

NORTH DAKOTA BEHAVIORAL HEALTH
**Epidemiological
Profile**

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Executive Summary

The state of North Dakota has made progress in addressing substance abuse and mental health in recent years. Despite this, North Dakota remains above the national average in many areas, which indicates further prevention implementation is necessary to improve the quality of life in the state. Identifying target populations that are showing improvement in mental health and rates of substance abuse presents opportunities to identify strategies that are working, populations that are receptive to prevention efforts, and areas where prevention efforts could be implemented or expanded.

Alcohol

Alcohol consumption, consequences, and modifiable risk factors in North Dakota have seen positive trends among the youth in recent years. Rates of ever using alcohol, binge drinking, driving after drinking alcohol, liquor law violations, and alcohol use disorder among North Dakota youth have decreased in recent years. North Dakota adult alcohol use remained above the national average for many categories relating to consumption. However, the percentage of adults who reported alcohol use disorder decreased between 2014 and 2017. In addition, the percentage of alcohol-related driving crashes in the state that resulted in a fatality decreased between 2017 and 2018.

Tobacco

Cigarette consumption, consequences, and modifiable risk factors in North Dakota have seen decreasing trends in recent years. Rates of tobacco use before age 13, cigarette use among youth, cigarette use among adults, the number of pregnant women using tobacco, and the number of cigarettes sold in North Dakota have declined in recent years. Middle and high school students reported a large increase in health care providers advising students not to use tobacco products. Age-adjusted mortality rates due to heart disease, age-adjusted rates of mortality due to lung and bronchus cancer, and age-adjusted rates of mortality due to cardiovascular disease have declined in recent years as well. These mortality rates were found to be lower than the national rates.

However, electronic cigarette use has increased both nationally and in North Dakota. Electronic cigarettes have become the most commonly used tobacco product among youth. While other forms of tobacco use have declined, the increase in electronic cigarette use has emerged as a serious health concern.

Illicit Drugs

Opioid consumption, consequences, and modifiable risk factors in North Dakota reported decreased trends in recent years. North Dakota observed decreased opioid use and consequences (e.g., overdose death), while the U.S. continued to report increased rates for use and overdose deaths. Rates of youth and adult marijuana use remained relatively unchanged in North Dakota, but remain lower than the national rate. The North Dakota rate of adult cocaine use increased between 2015 and 2018, but the percentage of adult cocaine use in North Dakota

remains lower than U.S. rates. The percentage of substance abuse treatment admissions for amphetamine use in North Dakota has continued to increase.

Nonmedical Use of Prescription Drugs

Nonmedical use of prescription drugs, related consequences, and modifiable risk factors in North Dakota have seen positive trends in recent years. Rates of nonmedical use of prescription drugs remained steady or declined for specific sub-populations with an overall decreasing trend. The rate of opioid-related emergency department visits and inpatient stays decreased between 2016 and 2017. North Dakota was below the national average in the number of opioid prescriptions per 10,000 persons.

Mental Health

Mental health indicators, consequences, and resources for mental health have increased in recent years. North Dakota youth reported higher rates of bullying, electronic bullying, and suicide attempts than U.S. rates. North Dakota adults reported increased rates of mental illnesses (e.g., major depressive episode and serious mental illnesses). However, North Dakota reported an increased percentage of adults who received mental health services between 2017 and 2018.

Introduction

Use of alcohol, tobacco, prescription and illicit drugs, and the increased rates of poor mental health takes a heavy toll on the lives and families of North Dakotans and the state economy. Alcohol use and abuse is the greatest substance-related problem facing the state (National Survey on Drug Use and Health [NSDUH], 2018; Behavioral Risk Factor Surveillance System [BRFSS], 2018). North Dakota has among the highest rates in the nation in current alcohol use and excessive drinking, regardless of age group (NSDUH, 2018).

The State Epidemiological Outcomes Workgroup (SEOW)

State Epidemiological Outcomes Workgroups (SEOWs) are groups of data experts and prevention stakeholders responsible for bringing data on substance abuse and related behavioral problems to the forefront of the prevention planning process. The North Dakota SEOW was initiated in 2006 by the North Dakota Department of Human Services (NDDHS), Behavioral Health Division. Funding for the project is provided by the federal Substance Abuse and Mental Health Services Administration (SAMHSA).

The mission of the North Dakota SEOW is to identify, analyze and communicate key substance abuse and related behavioral health data to guide programs, policies, and practices.

Expectations of the SEOW:

- Assessment of the prevalence of substance abuse and related behavioral health issues within specific populations and across the lifespan.
- Determination of the nature, magnitude, and problems, as well as shared risk and protective factors, associated with substance use and related behavioral health issues.
- Establishment and management of all relevant data systems, including systems used to conduct archival, evaluative, ethnographic, and perspective studies as well as those designed to serve as an early warning network.
- Development of state profiles detailing patterns and trends of substance use and related behavioral health issues.
- Engagement in systematic and analytical thinking to better understand the causes and consequences of substance abuse and behavioral health issues.
- Coordination with appropriate decision-making entities within the state to provide data in formats that will be useful in guiding effective and efficient use of prevention resources.
- Ongoing promotion of data, including the development of templates, reports, and other products for dissemination.

The SEOW is comprised of a broad representation of diverse partners and continues to provide leadership in identifying data needs. Membership includes representatives from:

- Boys & Girls Club of the Three Affiliated Tribes
- Center for Rural Health, University of North Dakota
- Department of Corrections & Rehabilitation
- Department of Health
- Department of Human Services
- Department of Public Instruction
- Department of Transportation
- Highway Patrol
- Information Technology Department
- Mental Health America of North Dakota
- North Dakota State University
- North Dakota University System
- Office of the Attorney General
- Office of the State Tax Commissioner
- Spirit Lake Sioux Tribe
- Standing Rock Sioux Tribe
- Turtle Mountain Band of Chippewa Indians, Turtle Mountain Community College
- Wyoming Survey & Analysis Center, University of Wyoming

Purpose of the Profile

The SEOW is charged with developing state epidemiological profiles of key substance use indicators.

This report constitutes the state profile. Its primary purpose is to serve as a reference document for the SEOW to understand the available state-level data regarding alcohol, tobacco and drug abuse. This profile will also be the foundation of additional, more accessible documents summarizing the status of behavioral health (mental health and substance abuse) in North Dakota. The University of North Dakota Center for Rural Health (CRH) completed this document through contract with NDDHS.

Principles of the SEOW

The SEOW is guided by the principle of **outcomes-based prevention**, which allows state prevention stakeholders to lead with results, not with strategies.

To achieve this, the SEOW utilizes a **public health approach** of focusing on preventing health problems and promoting healthy living for whole populations of people. By definition, public health is about populations. Public health focuses on the continuous monitoring of population-level health, and towards identifying, preventing, and managing conditions of diseases with the intention of improving health outcomes of a population.

Epidemiology is the study of factors affecting the health and wellness of populations. It is data-driven and relies on a systematic and unbiased approach to the collection, analysis, and interpretation of data. The SEOW relies on **epidemiological data** as the primary foundation for all planning and decision-making at state and community levels. Epidemiological data have proven to be very valuable for describing drug use patterns across person, place, and time, for identifying factors associated with increased (or decreased) risk for drug use and drug use disorders, and for informing prevention policies and strategies (Compton, Thomas, Conway, & Colliver, 2005).

Prevention that focuses on **risk and protective factors** is grounded in the public health approach, which relies on data-based predictors of problem behaviors and positive outcomes (Hawkins & Catalano, 2005). Few problems related to substance abuse can be changed through direct influence or attack. Rather, they are influenced indirectly through underlying factors that contribute to the problem and its initiation, escalation, and adverse consequences.

A variety of factors – including individual competencies, family resources, school quality, and community-level characteristics – can increase or decrease the risk that a person will develop a substance use disorder or related problem behaviors, such as early substance use, risky sexual behavior, or violence (National Research Council and Institute of Medicine, 2009). Specific to substance abuse, seven causal areas have been identified by researchers, and they include: (1) Economic/Retail Price; (2) Retail Availability; (3) Social Availability; (4) Enforcement; (5) Promotion of Alcohol; (6) Community Norms; and (7) Individual Factors (Birckmayer, Holder, Yacobian & Friend, 2004). Existing research and data suggest that there are a number of common or shared risk and protective factors throughout life that impact both substance abuse and mental health outcomes (SAMHSA, 2013). Identifying shared risk and protective factors

and examining **the unique issues of North Dakota's** rurality and cultural diversity are vital to increasing collaboration, decreasing duplication, and ultimately better addressing the population needs as a whole.

Methods

The Core Workgroup for North Dakota's SEOW project includes personnel from the North Dakota Department of Human Services' Behavioral Health Division (NDDHS) and the University of North Dakota Center for Rural Health (CRH). The work on this project has been guided by feedback, comments, advice, and data assistance from the SEOW, which has representation from a variety of state government, tribal, university, and advocacy agencies. The SEOW meets quarterly. The principal functions of the committee are to assist in identifying potential data sources, assess and prioritize the quality and appropriateness of various data sources and indicators, interpret and identify patterns and trends in substance use/consequence data, and to provide general guidance for developing the state's Alcohol, Tobacco, Illicit Drug, Prescription Drug and Mental Health Epidemiological Profile.

Data sources used in the 2019 Epidemiological Profile development include:

- Youth Risk Behavioral Survey (YRBS)
- National Survey on Drug Use and Health (NSDUH)
- Behavioral Risk Factor Surveillance System (BRFSS)
- North Dakota Survey of Young Adults (NDSOYA)
- National Center for Health Statistics (NCHS)
- National Institute on Alcohol Abuse and Alcoholism (NIAAA)
- Alcohol-Related Disease Impact (ARDI)
- National Highway Traffic Safety Administration (NHTSA)
- North Dakota Department of Transportation (NDDOT): North Dakota Crash Summary (NDCS)
- North Dakota Highway Patrol (NDHP)
- State of North Dakota Office of Attorney General, Crime Statistics Online (CSO) Program
- North Dakota Department of Corrections and Rehabilitation (DOCR)
- North Dakota Department of Public Instruction (NDDPI)
- Treatment Episode Data Set (TEDS)
- North Dakota Community Readiness Survey (CRS)
- Youth Tobacco Survey (YTS)
- Adult Tobacco Survey (ATS)
- Monitoring the Future (MTF)

- North Dakota Division of Vital Records (NDDVR)
- North Dakota Department of Health, Tobacco Prevention and Control
- CDC Wonder Query System
- Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)
- State of North Dakota Office of State Tax Commissioner.
- Federation of Tax Administrators (FTA)
- North Dakota Department of Health, Division of Disease Control
- Healthcare Cost and Utilization Project (HCUP)
- Centers for Medicare and Medicaid Services (CMS)
- National Prescription Audit (NPA)
- CDC Annual Surveillance Report of Drug-Related Risks and Outcomes
- North Dakota Board of Pharmacy
- National Survey of Substance Abuse Treatment Services (N-SSATS)
- North Dakota North Dakota Council on Abused Women's Services (ND CAWS)
- Substance Abuse and Mental Health Services Administration (SAMHSA). National Mental Health Services Survey (N-MHSS)
- SAMHSA Uniform Reporting System (URS)
- Substance Abuse and Mental Health Services Administration (SAMHSA). Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health
- U.S. Department of Health and Human Services (HHS). The Health Consequences of Smoking-50 Years of Progress: A Report of the Surgeon General
- American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders (5th Ed.)
- National Center for Health Statistics (NCHS). Suicide Rate in the United States Continue to Increase

Other data sets have notable shortcomings which had to be considered while extracting their positive aspects. For example, Treatment Episode Data Set (TEDS) data is a good source of substance-related treatment admissions for North Dakota; however, one must keep in mind this system does not collect data from all of the state's treatment facilities. In fact, private treatment providers are not obligated to report any of their patient or client information to TEDS. In addition, crime data in North Dakota is a rich source of information on substance consequences, but it is not without its limitations. The integrity of crime databases is dependent and reliant upon reporting compliance by law enforcement agencies and personnel throughout the state.

In using data from multiple sources, it is important to mention that many sources differ in their intended goals and in their methods of collecting and reporting information. If readers have questions regarding the methods, strengths, or limitations of the sources used in this profile, we recommend consulting the original data source(s) to maximize the usefulness of the source and ensure accurate interpretations of the findings.

To create the state epidemiological profile report, a number of events occurred. First, consumption/consequence items were prioritized and data was collected and presented to the SEOW workgroup. Then, SEOW members provided feedback on grouping of data in figures, tables, format, and information or data needing further clarification. With this feedback, the SEOW epidemiology staff made modifications and provided the updated material to the entire workgroup for review before submission of the draft report.

Substance Abuse and Mental Health in North Dakota

Section 1. Alcohol: Consumption, Consequences, and Modifiable Risks

Alcohol in North Dakota: Consumption

Alcohol Use

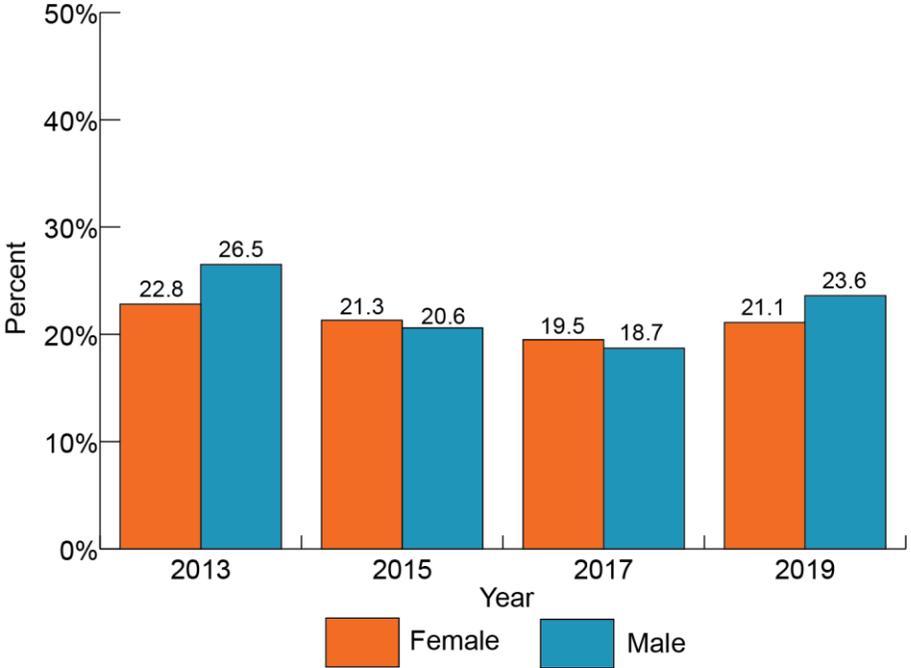
About the Indicator

According to the Surgeon General’s Report on Alcohol, Drugs and Health, 1 in 10 deaths among working-age adults (20-64 years) can be attributed to alcohol misuse (Stahre, et al., 2014). Over 137 million Americans aged 18 and older have used alcohol in the past month (NSDUH, 2019). Alcohol misuse affects millions across the country as well as those living in North Dakota. Seventy-three percent of North Dakota adults perceived alcohol use as a moderate or serious problem in society among adults, while 76.3% perceived alcohol use as a moderate or serious problem in society among youth (ND CRS, 2019). In general, alcohol is the most widely used addictive substance in the United States (NCADD, 2015). “Current drinking” can be defined as any reported alcohol consumption in the past 30 days (BRFSS, 2019).

Section Summary

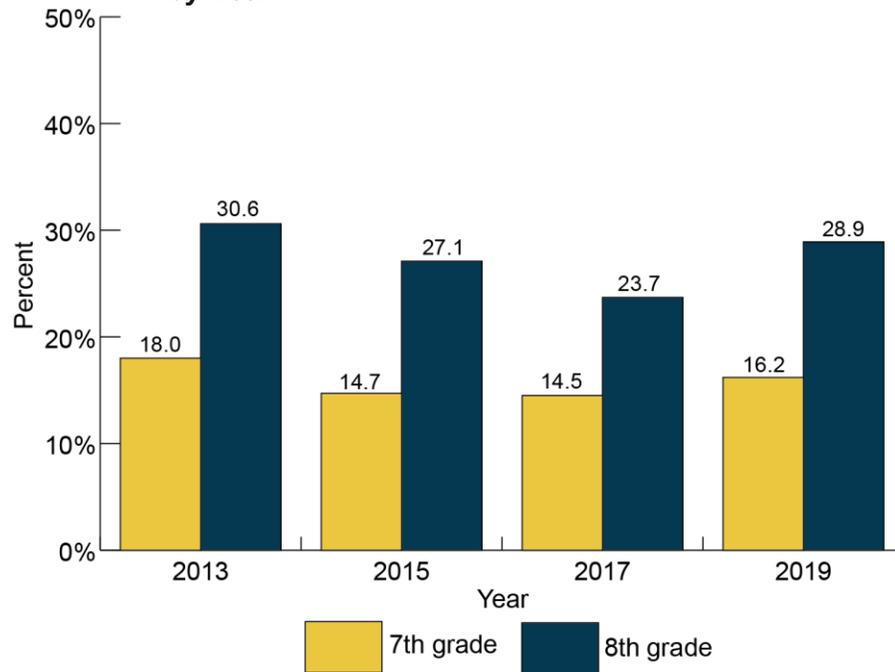
- In 2019, 22.5% of North Dakota middle school students used alcohol, a percentage that had been in decline since 2013, but increased slightly in 2019 (YRBS, 2019; see Figure 1.1).
- In 2013 and 2019, male middle school students reported higher rates of alcohol use than females. However, from 2015 to 2017, a higher percentage of female students reported alcohol consumption compared to males (YRBS, 2019; see Figure 1.1).

Figure 1.1: Percentage who Ever Drank Alcohol, Middle School Students, ND, by Gender, by Year



Data Source: YRBS

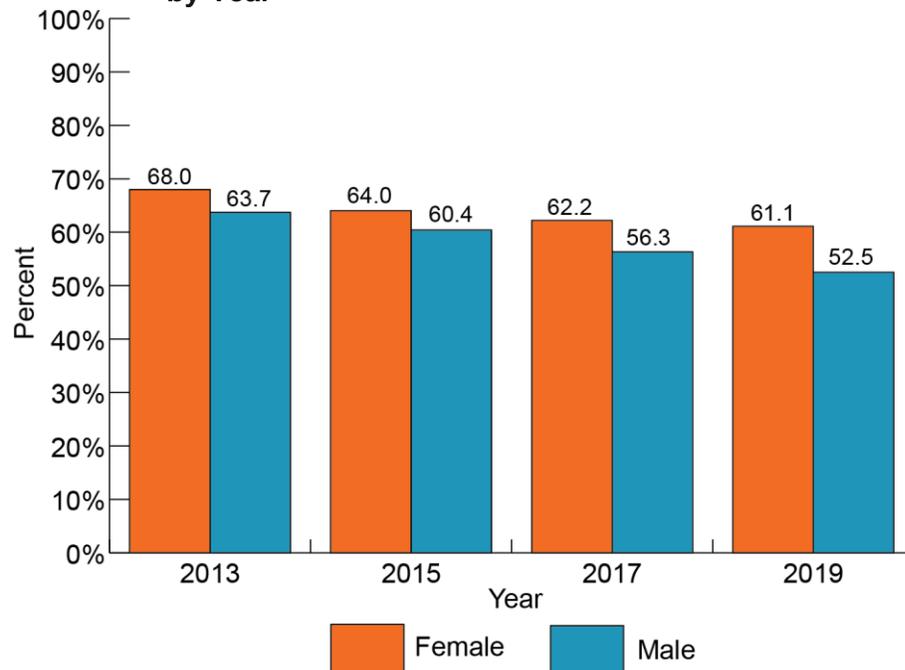
Figure 1.2: Percentage who Ever Drank Alcohol, Middle School Students, ND, by Grade, by Year



Data Source: YRBS

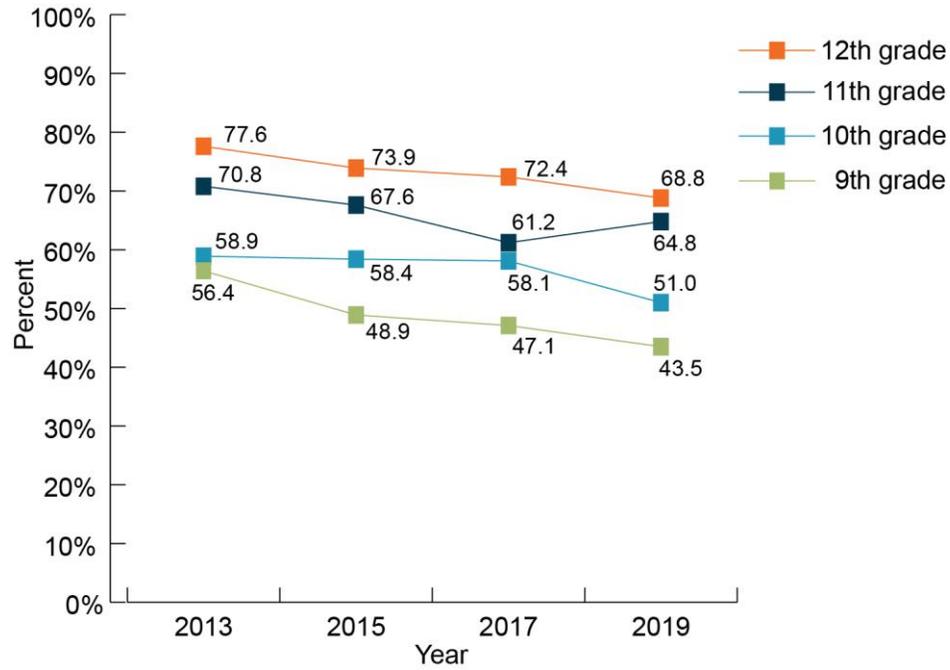
- Between 2013 and 2019, high school students reported decreasing rates of ever consuming alcohol. Females reported higher rates of ever consuming alcohol than male students did over the same time period (YRBS, 2019; see Figure 1.3).

Figure 1.3: Percentage who Ever Drank Alcohol, High School Students, ND, by Gender, by Year



Data Source: YRBS

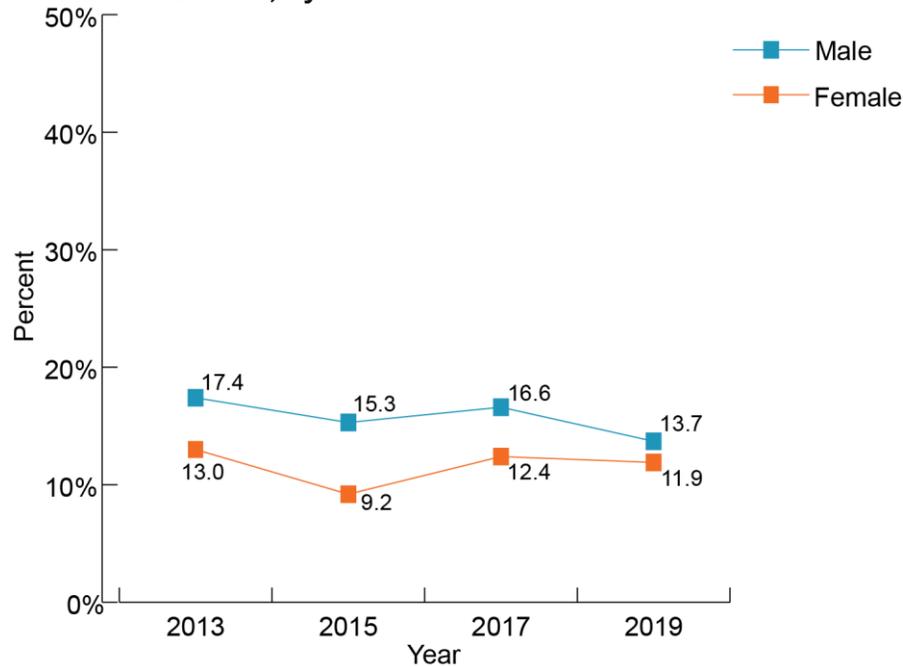
Figure 1.4: Percentage who Ever Drank Alcohol, High School Students, ND, by Grade, by Year



Data Source: YRBS

- Compared to 2013, the number of high school students who reported having their first drink of alcohol before age 13 decreased in 2019. Rates of alcohol consumption before age 13 remained consistently higher among male compared to female students over the same time period (YRBS, 2019; see Figure 1.5).

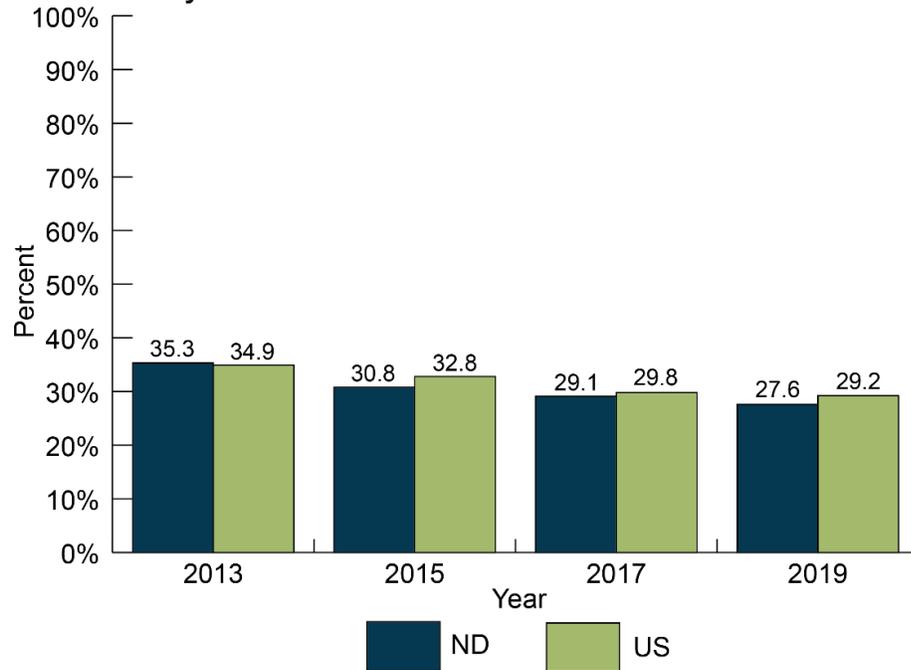
Figure 1.5: Percentage who Drank Alcohol before Age 13, High School Students, ND, by Gender, by Year



Data Source: YRBS

- Between 2013 and 2019, the number of North Dakota high school students who reported currently drinking alcohol (i.e., drinking alcohol on at least one day during the past month) has continued in a downward trend. North Dakota high school students reported slightly lower rates of alcohol consumption in the past month than the national average in 2015, 2017, and 2019 (YRBS 2019; see Figure 1.6).

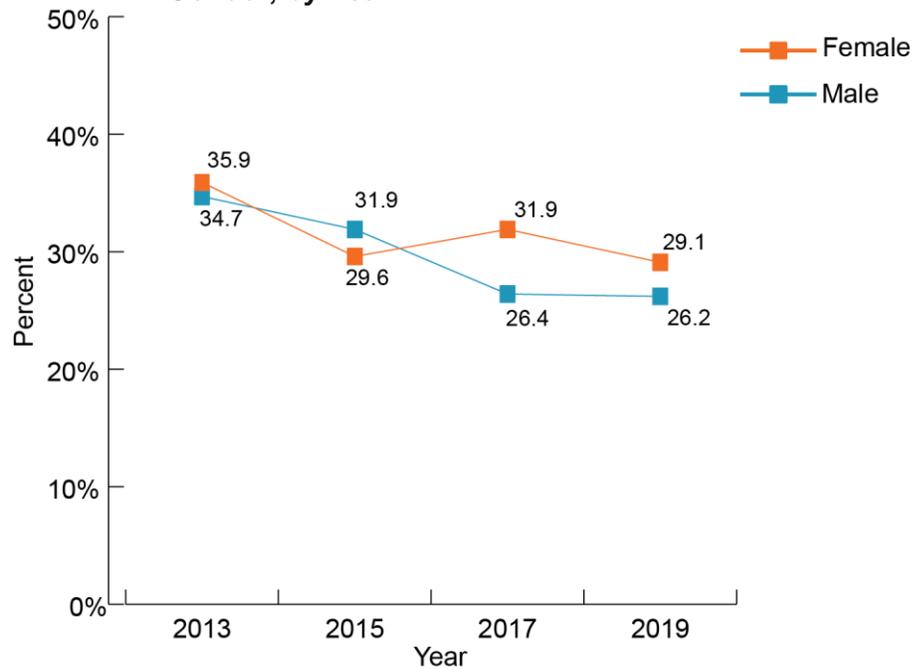
Figure 1.6: Percentage who Currently Drank Alcohol, High School Students, ND vs. U.S., by Year



Source: YRBS

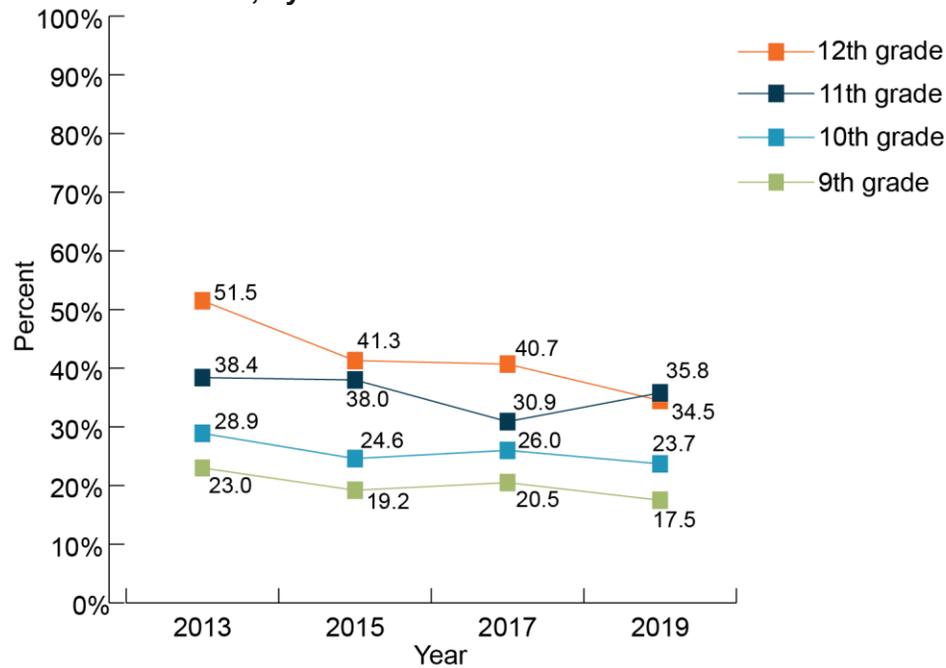
- As North Dakota high school students move through high school, from 9th to 12th grade, they were more likely to report current alcohol consumption between 2013 and 2019 (YRBS, 2019; see Figure 1.8). However, it is important to note that the overall trend for drinking in the past thirty days is declining (YRBS, 2019; see Figure 1.7).

Figure 1.7: Percentage who Currently Drank Alcohol, High School Students, ND, by Gender, by Year



Data Source: YRBS

Figure 1.8: Percentage who Currently Drank Alcohol, High School Students, ND, by Grade, by Year



Data Source: YRBS

- In 2018, North Dakota adults, 21 and older, consumed on average 42% and 35% more alcohol than the national average in the form of spirits and beer, respectively. However, North Dakota consumption of wine was reported slightly below the national average (NIAAA, 2018; see Table 1.1).

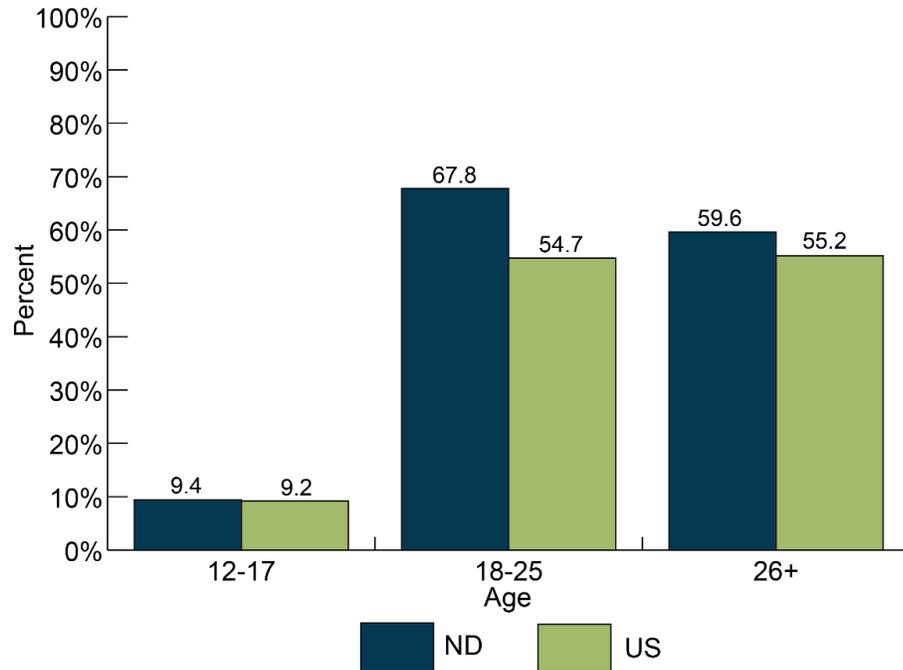
Table 1.1: Per Capita Alcohol Consumption in Gallons among Persons Age 21 and Older per 10,000, ND vs U.S., by Year

| | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|
| Spirits | 2014 | 2015 | 2016 | 2017 | 2018 |
| ND | 1.57 | 1.49 | 1.45 | 1.46 | 1.33 |
| U.S. | 0.90 | 0.91 | 0.94 | 0.95 | 0.87 |
| Wine | 2014 | 2015 | 2016 | 2017 | 2018 |
| ND | 0.39 | 0.40 | 0.38 | 0.38 | 0.34 |
| U.S. | 0.48 | 0.47 | 0.49 | 0.49 | 0.44 |
| Beer | 2014 | 2015 | 2016 | 2017 | 2018 |
| ND | 1.89 | 1.78 | 1.70 | 1.70 | 1.50 |
| U.S. | 1.24 | 1.23 | 1.22 | 1.19 | 1.05 |
| All Beverages | 2014 | 2015 | 2016 | 2017 | 2018 |
| ND | 3.86 | 3.67 | 3.53 | 3.54 | 3.16 |
| U.S. | 2.62 | 2.62 | 2.64 | 2.63 | 2.35 |

Data Source: NIAAA

- In 2019, 67.8% of North Dakota adults aged 18-25 consumed alcohol at least once in the last month and was higher than the national rates of 54.7% for the same age group (NSDUH, 2019; see Figure 1.9). North Dakota also reported a larger percent of current alcohol use (within the past 30 days) than the national average among adults aged 26 and older (NSDUH, 2019; see Figure 1.9).

