate disparity found among residents of Grand Forks who are American Indian or Alaska Native are also reflected in larger national datasets. A study of the National Violent Death Reporting System found American Indians or Alaska Natives suicide rates were more than 3.5 times higher than those among racial or ethnic groups with the lowest rates.¹³

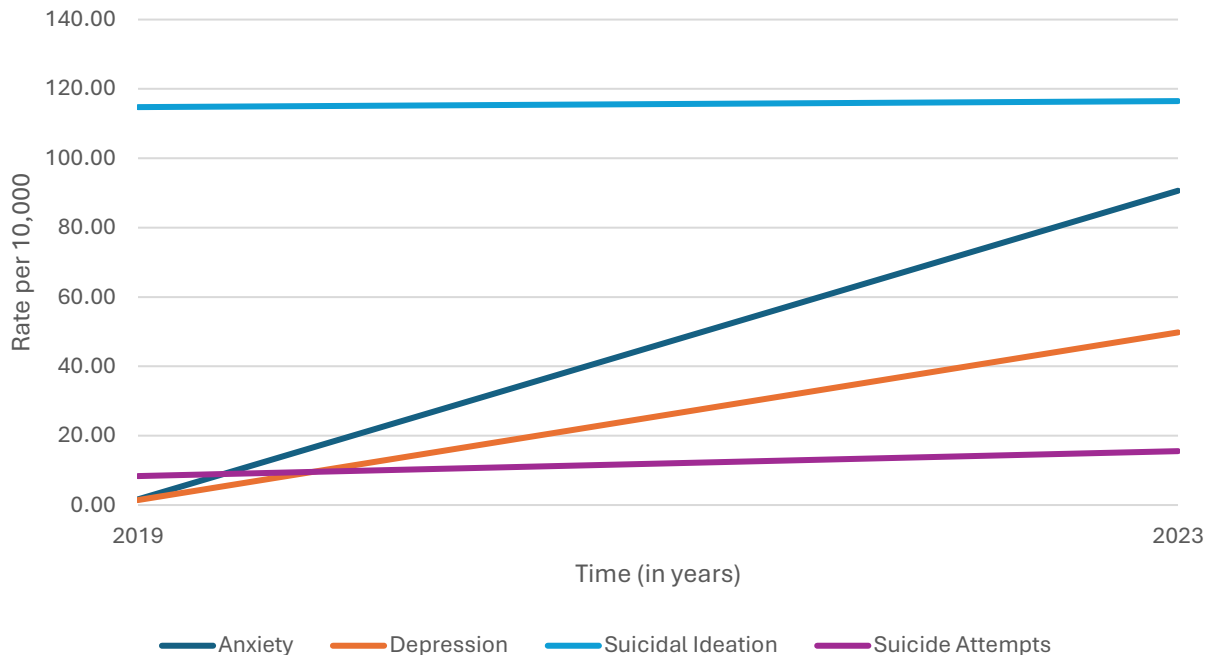
Discussion

Descriptive data are not able to identify causal factors for the conditions within this report. However, descriptive data can be used to generate potential explanations or hypothesis. It can also provide insight into where interventions may be most needed. Several themes and characteristics emerge from the multiple data sources analyzed and reviewed in this report for which there is considerable consistency and agreement among the data sources. For Grand Forks County, the prevalence and

¹³ Centers for Disease Control and Prevention. (2018). Health-related quality of life among adults with arthritis — United States, 2014–2016. *Morbidity and Mortality Weekly Report*, 67(8), 224-229.

incidence of mental health related conditions have increased since 2019. Within those increases the predominant contributors are those of anxiety and depression.

Figure 71: Mental health related visits 2019-2023 by condition/syndrome, Grand Forks County residents, NDHHS



Potential explanations for the increases in ND ESSENCE data include but aren't limited to a real increase in overall incidence, improved data quality and reporting, increased frequency of recognition and diagnosis, increased self-reporting, changes in care seeking behavior, or other causes.

The age group burden varies by condition. Individuals 12-17 years of age emerged as the age group with the highest rates of depression, suicidal ideation, and suicide attempts. These findings are reflective of state and national trends. These age groups are not represented in BRFSS data, but rather in the Youth Risk Behavioral Surveillance System (YRBSS). Data from YRBSS are not assessed in this report. A future analysis should include these data to add greater context to the findings for ND ESSENCE data on those under 18 years of age in Grand Forks County which can aid in the understanding of potential causal factors as well as the development and implementation of interventions.