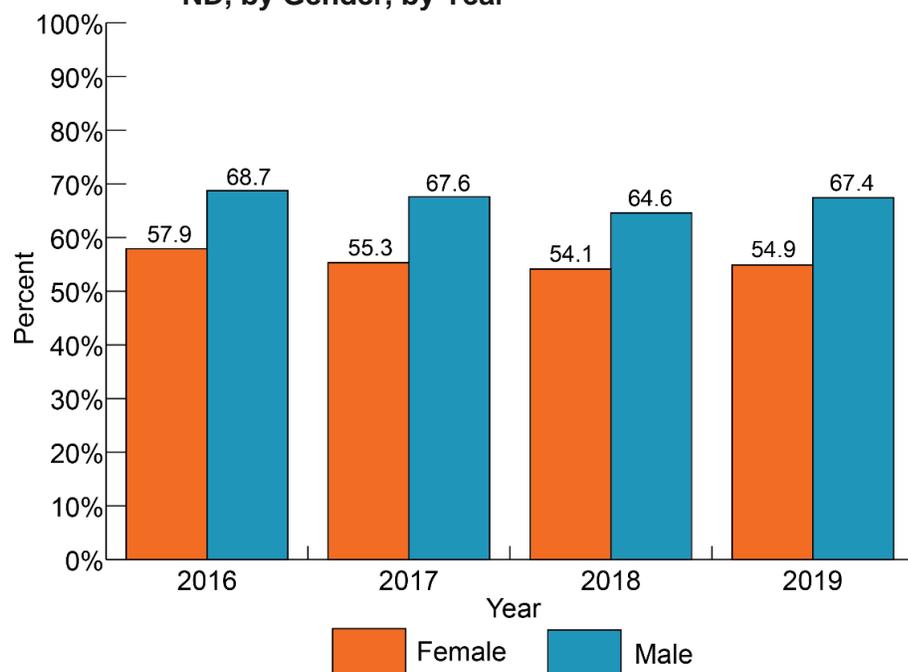
Figure 1.9: Percentage who Used Alcohol at Least Once in the Past Month, ND vs. U.S., by Age, 2018-2019



Data Source: NSDUH

- Between the years 2016 and 2019, more adult males reported consuming alcohol in the past month than females (BRFSS, 2019; see Figure 1.10).
- Between 2016 and 2019, North Dakota current alcohol consumption rates (having at least one drink in the past month) have remained relatively unchanged among both adult males (68.7%, 67.4%) and females (57.9%, 54.9%; BRFSS, 2019; see Figure 1.10).

Figure 1.10: Percentage who Used Alcohol at Least Once in the Past Month, Adults (18+), ND, by Gender, by Year



Data Source: BRFSS

Binge Drinking

About the Indicator

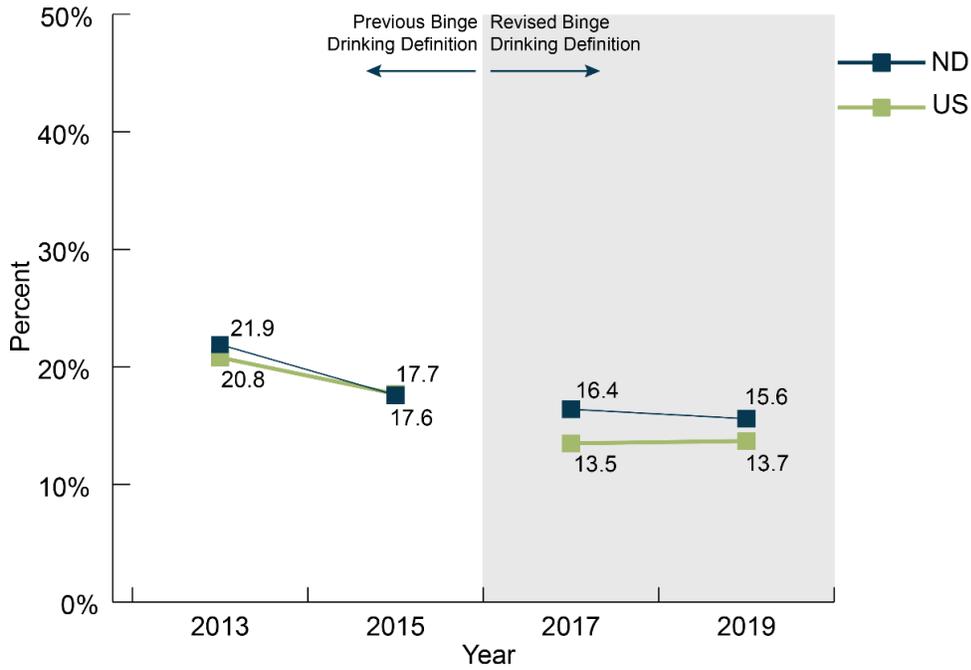
The Behavioral Risk Factor Surveillance System (BRFSS, 2019) defined current binge drinking as consuming four or more drinks for women and five or more drinks for men in a row on one occasion during the past 30 days. Current binge drinking, defined by the Youth Risk Behavior Survey (YRBS), is having four or more drinks of alcohol in a row for females and five or more drinks for males of alcohol in a row on one or more of the past 30 days.

Regarded as the most common, costly, and harmful pattern of excessive alcohol use in the United States, binge drinking is a major problem (Prev. Chronic Dis., 2014; Am. J. Prev. Med., 2015). However, studies have shown that alcohol policies within states strongly affect harmful excessive alcohol use behaviors, specifically binge drinking (AJPM, 2013).

Section Summary

- The percentage of North Dakota high school students who reported binge drinking (having five or more drinks of alcohol in a row within a couple of hours on at least one day in the past month) had decreased by 28.8% since 2013 (YRBS, 2019; see Figure 1.11).
- More North Dakota high school students have engaged in binge drinking compared to their United States peers, percentage-wise, since 2013. However, in 2015, both the U.S. and North Dakota high school students reported nearly identical binge drinking rates (YRBS, 2019; see Figure 1.11).

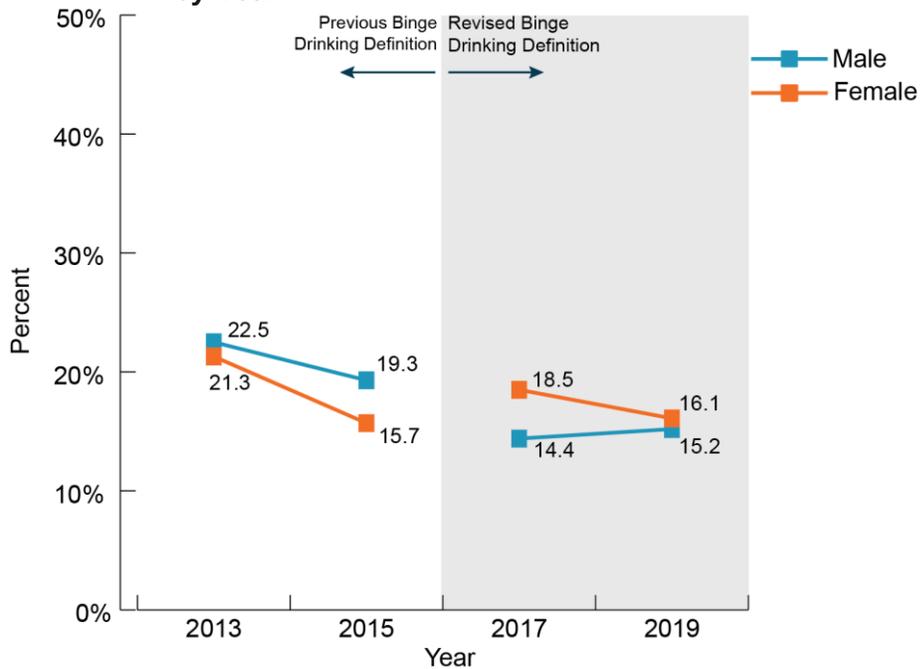
Figure 1.11: Percentage of Current Binge Drinking, High School Students, ND vs. U.S., by Year



Data Sources: YRBS

- Between the years 2013 through 2015, both males and females reported a decrease in binge drinking, although a higher percentage of males reported binge drinking. However, from 2017 to 2019, females reported higher rates of binge drinking than males (YRBS, 2019; see Figure 1.12).

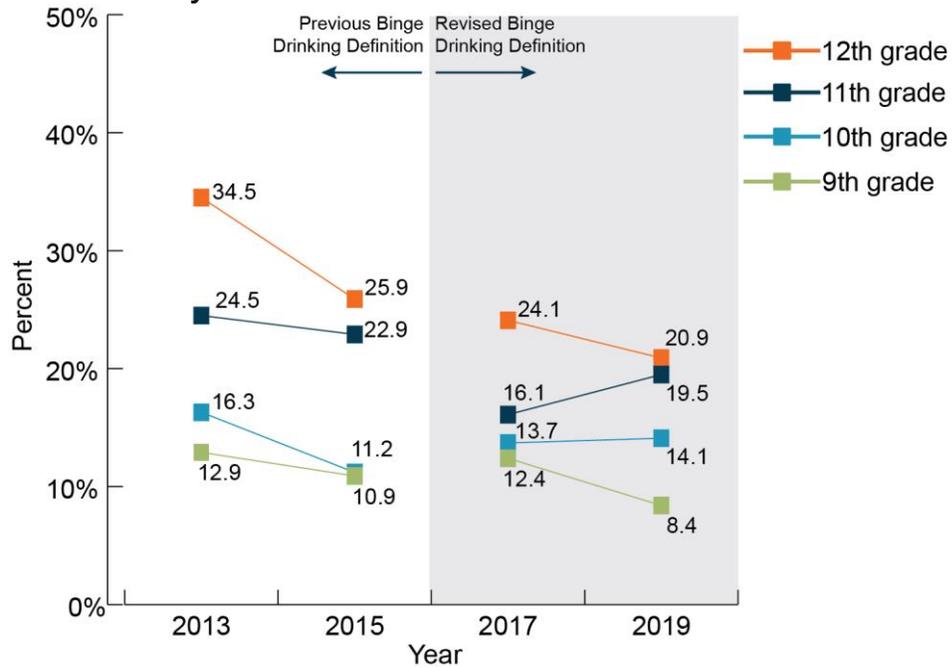
Figure 1.12: Percentage of Current Binge Drinking, High School Students, ND, by Gender, by Year



Data Sources: YRBS

- Typically, as high school students advanced through grades, the rates of binge drinking increased. Between the years 2013 and 2015, binge drinking decreased for each grade level; however, from 2017 to 2019, binge drinking increased among those in 11th grade from 16.1% to 19.5% (YRBS, 2019; see Figure 1.13).

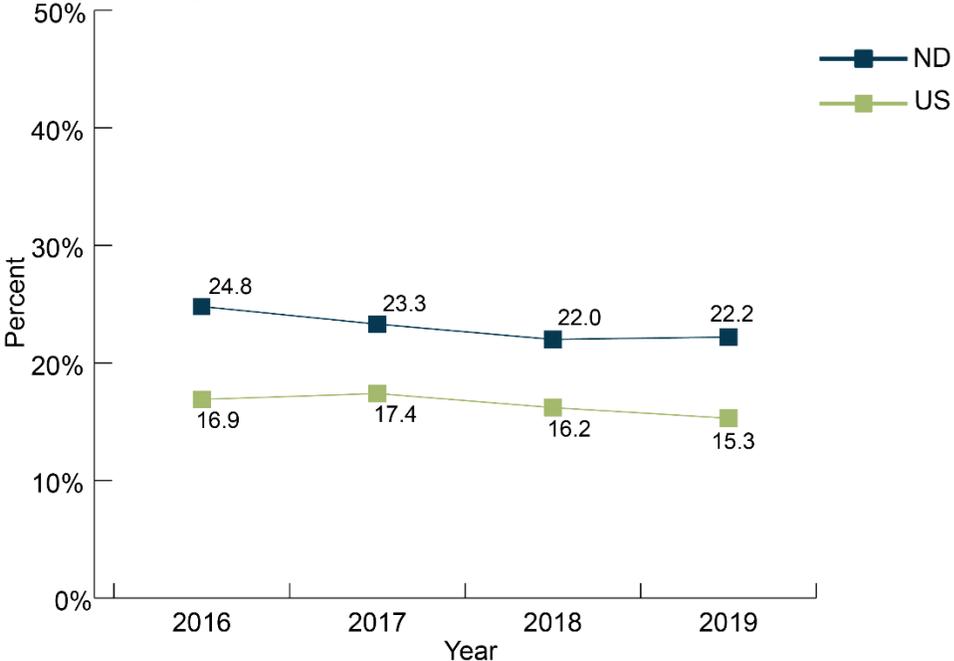
Figure 1.13: Percentage of Current Binge Drinking, High School Students, ND, by Grade, by Year



Data Sources: YRBS

- Adult binge drinking rates in North Dakota have been higher than the national rates from 2016 to 2019. In 2019, the rate of adult binge drinking in North Dakota was 22.2% compared to 15.3% at the national level (BRFSS, 2019, see Figure 1.14).

Figure 1.14: Percentage of Binge Drinking in the Past 30 days, Adults (18+), ND vs. U.S., by Year

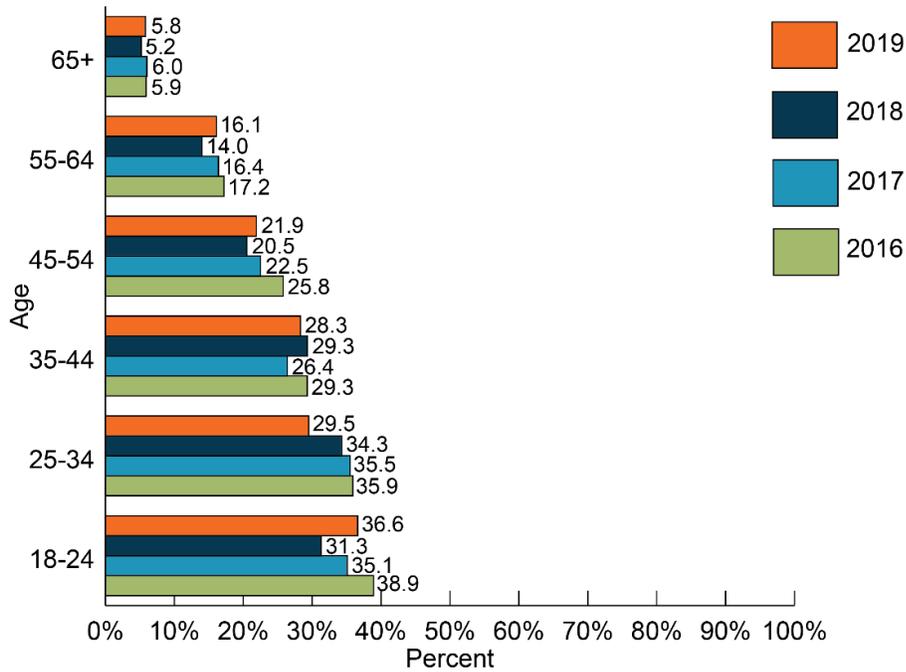


Data Source: BRFSS

Data Note: Binge drinking refers to males consuming five or more drinks on one occasion, females having four or more drinks on one occasion in the past 30 days.

- North Dakota adults aged 18 to 24 and 25 to 34 have consistently reported the highest rates of binge drinking compared to other age groups. Binge drinking rates decreased as adults age (BRFSS, 2019; see Figure 1.15).

Figure 1.15: Percentage of Binge Drinking in the Past 30 Days, Adults, ND, by Age, by Year

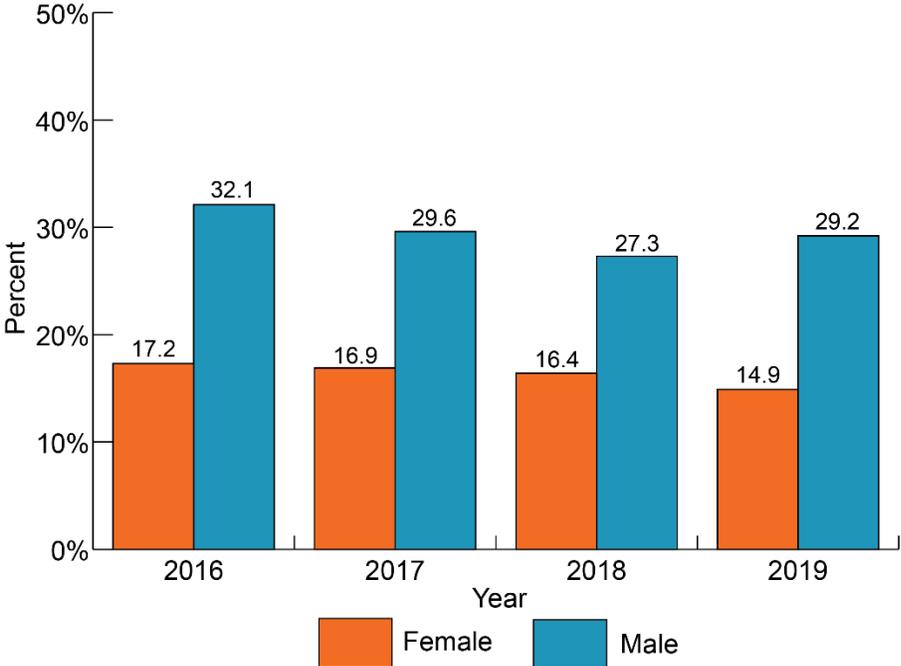


Data Source: BRFSS

Data Note: Binge drinking refers to males consuming five or more drinks on one occasion, females having four or more drinks on one occasion in the past 30 days.

- North Dakota adult males (age 18+) have consistently reported higher rates of binge drinking than females between the years 2016 and 2019. Adult binge drinking rates for both genders have remained relatively stable over that period (BRFSS, 2019; see Figure 1.16).

Figure 1.16: Percentage of Binge Drinking in the Past 30 Days, Adults (18+), ND, by Gender, by Year

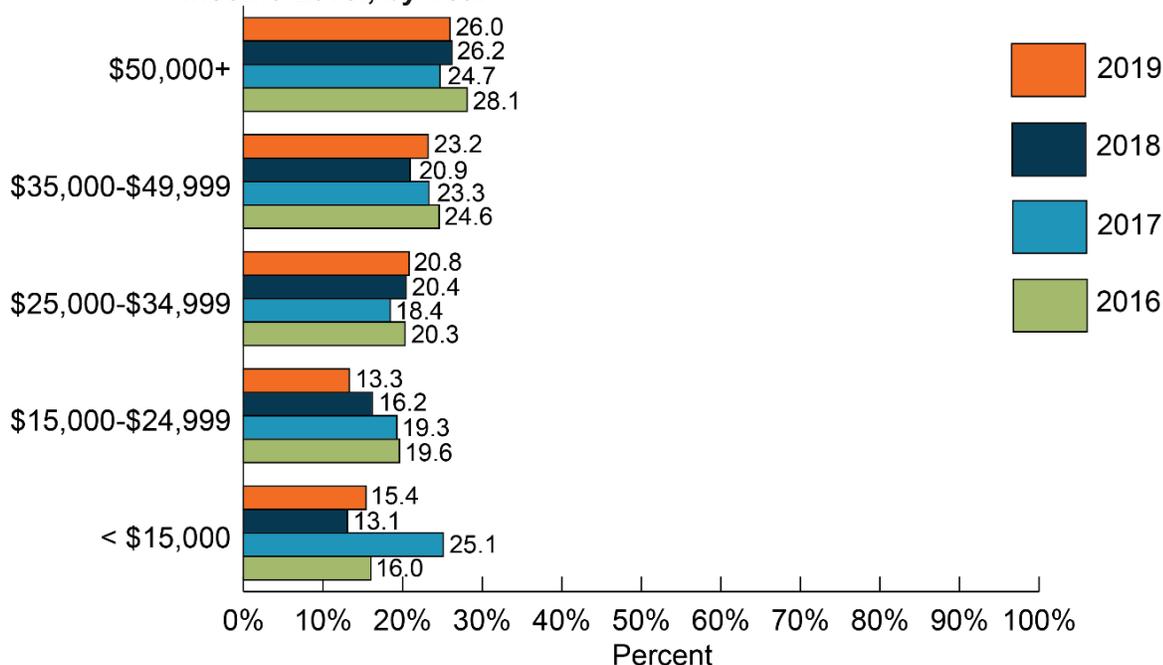


Data Source: BRFSS

Data Note: Binge drinking refers to males consuming five or more drinks on one occasion, females having four or more drinks on one occasion in the past 30 days.

- From 2016 to 2019, North Dakota adults with an income above \$50,000 generally reported a higher average binge drinking rate than any other income bracket (BRFSS, 2019; see Figure 1.17).

Figure 1.17: Percentage of Binge Drinking in the Past 30 Days, Adults (18+), ND, by Income Level, by Year



Data Source: BRFSS

Data Note: Binge drinking refers to males consuming five or more drinks on one occasion, females having four or more drinks on one occasion in the past 30 days.

Excess Drinking

About the Indicator

Substance Abuse and Mental Health Services Administration (SAMHSA) defines heavy or excessive alcohol use as binge drinking on five or more days in the past month. Heavy alcohol use is defined by the Behavioral Risk Factor Surveillance System (BRFSS) as 14 drinks per week for males and 7 drinks per week for females.

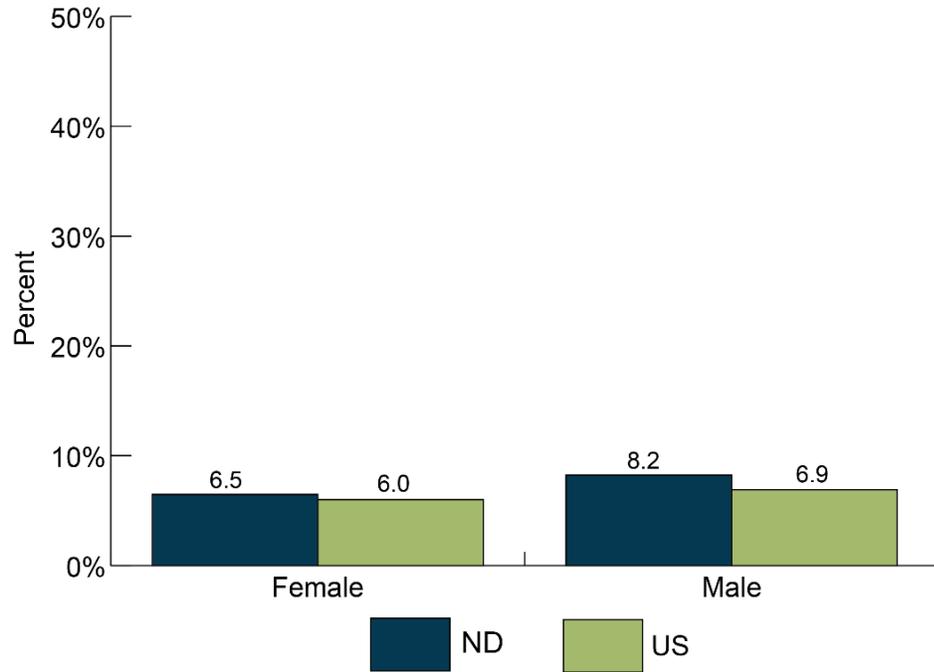
The Centers for Disease Control and Prevention (CDC) reported that excessive drinking cost the United States \$249 billion in 2010 (i.e., \$2.05 per drink), which was a substantial increase from 2006 when excessive drinking cost the United States \$223.5 billion (i.e., \$1.90 per drink). It is estimated that excessive drinking cost North Dakota over 487 million dollars in 2010 (AJPM, 2015).

Section Summary

- The percentage of North Dakota adults, age 18 and older, who had reported drinking in excess was higher than the U.S. averaged national percentage of adults who reported excess drinking in 2019 (BRFSS, 2019; see Figure 1.18).

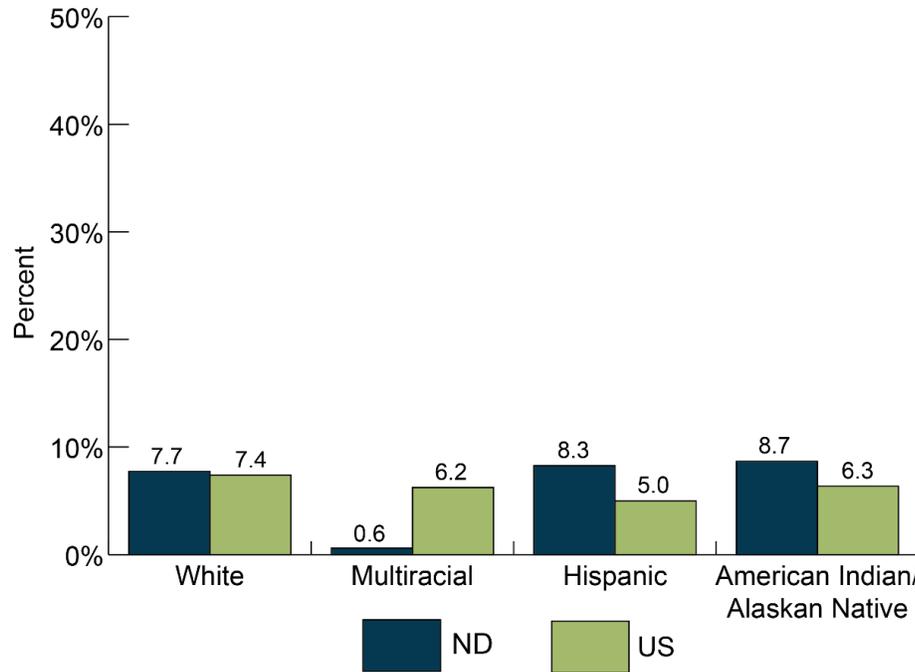
- In 2019, the percentage of North Dakotan males who reported drinking in excess (more than two drinks per day for males and one drink per day for females) was higher than females (BRFSS, 2019; see Figure 1.18).

Figure 1.18: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Gender, 2019



Data Sources: BRFSS

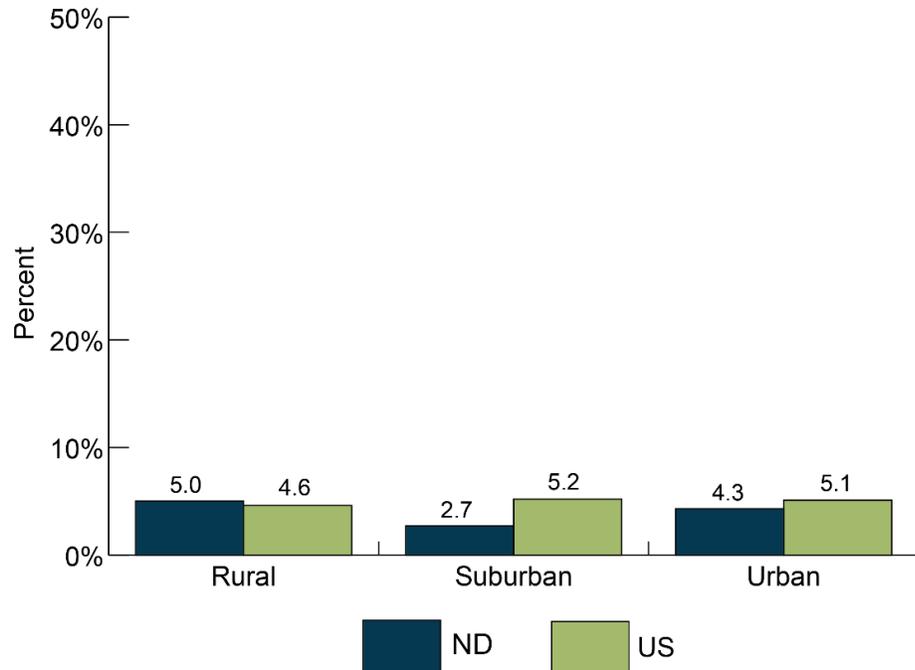
Figure 1.19: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Race/Ethnicity, 2019



Data Sources: BRFSS

Data Note: Data is suppressed if underweighted sample is less than 50 respondents per subgroup.

Figure 1.20: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Location*, 2019

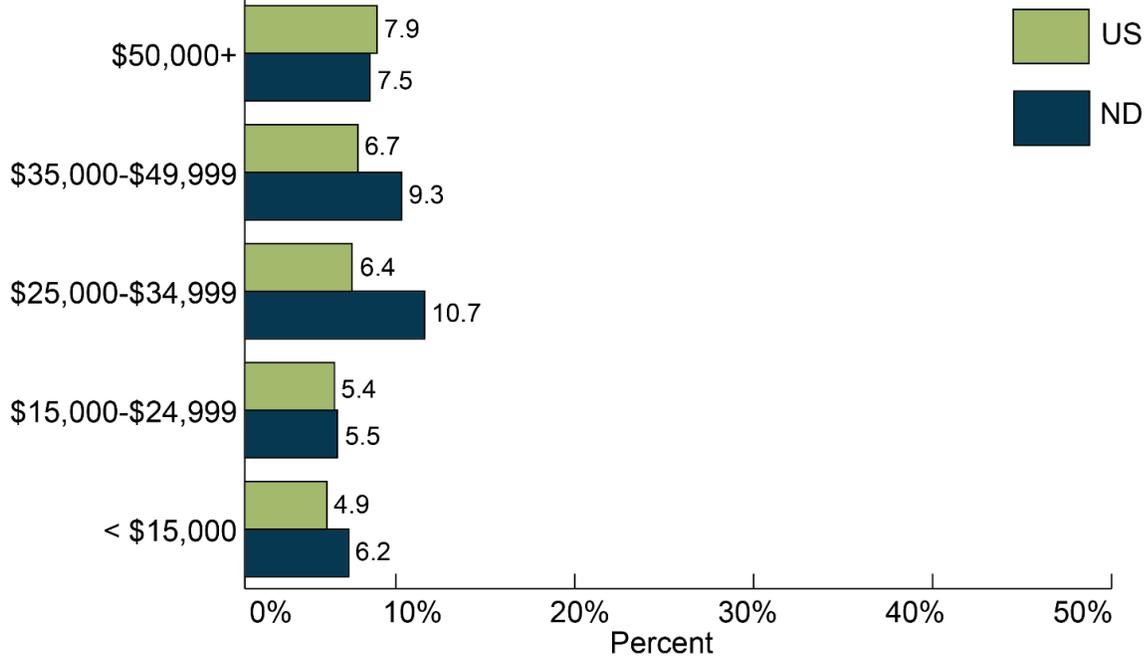


Data Sources: BRFSS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

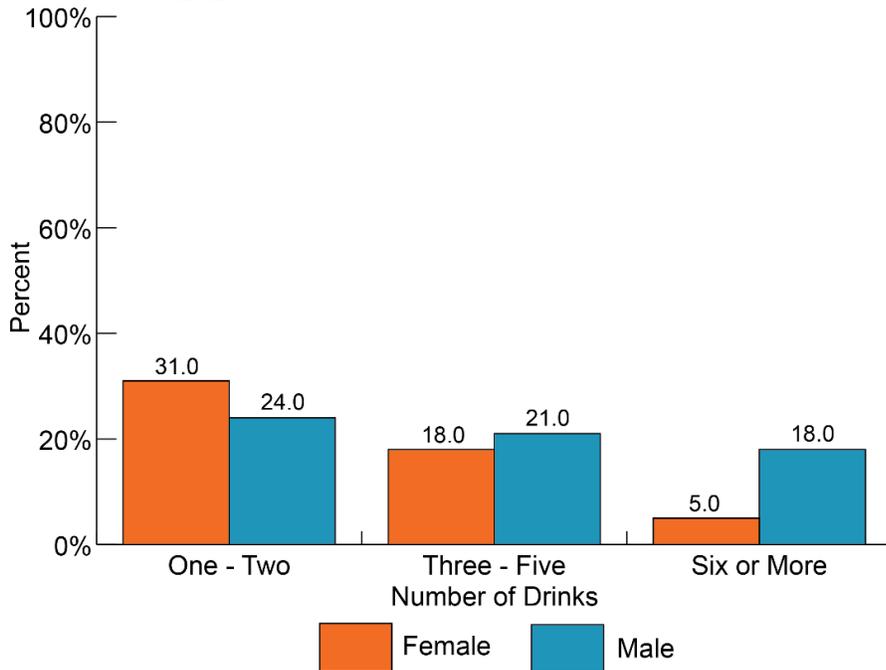
- The percentage of North Dakota adults who drank excessively was lowest among those with an income level between \$15,000 and \$24,999. Highest excess drinking rates in North Dakota were reported among those with an annual income between \$25,000 and \$34,999 (BRFSS, 2019; see Figure 1.21).