The burden of mental health conditions differs by sex. Females represented a greater prevalence or incidence than that of males in all conditions in this report apart from suicidal ideation. The reasons for this could be due to a greater prevalence of mental health conditions, a difference in care seeking behaviors, developmental, physiological, sociological or other reasons.^{14,15} Future intervention work may consider approaches that consider differences in how men and women experience mental

¹⁴ Albert, P. R. (2015). *Why is depression more prevalent in women?* *Journal of Psychiatry and Neuroscience*, 40(4), 219-221.

health challenges in order to target tailored interventions.¹⁵ These data match other findings and are consistent with other reliable sources on mental health and gender.¹⁶

The final theme is one of health equity. While racial, economic and sex characteristics were included in this report, these are but a few of the population groups to which people may identify and that which may be associated with mental health disparities. Future work could include data which adds to the understanding of mental health disparities experienced by other special populations in Grand Forks County.

Indigenous people experienced all conditions at a far higher rate than any other group in Grand Forks County. These data align with other sources. Indian Health Services report American Indians and Alaska Natives experience serious mental distress at a 2.5 times higher rate than the general population.¹⁷ While interventions are needed, interventions aimed at reducing mental health inequity among Native Americans should be both culturally appropriate and effective. Involving community representatives in planning and implementation are critical for achieving this goal.¹⁸

Other health equity pieces arose within the BRFSS data regarding the association with income or education level and frequency of poor mental health days. A literature review conducted by the US Department of Health and Human Services on Poverty states, “Across the lifespan, residents of impoverished communities are at increased risk for mental illness, chronic disease, higher mortality, and lower life expectancy.”¹⁹ These data demonstrate how social determinants of health related to economic health have real tangible associations with the physical and mental health of people. Intervention work directed at improving the economic health of individuals and families may also improve the mental health of those individuals and families.

The North Dakota Health and Human Services’ State Epidemiological Outcomes Workgroup (SEOW) generated a 2022 Behavioral Health Epidemiological Profile²⁰ for the state. This report includes extensive state level analysis of data sources included in this report as well as YRBSS youth data or measures such as substance use not included. It is a useful companion resource to supplement local data or provide broader context to the findings in this report.

It is important to note, data sources like BRFSS, NSDUH, or other large survey data sources often lack sensitivity to detect local changes. However, they proved to be accurate when compared to findings from ND ESSENCE as it relates to these mental health conditions. BRFSS identified people 45-54 years of age as having the greatest prevalence of depression among adult age groups for Grand

¹⁵ Eaton NR, Keyes KM, Krueger RF, Balsis S, Skodol AE, Markon KE, Grant BF, Hasin DS. An invariant dimensional liability model of gender differences in mental disorder prevalence: evidence from a national sample. *J Abnorm Psychol.* 2012 Feb;121(1):282-8. doi: 10.1037/a0024780. Epub 2011 Aug 15. PMID: 21842958; PMCID: PMC3402021

¹⁶ American Psychiatric Association. (n.d.). *Mental health facts for women.*

¹⁷ Indian Health Service. (2014). *Trends in Indian health: 2014 edition.*

¹⁸ Hood S, Campbell B, Baker K. *Culturally Informed Community Engagement: Implications for Inclusive Science and Health Equity* [Internet]. Research Triangle Park (NC): RTI Press; 2023 Jan.

¹⁹ Centers for Disease Control and Prevention. (n.d.). *Poverty: Literature summaries.* Office of Disease Prevention and Health Promotion. Retrieved December 6, 2024

²⁰ North Dakota Department of Health and Human Services. (2022). *Behavioral health epidemiological profile.* Retrieved from https://www.hhs.nd.gov/sites/www/files/documents/BH/EPI_2022.pdf

Forks County. This measure differed from the state level estimate for depression from BRFSS. ND Essence data also indicated this when looking at cumulative incidence rate by age groups for depression for Grand Forks County. NSDUH showed more modest trends compared to ND ESSENCE. However, it should be noted that due to NSDUH's methodology changes, more recent data were not available for substate regions and ND ESSENCE showed more dramatic increases after 2021.