Figure 1.21: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Income Level, 2019



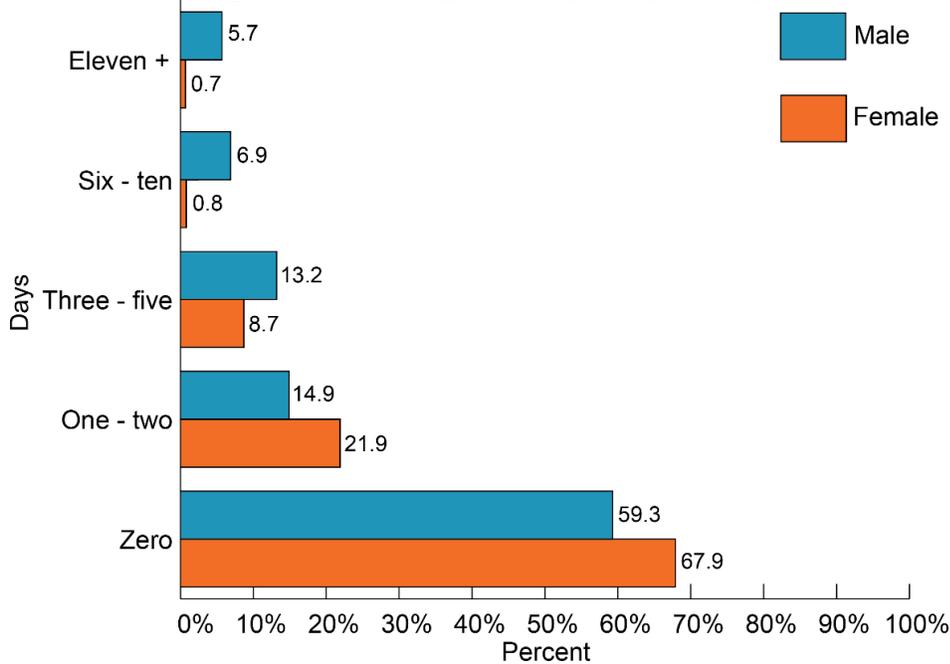
Data Source: BRFSS

Figure 1.22: Percentage of the Average Number of Alcoholic Beverages Consumed on Days When Current Drinkers Drank, Young Adults (18-29), ND, by Gender, 2020



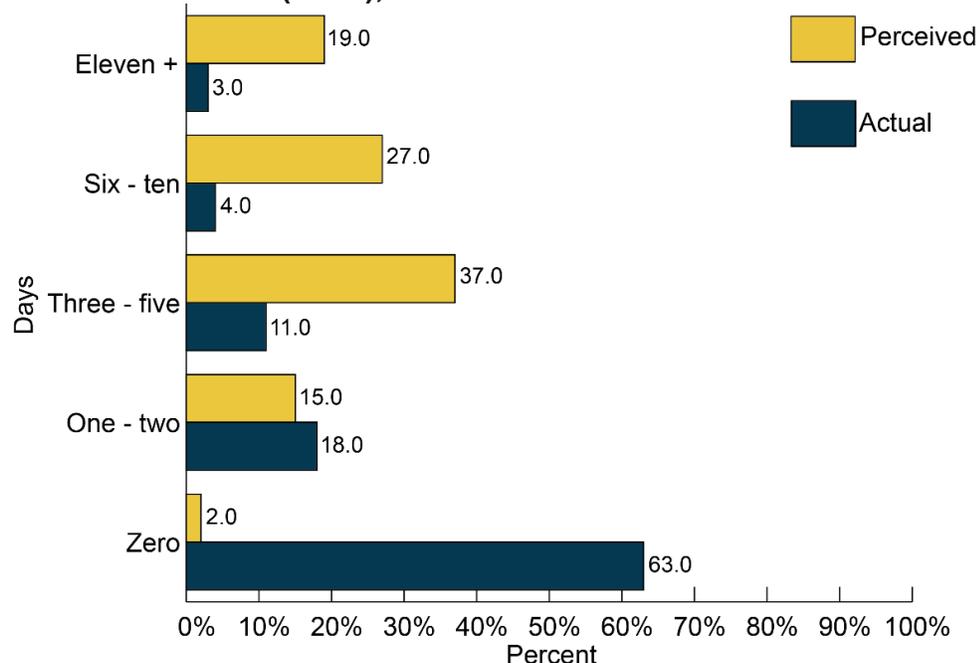
Data Source: NDSOYA

Figure 1.23: Percentage of the Number of Days during the Past 30 Days Current Drinkers Binge Drank, Young Adults (18-29), ND, by Gender, 2020



Data Source: NDSOYA

Figure 1.24: Percentage of Actual vs Perceived Binge Drinking among Peers, Young Adults (18-29), 2020



Data Source: NDSOYA

Alcohol in North Dakota: Consequences

Alcohol-Attributed Deaths

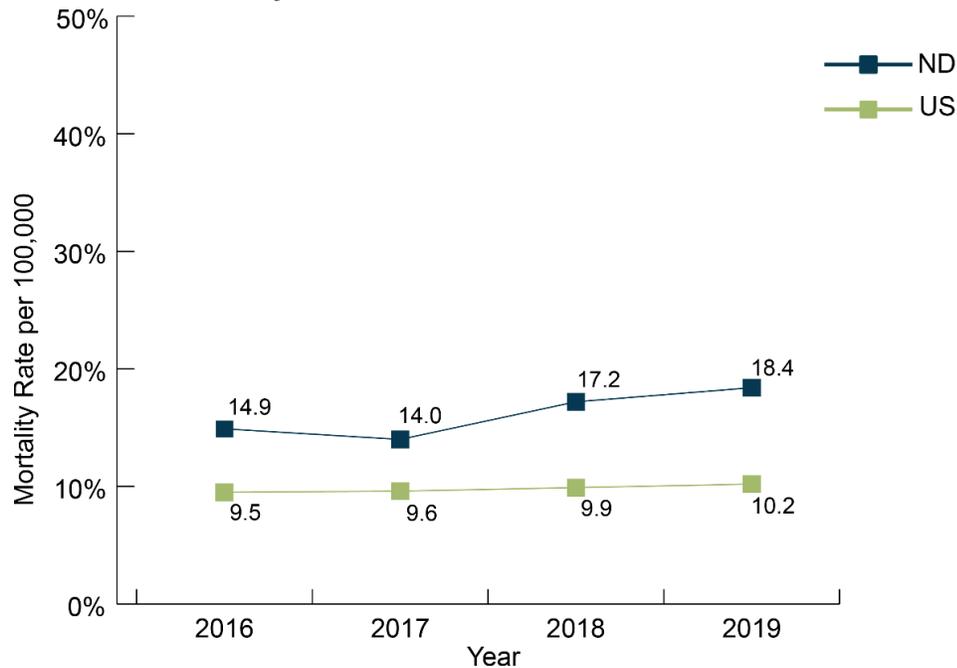
About the Indicator

Consuming alcohol exceeding moderation for too long can be detrimental to one’s health; leading to increased rates of morbidity and mortality. An estimated 95,000 people die from alcohol related causes each year (ARDI, 2020). Drunk driving crashes make up roughly 12% of alcohol related deaths in the United States; accounting for more than 10,000 fatalities per year (NHTSA, 2017).

Section Summary

- Statewide, 73.8% of North Dakotans believed that alcohol use was a moderate or serious problem in their community. Urban areas were most likely to report that alcohol use was a serious problem (ND CRS, 2019).
- North Dakota reported higher rates of drug/alcohol-induced causes of mortality when compared to the United States from 2016 to 2019 (NCHS, 2020; see Figure 1.25).

Figure 1.25: Percentage of Age-Adjusted Alcohol-Induced Causes of Mortality, ND vs. U.S., by Year



Data Source: NCHS

- In North Dakota, liver disease and alcohol dependence syndrome were the leading chronic conditions among those who died from excessive alcohol use (ARDI, 2020).
- In North Dakota, motor-vehicle traffic crashes and suicide were the leading acute causes of death among those who consumed alcohol excessively (ARDI, 2020).
- Excessive alcohol use was a contributing factor to more years of potential life lost for males compared to females, both in North Dakota as well as nationally (ARDI, 2020; see Table 1.2).

Table 1.2: Years of Potential Life Lost Due to Excessive Alcohol Use, ND vs. U.S., by Gender, 2011-2015

| | North Dakota | United States |
|---------------|--------------|---------------|
| Female | 1,827 | 800,619 |
| Male | 4,575 | 1,962,436 |
| Total | 6,402 | 2,763,055 |

Data Source: ARDI

Alcohol Use Disorder

About the Indicator

Alcohol use disorder (AUD), which includes alcohol dependence and abuse, is a chronic disease characterized by compulsive alcohol use, loss of control over alcohol intake, and a depressive emotional state when not consuming alcohol (NIAAA, 2015). In 2019, about 14.1 million U.S. adults, aged 18 and older, met the criteria for AUD (NSDUH, 2019). Adolescents can be diagnosed with AUD, and in 2019, an estimated 1.7% or 414,000 adolescents, aged 12–17, were diagnosed with AUD in the United States (NSDUH, 2019). From 2009 to 2014, it was estimated that 1 in 8 children aged 17 and under lived with at least one parent who met the criteria for alcohol use disorder within the last year (SAMHSA, 2017).

Section Summary

- The percentage of alcohol use disorder among 18- to 25-year-olds in North Dakota decreased from 2018 (13.8%) to 2019 (12.7%; NSDUH, 2019). North Dakota rates of alcohol use disorder remained stable among individuals between the ages of 12-17 and individuals 26 years of age and older from 2018 to 2019 (NSDUH, 2019).
- The percentage of alcohol use disorder among North Dakota adults has consistently remained higher than national rates (NSDUH, 2019).

Impaired Driving after Drinking

About the Indicator

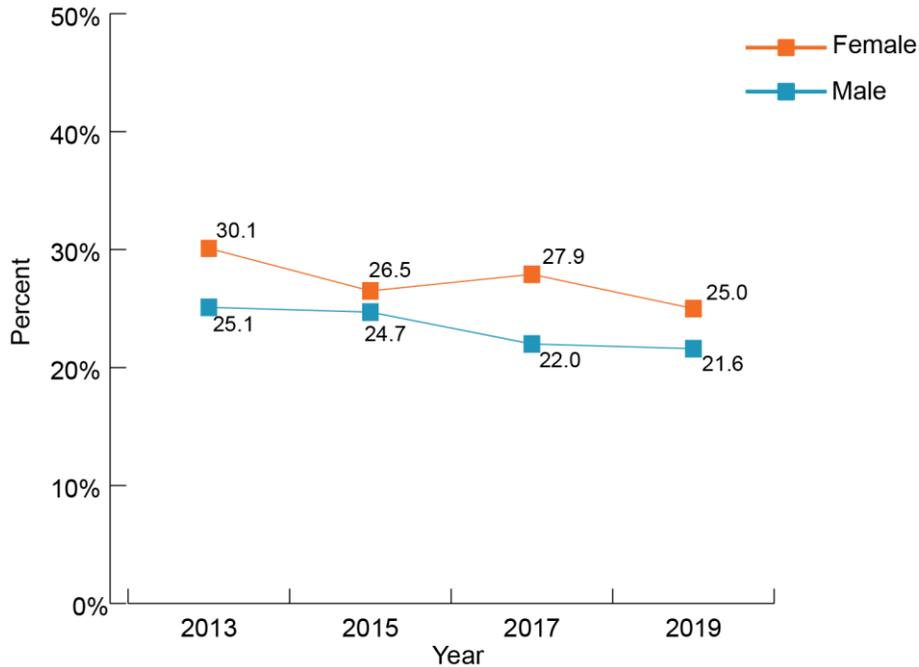
Alcohol is a substance that decreases the ability of the brain by damaging thinking processes, impairing reasoning, and affecting muscle control; every ability essential for effective driving. The risk of being involved in a crash is greater for youth than adults regardless of blood alcohol concentration (BAC; J Stud Alcohol Drugs, 2012). Nationally, drivers aged 21 to 24 with a BAC at or above 0.08 are more likely than any other age group to be involved in a fatal crash, followed by those aged 25 to 34 (NHTSA, 2018). Alcohol affects everyone, regardless of age. Consuming even a small amount of alcohol can affect one's driving ability.

Section Summary

- In general, apart from 10th graders, the percentage of high school students who drove a vehicle after drinking alcohol in the past 30 days decreased from 2015 to 2019 (ND YRBS, 2019).
- The percentage of North Dakota adult males who reported driving after consuming too much alcohol was greater than females in both 2016 and 2018 (BRFSS, 2018).
- The percentage of adults who reported driving after consuming too much alcohol decreased among both males (7.9% to 6.5%) and females (4.6% to 2.4%) from 2016 to 2018 (BRFSS, 2018).

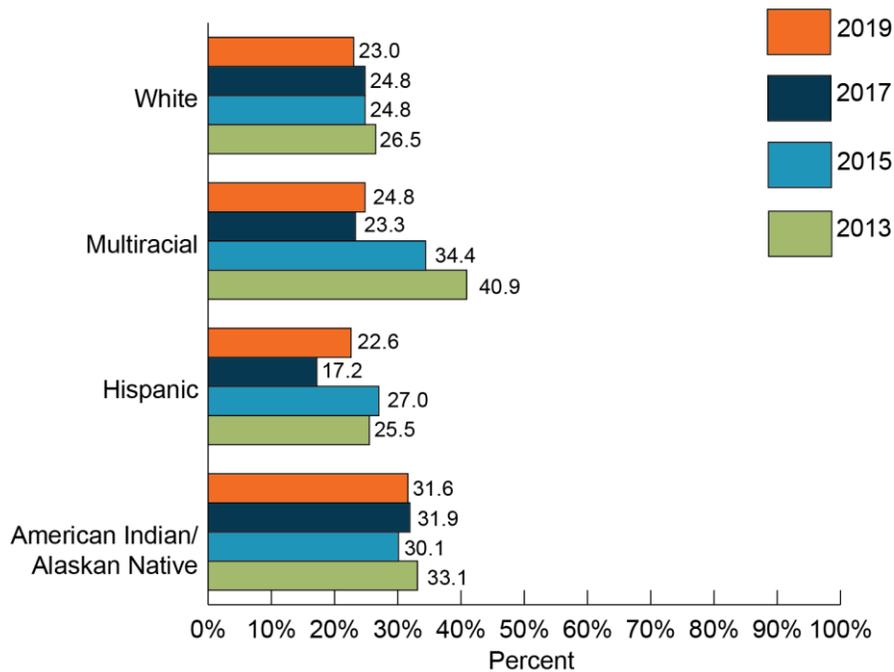
- The percentage of male middle school students who rode with a driver who had been drinking alcohol decreased overall from 2013 to 2019. However, between 2015 and 2017, the percentage of middle school females who rode with a driver who had been drinking alcohol increased slightly (26.5% to 27.9%; YRBS, 2019; see Figure 1.26).

Figure 1.26: Percentage of Middle School Students who rode with a Driver Who had been Drinking Alcohol, ND, by Gender, by Year



Data Source: YRBS

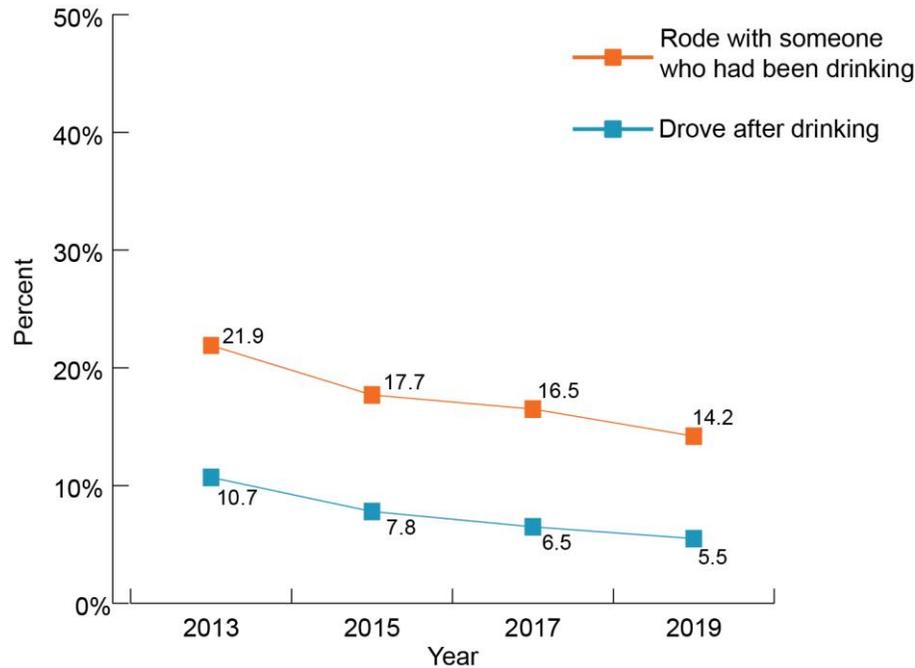
Figure 1.27: Percentage of Middle School Students who rode with a Driver Who had been Drinking Alcohol, ND, by Race/Ethnicity, by Year



Data Source: YRBS

- From 2013 to 2019, there was a 5.2 percentage point decrease in the number of North Dakota high school students who drank alcohol and drove a vehicle in the past month (YRBS, 2019; see Figure 1.28).
- From 2013 to 2019, there was roughly a 7.7 percentage point decrease in the number of North Dakota high school students who rode with a driver who had been drinking alcohol (YRBS, 2019; see Figure 1.28).

Figure 1.28: Percentage of High School Students who rode with a Driver who had been Drinking or Drove a Vehicle after Drinking, Past 30 Days, ND, by Year



Data Source: YRBS

- North Dakota adults in frontier communities were least likely to agree or strongly agree that drinking and driving laws are enforced when compared to adults in rural communities (ND CRS, 2019; see Table 1.3).
- The majority of North Dakota adults held the perception that drinking and driving laws were enforced in their communities (ND CRS, 2019; see Table 1.3).

Table 1.3: Perception of Drinking and Driving Laws Being Enforced within One’s Community, ND, 2019

| | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
|-----------------|-------------------|----------|---------|-------|----------------|
| Frontier | 2.6% | 12.3% | 16.9% | 56.7% | 11.5% |
| Rural | 2.8% | 7.9% | 13.0% | 61.0% | 15.3% |
| Urban | 2.1% | 5.4% | 15.3% | 56.6% | 20.7% |
| State | 2.2% | 7.0% | 15.3% | 57.2% | 18.2% |

Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

Alcohol-Related Fatal Crashes

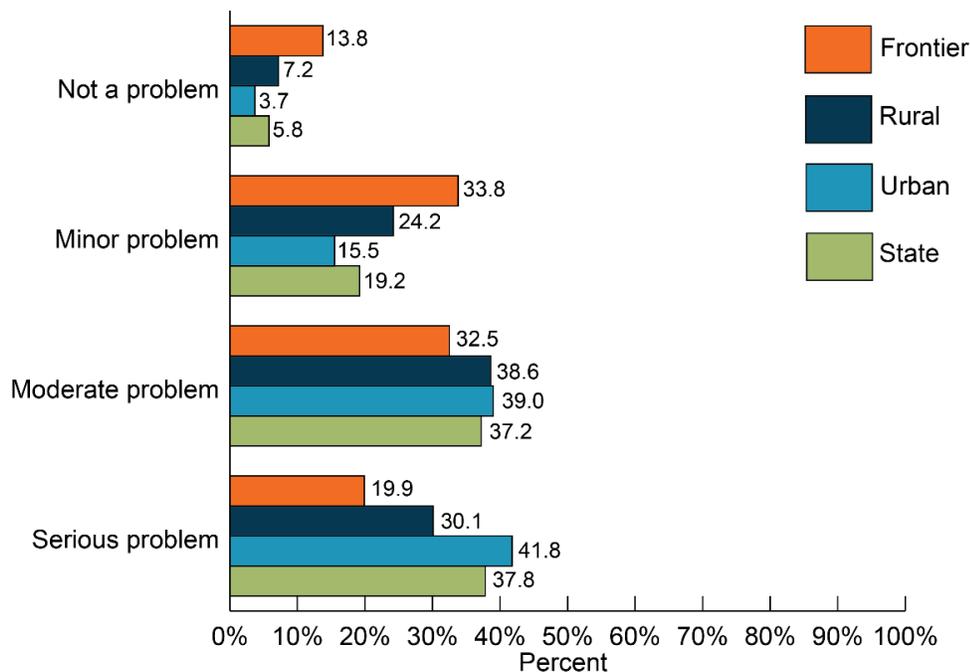
About the Indicator

Drunk driving is responsible for many traffic crashes. Every day, nearly 30 people in the United States die in alcohol-related vehicle crashes, which is one person every 48 minutes. In 2019, 10,142 people died because of alcohol-impaired crashes (NHTSA, 2019). In North Dakota, one alcohol-related crash occurred every 12 hours and one alcohol-related crash fatality occurred every 9 days (NDCS, 2019). In 2019, approximately one out of every six adult arrests in North Dakota were due to driving under the influence.

Section Summary

- Alcohol-related driving fatalities per 100 million Vehicle Miles Traveled (VMT) in North Dakota and in the U.S. have decreased between 2016 and 2018. National rates decreased in 2019 as well, while North Dakota rates increased. North Dakota rates were generally higher than U.S. rates except for in 2018 (FARS, 2019).
- North Dakota adults in frontier communities were more likely to perceive drugs/alcohol as either a minor problem or not a problem in contributing to injuries or crashes (47.6%) than North Dakota adults residing in rural (31.4%) and urban (19.2%) communities (ND CRS, 2019; see Figure 1.29).

Figure 1.29: Perception of Alcohol/Drug Use and the Contribution towards Injuries or Crashes, by Location*, ND, 2019



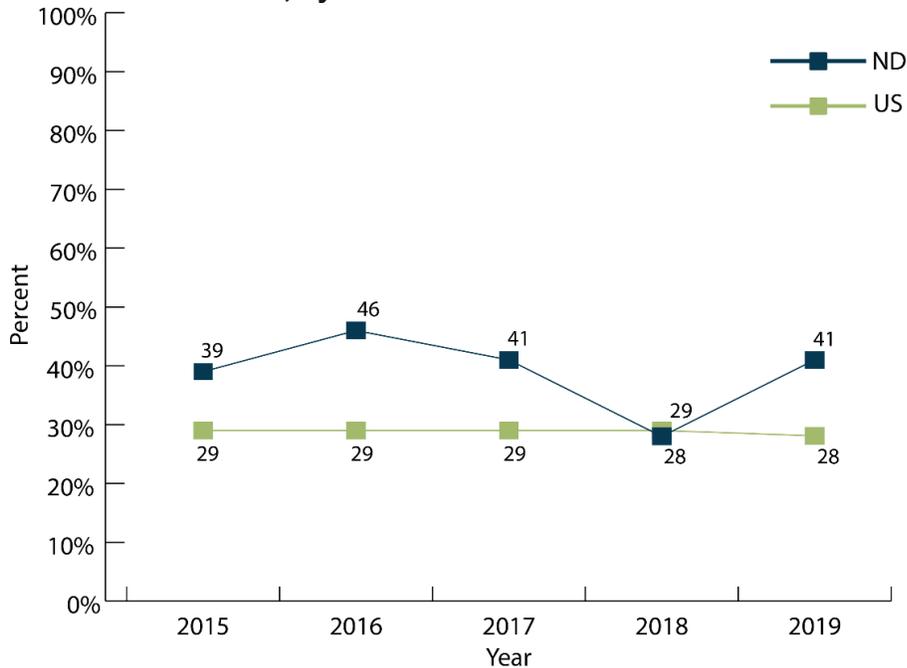
Data Source: ND CRS

Data Note: State totals are not indicative of cumulative percentages of responses (e.g., missing)

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

- The percentage of alcohol-related driving fatalities in North Dakota and the United States remained relatively unchanged between 2015 and 2019 aside from a 13-percentage point drop in North Dakota in 2018 (FARS, 2019; see Figure 1.30).
- The percentage of alcohol-related driving fatalities in North Dakota remained greater than the United States between 2015 and 2017, as well as in 2019 (FARS, 2019; see Figure 1.30).

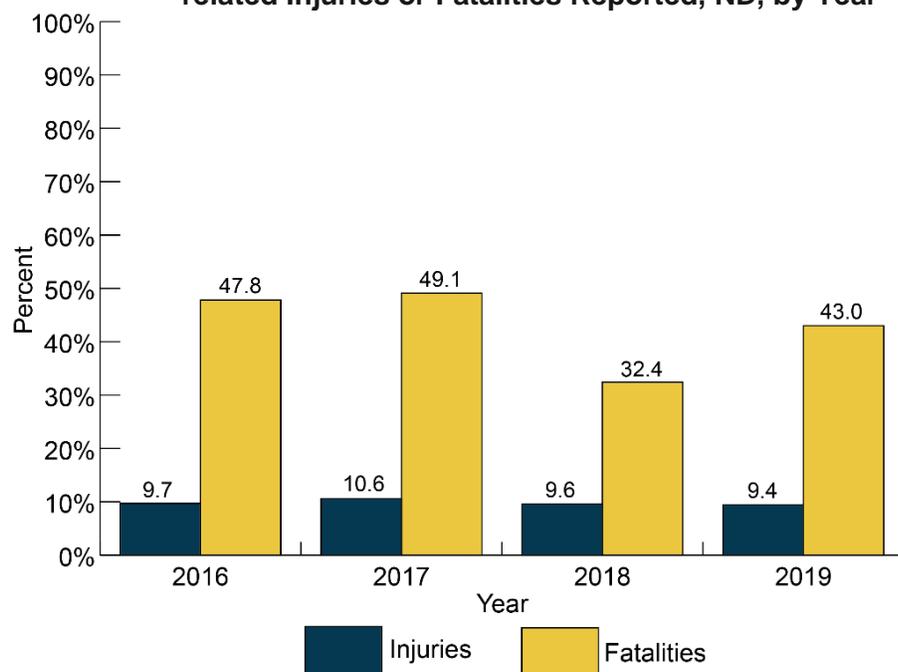
Figure 1.30: Percentage of Alcohol-Related Crashes which were Fatal, (BAC = 0.08+) ND vs. U.S., by Year



Data Source: FARS

- The percentage of alcohol-related driving injuries in North Dakota has remained relatively stable since 2016. There was an observed increase from 2016 to 2017, with a marginal decrease in 2018 and 2019 (NDCS, 2019; see Figure 1.31).
- The percentage of alcohol-related driving crashes in North Dakota resulting in fatalities decreased by almost 17 percentage points between 2017 and 2018, but saw a substantial increase of 10.6 percentage points in 2019 (NDCS, 2019; see Figure 1.31).

Figure 1.31: Percentage of Alcohol-Related Crash Injuries or Fatalities among all Crash-related Injuries or Fatalities Reported, ND, by Year



Data Source: NDDOT

Data note: Beginning in 2016, the criteria for determining alcohol-related fatal crashes and fatalities was revised. Revised counts indicate at least one operator in the crash had a positive BAC and/or officer suspected alcohol involvement was indicated on the crash report; passenger BACs are excluded. Alcohol-related injuries are counted based on officer suspected alcohol involvement from the crash report.

Impaired Driving Violations

About the Indicator

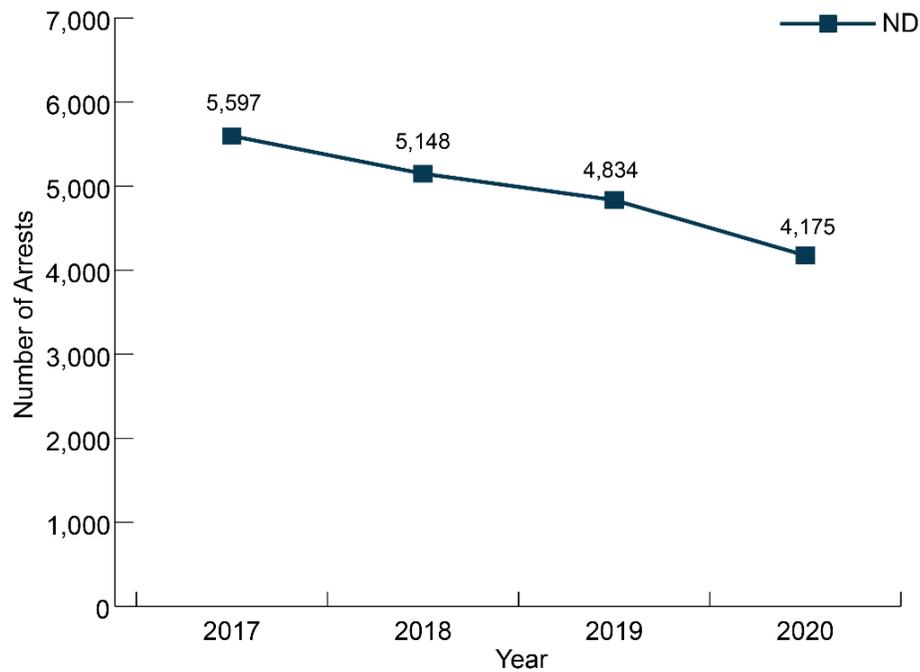
Actual Physical Control (APC) is defined by the North Dakota Highway Patrol as “being under immediate control or having the ability to operate the motor vehicle while being under the influence or having a blood-alcohol concentration of .08 percent or more” (NDHP, 2017).

In every state, people who drive while under the influence (DUI) of drugs/alcohol are committing a crime. In North Dakota, an individual can be arrested for DUI if the alcohol content (AC) is: 1) 0.08% or more; 2) 0.02% or more, if a person is younger than 21 years old; and 3) 0.04% or more, if a person is driving a commercial vehicle (NDHP, 2019). From 2019 to 2020, North Dakota reported a 13.6% decrease in the number of DUI arrests (State of North Dakota Office of Attorney General: CSO, 2020).

Section Summary

- When adult DUI arrests by race were assessed by the number of arrests per 1,000 individuals, the highest rates of arrest were among Black/African Americans (14.28%), and American Indian/Alaska Natives (9.4%), followed by Whites (5.82%) and Asians (3.55%; State of North Dakota Office of Attorney General: CSO, 2019).

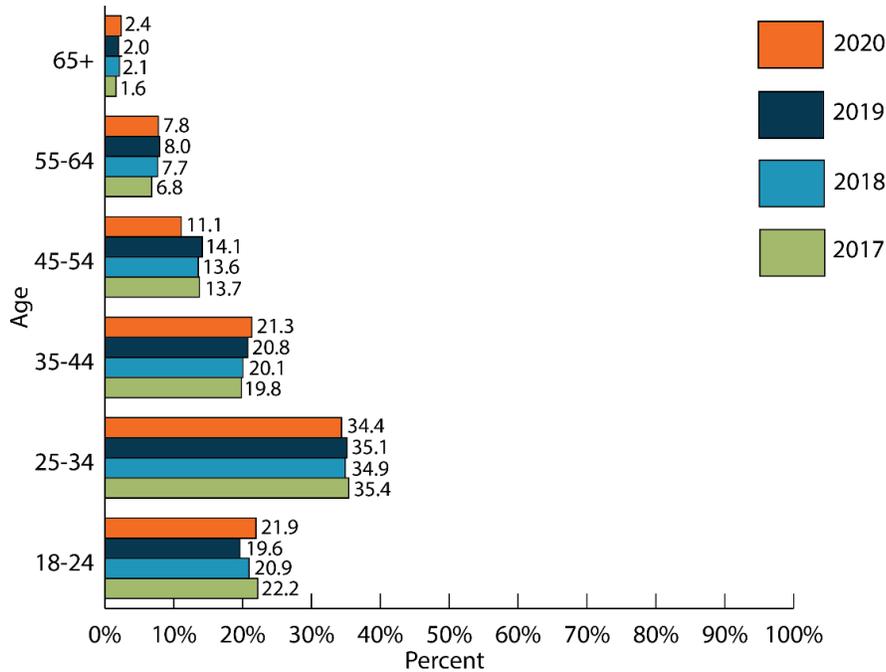
Figure 1.32: Adults DUI Arrests, Totals, ND, by Year



Data Source: State of North Dakota Office of Attorney General: Crime Statistics Online (CSO)

- In general, the number of DUI arrests in North Dakota has remained relatively consistent for all age groups from 2017 and 2020 with a few exceptions. Those in the 35-44 age group showed a 1.5% point increase, while those in the 45-54 age group had a 2.6% point decrease. Additionally, those over 65 years of age had a slight increase of 0.8% (State of North Dakota Office of Attorney General: Crime Report 2020; see Figure 1.33).
- North Dakota adults aged 25-34 reported the greatest percentage of DUI arrests between the years 2017 to 2020 when compared to all other age groups (State of North Dakota Office of Attorney General: Crime Report 2020; see Figure 1.33).

Figure 1.33: Percentage of Adult DUI Arrests, ND, by Age, by Year

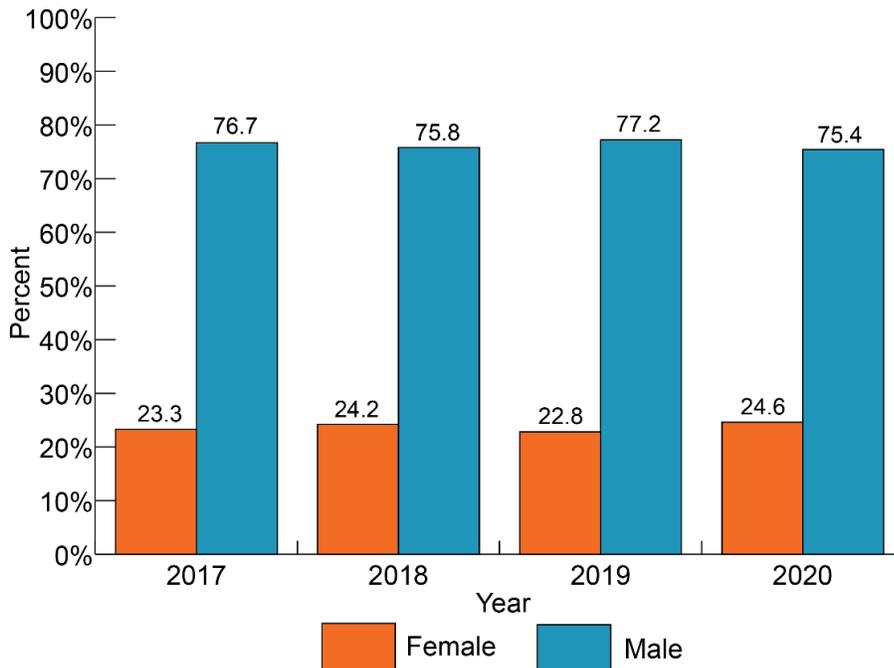


Data Source: State of North Dakota Office of Attorney General: Crime Report 2020

Data Note: State totals are not indicative of cumulative percentages of responses (e.g., missing, unknown).

- The percentage of adults arrested for DUI has been consistently higher among males than females in North Dakota from 2017 through 2020 (State of North Dakota Office of Attorney General: Crime Report 2020; see Figure 1.34).

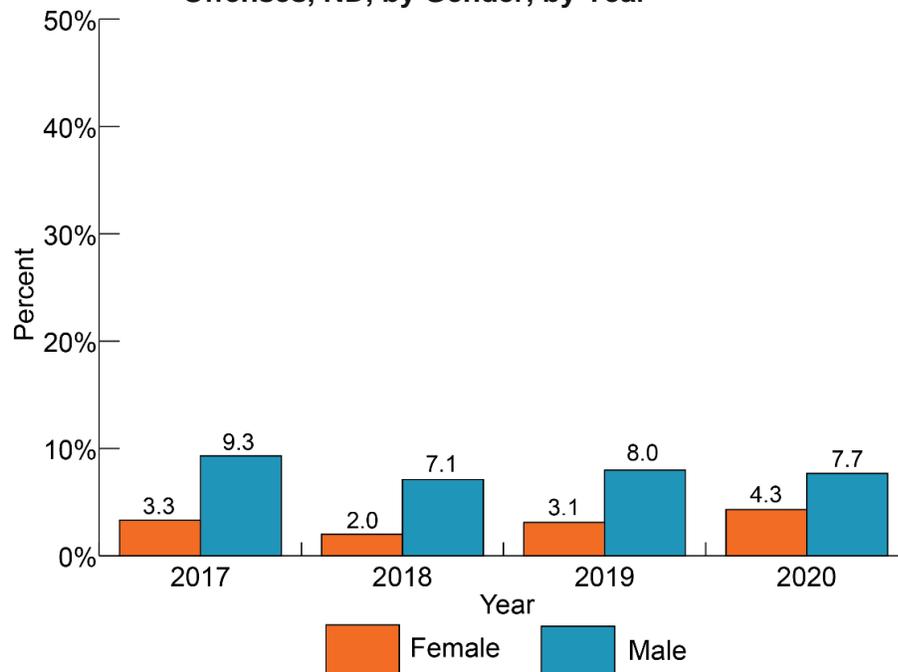
Figure 1.34: Percentage of Adult DUI Arrests, ND, by Gender, by Year



Data Source: State of North Dakota Office of Attorney General: Crime Report 2020

- From 2018 to 2019, the percentage of North Dakota DUI and Actual Physical Control (APC) offenders imprisoned among all drug and alcohol offenders increased for both males (+0.9 percentage points) and females (+1.1 percentage points). However, in 2020, the percentage increased again for females (+1.2 percentage points) but decreased for males (-0.3 percentage points; DOCR, 2020; see Figure 1.35).
- The percentage of adult male DUI and APC offenders was consistently greater than females in North Dakota from 2017 to 2020 (DOCR, 2020; see Figure 1.35).