ND ESSENCE has incredible utility for the evaluation of real time data regarding mental health conditions at the local level. BRFSS, NSDUH, etc., often lack the sample size to allow for stratification and stable estimates by age groups, sex, or race on an annual basis at substate geographies. Aggregated data over multiple years were used in this report to generate county level estimates from those data sources. ND ESSENCE does not have this limitation. However, it should also be considered ND ESSENCE may have some limitations such as potential sampling errors, data reporting, data quality, etc., and should be used in context with other data sources to draw a more complete epidemiological picture for conditions in which it is employed for analysis.

Ultimately, Grand Forks County faces many of the same mental health challenges as other areas of North Dakota and the United States. Recognition and support from local, state, and federal governments, through the allocation of resources, empower programs and interventions to address the community's mental health needs. While identifying and treating mental health conditions is one crucial aspect, prevention is equally important. Effective prevention strategies at the community level are essential to reduce the incidence of mental illness and promote mental health wellness and resilience.

Acknowledgements

Without the work, assistance, and/or support of these individuals or organizations this report would not have been possible.

- **Levi Schlosser, MPH** - Respiratory and Syndromic Surveillance Epidemiologist, NDHHS
- **Kodi Pinks, MPH** - Unit Director, Surveillance and Data Management, NDHHS
- **Matthew Schmidt, MPH** - BRFSS/YBRS Program Coordinator, NDHHS
- **North Carolina Department of Health and Human Services** along with the **UNC School of Medicine** for their Mental Health Dashboard at ncdetect.org, which served as inspiration for the syndromic data found in this report.

References

- Albert, P. R. (2015). Why is depression more prevalent in women? *Journal of Psychiatry and Neuroscience*, 40(4), 219-221. <https://doi.org/10.1503/jpn.150205>
- American Journal of Managed Care. (n.d.). Reducing avoidable ED visits for mental health could cut billions in costs, improve patient outcomes. *American Journal of Managed Care*. Retrieved from <https://www.ajmc.com/view/reducing-avoidable-ed-visits-for-mental-health-could-cut-billions-in-costs-improve-patient-outcomes>
- American Psychiatric Association. (n.d.). *Mental health facts for women*. Retrieved from <https://www.psychiatry.org/File%20Library/Psychiatrists/Cultural-Competency/Mental-Health-Disparities/Mental-Health-Facts-for-Women.pdf>
- Centers for Disease Control and Prevention. (n.d.). About BRFSS. Retrieved November 20, 2024, from <https://www.cdc.gov/brfss/about/index.htm>
- Centers for Disease Control and Prevention. (n.d.). About the National Syndromic Surveillance Program (NSSP). Retrieved November 26, 2024, from <https://www.cdc.gov/nssp/php/about/index.html>
- Centers for Disease Control and Prevention. (n.d.). About the National Violent Death Reporting System (NVDRS). Retrieved November 26, 2024, from https://www.cdc.gov/nvdrs/about/?CDC_AAref_Val=https://www.cdc.gov/violenceprevention/datasources/nvdrs/index.html
- Centers for Disease Control and Prevention. (2018). Health-related quality of life among adults with arthritis — United States, 2014–2016. *Morbidity and Mortality Weekly Report*, 67(8), 224-229. <https://www.cdc.gov/mmwr/volumes/67/wr/mm6708a1.html>
- Centers for Disease Control and Prevention. (n.d.). Poverty: Literature summaries. In Office of Disease Prevention and Health Promotion. Retrieved December 6, 2024, from <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/poverty#cit9>
- Merrick, M. T., Ford, D. C., Ports, K. A., Guinn, A. S., Chen, J., Klevens, J., Metzler, M., Jones, C. M., Simon, T. R., Daniel, V. M., Ottley, P., & Mercy, J. A. (2019). *Vital signs: Estimated proportion of adult health problems attributable to adverse childhood experiences and implications for prevention—25 states, 2015–2017*. *MMWR. Morbidity and Mortality Weekly Report*, 68(44), 999–1005. <https://www.cdc.gov/mmwr/volumes/68/wr/mm6844e1.html>
- Centers for Disease Control and Prevention. (n.d.). Worry. Retrieved December 5, 2024, from <https://www.cdc.gov/howrightnow/emotion/worry/index.html>
- County Health Rankings & Roadmaps. (n.d.). Access to care: Mental health providers. Retrieved November 25, 2024, from [pg. 65](https://www.countyhealthrankings.org/health-data/health-</p></div><div data-bbox=)

factors/clinical-care/access-to-care/mental-health-providers?anchor=data-methods&selected-tab=methods&year=2024

County Health Rankings & Roadmaps. (n.d.). About Us. Retrieved November 25, 2024, from <https://www.countyhealthrankings.org/about-us>

Eaton, N. R., Keyes, K. M., Krueger, R. F., Balsis, S., Skodol, A. E., Markon, K. E., Grant, B. F., & Hasin, D. S. (2012). An invariant dimensional liability model of gender differences in mental disorder prevalence: Evidence from a national sample. *Journal of Abnormal Psychology, 121*(1), 282-288. <https://doi.org/10.1037/a0024780>

Goldner, E. M., Lusted, A., Roerecke, M., Rehm, J., & Fischer, B. (2014). Prevalence of Axis-1 psychiatric (with focus on depression and anxiety) disorder and symptomatology among non-medical prescription opioid users in substance use treatment: systematic review and meta-analyses. *Addict Behav., 39*(3), 520-531. doi:10.1016/j.addbeh.2013.11.022

Grez-Ardila, N., & Zavala, H. (2024). *Title of the Article*. BMC Psychiatry, 24, Article 6066. <https://doi.org/10.1186/s12888-024-06066-7>

Hood, S., Campbell, B., & Baker, K. (2023). Culturally Informed Community Engagement: Implications for Inclusive Science and Health Equity [Internet]. Research Triangle Park (NC): RTI Press; January. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK592587/> doi:10.3768/rtipress.2023.op.0083.2301

Indian Health Service. (2014). Trends in Indian health: 2014 edition. https://www.ihs.gov/sites/dps/themes/newihstheme/display_objects/documents/Trends2014Book508.pdf

National Institute on Drug Abuse. (2022, September 27). Part 1: The Connection Between Substance Use Disorders and Mental Illness. Retrieved from <https://nida.nih.gov/publications/research-reports/common-comorbidities-substance-use-disorders/part-1-connection-between-substance-use-disorders-mental-illness> on 2024, September 23

Substance Abuse and Mental Health Services Administration. (n.d.). 2018-2020 NSDUH substate reports. Retrieved November 25, 2024, from <https://www.samhsa.gov/data/nsduh/2018-2020-substate-reports>

Substance Abuse and Mental Health Services Administration. (2021). 2021 National Survey on Drug Use and Health (NSDUH) releases. Retrieved November 25, 2024, from <https://www.samhsa.gov/data/release/2021-national-survey-drug-use-and-health-nsduh-releases>

Substance Abuse and Mental Health Services Administration. (n.d.). Supporting your mental health during the holiday season. Retrieved December 2, 2024, from <https://www.samhsa.gov/blog/supporting-your-mental-health-during-holiday-season>

Glossary of Terms

Any mental illness (AMI) is defined in NSDUH as adults aged 18 or older who currently or at any time in the past year have had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet DSM-IV criteria. AMI estimates are based on a predictive model applied to NSDUH data and are not direct measures of diagnostic status. Adults estimated as having a diagnosable mental, behavioral, or emotional disorder in the past year, regardless of their level of functional impairment, were defined as having AMI.

Major depressive episode (MDE) is defined as in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), which specifies a period of at least 2 weeks in the past year when an individual experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. For details, see American Psychiatric Association (2013).

Serious mental illness (SMI) is defined in NSDUH as adults aged 18 or older who currently or at any time in the past year have had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet diagnostic criteria specified in the DSM-IV and has resulted in serious functional impairment, which substantially interferes with or limits one or more major life activities. SMI estimates are based on a predictive model applied to NSDUH data and are not direct measures of diagnostic status. The estimation of SMI covers any mental disorders that result in serious impairment in functioning such as major depression and bipolar disorders. However, NSDUH data cannot be used to estimate the prevalence of specific mental disorders in adults. Also, it should be noted that SAMHSA has recently updated the definition of SMI for use in mental health block grants to include mental disorders as specified in the DSM-IV (APA, 1994).

Incidence – occurrence of new events in a population over a specified period of time.

Cumulative Incidence – The total number of new events for all years in the data set.

Incidence Rate –

$$\text{Incidence Rate} = \frac{\text{Number of New Cases}}{\text{Population at Risk}} \times 10,000$$

Cumulative Incidence Rate -

$$\text{Cumulative Incidence Rate} = \frac{\text{Total Number of Cases for All Years}}{\text{Population at Risk}} \times 10,000$$

Anxiety Syndrome- Pulled from the NC Detect Mental Health Data Dashboard at ncdetect.org/case-definitions.