Figure 1.35: Percentage of all Drug and Alcohol Offenders Imprisoned for DUI and APC Offenses, ND, by Gender, by Year



Data Source: DOCR

Liquor Law Violations

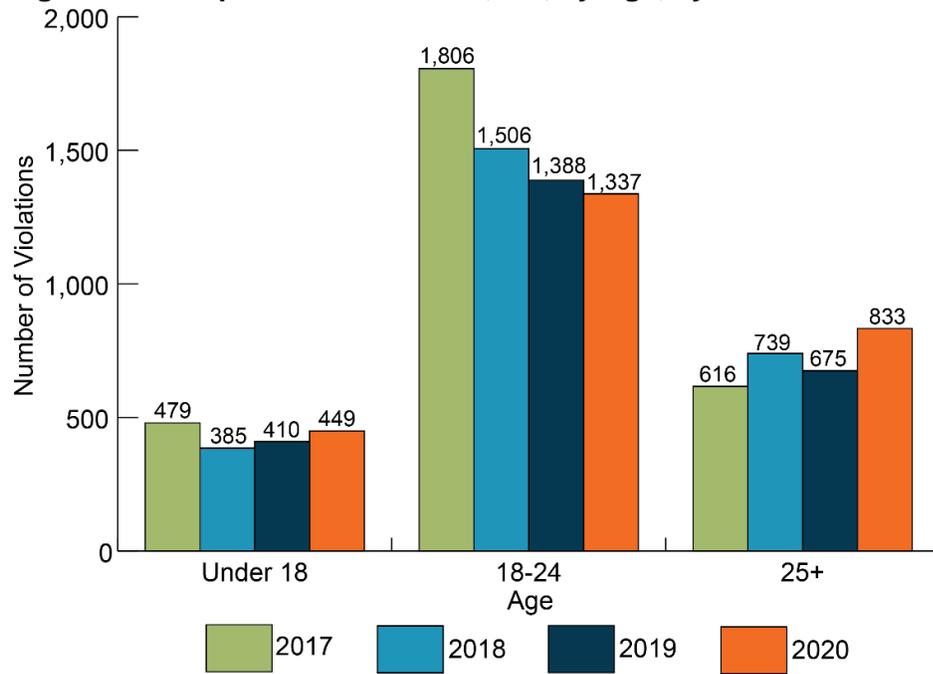
About the Indicator

Liquor law violations (LLV) are described as any local or state liquor law violations, excluding driving under the influence (DUI), Actual Physical Control (APC), and drunkenness. The North Dakota Office of Attorney General gathers data of reported LLVs, which include such offenses as minor in possession, minor in consumption, unlawful delivery to a minor, minor in a liquor establishment, and illegal manufacturing of alcoholic beverages. Selling liquor without a license is illegal. In North Dakota, there were approximately 2,619 liquor law violations in 2020; this is an increase from 2,473 violations in 2019 (State of North Dakota Office of Attorney General: CSO, 2020).

Section Summary

- The number of liquor law violations reported in North Dakota is higher (more than three times greater) among those ages 18 to 24 compared to those younger than 18 years old between the years 2017 and 2020 (State of North Dakota Office of Attorney General: CSO, 2020; see Figure 1.36).
- From 2017 to 2020, the number of liquor law violations decreased among those 18 to 24 years old. Among those aged 17 and younger, the number of violations slightly increased from 2019 to 2020. For those 25 and older, a substantial increase occurred over the same time period (State of North Dakota Office of Attorney General: CSO, 2020; see Figure 1.36).

Figure 1.36: Liquor Law Violations, ND, by Age, by Year



Data Source: State of North Dakota Office of Attorney General: Crime Statistics Online (CSO)

Data Note: The data used is based on a “snapshot” from CSO database as of August 23rd, 2020.

Consequences of Alcohol on Student Grades

About the Indicator

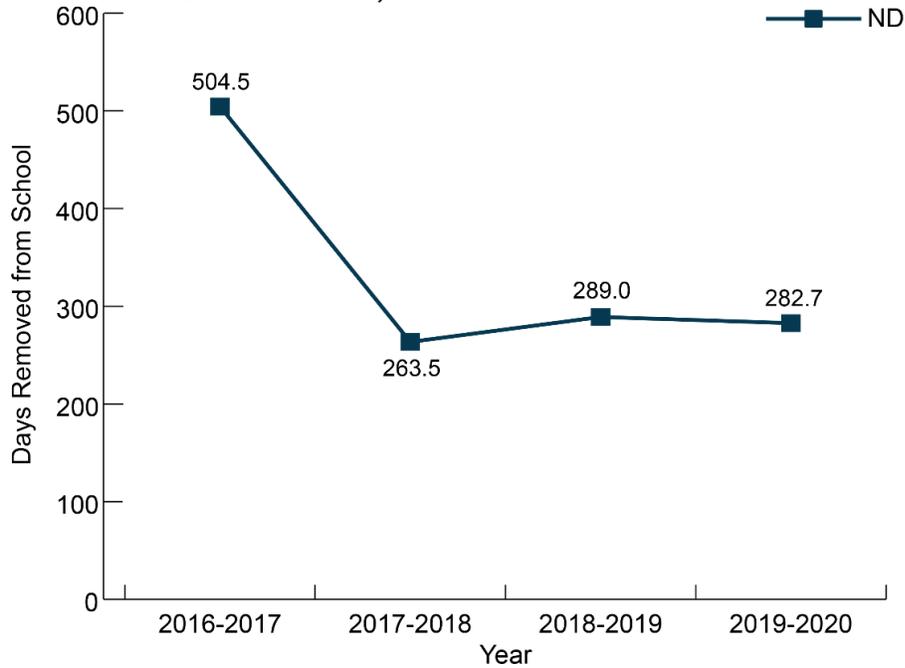
Academic performance is negatively affected by alcohol consumption (NIH, 2011). Alcohol use not only affects brain development and memory, but also school-related achievement and behavior (CDC, 2020).

Section Summary

- The number of school days missed by North Dakota students, grades kindergarten through 12th, due to alcohol related suspensions or expulsions decreased by nearly 50% from the

2016-2017 to the 2017-2018 school year, although it rose slightly during the 2018-2019 school year and remained steady for the 2019-2020 school year (NDDPI, 2020; see Figure 1.37).

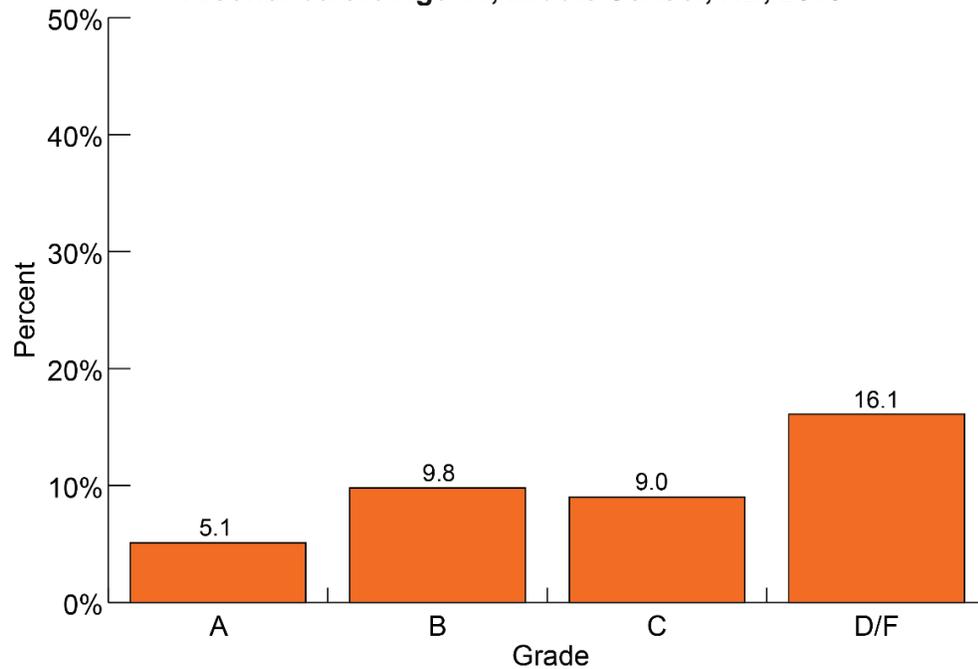
Figure 1.37: Days of School Missed due to Alcohol Related Suspensions or Expulsions, Students K-12, ND



Data Source: NDDPI

- Middle school students, who reported drinking alcohol for the first time before age 11, comprised a larger percentage of students with B (9.8%) and D/F (16.1%) grade point averages (GPA) than A (5.1%) and C (9.0%) GPAs in 2019 (YRBS, 2019; see Figure 1.38).

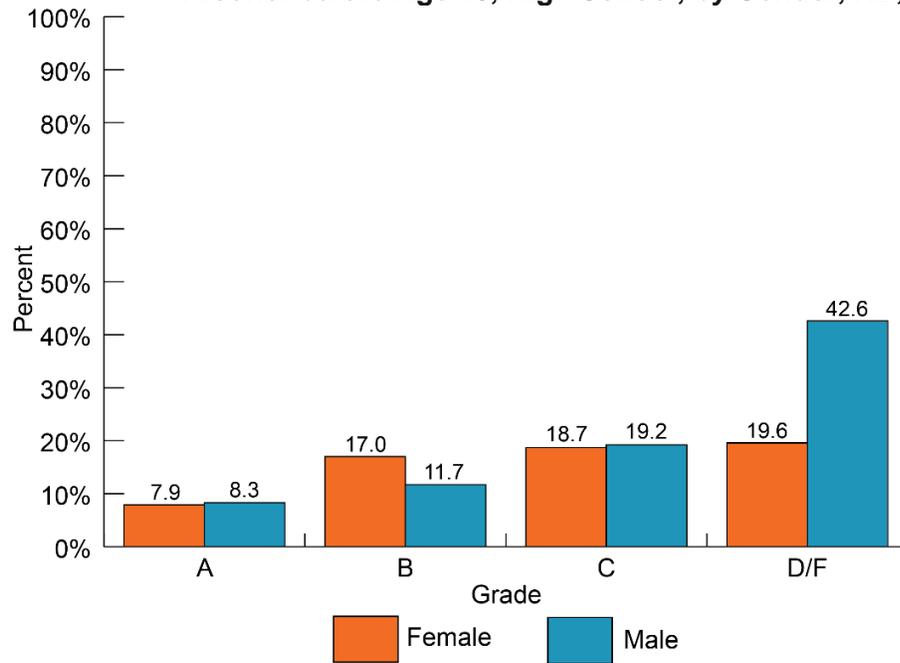
Figure 1.38: Percentage of Students within each GPA Category who Reported Drinking Alcohol before Age 11, Middle School, ND, 2019



Data Source: YRBS

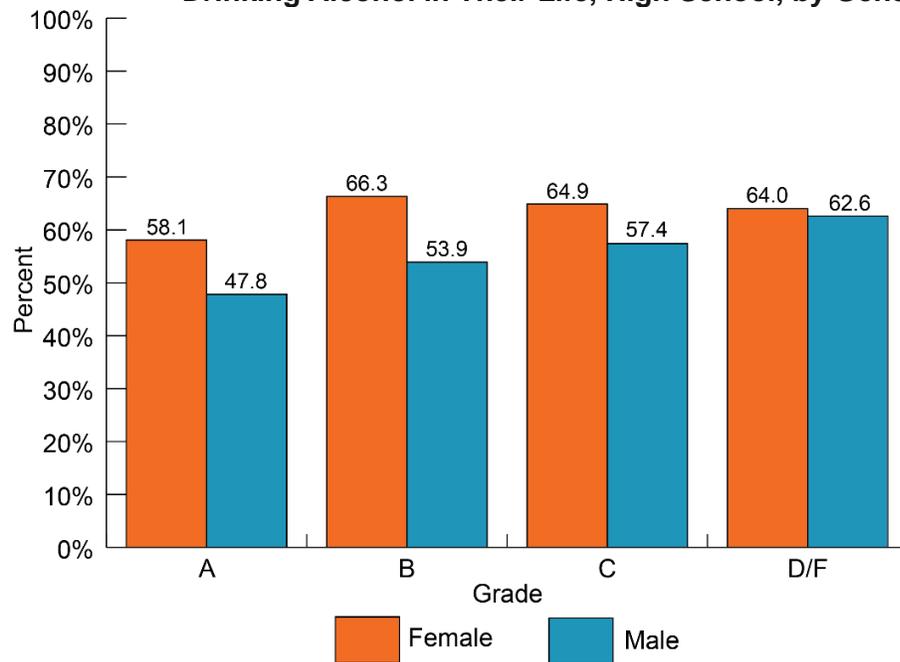
- A greater percentage of high school students who reported earning C and D letter grades reported drinking alcohol for the first time before age 13 than students earning A and B letter grades (YRBS, 2019; see Figure 1.39). Similar trends are found among students who reported ever consuming alcohol in their life, with the exception of female students earning B letter grades who had the highest percentage of all groups (YRBS, 2019; see Figure 1.40).

Figure 1.39: Percentage of those reporting each GPA Category who reported Drinking Alcohol before Age 13, High School, by Gender, ND, 2019



Data Source: YRBS

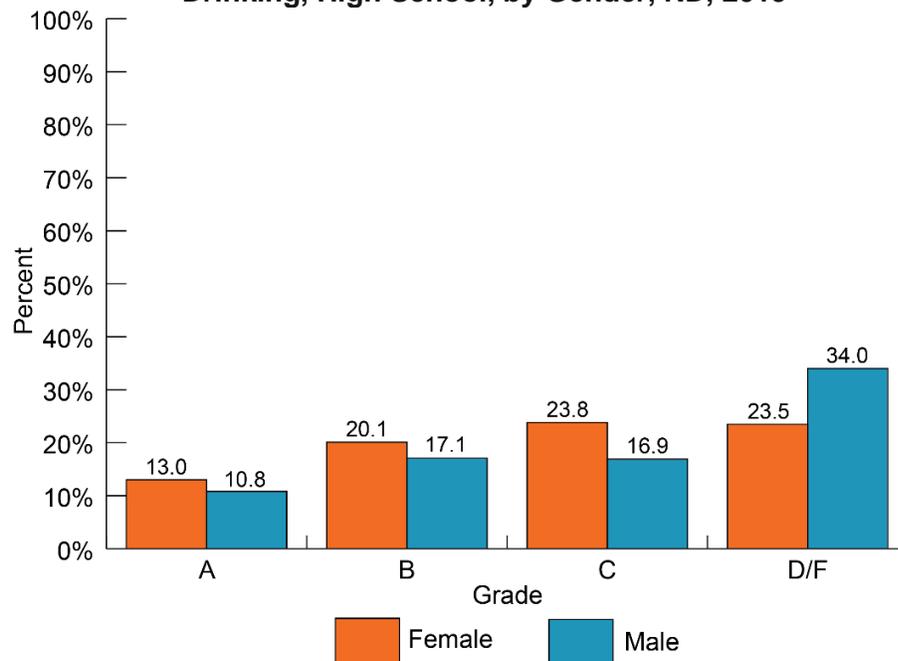
Figure 1.40: Percentage of those reporting each GPA Category who reported Ever Drinking Alcohol in Their Life, High School, by Gender, ND, 2019



Data Source: YRBS

- Among high school students who reported binge drinking, a higher percentage of females reported A, B, and C grade point averages compared to males, while a higher percentage of males reported a D/F grade point average compared to females (YRBS, 2019; see Figure 1.41).

Figure 1.41: Percentage of those reporting each GPA Category who reported Binge Drinking, High School, by Gender, ND, 2019



Data Source: YRBS

Substance Abuse Treatment Admissions

About the Indicator

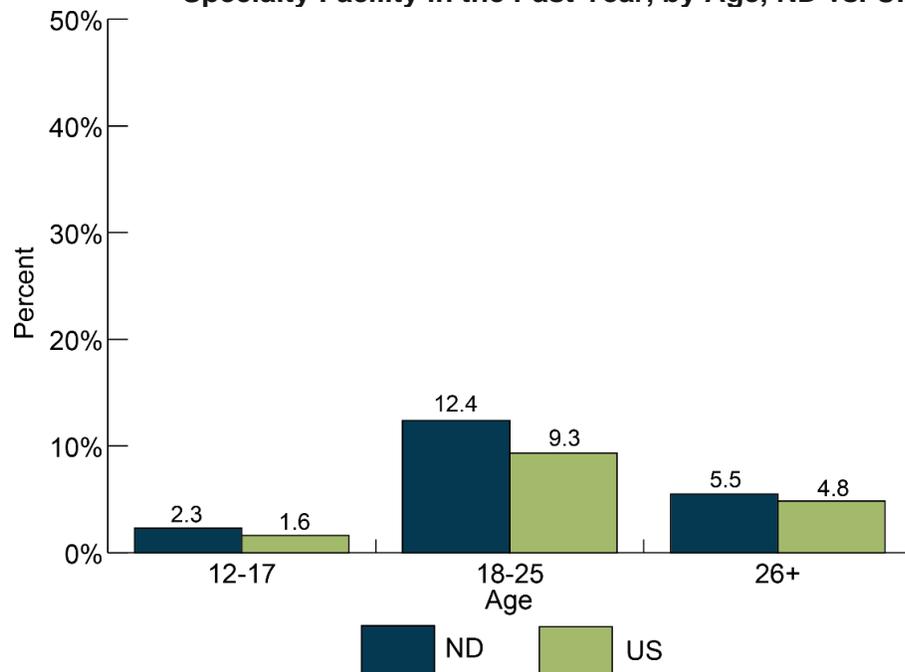
The data below shows substance use treatment-related data in North Dakota and the United States. The Treatment Episode Data Set (TEDS, 2019) data used in this report summarizes demographic information of individuals aged 12 and older who received treatment for alcohol treatment only, as well as treatment for alcohol with a secondary drug. This data only includes admissions into the public behavioral health system and not any private substance abuse treatment facility. In North Dakota, there were 3,832 admissions to publicly funded substance abuse treatment facilities in 2018; 1,321 of these were alcohol-related admissions (TEDS, 2019).

Section Summary

- In 2018, males reported a substantially higher percentage of alcohol only treatment facility admissions than females, 66.0% to 32.5% respectively. This has been a consistent trend from 2015 to 2018 (TEDS, 2019).

- The percentage of substance abuse treatment admissions for alcohol among individuals 12 years and older was consistently highest among Whites (72.3%-74.6%) compared to other racial groups from 2015 to 2018 (TEDS, 2019). However, the percentage of American Indian/Alaska Native individuals admitted to substance abuse treatment for alcohol from 2015 to 2018 (17.8% - 21.0%) was disproportionately high considering they make up only 5.3% of the population of North Dakota (United States Census Bureau, 2019).
- Similarly, when examining substance abuse treatment admissions for alcohol *with* a secondary drug among individuals 12 years and older, the percentage of Whites are consistently the highest from 2015 to 2018 (57.8% - 69.2%; TEDS 2019). American Indian/Alaska Native make up the second highest group (22.9% - 32.5%) despite only making up 5.3% of North Dakota's population (United States Census Bureau, 2019).
- In 2019, a higher percentage of North Dakotans were in need of alcohol abuse treatment but were not able to receive the treatment, regardless of age group, in comparison to national percentages. Overall, however, the 18–25-year-old age group indicated the greatest need, percentage-wise. This was true nationally, as well (NSDUH, 2019; see Figure 1.42).

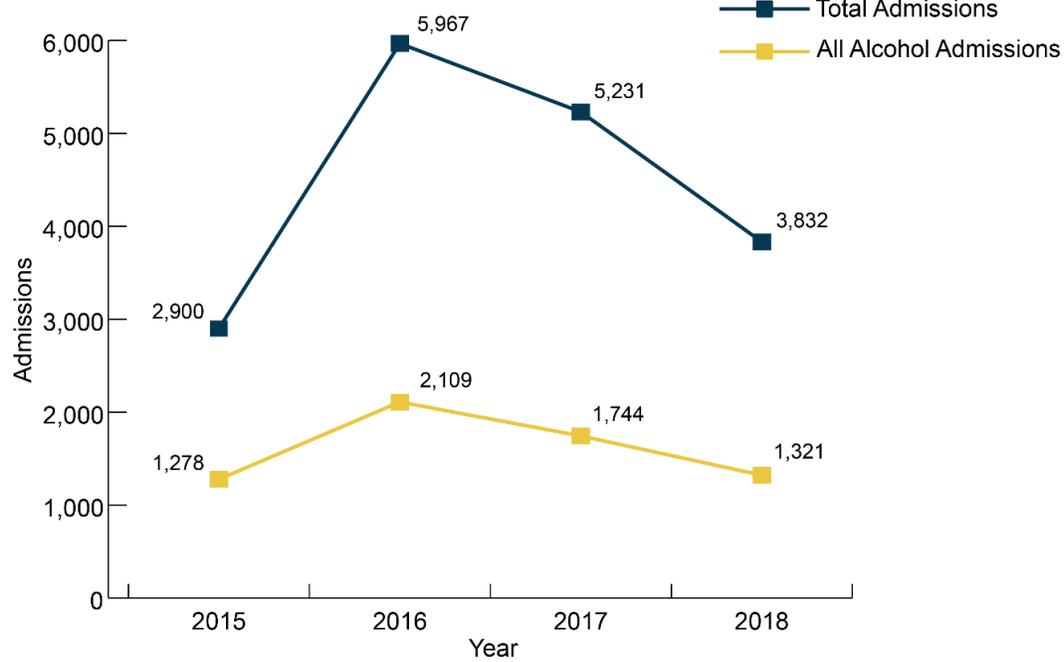
Figure 1.42: Percentage Needing but Not Receiving Alcohol Abuse Treatment at a Specialty Facility in the Past Year, by Age, ND vs. U.S., 2019



Data Source: NSDUH

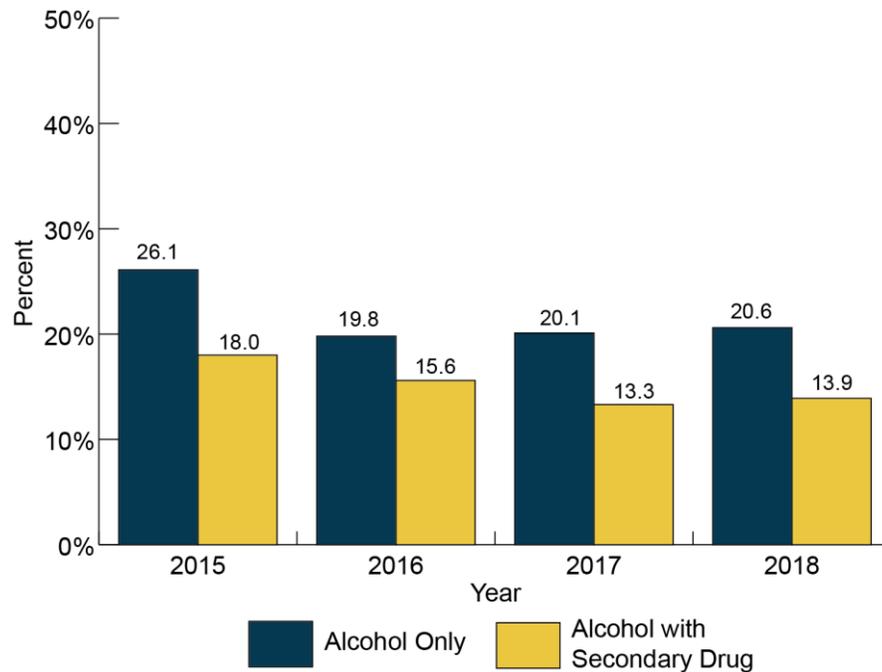
- The number of admissions to publicly funded substance abuse treatment facilities in North Dakota rose between 2015 (2,900) and 2016 (5,967) and fell between 2017 (5,231) and 2018 (3,832; TEDS, 2019; see Figure 1.43).

Figure 1.43: Substance Abuse Treatment Admissions, Ages 12+, ND, Total vs. Alcohol Admissions, by Year



Data Source: TEDS

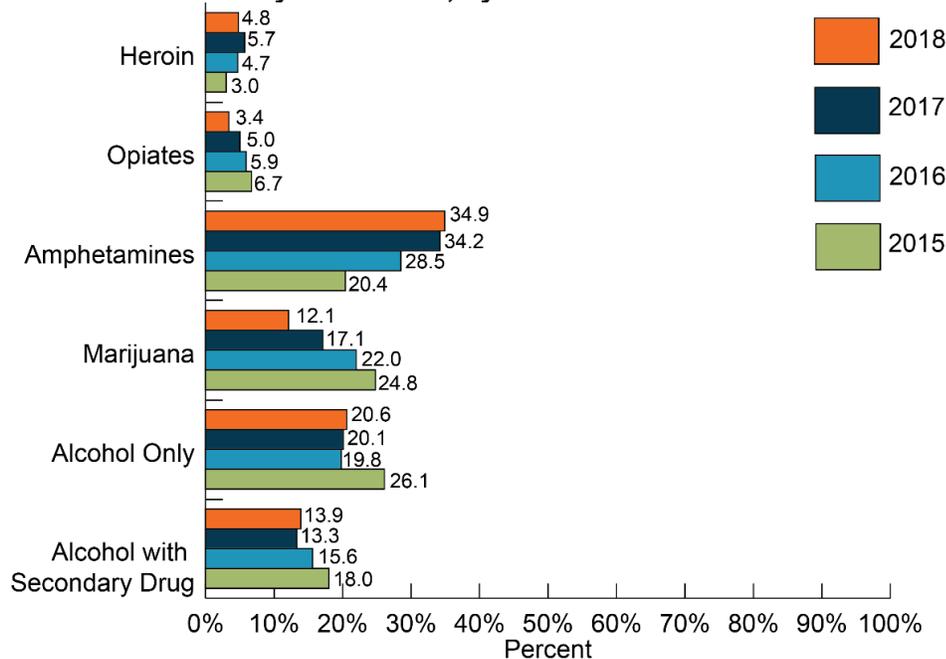
Figure 1.44: Percentage of Substance Abuse Treatment Admissions, Ages 12+, ND, Primary Alcohol vs. Alcohol with Secondary Drug, by Year



Data Source: TEDS

- From 2015 to 2018, there was an overall decline in the percentage of marijuana and opioid use admissions in North Dakota (TEDS, 2019; see Figure 1.45).
- In 2018, amphetamine use admissions made up over one-third of all primary substance treatment admissions in North Dakota (TEDS, 2019; see Figure 1.45).

Figure 1.45: Percentage of Substance Abuse Treatment Admissions, Age 12+, ND, by Primary Substance, by Year



Data Source: TEDS

- Individuals admitted for alcohol treatment only represented a slightly older age demographic compared to individuals admitted for treatment of alcohol *with* a secondary drug (TEDS, 2019; see Table 1.4).
- Substance abuse treatment admissions for alcohol were highest among individuals in the 36 to 40 and 26- to 30-year-old age groups in 2018 (TEDS, 2019; see Table 1.4).
- From 2015 to 2018, there was a notable decreasing trend in admissions for individuals between 46 and 50 years old. On the contrary, there was a notable increasing trend in admissions for individuals between 61 and 65 years old over the same time period (TEDS, 2019; see Table 1.4).

Table 1.4: Percentage of Substance Abuse Treatment Admissions, ND, Primary Alcohol-Only, by Age, by Year

| Admitted to Treatment | 2015 | 2016 | 2017 | 2018 |
|------------------------------|-------------|-------------|-------------|-------------|
| 12-17 years | 1.3% | 1.7% | 2.3% | 0.3% |
| 18-20 years | 0.7% | 1.6% | 1.0% | 1.9% |
| 21-25 years | 5.3% | 7.2% | 6.9% | 6.1% |
| 26-30 years | 14.7% | 14.2% | 15.2% | 15.4% |
| 31-35 years | 13.6% | 15.0% | 14.1% | 14.5% |
| 36-40 years | 14.8% | 11.0% | 13.6% | 15.7% |
| 41-45 years | 12.5% | 11.9% | 10.6% | 10.9% |
| 46-50 years | 13.1% | 11.7% | 11.7% | 8.9% |
| 51-55 years | 11.6% | 13.8% | 10.1% | 9.1% |
| 56-60 years | 8.6% | 7.5% | 9.0% | 9.5% |
| 61-65 years | 1.8% | 3.2% | 4.2% | 4.9% |
| 66 years and over | 2.0% | 1.2% | 1.3% | 2.8% |

Data Source: TEDS

- In North Dakota, individuals aged 21 to 40 represented over 50% of primary alcohol treatment admissions (TEDS, 2019; see Table 1.4) and over 60% of alcohol with secondary drug treatment admissions in 2018 (TEDS, 2019; see Table 1.5).
- Substance abuse treatment admissions for alcohol with a secondary drug was highest among individuals in the 26 to 30 year old and 31 to 35 year old age groups in 2018 (TEDS, 2019; see Table 1.5).
- From 2015 to 2018, there was a notable decreasing trend in admissions for individuals between 41 and 45 years old and 51 to 55 years old. On the other hand, there was a notable increasing trend in admissions for individuals between 36 to 40 years old and 46 to 50 years old (TEDS, 2019; see Table 1.5).

Table 1.5: Percentage of Substance Abuse Treatment Admission, ND, Alcohol with Secondary Drug, by Age, by Year

| Admitted to Treatment | 2015 | 2016 | 2017 | 2018 |
|-----------------------|-------|-------|-------|-------|
| 12-17 years | 2.9% | 4.5% | 4.2% | 4.3% |
| 18-20 years | 2.9% | 2.9% | 2.7% | 1.5% |
| 21-25 years | 14.6% | 15.1% | 13.1% | 11.6% |
| 26-30 years | 24.0% | 19.3% | 20.0% | 20.1% |
| 31-35 years | 17.3% | 17.2% | 20.3% | 19.1% |
| 36-40 years | 10.6% | 13.9% | 14.0% | 15.6% |
| 41-45 years | 10.4% | 9.4% | 7.9% | 7.1% |
| 46-50 years | 6.5% | 8.4% | 8.8% | 9.9% |
| 51-55 years | 6.5% | 6.5% | 5.2% | 3.9% |
| 56-60 years | 3.8% | 1.9% | 3.2% | 6.0% |
| 61-65 years | 0.6% | 1.0% | 0.4% | 0.8% |
| 66 years and over | 0.0% | 0.0% | 0.1% | 0.0% |

Data Source: TEDS

Alcohol in North Dakota: Modifiable Risks

Source of Alcohol for Youth

About the Indicator

The source from where alcohol is accessed is a crucial intervening variable impacting underage drinking. Communities can use interventions to prevent or reduce the risk of alcohol related harm; managing the number and location of where alcohol is sold/served and holding retailers liable for any damage or injury caused by intoxicated customers are two examples of community level interventions (CDC, 2018). These sources include access from retail establishments such as bars or liquor stores, or socially by individuals such as parents, family members, and friends.

Section Summary

- In 2019, 85.4% of North Dakota adults felt it was not at all or slightly difficult for youth to sneak alcohol from their home or a friend’s home. Additionally, 71.2% of North Dakota adults felt it was not at all or slightly difficult for youth to get an older person to buy alcohol for them (ND CRS, 2019).
- Overall, a higher percentage of adults in urban areas felt it was not at all or slightly difficult for youth to access alcohol compared to adults in rural areas (ND CRS, 2019).

Community Perception Relating to Alcohol

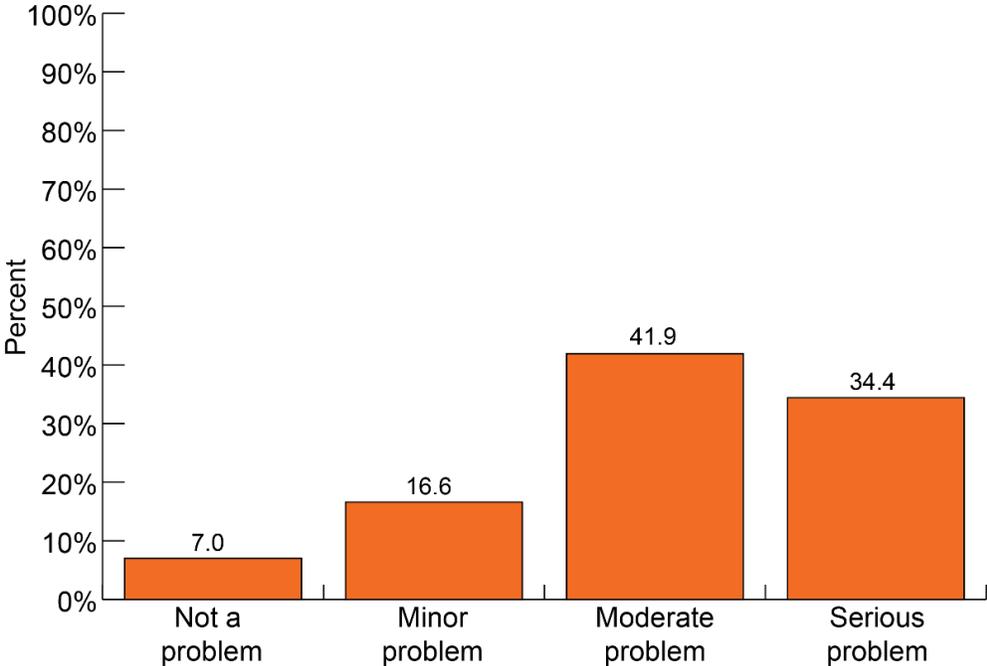
About the Indicator

Cultural perceptions and social norms can color the lens with which individuals see and accept various practices. Studies have shown that cultural norms shape alcohol consumption (Alcohol Res., 2016). If communities are more likely to accept excessive drinking, it is likely that higher rates of excessive drinking will occur. Using cigarette smoking as an example, as the public image of smoking changed in the United States, the prevalence of smoking decreased (Cancer Epidemiol Biomarkers Prev., 2015). It may also be the case that with changing cultural perceptions around excessive alcohol use, changes in alcohol consumption may follow.

Section Summary

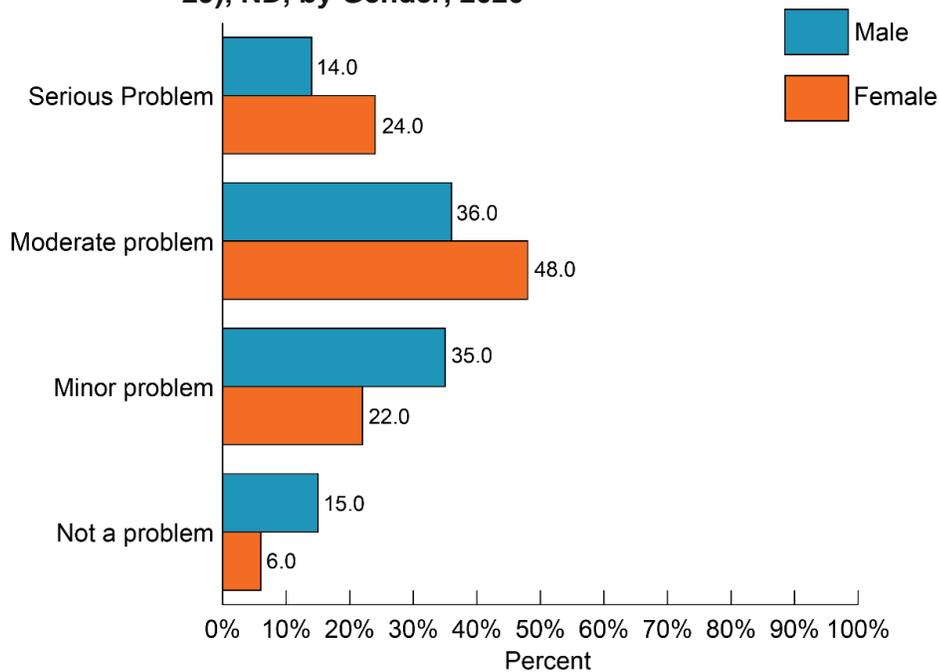
- The majority of ND adults (76.3%) held the belief that alcohol use in the community was a moderate or serious problem among youth (ND CRS, 2019; see Figure 1.46).

Figure 1.46: Statewide Perception of Alcohol Use in Community as a Problem among Youth, ND, 2019



Data Source: ND CRS

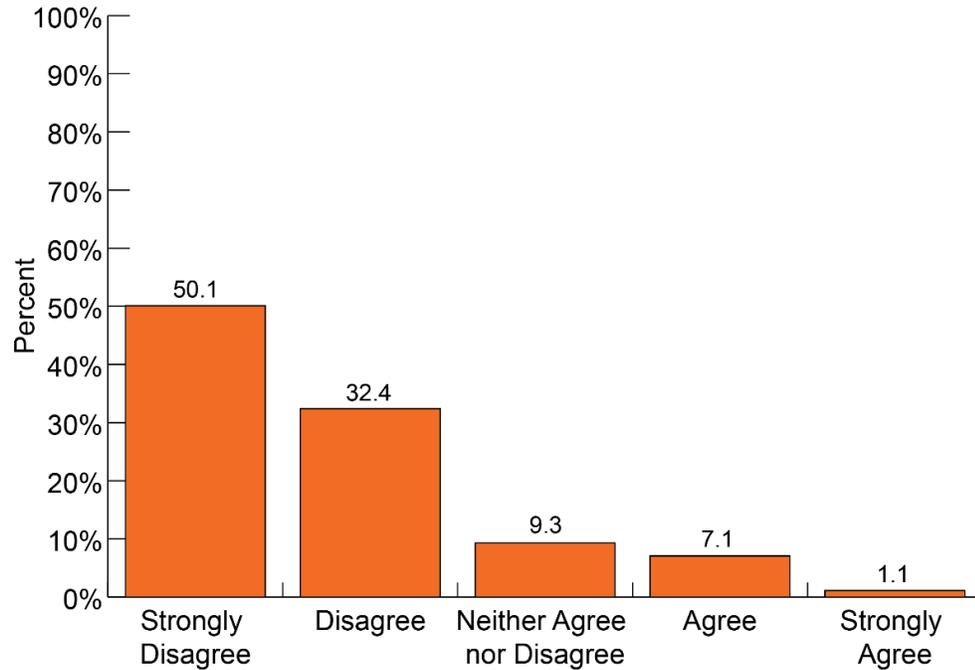
Figure 1.47: Statewide Perception of Underage Drinking as a Problem, Young Adults (18-29), ND, by Gender, 2020



Data Source: NDSOYA

- The majority of North Dakota adults disagreed (82.5% disagree or strongly disagree) that youth should be able to drink as long as they do not drive afterward (ND CRS, 2019; see Figure 1.48). These percentages are generally stable regardless of whether respondents lived in a rural or urban area.

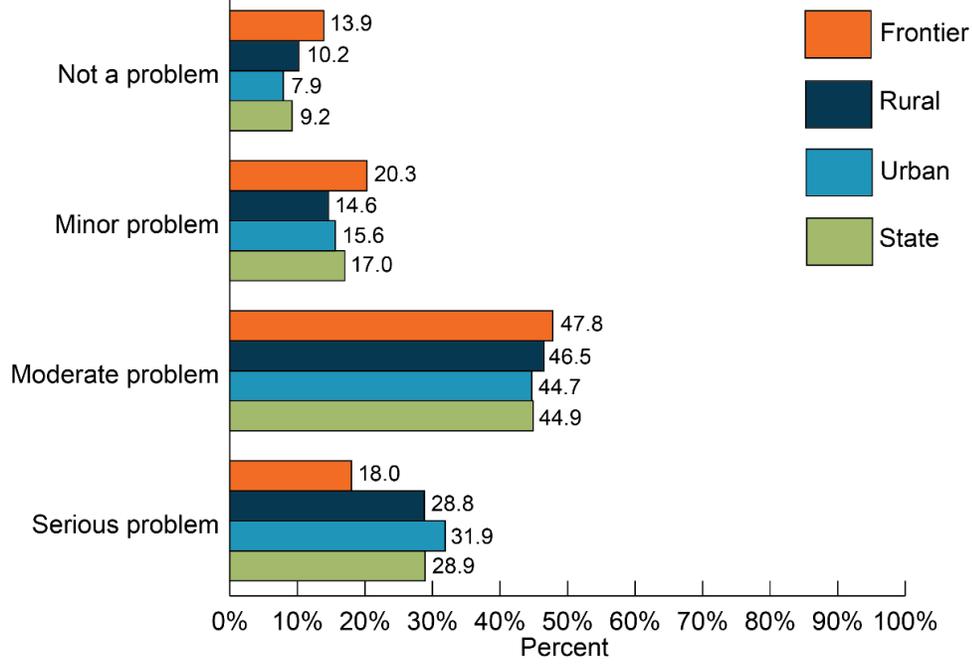
Figure 1.48: Statewide Perception on Accepting Youth Alcohol Consumption as Long as They Do Not Drive, ND, 2019



Data Source: ND CRS

- North Dakota adults in urban communities reported higher rates of concern regarding alcohol use as a serious problem when compared to both rural and frontier communities. This is a shift from previous years. In 2017, more adults in rural areas reported higher rates of serious concern regarding alcohol use than urban and frontier communities (ND CRS, 2019; see Figure 1.49).

Figure 1.49: Perception of Alcohol Use in Community as a Problem among Adults, ND, 2019



Data Source: ND CRS

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Stahre, M., Roeber, J., Kanny, D., Brewer, R. D., & Zhang, X. (2014). Contribution of excessive alcohol consumption to deaths and years of potential life lost in the United States. *Preventing Chronic Disease, 11*, E109. <https://doi.org/10.5888/pcd11.130293>

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Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH)

Substance Abuse and Mental Health Services Administration (SAMHSA). Treatment Episode Data Set (TEDS)

United States Census Bureau. 2019 American Community Survey 5-Year Estimates

Wyoming Survey & Analysis Center (WYSAC). North Dakota Community Readiness Survey (ND CRS)

Wyoming Survey & Analysis Center (WYSAC). North Dakota Survey of Young Adults (NDSOYA)

Section 2. Tobacco: Use, Consequences, and Modifiable Risks

Tobacco and Nicotine in North Dakota: Use

Youth Tobacco Use

About the Indicator

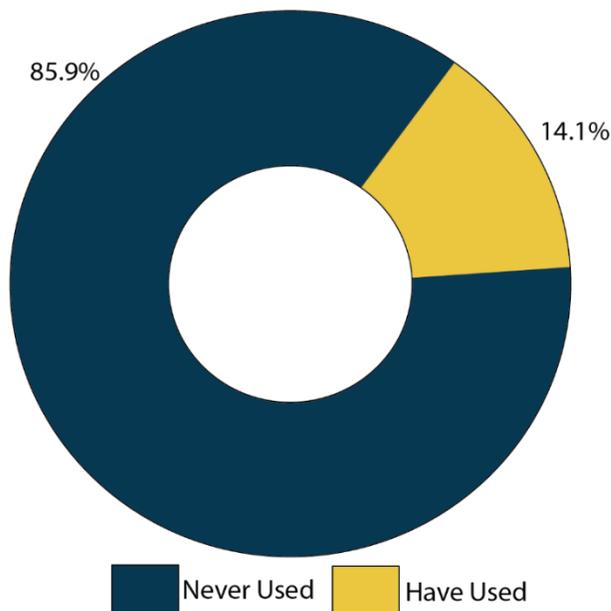
The National Survey on Drug Use and Health (NSDUH) estimates in 2019, 572,000 youth aged 12-17 across the country smoked cigarettes in the past month, and about 75,000 reported smoking daily. In the United States, twelve of every 100 middle school students and 31 of every 100 high school students reported current use of a tobacco product (CDC, 2019).

The increasing popularity of electronic vapor products has swung the tobacco use pendulum away from cigarettes, cigars, and smokeless tobacco products, which have been the main tobacco products used among youth in the past (CDC, 2019).

Section Summary

- In 2017, roughly 86% of middle school students in North Dakota reported having never used tobacco in their lifetime (YTS, 2017; see Figure 2.1).

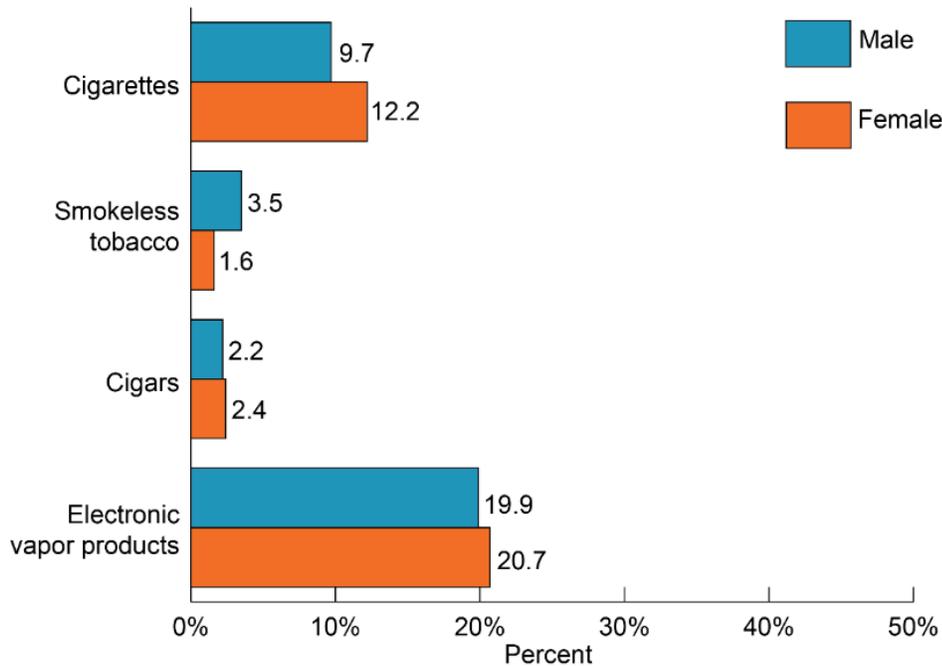
Figure 2.1: Percentage of Tobacco Use in Lifetime, Middle School Students, ND, 2017



Data Source: YTS

- Among North Dakota middle school students, females reported higher rates of ever using cigarettes (12.2%) and electronic vapor products (20.7%) than their male (9.7% and 19.9%) counterparts (YRBS, 2019; see Figure 2.2).

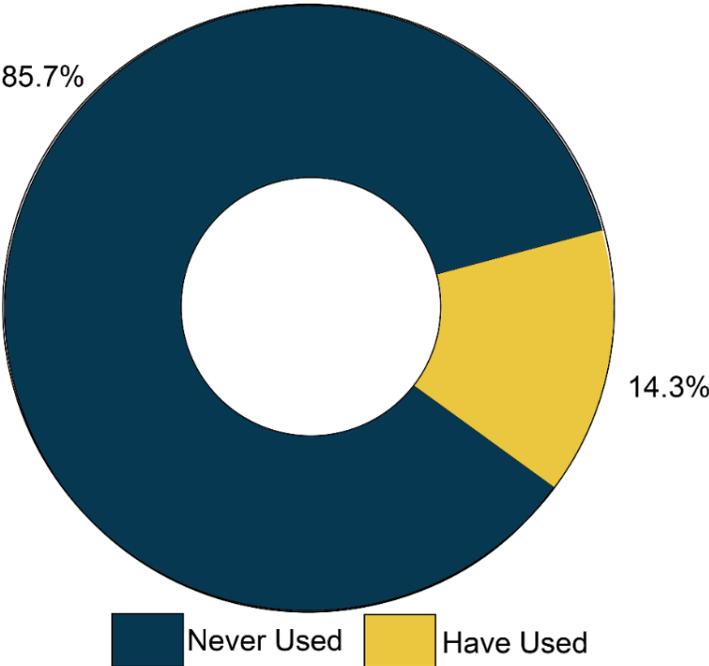
Figure 2.2: Percentage of Tobacco Products Ever Tried, Middle School Students, ND, by Gender, 2019



Data Source: YRBS

- More than one in 10 (14.3%) North Dakota high school students reported using tobacco at least once in their lifetime (YTS, 2019; see Figure 2.3).

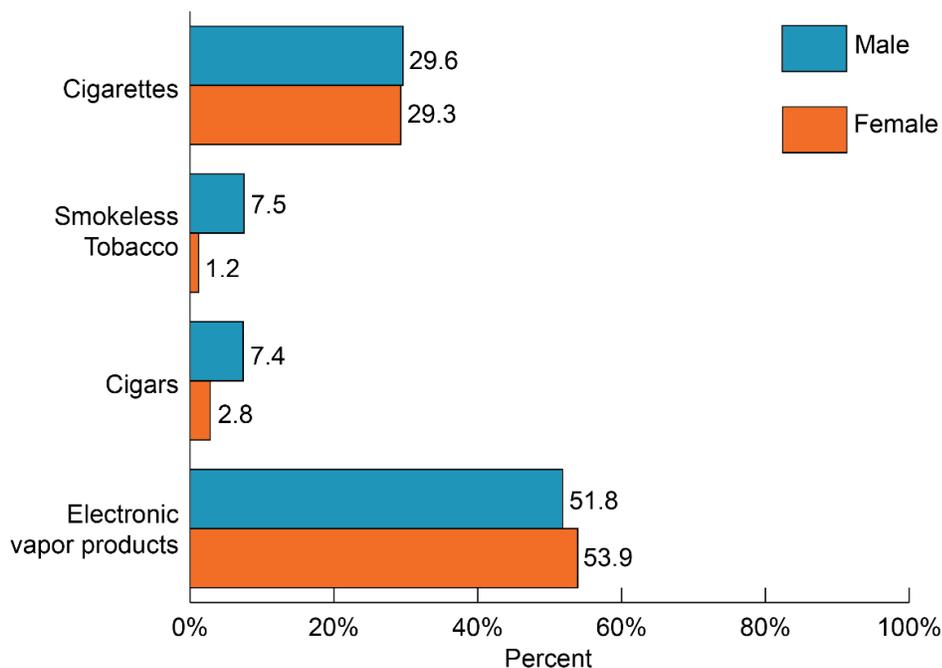
Figure 2.3: Percentage of Tobacco Use in Lifetime, High School Students, ND, 2019



Data Source: YTS

- North Dakota high school male students were more likely than their female counterparts to have ever used cigarettes, smokeless tobacco, and cigars (YRBS, 2019; see Figure 2.4).
- In 2019, female high school students reported slightly higher rates of ever using electronic vapor products than their male counterparts (YRBS, 2019; see Figure 2.4).

Figure 2.4: Percentage of Tobacco Products Ever Tried, High School Students, ND, by Gender, 2019



Data Source: YRBS

Adult Tobacco Use

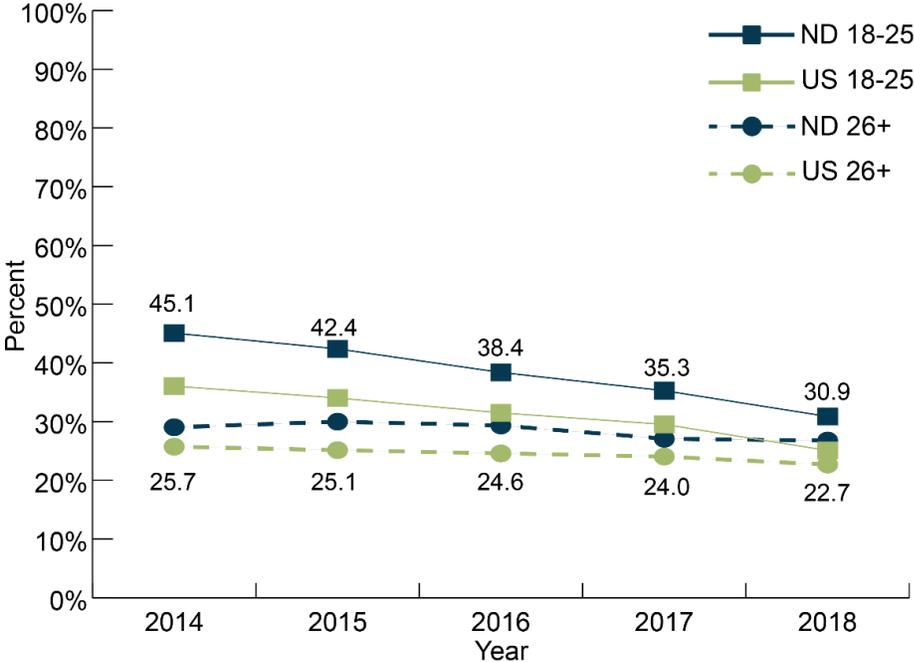
About the Indicator

In 2018, the National Survey on Drug Use and Health (NSDUH, 2019) estimated that 58.1 million people in the United States currently used tobacco products. Though the number of adults currently using tobacco products has been declining over the decade (68.1 million in 2008), cigarette smoking remains the leading cause of preventable disease and death in the United States (HHS, 2014).

Section Summary

- There was a decline in the number of adults who reported tobacco use in the past month, both in North Dakota and the United States, between 2014 and 2018 (NSDUH, 2018; see Figure 2.5). Notably, the largest percentage point decrease observed was among North Dakota adults aged 18-25 (45.1% to 30.9%) over the same period of time (NSDUH, 2018; see Figure 2.5).
- Between 2014 and 2018, the percentage of North Dakota adults 18 and older who reported tobacco use in the past month remained higher than U.S. adult use of the same age (NSDUH, 2018; see Figure 2.5).

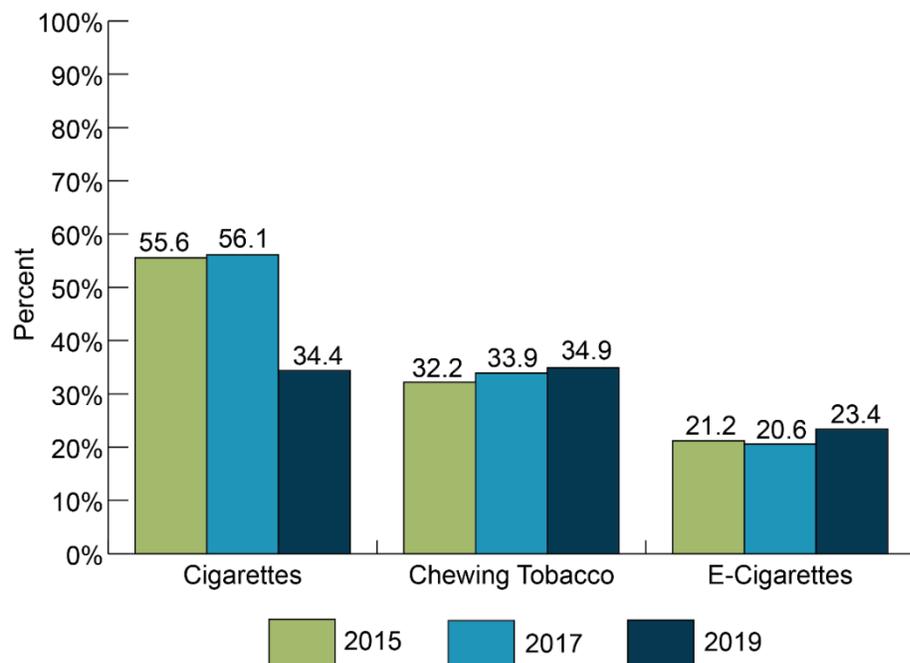
Figure 2.5: Percentage of Any Tobacco Use in past Month, ND vs. U.S., by Age, by Year



Data Source: NSDUH

- The percentage of North Dakota adults who had reported using cigarettes at least once in their lifetime rose marginally from 2015 to 2017 (ATS, 2019; see Figure 2.6).
- From 2015 to 2017, North Dakota reported a consistent increase in the percentage of adults who had ever used chewing tobacco in their lifetime (ATS, 2019; see Figure 2.6).
- The percentage of North Dakota adults who reported trying e-cigarettes has remained greater than 20% since 2015 (ATS, 2019; see Figure 2.6).

Figure 2.6: Percentage who Ever Tried Tobacco Products in Lifetime, Adults (18+), ND, by Year (2015, 2017, 2019)



Data Source: ATS

Tobacco Use Initiation among Youth

About the Indicator

Nine out of 10 smokers start cigarette smoking before the age of 18, and every day more than 1,400 youth (aged 12-17 years old) smoke a cigarette for the first time in the United States (NSDUH, 2019). Approximately 2,100 youth and young adults who were occasional smokers became daily smokers (HHS, 2014). Encouragingly, the National Survey on Drug Use and Health reported a substantial decrease in the number of youths aged 12-17, who initiated cigarette use between 2016 (723,000) and 2019 (572,000; NSDUH, 2019).

Section Summary

- Since 2009, fewer North Dakota high school females used cigarettes before age 13 compared to their male counterparts (YRBS, 2017; see Table 2.1).
- The percentages of high school students who used cigarettes before age 13 for the first time were higher in North Dakota (11.2%) than the United States (7.9%; YRBS, 2017/2019; see Table 2.1).

Table 2.1: Percentage who Consumed First Cigarette before Age 13, ND vs. U.S., by Gender

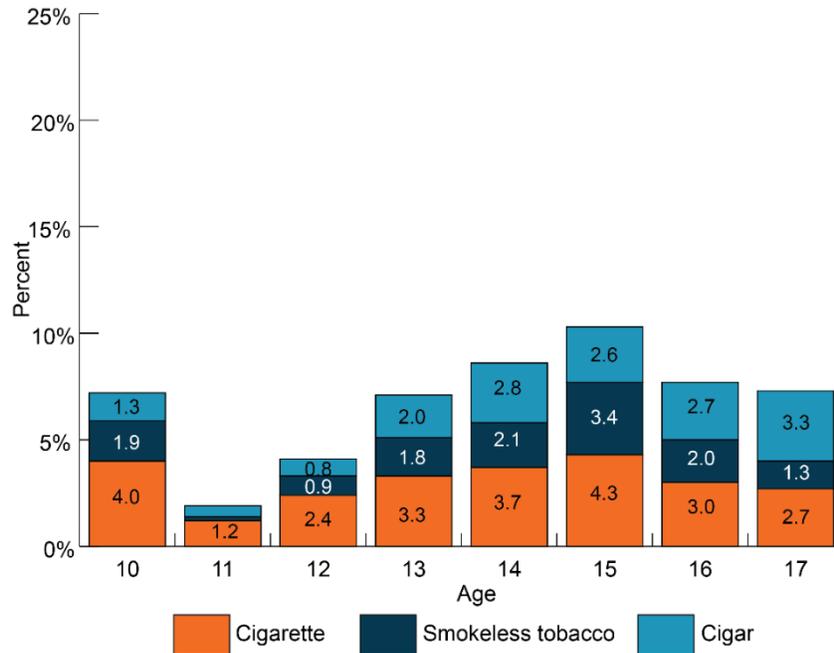
| First Tried Cigarette Smoking Before Age 13 | | | | |
|---|-------|--------|-------|------|
| | Total | Female | Male | Year |
| North Dakota | 11.2% | 9.7% | 12.4% | 2017 |
| United States | 7.9% | 7.1% | 8.5% | 2019 |

Data Source: YRBS

Data Note: Trend data not available for question, question change from 2015 to 2017.

- In 2019, the percentage of North Dakota high school students who reported using tobacco products for the first time increased until age 15 at which point percentages declined for those age 16 and 17 and older (YTS, 2019; see Figure 2.7).

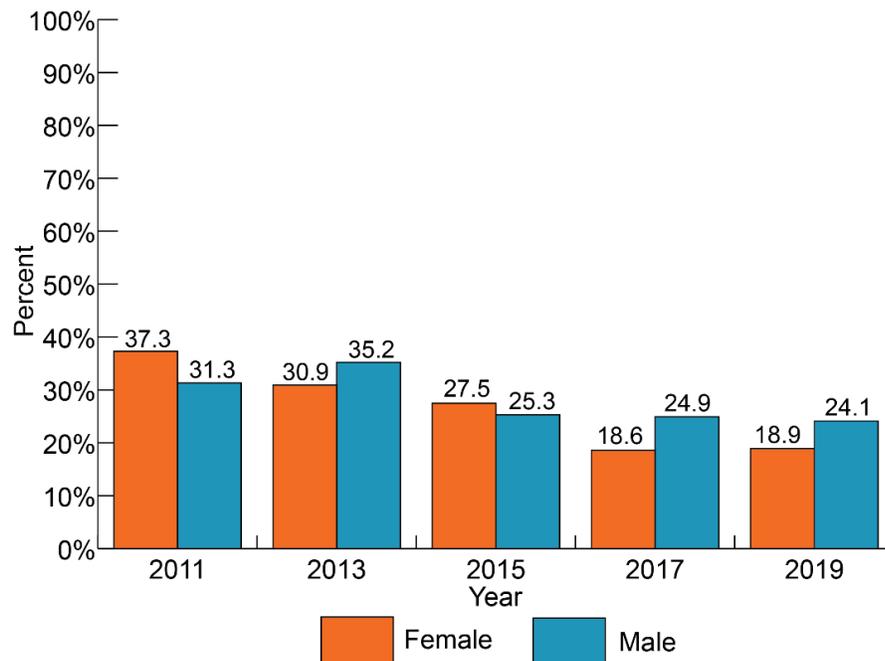
Figure 2.7: Percentage of Students who Reported their Age When First Used Tobacco Product, High School Students, ND, 2019



Data Source: YTS

- From 2013 to 2019, the percentage of male and female 9th grade students who have ever tried cigarettes has generally been decreasing (YRBS, 2019; see Figure 2.8).

Figure 2.8: Percentage who Ever Tried Cigarette Smoking among 9th Grade High School Students, ND, by Gender, by Year



Data Source: YRBS

Youth Cigarette Smoking

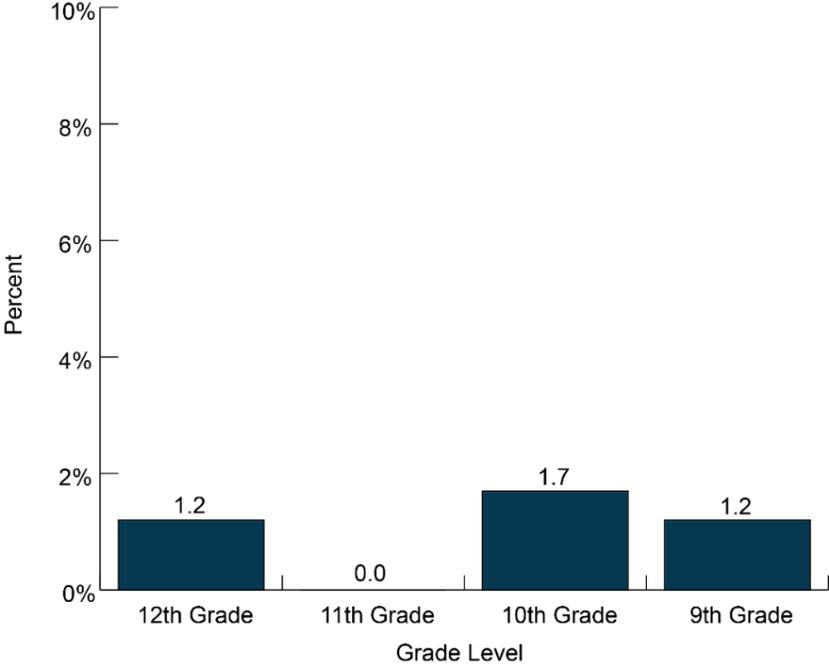
About the Indicator

In 2018, 99,000 youth aged 12-17 reported daily cigarette use (NSDUH, 2018). The rates of current cigarette use among youth in the United States has decreased from 9.2% in 2008 to 2.7% in 2018. Still, the CDC reports that if smoking continues at the current rate among youth in the United States, approximately 1 out of every 13 American youth will die early from a smoking-related illness (HHS, 2014).

Section Summary

- In 2019, 94.1% of adults in North Dakota either disagreed or strongly disagreed with the notion that youth cigarette smoking was okay (ND CRS, 2019).
- The majority of North Dakotans (64.4%), and Americans in general (71.5%), perceive great risk from smoking one or more packs of cigarettes daily. These percentages have remained stable from 2014 through 2019 (NSDUH, 2019).
- The percentage of North Dakota middle school students who reported ever trying cigarette smoking decreased between 2013 (17.0%) and 2019 (10.9%; YRBS, 2019).

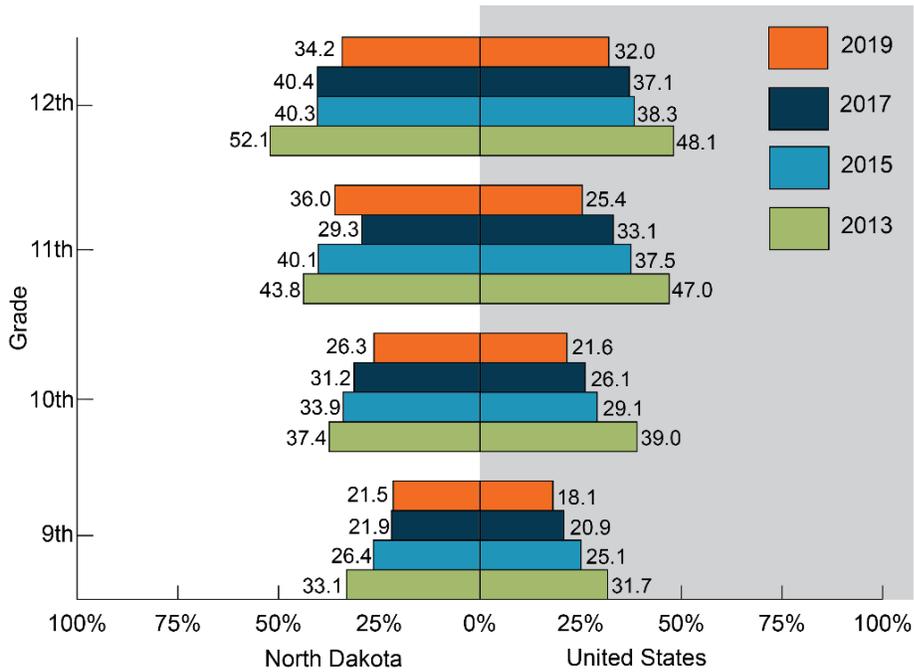
Figure 2.9: Percentage of Youth who attended a program at school to help quit smoking, ND, by Grade, 2019



Data Source: YTS

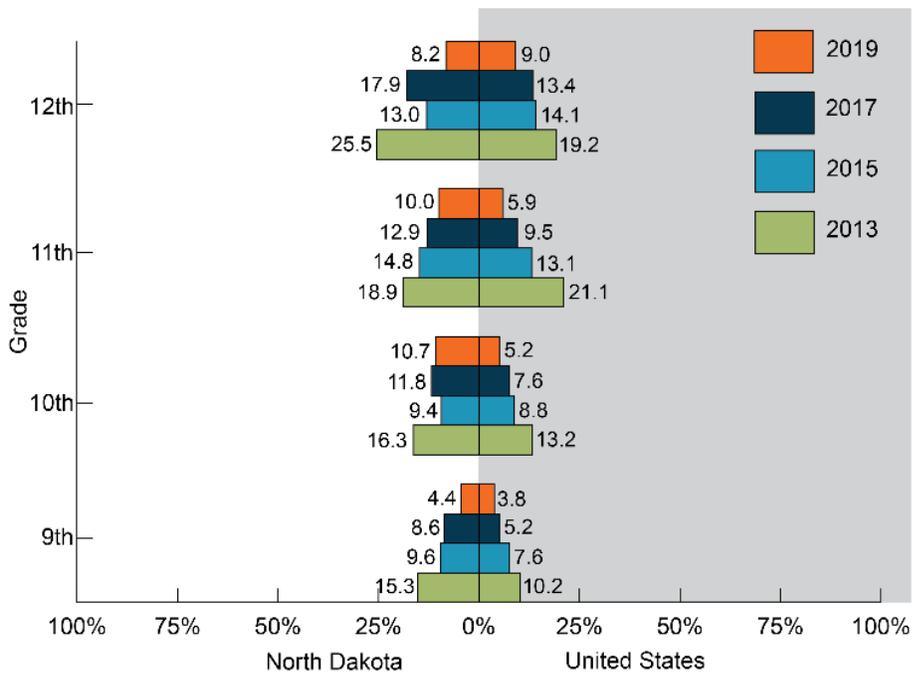
- The percentage of North Dakota high school students who reported ever using a cigarette declined from 2013 to 2019 except for North Dakota students in 11th grade. North Dakota reported the largest percentage point decrease (10.8%) among students in 11th grade between 2015 and 2017 (YRBS, 2019; see Figure 2.10).

Figure 2.10: Percentage who Ever Tried Cigarette Smoking, High School Students, ND vs. U.S., by Year



Data Source: YRBS

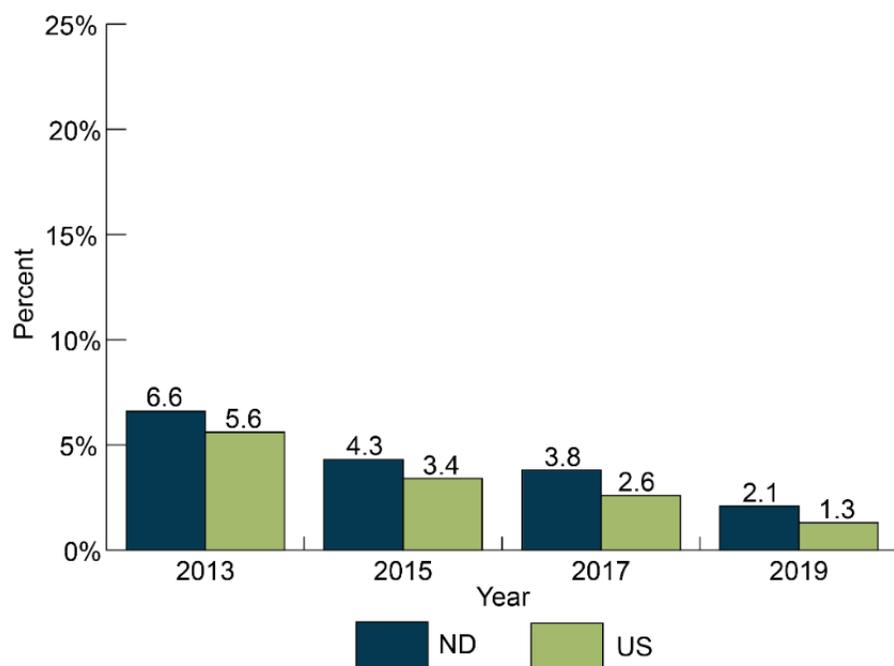
Figure 2.11: Percentage who Currently Smoke Cigarettes (at Least One Day a Month), High School Students, ND vs. U.S., by Year



Data Source: YRBS

- The percentages for male and female middle school students who currently smoke cigarettes on at least 20 days a month have remained relatively low from 2013 (females = 0.9%, males = 1.2%) to 2019 (females = 0.4%, males = 0.2%; YRBS, 2019).
- The percentage of North Dakota high school students frequently using cigarettes (20 or more days within the past month) declined between 2013 and 2019 (YRBS, 2019; see Figure 2.12).
- The percentages for high school students who currently smoke cigarettes on all days of the month have declined from 2013 (U.S. = 3.9%, ND = 4.0%) to 2019 (U.S. = 1.1%, ND = 1.4%; YRBS, 2019).