ICD-10-CM Codes: F06.4, F40.00, F40.01, F40.02, F40.10, F40.11, F40.210, F40.218, F40.220, F40.228, F40.230, F40.231, F40.232, F40.233, F40.240, F40.241, F40.242, F40.243,

F40.248,F40.290, F40.291, F40.298, F40.8, F40.9, F41.0, F41.1, F41.3, F41.8, F41.9, F42.2, F42.3, F42.4,F42.8, F42.9, F43.11, F43.12, F93.0, F94.0, R46.6

Depression Syndrome - Custom event to identify ED visits with a depression diagnosis. This definition is from the CMS Chronic Conditions Warehouse. Pulled from the NC Detect Mental Health Data Dashboard at ncdetect.org/case-definitions

ICD-10-CM Codes: F31.30, F31.31, F31.32, F31.4, F31.5, F31.60, F31.61, F31.62, F31.63, F31.64, F31.75, F31.76, F31.77, F31.78, F31.81, F32.0, F32.1, F32.2, F32.3, F32.4, F32.5, F32.9, F33.0, F33.1, F33.2, F33.3, F33.40, F33.41, F33.42, F33.8, F33.9, F34.1, F43.21, F43.23,F32.A

Suicidal Ideation CDC V1 Syndrome - Custom event that includes chief complaint terms in addition to the specific diagnosis of suicidal ideation. Developed by the CDC for use in NSSP ESSENCE.

chief complaint terms:(('SI' OR like 'SI[/ ;.]%' OR like '%[/ ;.]SI' OR like '%[/ ;.]SI[/ ;.]%' OR (like '%WANT%' AND like '%DIE %') OR (like '%LIFE%' AND like '% END%') OR ((like '%SELF%' AND (like '%HARM%' OR like '%HURT%' OR (like '%HANG%' AND NOT like '%CHANG%') OR like '%INFLICT%' OR like '%KILL%' OR like '%LACERA%' OR like '%MUTILAT%' OR like '%SHOOT%' OR like '%STAB%' OR like '%IDEAT%' OR like '% CUT%')) AND (like '%PLAN%' or like '%WANT%' or like '%GOING TO%')) OR like '%SUICIDE%' OR like '%SUIC%' OR like '%SUCI%' OR (like '%SUSCI%' AND NOT like '%RESUSCI%') OR like '%SUISID%' OR like '% END IT%' OR like '%IDEATION%') AND NOT (like '%END OF LIFE%' OR like '%END OF BATTERY LIFE%' OR like '%DENIE[SD] SELF HARM%' OR like '%NO SELF HARM%' OR like '%ACCIDENT%' OR like '%HOMICI%' OR like '%DENIE[SD] SI[V;.]%' OR like '%DENIE[SD] SI' OR like '%DENIE[SD] ANY SI[V;.]%' OR like '%DENIE[SD] ANY SI' OR like '%DENIE[SD] CURRENT SI[V;.]%' OR like '%DENIE[SD] CURRENT SI' OR like '%NO SI[V;.]%' OR like '%NO SI' OR like '%NOT SI[V;.]%' OR like '%NOT SI' OR like '%DENIE[SD] SUIC%' OR like '%DENIE[SD] CURRENT SUIC%' OR like '%DENIE[SD] ANY SUIC%' OR like '%DENIE[SD] S/H%' OR like '%RT SI[V;.]%' OR like '%RT SI' OR like '%RIGHT SI[\ /;.]%' OR like '%RIGHT SI' OR like '%NOT SUIC%'))

ICD-9/10-CM Codes: R45.851 OR V62.84

Suicide Attempt – Definition Factsheet and Technical Brief link:

https://cdn.ymaws.com/www.cste.org/resource/resmgr/pdfs/CDC_Suicide_Attempt_v2.pdf

Syndromic Surveillance – an investigational approach where health department staff, assisted by automated data acquisition and statistical alerts, monitor disease indicators in real-time or near real-time. For this report, syndromic surveillance refers to the use of ND ESSENCE to evaluate mental health conditions based upon validated “syndromes” for mental health conditions.

Mental Health Event – CDC Mental Health V1

Specific code list is several pages long due to incorporating a large range of mental health conditions and text from chief complaints. External links are not available. It can be provided upon request.