Figure 2.12: Frequently Smoke Cigarettes (at Least 20 Days a Month), High School Students, ND, by Year



Data Source: YRBS

Adult Cigarette Smoking

About the Indicator

Cigarette smoking is the principal cause of preventable diseases and deaths in the United States. The NSDUH estimates that roughly 18% of U.S. adults aged 18 and older have smoked at least one cigarette in the past month; North Dakota reports a similar percentage, 21% (NSDUH, 2019). However, the percentage of North Dakota adults who reported smoking a cigarette in the past 30 days has significantly decreased between 2009 (26.1%) and 2019 (21.0%).

Current smoker: Those who smoked at least 100 cigarettes during their lifetime and who, within the thirty days preceding the survey, have smoked at least one cigarette.

Section Summary

- The percentage of adults who had reported any cigarette use in the past month in both North Dakota and the United States declined between the years 2014 and 2019 (NSDUH, 2019; see Table 2.2).

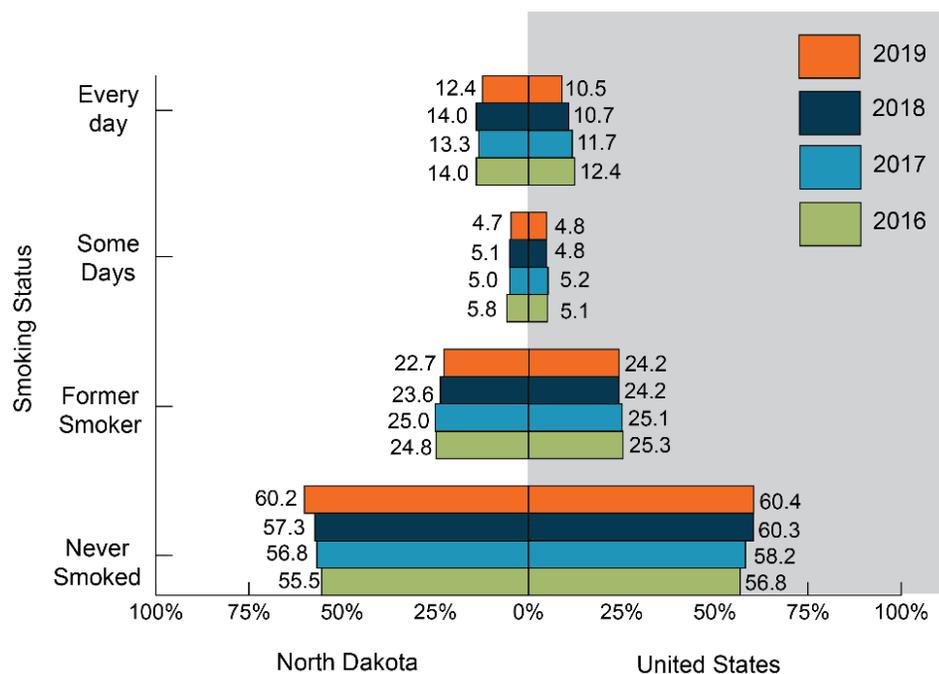
Table 2.2: Percentage of Any Cigarette Use in the Past Month among Adults, ND vs. U.S., by Age, by Year

| Any Cigarette Use Past Month by Age Groups, North Dakota vs. United States | | | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|
| | Age Group | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| ND | 18-25 years | 34.4% | 31.3% | 26.6% | 25.5% | 25.5% | 21.6% |
| | 26+ years | 29.5% | 27.5% | 25.1% | 22.9% | 21.1% | 20.8% |
| U.S. | 18-25 years | 24.2% | 24.2% | 22.6% | 20.8% | 20.1% | 18.3% |
| | 26+ years | 21.5% | 20.7% | 20.1% | 19.5% | 18.7% | 18.4% |

Data Source: NSDUH

- From 2016 to 2019, the percentage of adults who have never smoked consistently increased for both North Dakota and the United States (BRFSS, 2019; see Figure 2.13).
- The percentage of respondents in North Dakota and the United States reporting daily smoking has gradually decreased from 2014 (U.S. = 12.9%, ND = 14.4%) until 2019 (U.S. = 10.5%, ND = 12.4%). Likewise, the percentage of respondents in North Dakota and the United States reporting as current smokers has also gradually decreased from 2014 (U.S. = 18.1%, ND = 19.9%) until 2019 (U.S. = 14.3%, ND = 16.7%; BRFSS, 2019).
- The percentage of current smokers has remained relatively stable among females and males from 2015 (females = 15.4%, males = 21.9%) until 2019 (females = 15.7%, males = 17.6%; BRFSS, 2019).
- The majority of current smokers in North Dakota are white (81.0%), although blacks (1.7%), American Indian/Alaskan Natives (8.7%), and Hispanics (3.3%) are also represented. The majority of U.S. respondents reporting as current smokers are also primarily white (64.0%); with blacks (13.0%), American Indian/Alaskan Natives (2.0%), and Hispanics (14.0%) also represented (BRFSS, 2019).

Figure 2.13: Percentage of Smoking Status, Adults (18+), ND vs. U.S., by Year



Data Source: BRFSS

Youth Smokeless Tobacco Use

About the Indicator

Youth smokeless tobacco use in the United States has been in a slow but relatively steady decline since the early 1990s (Monitoring the Future, 2019). Smokeless tobacco is just as unhealthy as smoking and can lead to nicotine addiction. It causes cancer of the mouth, tongue, cheek, gum, esophagus, and pancreas. Smokeless tobacco can also increase the risks for early delivery and stillbirth when used during pregnancy, can cause nicotine poisoning in children, and may increase the risk for death from heart disease and stroke (CDC, 2016).

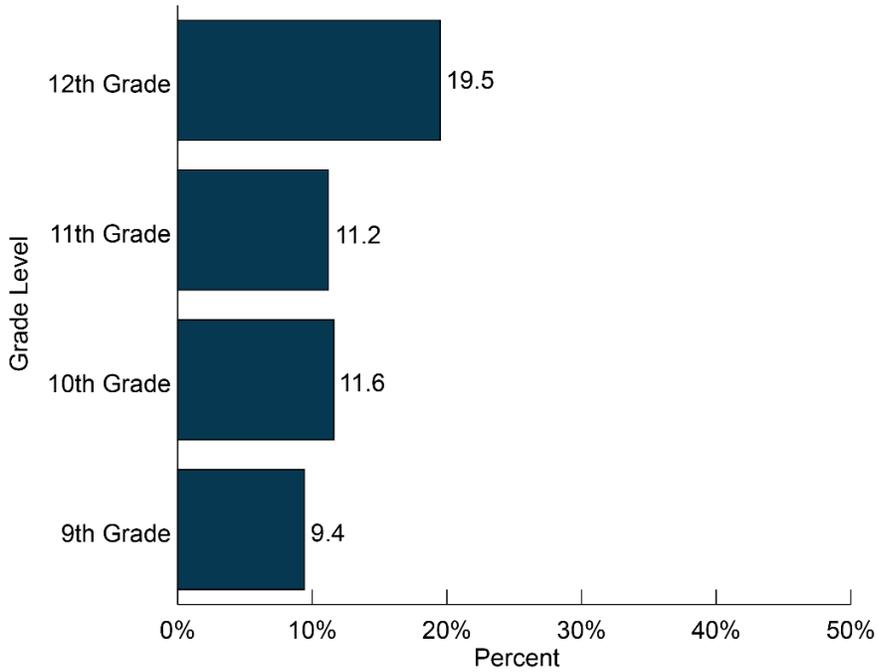
Current user: used on 1 or more days of the past 30 days.

Frequent user: used on 20 or more days out of the past 30 days.

Section Summary

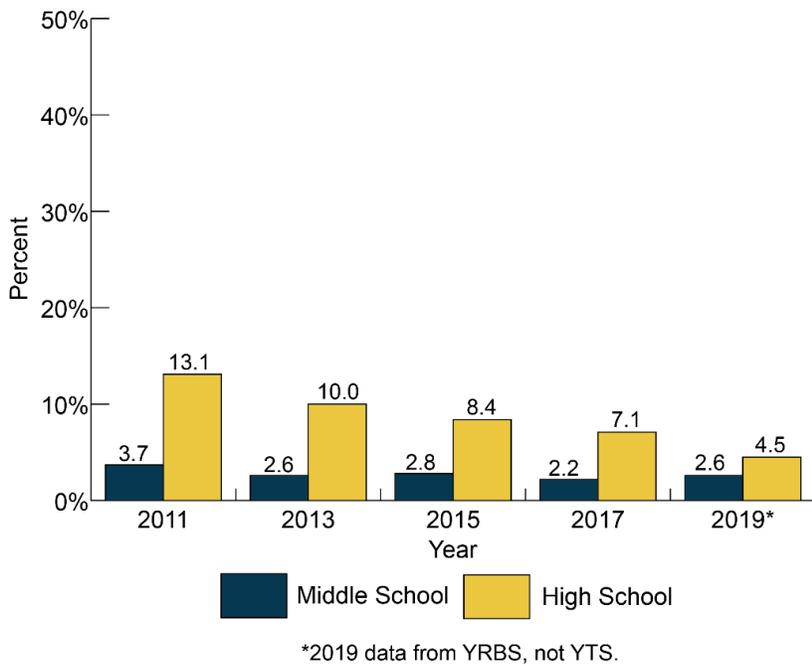
- North Dakota high school students were nearly 3 times more likely to use smokeless tobacco than North Dakota middle school students between the years 2014 and 2017 (YTS, 2019). However, both middle school and high school student smokeless tobacco rates have declined from 2011 until 2019 (YTS, 2019; see Figure 2.15).

Figure 2.14: Percentage of Students who Ever Used Smokeless Tobacco, ND, by Grade, 2019



Data Source: YTS

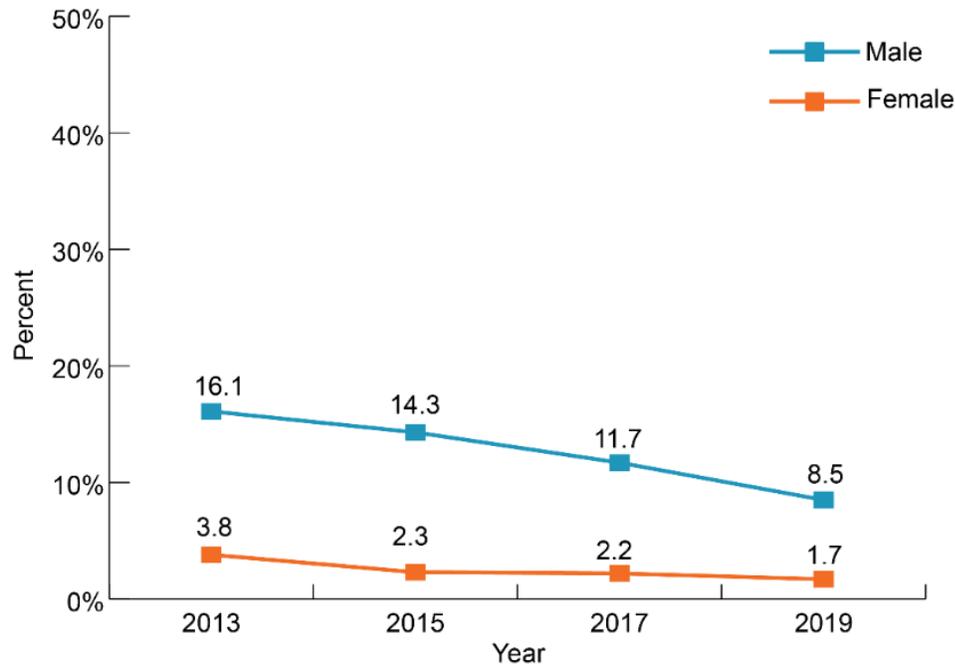
Figure 2.15: Percentage of Current Smokeless Tobacco Use, ND, Middle vs. High School Students, by Year



Data Source: YTS & YRBS

- Females have been far less likely to use smokeless tobacco consistently between 2013 and 2019 (YTS, 2019; see Figure 2.16).

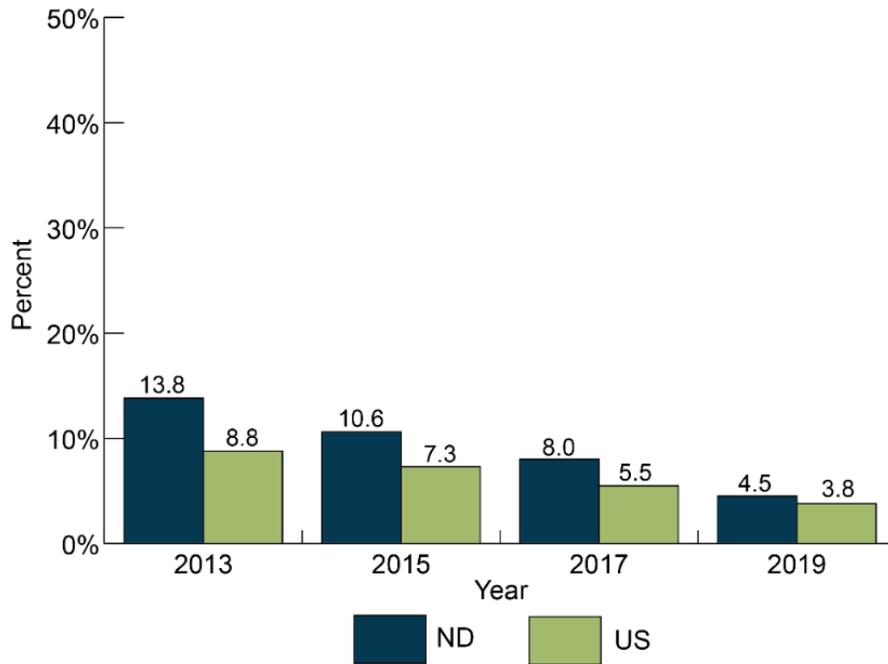
Figure 2.16: Percentage of Current Smokeless Tobacco Use (at least one day during the month), High School Students, by Gender, by Year



Data Source: YTS

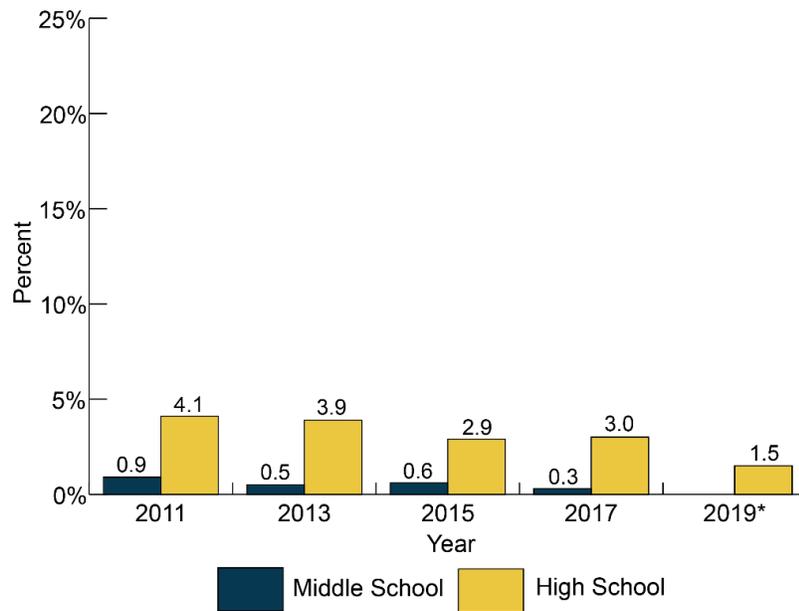
- A higher percentage of North Dakota high school students currently used smokeless tobacco when compared to high school students nationally between the years 2013 and 2019 (YRBS, 2019; see Figure 2.17).
- North Dakota high school students reported decreased current smokeless tobacco use in 2019 (4.5%) compared to rates in 2013 (13.8%; YRBS, 2019; see Figure 2.17).

Figure 2.17: Percentage of Current Smokeless Tobacco Use (at least one day during the Month), High School Students, ND vs. U.S., by Year



Data Source: YRBS

Figure 2.18: Percentage of Frequent Smokeless Tobacco Use, Middle vs. High School Students, ND, by Year

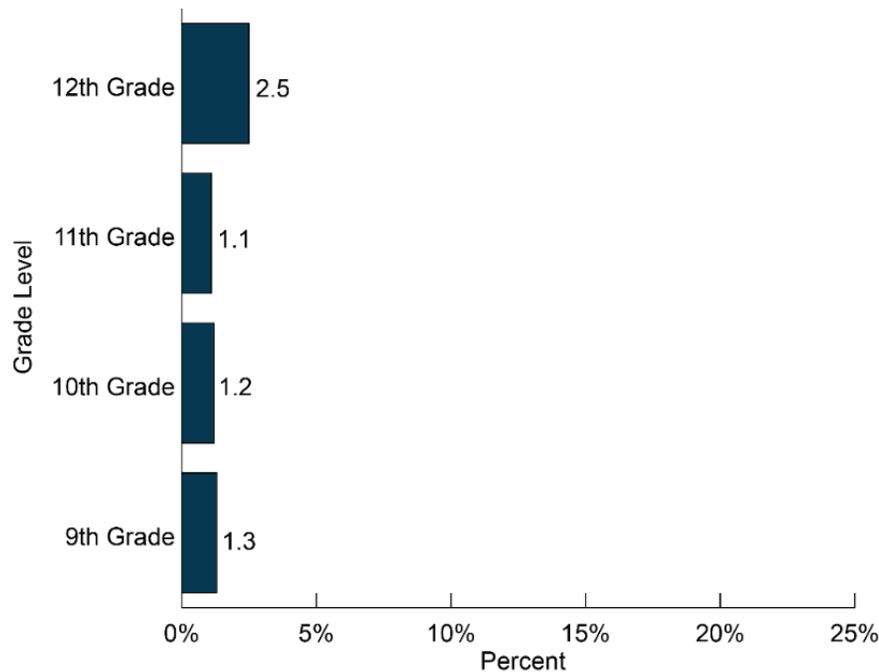


*2019 YTS data did not include Middle School students.

Data Source: YTS

- As North Dakota students advanced to higher grades, they were more likely to engage in frequent smokeless tobacco use (YTS, 2019; see Figure 2.19).

Figure 2.19: Percentage of Frequent Smokeless Tobacco Use among Students, ND, by Grade Level, 2019



Data Source: YTS

Youth Electronic Vapor Products

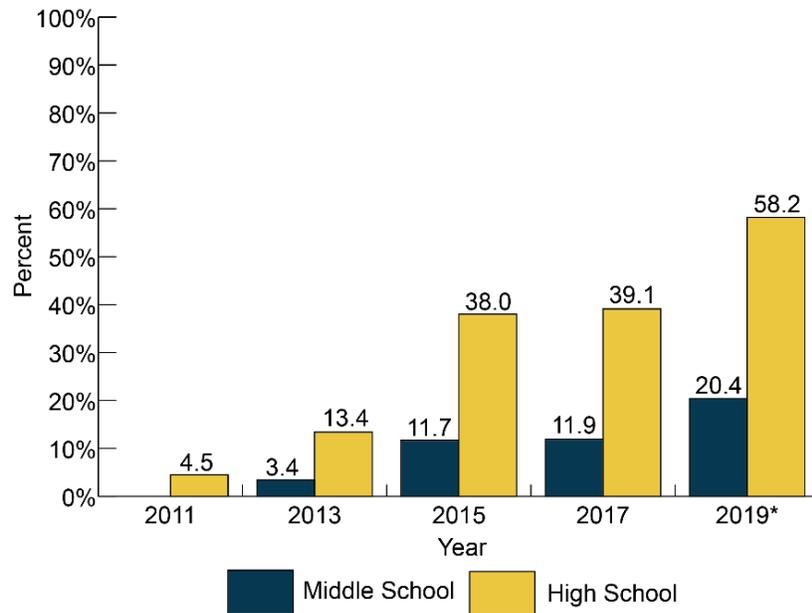
About the Indicator

Although cigarette smoking and smokeless tobacco use rates in the United States have been declining, the use of electronic vapor products among youth has been on the rise. Electronic vapor products, which has many names, e-cigs, vapes, vape pens, mods, hookah pens, etc., have been the most commonly used tobacco product among youths nationally since 2014 (CDC, 2019). Among U.S. high school students, nonlinear increases were observed in e-cigarette use in the past 30 days from 2011 to 2019 (1.5% to 27.5%; CDC, 2019). Multiple data sources show a steady increase in use of electronic vapor products among North Dakota youth (YTS, 2019; YRBS, 2019).

Section Summary

- North Dakota high school students were more likely to have ever used electronic vapor products compared to North Dakota middle school students between the years 2011 and 2019 (YTS, 2017; YRBS, 2019; see Figure 2.20).

Figure 2.20: Percentage who Ever Used Electronic Vapor Product Middle School vs. High School, ND, by Year

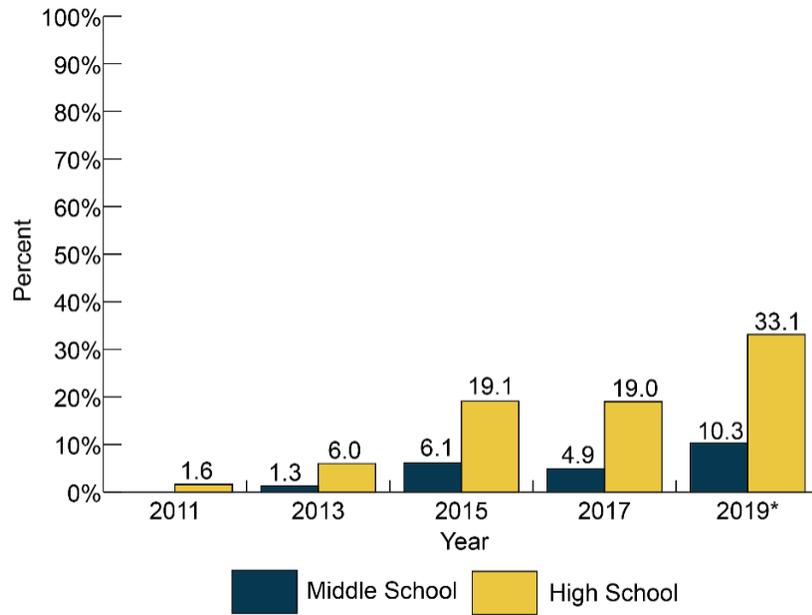


*2019 data from YRBS, not YTS.

Data Source: YTS & YRBS

Data Note: ND YTS did not ask about electric vapor product use in 2011 survey of middle school students and did not survey middle school students in 2019.

Figure 2.21: Percentage of Current Electronic Vapor Product Use, Middle School vs. High School, ND, by Year



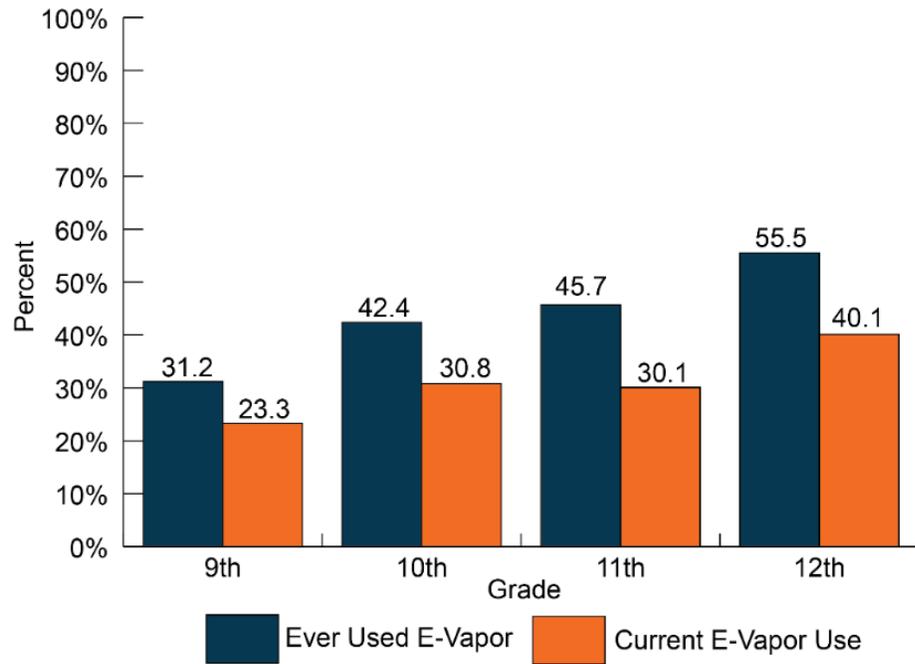
*2019 data from YRBS, not YTS.

Data Source: YTS & YRBS

Data Note: ND YTS did not ask about electric vapor product use in 2011 survey of middle school students and did not survey middle school students in 2019.

- Forty percent of North Dakota high school students reported currently using electronic vapor products by the time they are in 12th grade (YTS, 2019; see Figure 2.22).
- By 12th grade, over 50% of North Dakota high school students have used an electronic vapor product (YTS, 2019; see Figure 2.22).

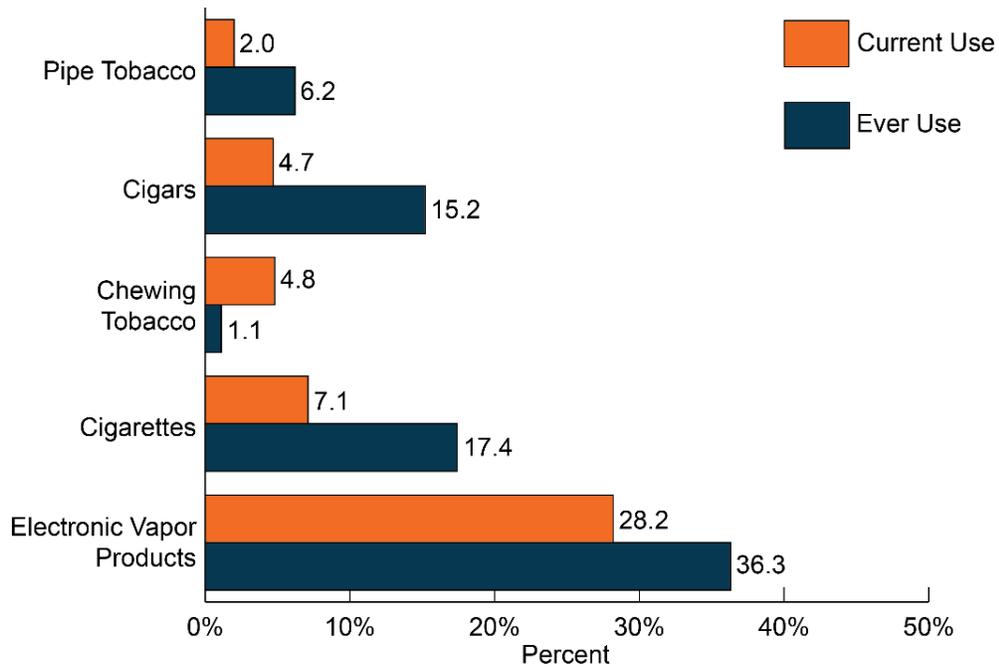
Figure 2.22: Percentage of Electronic Vapor Product Use, High School Students, ND by Grade, 2019



Data Source: YTS

- In 2019, electronic vapor products were the most commonly tried and currently used tobacco product among North Dakota high school students (YTS, 2019; see Figure 2.23).

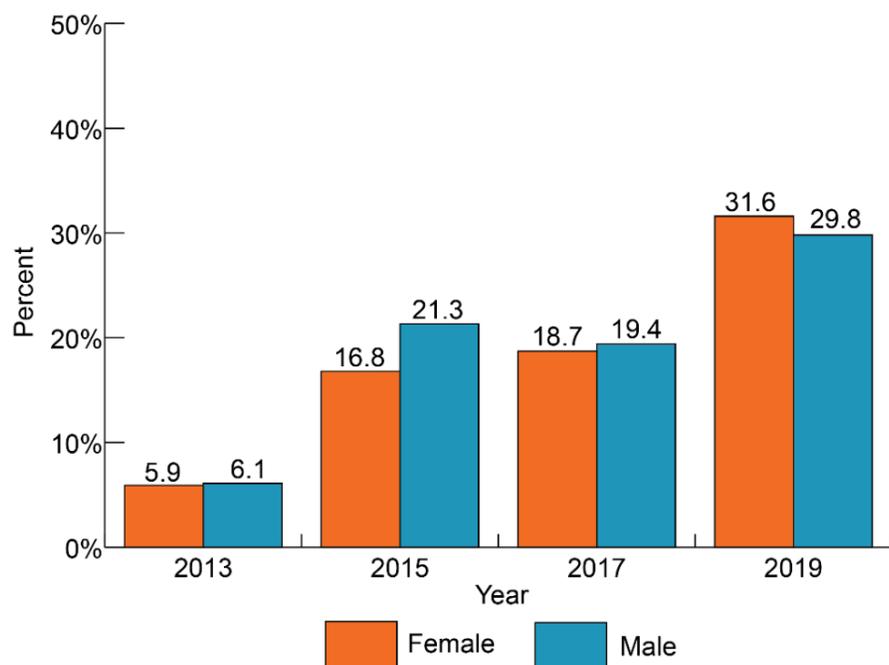
Figure 2.23: Percentage of Tobacco Product Use, High School Students, ND, 2019



Data Source: YTS

- Both males and females reported increased electronic vapor use from 2013 to 2019, with substantial increases from 2017 to 2019 (YTS, 2019; see Figure 2.24).

Figure 2.24: Percentage of Current Electronic Vapor Product Use, High School Students, ND, by Gender, by Year



Data Source: YTS

Data Note: Question wording changed between 2013 and 2015.

Adult Electronic Vapor Products

About the Indicator

Electronic vapor products have transformed the tobacco use landscape. E-cigarettes, have quickly become one of the primary tobacco products among U.S. adults. As of 2018, 8.1 million Americans reported current e-cigarette use. At 3.2% of the U.S. adult population, e-cigarette use is ahead of smokeless tobacco: e.g., snus, chew, dip (2.4%), and pipe tobacco use (1.0%; (CDC, 2019). Recently, there have been numerous cases of a lung disease/injury related to electronic vapor products. The CDC and FDA are investigating the potential cause(s) and have labeled this the electronic vapor product use-associated lung injury (EVALI; CDC, 2020). The federal government has also recently raised the minimum age of sale for tobacco products from 18 to 21 years of age, with the President signing the legislation on December 20th, 2019 (FDA, 2020).

Many cigarette users have reported using electronic vapor products to help curb cigarette appetites or quit cigarette smoking altogether (N Engl J Med., 2019). Some research suggests that e-cigarettes might be less harmful than cigarettes when individuals who regularly smoke switch to them as a complete replacement (Curr Opin Pulm Med., 2017). While regular cigarettes contain more than 7,000 chemicals when smoked, many of them toxic, e-cigarettes most likely contain fewer chemicals, though the complete contents remain unknown (John

Hopkins, 2019). Both cigarettes and e-cigarettes contain nicotine; however, e-cigarettes can contain more nicotine than other tobacco products. In 2017, it was estimated that 9 in 10 adult current cigarette smokers were using e-cigarettes in addition to cigarettes (CDC, 2018). Though electronic cigarettes are marketed as a tool to help quit, the Food and Drug Administration has yet to approve them as cessation devices (Johns Hopkins, 2019).

Section Summary

- In 2018, rates for e-cigarette use among adults in North Dakota were similar to national rates (BRFSS, 2018).
- The percentage of North Dakota adults using e-cigarettes, both male and female, has increased from 2016 to 2017 (BRFSS, 2017).
- Current electronic vapor product rates among adults aged 18-24 increased by 40.2% (from 8.7% to 12.2%) from 2016 to 2017 (BRFSS, 2017).

Tobacco Use among Pregnant Women

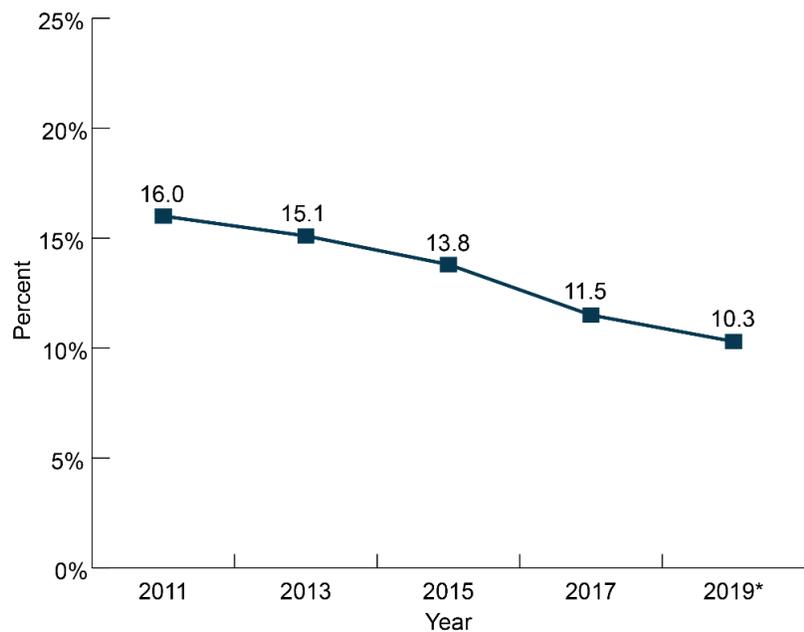
About the Indicator

Smoking during and after pregnancy may increase the risk of health problems for developing babies. Some known effects of smoking while pregnant include increased risk of preterm birth, low birth weight, and neurological and lung defects. In addition, the risk of Sudden Infant Death Syndrome (SIDS), asthma, colic, and childhood obesity are greater for children born to a mother who smoked during pregnancy (CDC, 2016; Obstet Gynecol., 2017).

Section Summary

- In North Dakota, the percentage of women who reported tobacco use during pregnancy decreased from 2011 to 2019 (North Dakota Department of Health, Tobacco Prevention and Control, 2019; see Figure 2.25).

Figure 2.25: Percentage of Women Using Tobacco Products during Pregnancy (First Trimester), Adults, ND



*2019 Question changed from “using tobacco products” to “smoking cigarettes”.

Data Source: NDDOH, Tobacco Prevention and Control: Tobacco Surveillance Data

Tobacco and Nicotine in North Dakota: Consequences

Diseases

About the Indicator

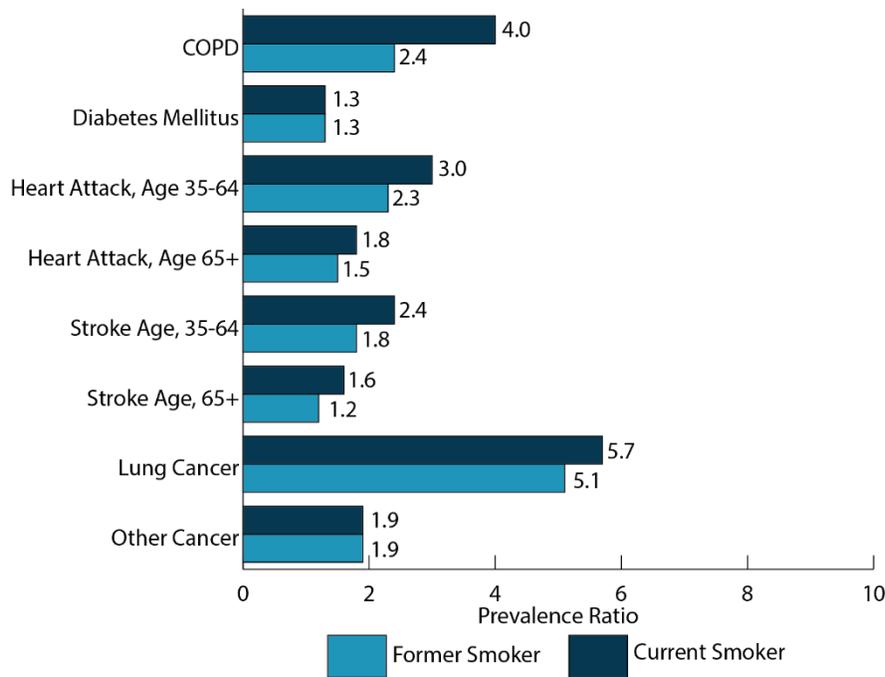
The U.S. Department of Health and Human Services reports that in 2014, over 16 million Americans live with smoking-related health problems, such as emphysema, bronchitis, heart disease, pregnancy-related problems, among others. Cigarette smoking is linked to about 90% of lung cancer deaths (CDC, 2010). Smokers today, though smoking fewer cigarettes than those 50 years ago, are much more likely to develop lung cancer. Research suggests that this increased risk may be due to changes in cigarette filters and the increase of, or changes to the chemical makeup of cigarettes (HHS, 2014).

Section Summary

- Prevalence ratios (prevalence of disease among nonsmokers compared to former and current smokers, where nonsmokers are the control) for both current and former smokers in the United States were higher than those who had never smoked for all those surveyed between 2006 and 2012 (JAMA, 2014; see Figures 2.26, 2.27).
- Lung cancer prevalence ratios (prevalence of disease among nonsmokers compared to former and current smokers, where nonsmokers are the control) were notably higher for

both current (men: 5.7, women: 4.5) and former (men: 5.1, women: 9.4) smokers than nonsmokers surveyed between 2006 and 2012 (JAMA, 2014; see Figures 2.26, 2.27).

Figure 2.26: Adjusted Prevalence Ratios of Smoking- Attributable Diseases by Smoking Status, Males, U.S., 2006-2012

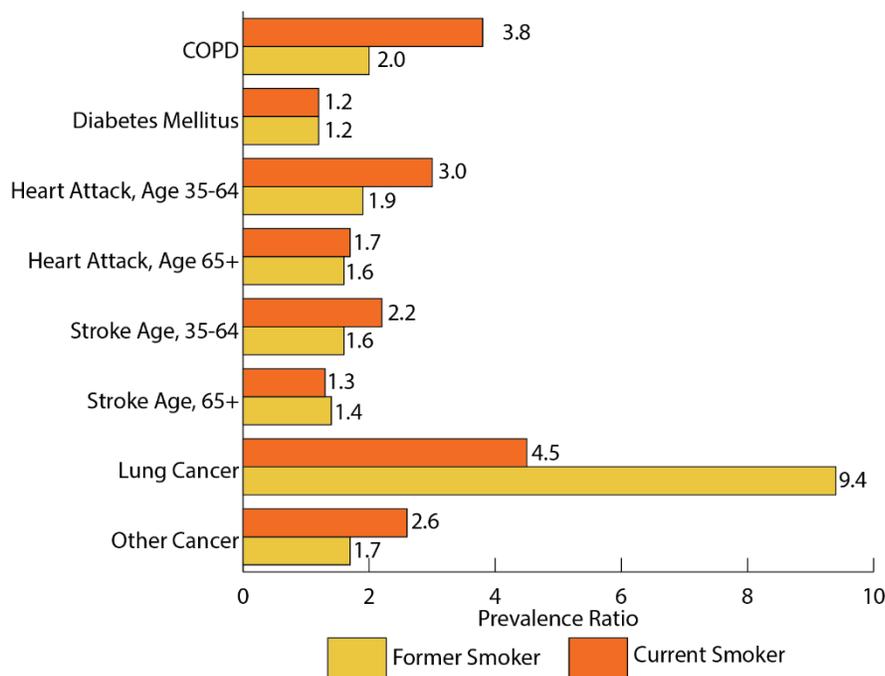


Data Source: NHIS, Adaptation by JAMA

Data Note: Abbreviation chronic obstructive pulmonary disease (COPD).

Data Note: Other cancers include: bladder, cervix, colon/rectum, kidney, larynx/mouth/tongue/lip/throat/pharynx, and stomach.

Figure 2.27: Adjusted Prevalence Ratios of Smoking- Attributable Diseases by Smoking Status, Females, U.S., 2006-2012



Data Source: NHIS, adaptation by JAMA

Data Note: Abbreviation chronic obstructive pulmonary disease (COPD).

Data Note: Other cancers include: bladder, cervix, colon/rectum, kidney, larynx/mouth/tongue/lip/throat/pharynx, and stomach.

- North Dakota spent approximately \$756 per capita on smoking-related medical expenditures and productivity loss costs each year (North Dakota Department of Health, Tobacco Prevention and Control; see Table 2.3).

Table 2.3: Total and Annual Smoking – Attributable Economic Impact, North Dakota, 2018

| Smoking- Attributable Economic Impact in North Dakota | | | |
|---|-----------------------------|--------------------|------------------------------------|
| | Direct Medical Expenditures | Productivity Costs | Smoking Attributable Medicaid Cost |
| Total | \$326,000,000 | \$232,600,000 | \$56,900,000 |
| Annual Cost Per Capita | \$441 | \$315 | \$77 |

Data Source: North Dakota Department of Health, Tobacco Prevention and Control, Campaign for Tobacco-Free Kids, U.S. Census Bureau

Data Note: Annual average productivity costs from 2000-2004 were updated to match the 2009 dollar.

Tobacco - Attributed Deaths

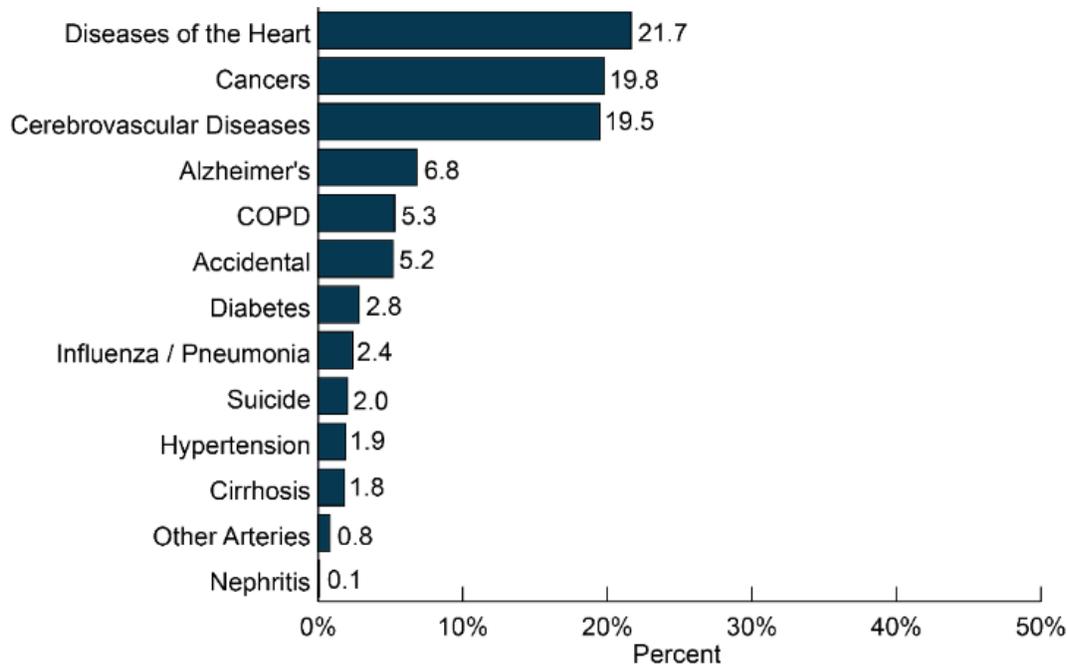
About the Indicator

The U.S Department of Health and Human Services (2014) indicates that tobacco is the principal source of preventable illness and death in the United States, resulting in one out of every 5 deaths or over 480,000 deaths every year. Many people who had Chronic Obstructive Pulmonary Disease (COPD) were smokers, and almost 8 out of 10 deaths from COPD were a result of smoking. In addition to COPD, lung cancer is the leading cause of cancer death among both men (90%) and women (80%) in the United States (HHS, 2014).

Section Summary

- Over 40% of deaths in North Dakota in 2019 were due to cancer or a disease of the heart (ND Vital Records, 2019; see Figure 2.28)

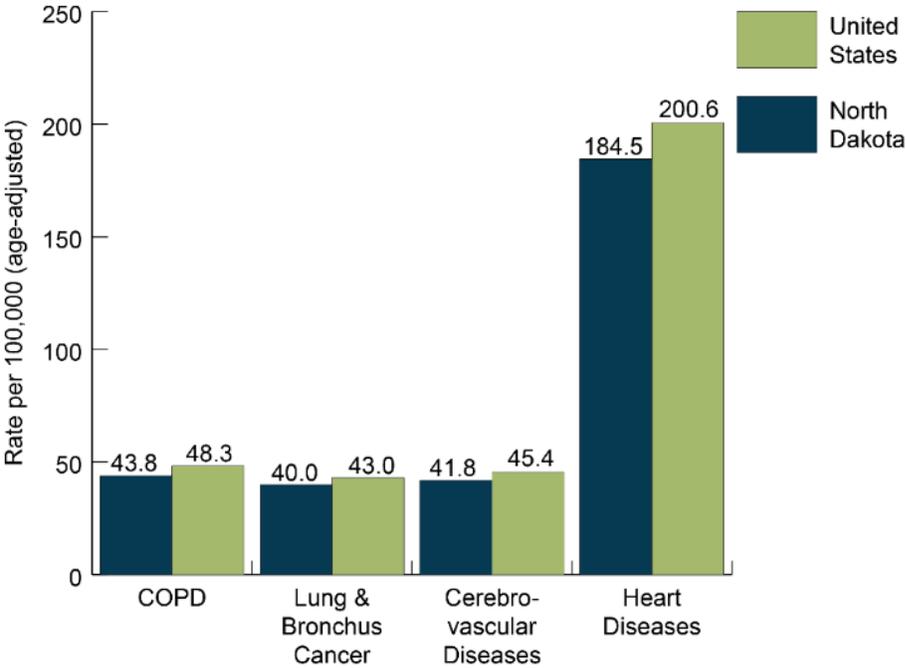
Figure 2.28: Percentage Cause of Death, All Deaths, ND, 2019



Data Source: ND Vital Records

- In 2019, North Dakota reported lower COPD, lung and bronchus cancer, cerebrovascular diseases, and heart disease mortality rates than the United States (CDC Wonder, 2019; see Figure 2.29).

Figure 2.29: COPD, Heart Disease, Cerebrovascular Disease, Lung and Bronchus Cancer Mortality Rates per 100,000, ND vs. U.S., 2019



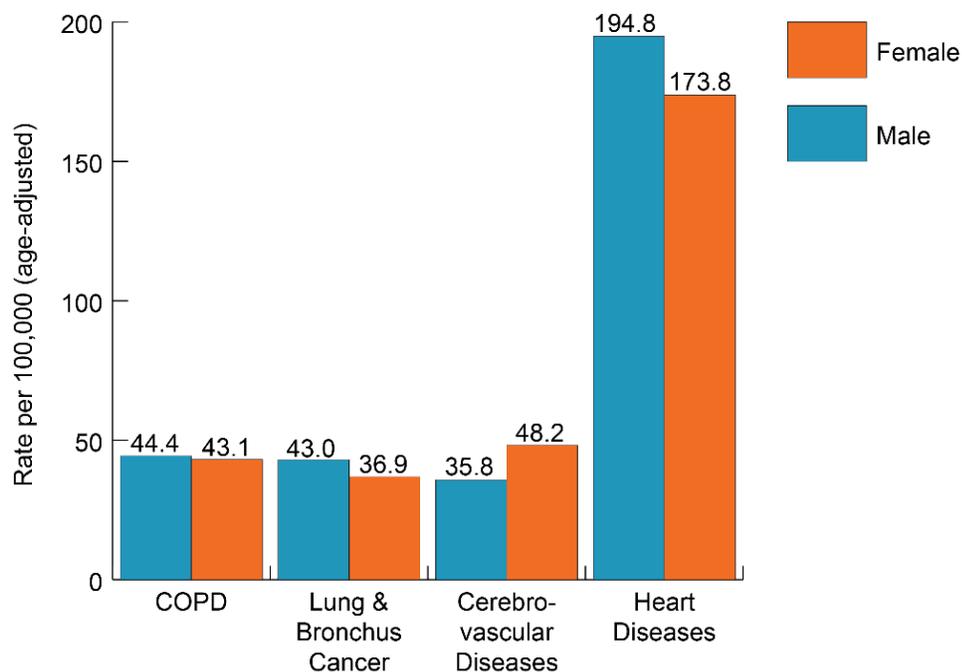
Data Source: CDC Wonder

Data Note 1: ICD-10 codes used: Diseases of the heart: I00-I109, I11, I13, I20-I51; Cerebrovascular disease: I60-I69; Lung and Bronchus Cancer: C34.0-C34.3, C34.8-C34.9; COPD: J40-J47.

Data Note 2: This graph previously showed multiple years; however, the data was stable and therefore only the most recent data is shown.

- The rate of deaths reported for COPD, lung and bronchus cancer, cerebrovascular diseases, and heart disease have remained stable over the last several years (CDC Wonder, 2019).
- North Dakota males have consistently reported greater COPD, lung and bronchus cancer, and heart disease mortality rates than females (CDC Wonder, 2019; see Figure 2.30).

Figure 2.30: COPD, Heart Disease, Cerebrovascular Disease, Lung and Bronchus Cancer Mortality Rates per 100,000, ND vs. U.S., by Gender, 2019



Data Source: CDC Wonder

Data Note 1: ICD-10 codes used: Diseases of the heart: I00-I109, I11, I13, I20-I51; Cerebrovascular disease: I60-I69; Lung and Bronchus Cancer: C34.0-C34.3, C34.8-C34.9; COPD: J40-J47.

Data Note 2: This graph previously showed multiple years; however, the data was stable and therefore only the most recent data is shown.

Tobacco and Nicotine in North Dakota: Modifiable Risks

Youth Cessation/Quit Attempts

About the Indicator

Tobacco use can lead to nicotine dependence. The Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) criteria for substance use disorders states, “Dependence is a maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period.” The maladaptive patterns included: “tolerance, withdrawal, using larger amount of the substance over a longer time period, desire to cut, curb, or quit use, large amounts of time spent

to obtain substance, and a reduction or total abandonment of social, occupational or recreational activities because of the substance abuse” (DSM-5, 2013).

Coupled with addiction, tobacco, and other substances found in tobacco products, have toxic effects that can lead to increased risk of serious health problems. Quitting smoking can dramatically reduce the likelihood of developing blood clots, high cholesterol, poor oral health, lung and bronchus cancer, and other smoking-related diseases (HHS, 2014). In 2019, 25.5% of 12th grade students reported vaping nicotine at least once in the past month (MFT, 2019). Nicotine dependence is an addiction that often requires repeated cessation attempts, but there are helpful resources for managing withdrawals and quitting altogether. Smokers can and are able to quit smoking. In the United States, there are more former smokers compared to current smokers (HHS, 2014).

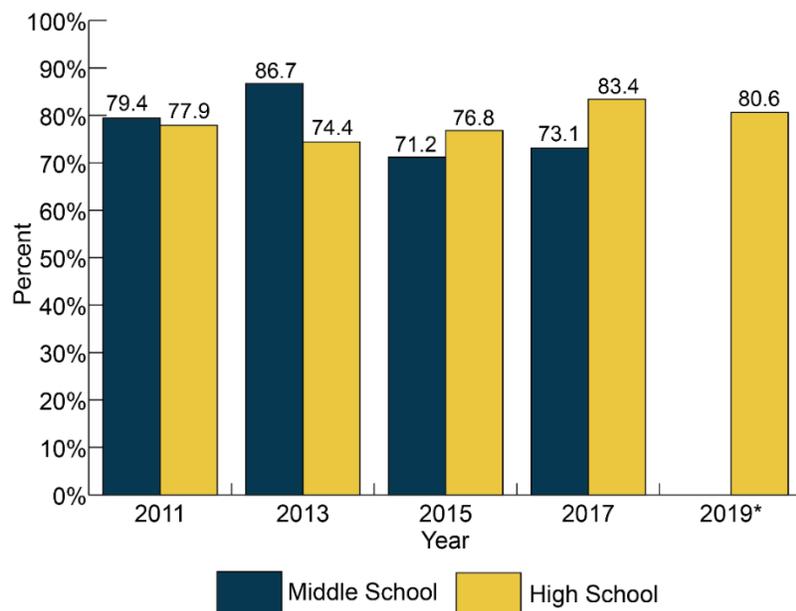
Current smoker: Those who smoked tobacco on 1 or more days of the past 30 days.

Frequent smoker: Those who smoked tobacco on 20 or more days out of the past 30 days.

Section Summary

- The percentage of *current* high school smokers who believed they could quit if they wanted has remained very stable, around 80%, over the last several years (YTS, 2019; see Figure 2.31).

Figure 2.31: Perception held by *Current* Smokers that they Would be Able to Quit, Middle vs. High School Students, ND, by Year

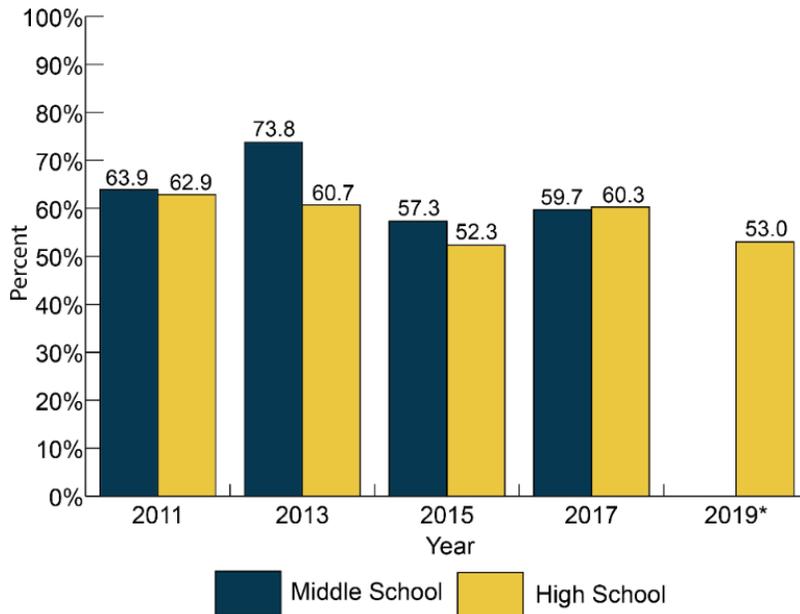


*2019 YTS data did not include Middle School students.

Data Source: YTS

- More than 50% of *frequent* high school smokers believed they could quit over the last several years (YTS, 2019; see Figure 2.32).

Figure 2.32: Perception that *Frequent* Smokers Would be Able to Quit, Middle vs. High School Students, ND, by Year

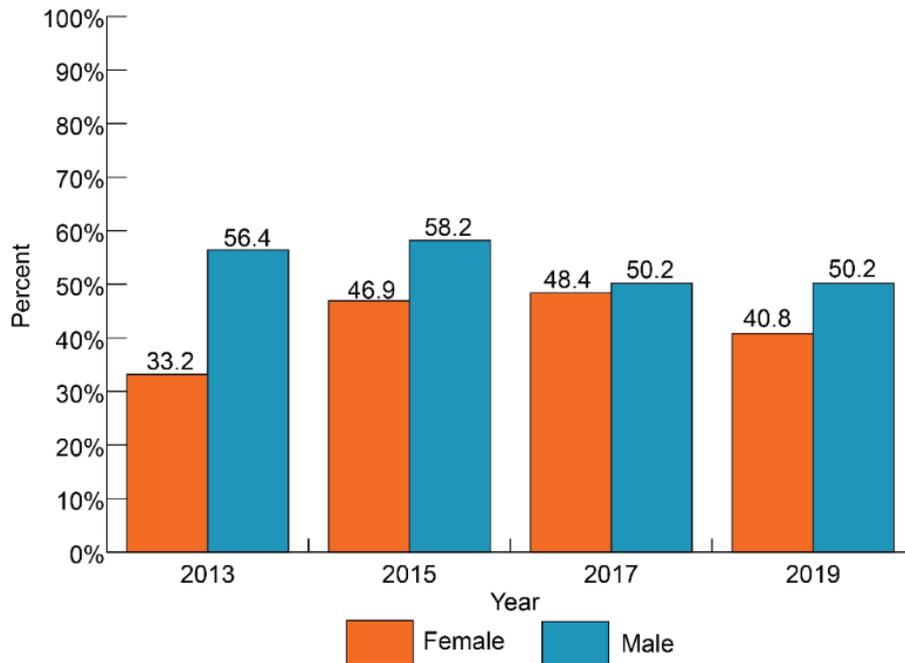


*2019 YTS data did not include Middle School students.

Data Source: YTS

- Between 2013 and 2019, a greater percentage of North Dakota female high school students attempted to quit smoking compared their male counterparts (YRBS, 2019; see Figure 2.33).

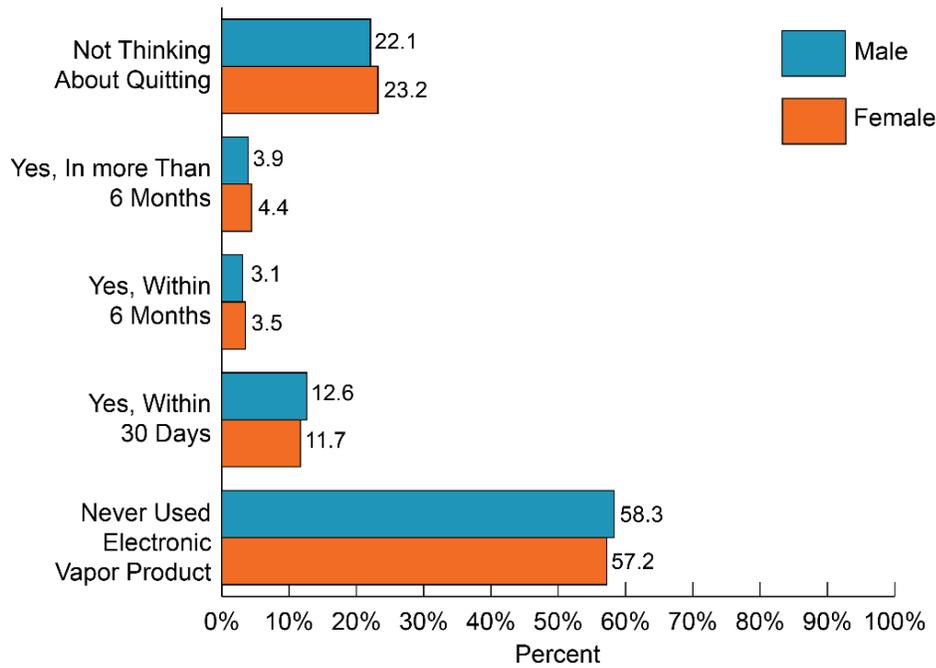
Figure 2.33: Percentage of *Current* Smokers Who Did Not Try to Quit Smoking Cigarettes in the Past Year, High School Students, ND, by Gender



Data Source: YRBS

- The percentage of *current* smokers who want to quit among middle and high school students decreased slightly from 2011 (MS = 51.3%, HS = 51.5%) to 2017 (MS = 44.1%, HS = 45.7%). In 2019, North Dakota did not collect middle school data from the YTS; but the percentage of high school students continued to decline (HS = 40.2%; YTS, 2019).
- Less than 35% of males and females who use electronic vaping products were considering quitting (YTS, 2019; see Figure 2.34).

Figure 2.34: Timeframe for Quitting Electronic Vapor Products, High School Students, ND, by Gender, 2019



Data Source: YTS

Adult Cessation/Quit Attempts

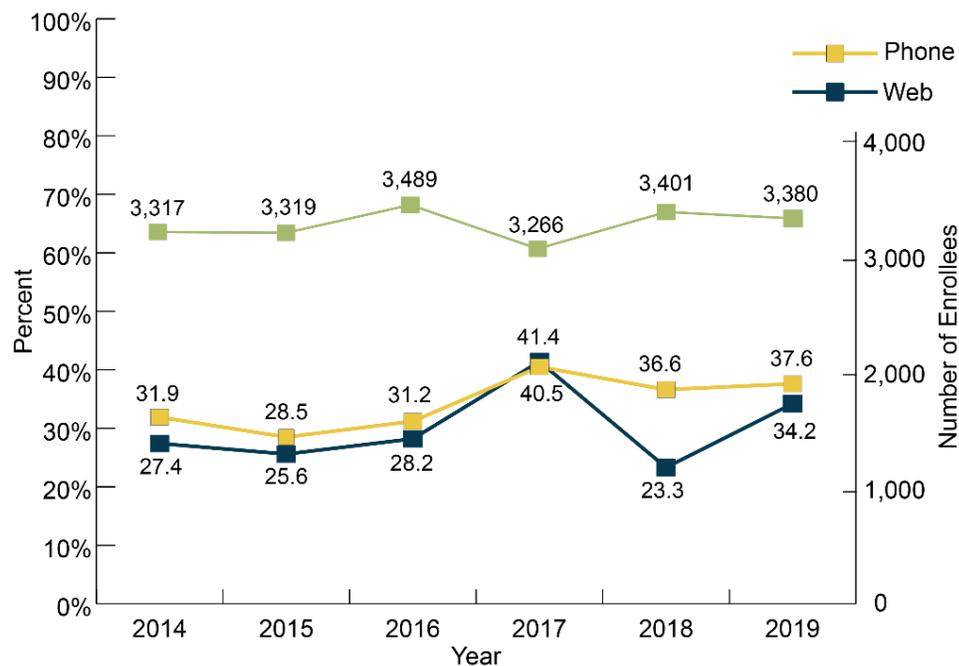
About the Indicator

Quitting smoking helps to reduce the risk of developing smoking-related diseases and early death. Nicotine dependence is a condition that often requires repeated treatments, but effective treatments and resources for quitting are available. Smokers do succeed in quitting smoking; today, there are more former than current smokers (CDC, 2014). Most current U.S. adult cigarette smokers (68.0%) reported in 2015 that they wanted to quit altogether (CDC, 2017).

Section Summary

- The majority of North Dakota adults (~66%) held the perception that peer tobacco use was a moderate or serious problem within their community; regardless of whether they were located in a frontier, rural, or urban environment (ND CRS, 2019).
- The percentages of North Dakotan current smokers who have tried to quit has remained stable from 2015 (females = 57.5%, males = 54.5%) until 2019 (females = 58.4%, males = 52.1%; BRFSS, 2019).
- The percentage of currently smoking adults who attempted to quit in North Dakota varies by age, with 25- to 34-year-olds having the highest percentage (22.9%) decreasing across the lifespan to the lowest among those 65 years old and older (11.4%; BRFSS, 2019).
- North Dakota Department of Health, Tobacco Prevention and Control (2019) reported no consistent trend in the number of enrollees in the tobacco cessation program, NDQuits, from 2014 to 2019 (NDDOH Tobacco Prev., 2019; see Figure 2.35).
- The CDC sets a benchmark of 2.1 for percent of reach for the NDQuits program in North Dakota. The NDQuits program has consistently underperformed with stable percentages from 2015 (1.6%) to 2019 (1.2%). However, these rates are similar to rates reported by other states (NDDOH Tobacco Prev., 2019).

Figure 2.35: Percentage Who Successfully Quit Using Tobacco, Web vs. Phone Program and NDQuits Total Enrollees, ND



Data Source: North Dakota Department of Health, Tobacco Prevention and Control

Data Note 1: Quit rate criteria is defined as: report no use of cigarettes seven months after program or no reported use of other forms of tobacco in the past 30 days.

Data Note 2: Respondents to the NDQuits Follow-up Survey in 2017 were more likely to exhibit behaviors associated with greater levels of quitting (e.g., older, higher level of education, be insured) and could show an upward bias compared to all program participants.

Health and Professional Inquiry

About the Indicator

Chronic disease and nicotine dependence have many similar symptoms and outcomes. Very rarely will an initial attempt to quit using tobacco result in successful permanent cessation (CDC, 2006). The majority of individuals will cycle through relapse and remission for many years. Having physicians counsel patients on the considerable health benefits of smoking cessation can provide support, education, and encouragement patients need when trying to achieve nicotine abstinence (Am. Fam. Physician, 2012).

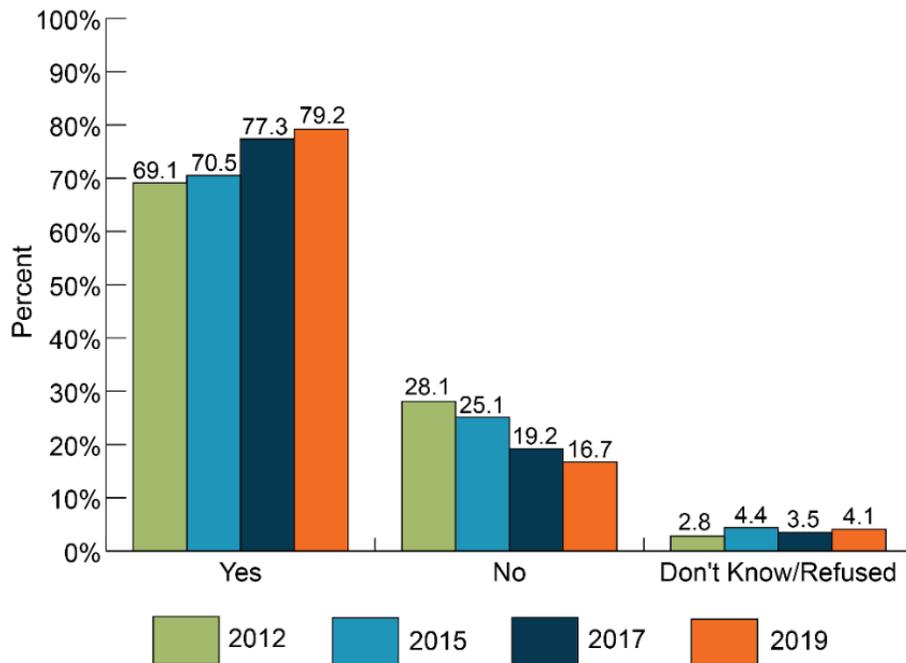
Section Summary

- From 2011 to 2017, the percentage of North Dakota middle school students who reported that a health care provider inquired about personal tobacco use in the past year doubled (21.7% to 44.2%; YTS, 2017). Middle school students were not included in the North Dakota

YTS in 2019. Among high school students, 61.8% of students who saw a doctor, dentist, or nurse reported an inquiry regarding tobacco use by the healthcare provider (YTS, 2019).

- The percentage of North Dakota middle school students who reported that a doctor, dentist, or nurse had advised them not to use tobacco increased from 2011 to 2017 (YTS, 2017). The percentage of North Dakota high school students who reported a healthcare worker advised them not to use tobacco has increased from 2011 to 2019, 31.1% to 44.1% (YTS, 2019).
- From 2012 to 2019, an increasing percentage (69.1% to 79.2%) of North Dakota adults reported that a doctor, dentist, or other health professional inquired about their use of cigarettes or tobacco products (ATS, 2019; see Figure 2.36).

Figure 2.36: Percentage of Adults (18+) who Reported a Health Professional Asked about Cigarettes or Tobacco Use in the Past Year, ND, by Year



Data Source: ATS

Source of Tobacco for Youth

About the Indicator

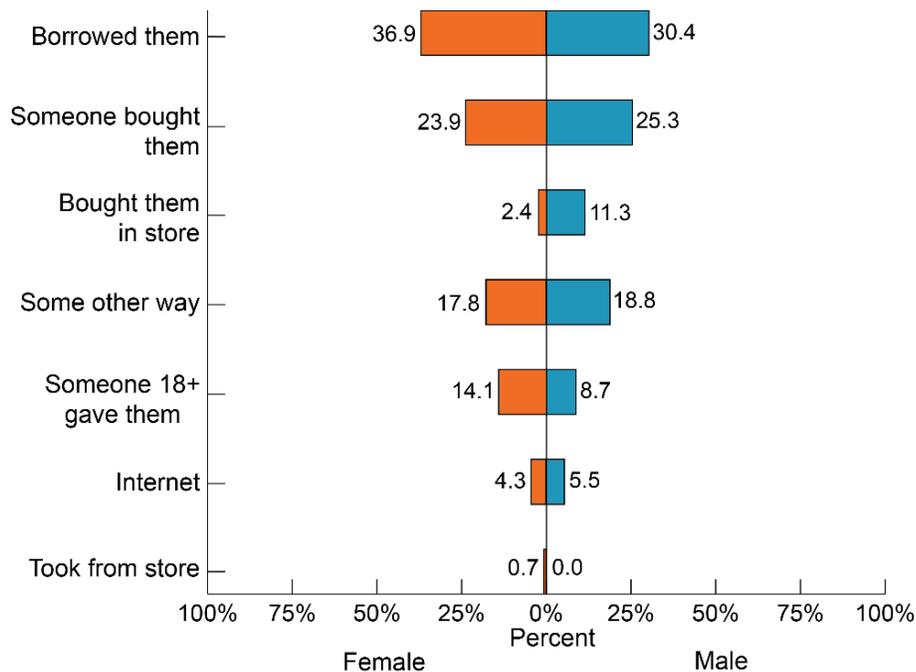
According to the 2019 Monitoring the Future Survey, about 41% of eighth graders, more than half of tenth graders, and about 73% of twelfth graders found it easy to get cigarettes if they wanted them (MTF, 2019). The study reported that about 45% of eighth graders, 66% of tenth graders, and 82% of twelfth graders thought it was easy to get a vaping device if they wanted it. Knowing where youth are getting tobacco products may be just as important as youth tobacco use itself. Youth smokers obtained cigarettes most regularly from retail stores or gas stations

where they purchase them directly, or from a familiar source, such as a friend or acquaintance; although, this can vary from community to community (YTS, 2019).

Section Summary

- Most high school students, in North Dakota and nationally, obtained their electronic vapor products from someone who bought them for the student or lent them to the student (YTS, 2019).
- A larger percentage of male students (11.3%), under age 18, reported buying electronic vapor products in a store compared to female students (2.4%) in North Dakota. North Dakota students were most likely to obtain electronic vapor products from someone who bought or lent them to the students (YTS, 2019; see Figure 2.37).

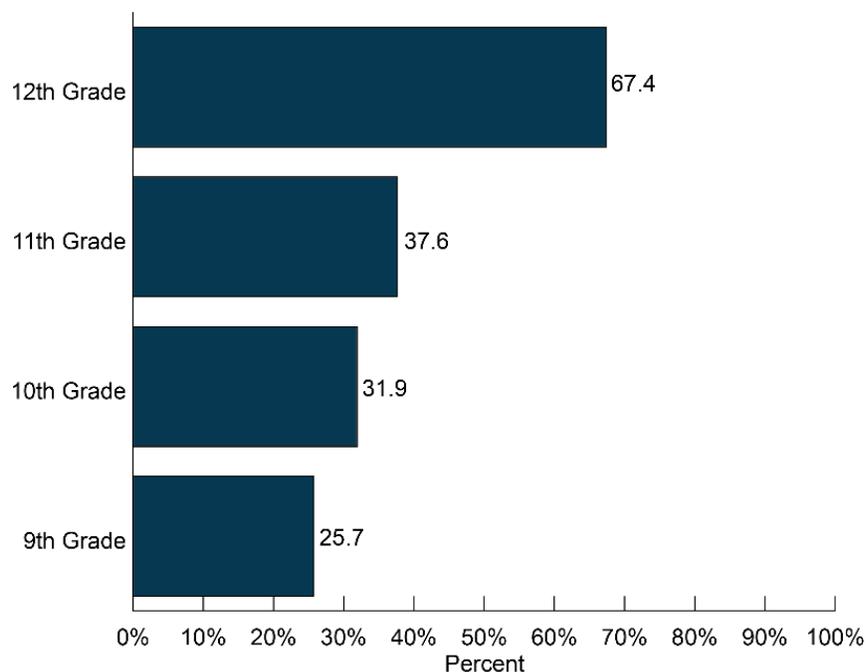
Figure 2.37: Percentage of Students' Source for Electronic Vapor Products, High School Students, ND, by Gender, 2019



Data Source: YTS

- In 2019, the percentage of North Dakota students who thought it was very easy to obtain tobacco products increased with grade level, peaking with 67.4% in 12th grade (YTS, 2019; see Figure 2.38).

Figure 2.38: Percentage of Students who Thought it was Very Easy to Obtain Tobacco Products, ND, by Grade Level, 2019



Data Source: YTS

Cigarettes Sold and Tax Rate

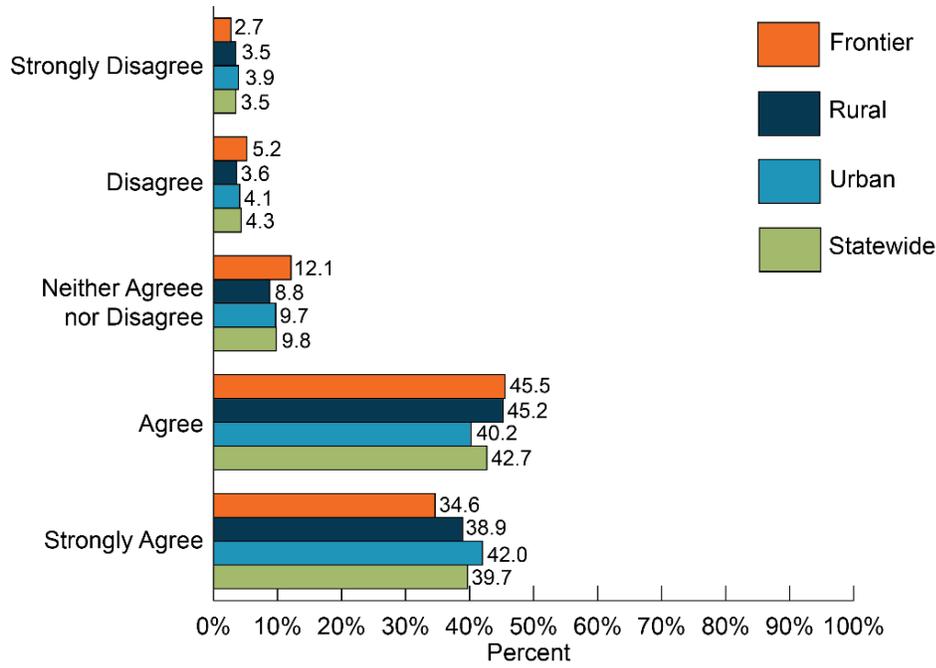
About the Indicator

The number of cigarettes sold in 2017 (249 billion) in the United States showed a 3.5% decrease from 258 billion sold in 2016 (CDC, 2018). In North Dakota, cigarettes are subject to an excise tax in addition to sales tax. The current excise tax, set in 1993, equates to \$0.44 for a 20 pack of cigarettes or \$0.55 for a package of 25 (ND Officer of State Tax Commissioner, 2019).

Section Summary

- Statewide perceptions on increasing the tobacco tax are generally agreeable with 66.8% responding with either agree or strongly agree, 18.9% neither agreeing or disagreeing, and only 24.4% disagreeing or strongly disagreeing (ND CRS, 2019).
- In 2019, over 75% of adults in North Dakota agreed (agree or strongly agree) that e-cigarettes should be taxed the same as other tobacco products (ND CRS, 2019; see Figure 2.39).
- The number of cigarettes sold in North Dakota steadily declined from 2015 (11.0) to 2019 (8.9; in hundred million units; North Dakota Office of State Tax Commissioner, 2019).

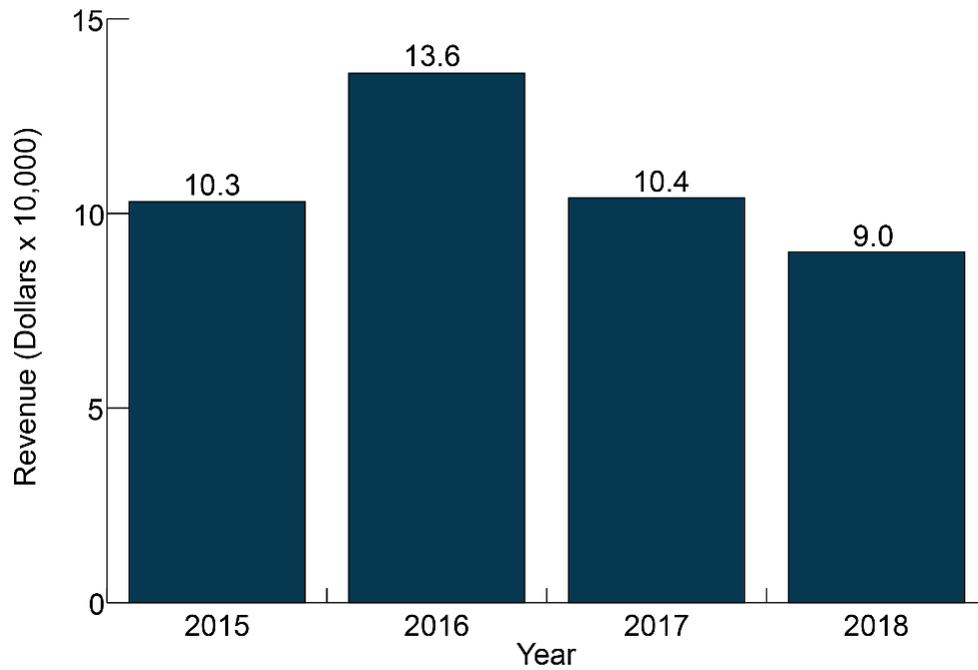
Figure 2.39: Perception that E-Cigarettes Should be Taxed the Same as Other Tobacco Products, ND, by Location*, 2019



Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

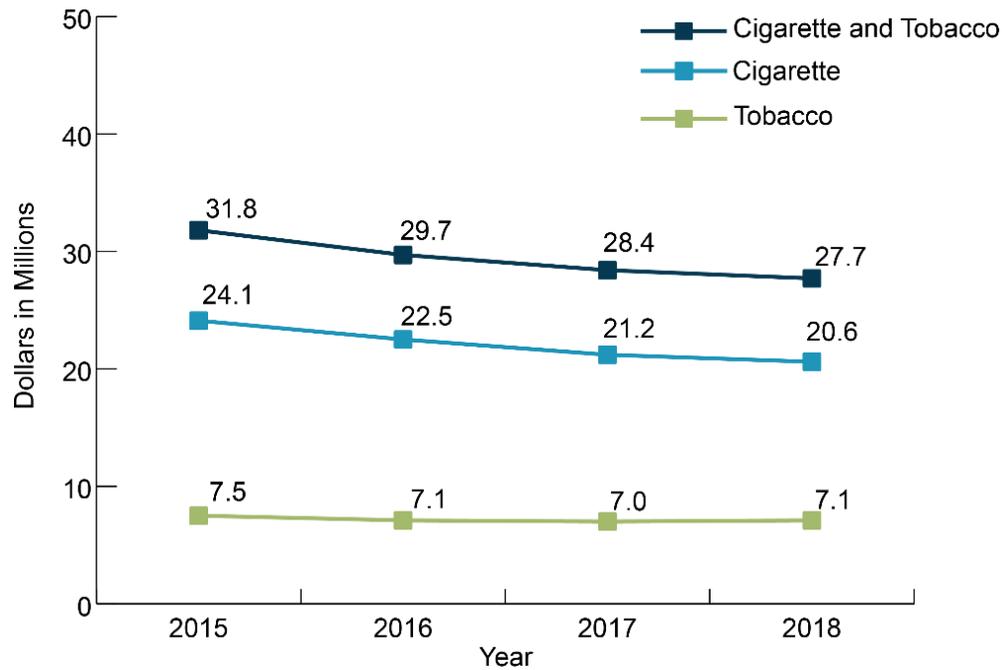
Figure 2.40: Tribal Tobacco Tax Revenue, ND, by Year



Data Source: North Dakota Office of State Tax Commissioner

- From 2015 to 2018, an overall decrease in tobacco, cigarette, and combined revenues was reported in North Dakota. However, from 2017 to 2018, tobacco revenue reported a marginal 0.1 percentage point increase. Overall, tobacco revenue has remained stable between 2015 and 2018 (North Dakota Office of State Tax Commissioner, 2018; see Figure 2.41).

Figure 2.41: Cigarette and Other Tobacco Product Revenue, ND, by Year



Data Source: North Dakota Office of State Tax Commissioner

- In 2020, North Dakota had the lowest excise tax rates on cigarettes (\$0.44 per pack) when compared to surrounding states and was less than one-third that of the national median (US \$1.74; FTA, 2020; see Table 2.4). North Dakota also had the lowest price per pack of cigarettes when compared to surrounding states and the national median (FTA, 2020; see Table 2.5).

Table 2.4: State Excise Tax Rates on Cigarettes, 2020

| State | Tax Rate (cents per pack) |
|--------------|---------------------------|
| North Dakota | 044 |
| South Dakota | 153 |
| Montana | 170 |
| Minnesota | 304 |
| U.S. Median | 174 |

Data Source: FTA

Table 2.5: States Average Retail Price per Pack (with all taxes), 2019

| State | Average Retail Price Per Pack |
|--------------|--------------------------------------|
| North Dakota | \$5.43 |
| South Dakota | \$6.69 |
| Montana | \$6.92 |
| Minnesota | \$9.13 |
| U.S. Median | \$6.79 |

Data Source: Orzechowski and Walker. Tax Burden on Tobacco.

Data Sources

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National Institute of Drug Abuse (NIH). Monitoring the Future (MTF): National Survey Results on Drug Use

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Orzechowski and Walker. Tax Burden on Tobacco (Data Set)

State of North Dakota Office of State Tax Commissioner, Cigarette and Tobacco Tax Collections Federation of Tax Administrators (FTA)

Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH)

The New England Journal of Medicine (N Engl J Med.). A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy

U.S. Department of Health and Human Services (HHS). Office of the Surgeon General: Health Consequences of Smoking, Surgeon General Fact Sheet

U.S. Department of Health and Human Services (HHS). The Health Consequences of Smoking-50 Years of Progress: A Report of the Surgeon General

Wyoming Survey & Analysis Center (WYSAC). North Dakota Community Readiness Survey (ND CRS)

Section 3. Illicit Drugs in North Dakota: Use, Consequences, and Modifiable Risks

Illicit Drugs in North Dakota: Use

Marijuana Use

About the Indicator

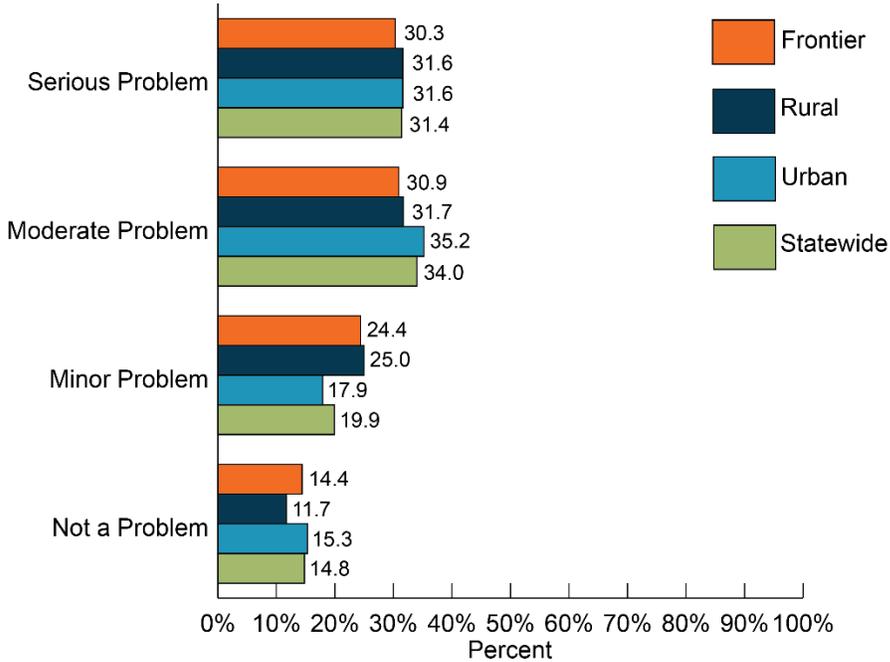
The National Institutes of Health (NIH; 2016) defines marijuana as the dried leaves, flowers, stems, and seeds from the hemp plant, which contains the mind-altering chemical *delta-9-tetrahydrocannabinol* (THC) and other compounds. Among states recognizing it as an illicit drug, marijuana, also known as weed, pot, or cannabis, is the most commonly used illegal drug with 43.5 million users. Marijuana use has many side effects on health including brain damage, especially among teens because their brains are still developing until their mid-20s (SAMHSA, 2018).

In recent years, marijuana products have expanded from hand-rolled cigarettes (joints), pipes (bongs) or vaporizers to extracts. Marijuana extracts are THC-rich resins extracted from the hemp plant and can deliver significantly greater amounts of THC into the body than other forms. Shatter, wax, or hash oil are names of various forms of marijuana extracts that can be smoked or mixed with food (edibles).

Section Summary

- Nearly two-thirds (65.4%) of the adults in North Dakota held the perception that youth marijuana use was a moderate or serious problem in their community (ND CRS, 2019; see Figure 3.1).

Figure 3.1: Perception of Youth Marijuana Use in Community as a Problem, ND, by Location*, 2019

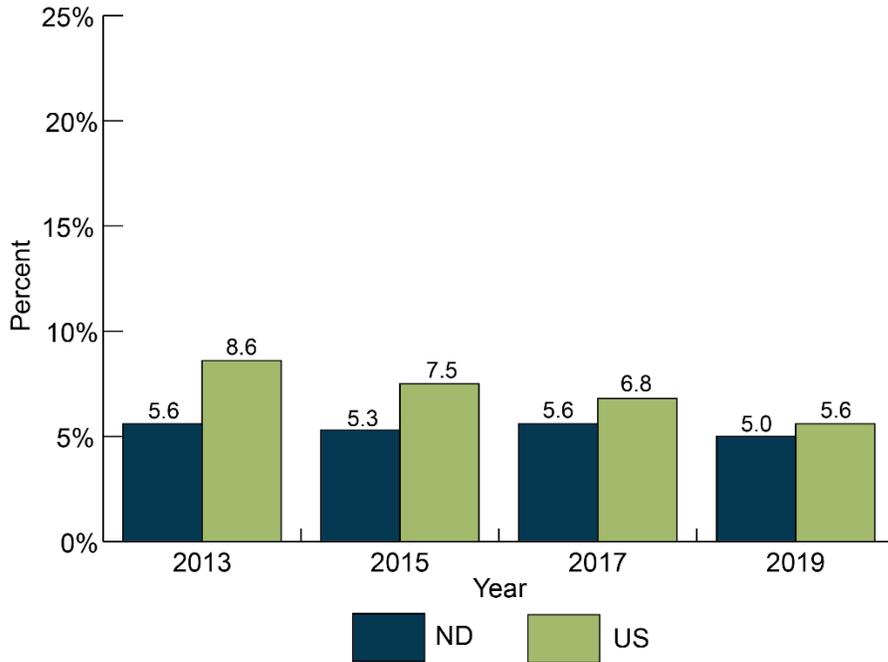


Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

- The percentage of North Dakota high school students who reported first time use of marijuana before age 13 remained relatively stable from 2013 to 2019, noting a slight decrease in 2019. Nationally, an overall decrease was also observed from 2013 to 2019 (YRBS, 2019; see Figure 3.2).

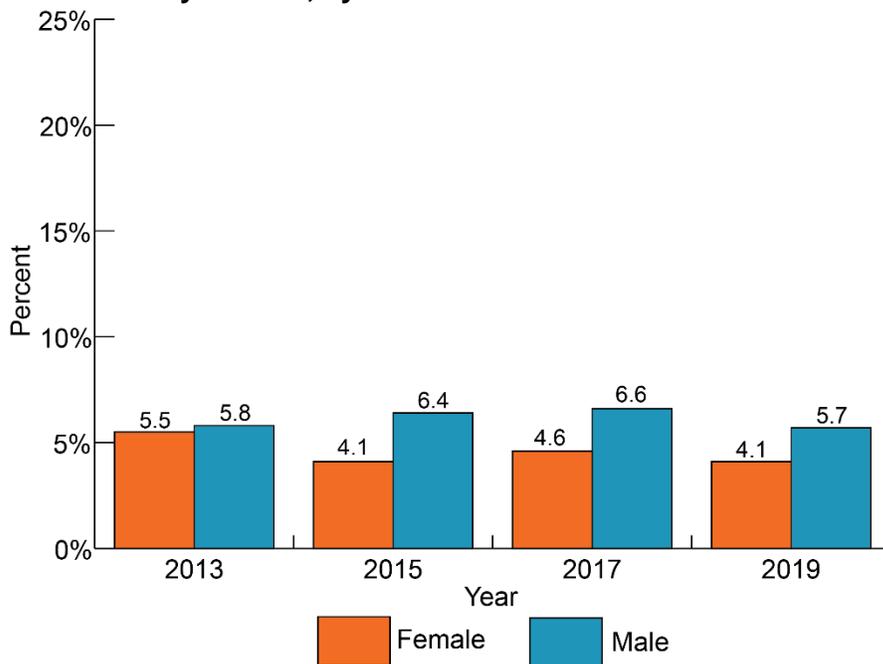
Figure 3.2: Percentage of First Time Using Marijuana before Age 13, High School, ND vs. U.S., by Year



Data Source: YRBS

- The percentage of male North Dakota high school students who used marijuana for the first time before age 13 remained higher than their female peers between the years 2013 and 2019 (YRBS, 2019; see Figure 3.3).

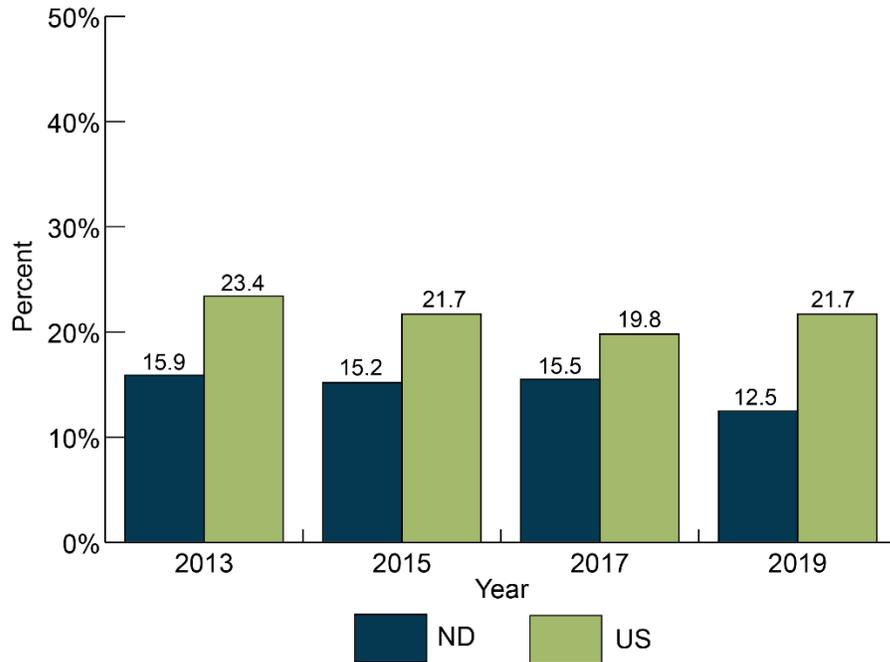
Figure 3.3: Percentage of First Time Marijuana Use before Age 13, High School, ND, by Gender, by Year



Data Source: YRBS

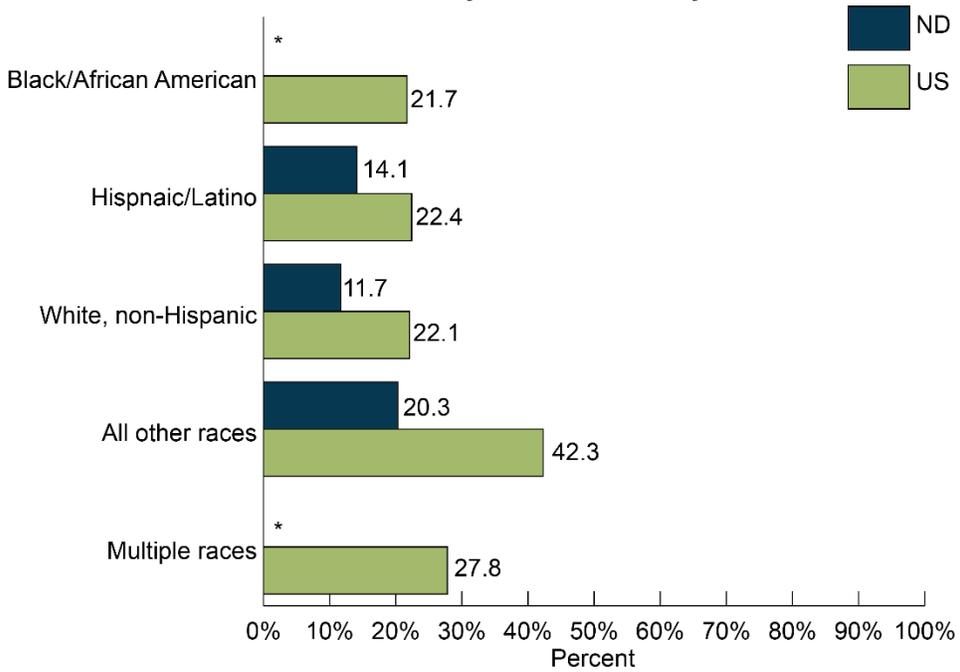
- The percentage of North Dakota high school students who reported current marijuana use (at least once in the past month) was lower than U.S. rates between 2013 and 2019. North Dakota rates remained relatively stable until 2019 when they decreased. National rates remained stable from 2013 to 2019 with a slight decrease in 2017 (YRBS, 2019; see Figure 3.4).

Figure 3.4: Percentage of Current Marijuana Use (at Least Once in Past Month), High School, ND vs. U.S., by Year



Data Source: YRBS

Figure 3.5: Percentage of Current Marijuana Use (at Least Once in Past Month), High School, ND vs. U.S., by Race / Ethnicity, 2019

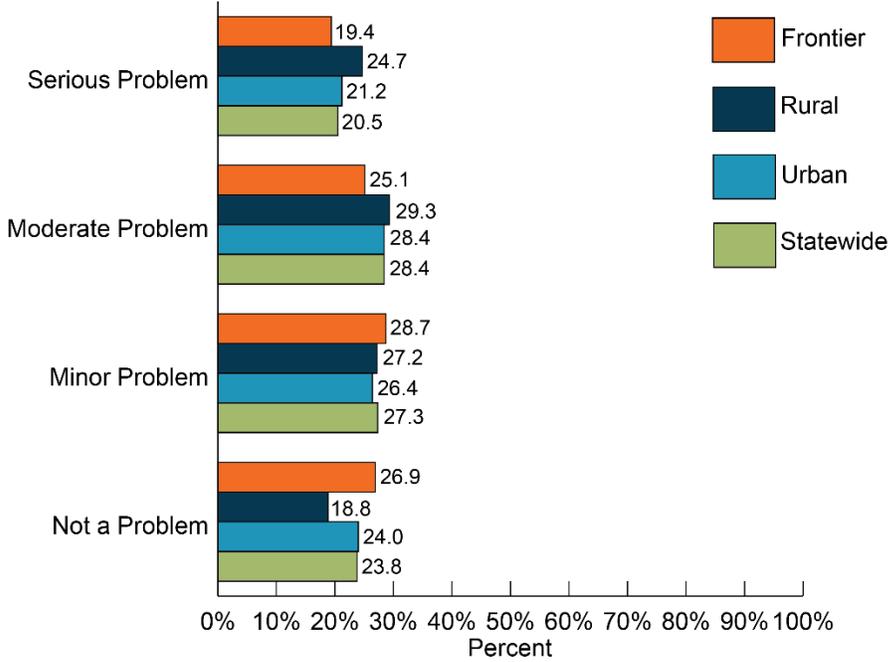


Data Source: YRBS

Data Note: (*) Suppressed data for confidentiality if n < 100.

- Nearly half (48.9%) of the adults in North Dakota perceived adult marijuana use as a moderate or serious problem in their community (ND CRS, 2019; see Figure 3.6).

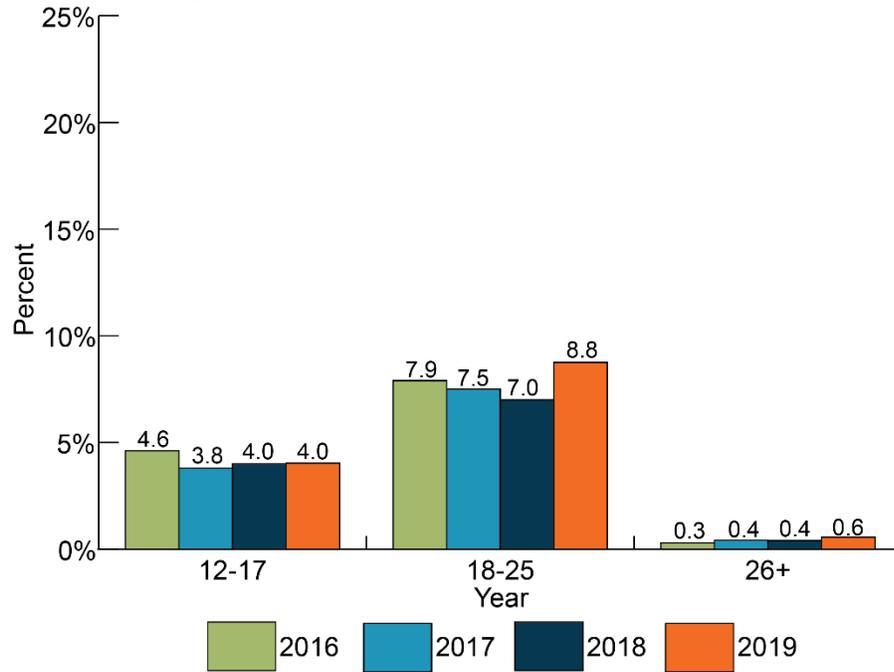
Figure 3.6: Perception of Adult Marijuana Use as a Problem in Community, ND, by Location*, 2019



Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in Appendix (p.177).

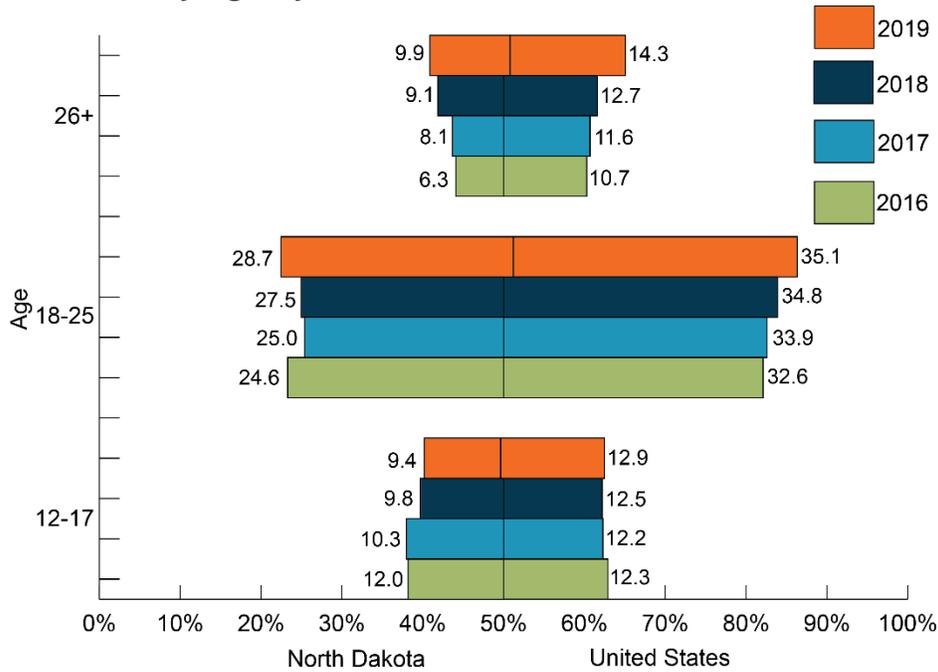
Figure 3.7: Percentage of Initial Marijuana Use Occurring Within the Past Year, ND, by Age, by Year



Data Source: NSDUH

- From 2015 to 2019, national rates of marijuana use in the past year were greater than North Dakota rates. In 2019, just over a quarter (28.7%) of North Dakota adults 18 to 25 years old reported marijuana use in the past year. In comparison, over one-third (35.1%) of U.S. adults, among the same age group, reported marijuana use in the past year (NSDUH, 2019; see Figure 3.8).

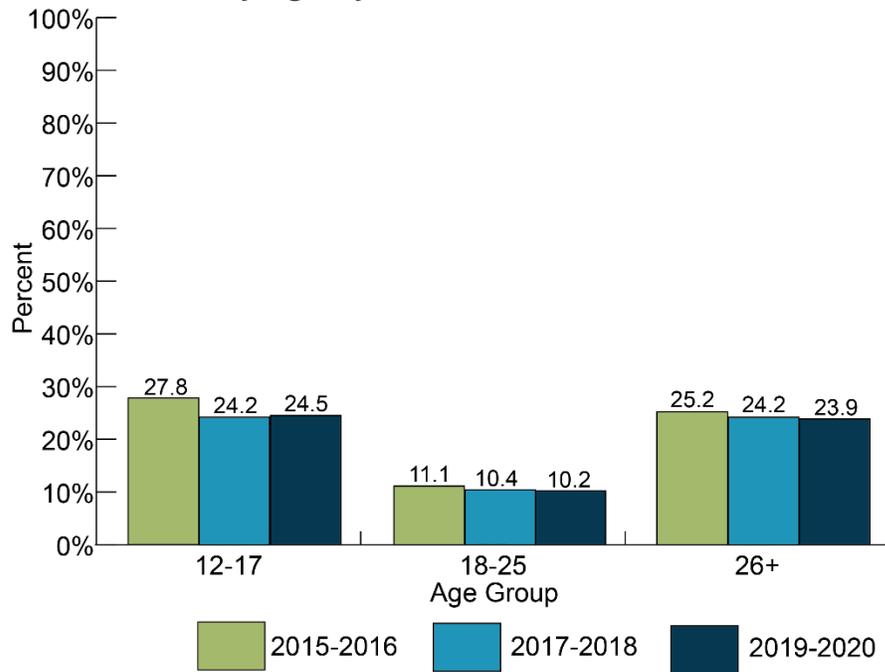
Figure 3.8: Percentage of Marijuana Use at Least Once in the Past Year, ND vs. U.S., by Age, by Year



Data Source: NSDUH

- The perception that there is a great risk of harm involved with smoking marijuana once a month has decreased among both youth and adults in North Dakota from 2015 to 2019 (age 12-17, 3.3 percentage point decrease; age 18-25, 0.9 percentage point decrease; age 26+, 1.3 percentage point decrease; NSDUH, 2019; see Figure 3.9).

Figure 3.9: Perception of Great Risk of Harm when Smoking Marijuana Once a Month, ND, by Age, by Year

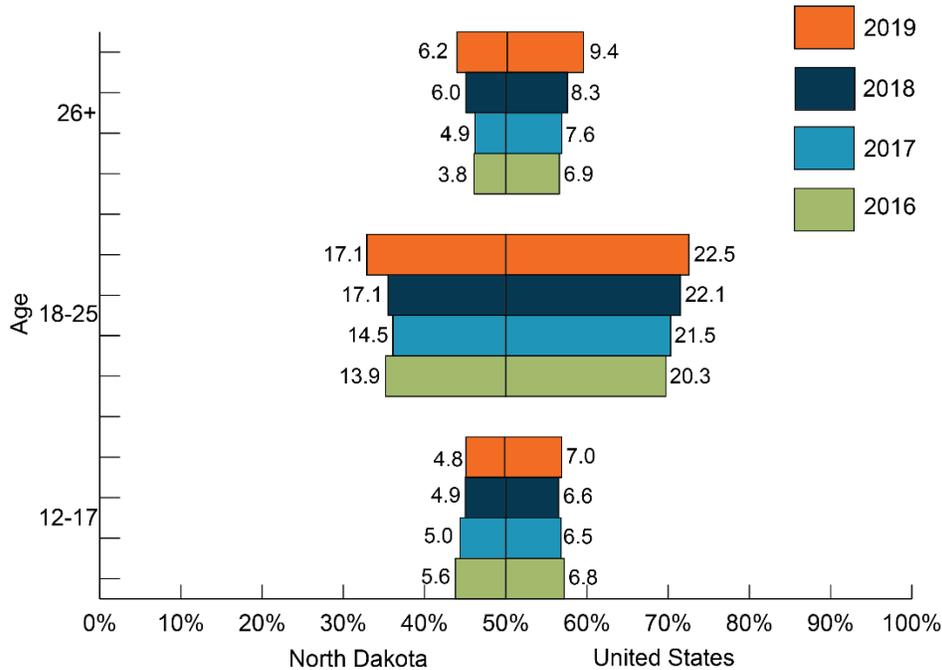


Data Source: NSDUH

Data Note: Data not collected in 2014-2015 survey.

- North Dakota adults' monthly marijuana use rates for all age groups fell below the national rates between 2016 and 2019 (NSDUH, 2019; see Figure 3.10).

Figure 3.10: Percentage of Marijuana Use in the Past Month, ND vs. U.S., by Age, by Year



Data Source: NSDUH

Cocaine, Ecstasy, Heroin, and Methamphetamine Use

About the Indicator

Though marijuana is the most commonly used illicit drug in the United States, other prevalent and serious illicit drugs such as cocaine, ecstasy, heroin, and methamphetamine account for a greater proportion of overdose deaths. In 2019, an estimated 57.2 million Americans, aged 12 and older, reported illicit drug use in the past year (NSDUH, 2019). Roughly, 2 in 5 adults (39.1%) aged 18 to 25 reported illicit drug use in the past year; the highest rate compared to other age groups (NSDUH, 2019).

Section Summary

- In 2019, North Dakota high school male students reported equal rates of methamphetamine use, but increased rates of inhalants and heroin use compared to their female counterparts (YRBS, 2019; see Table 3.1).

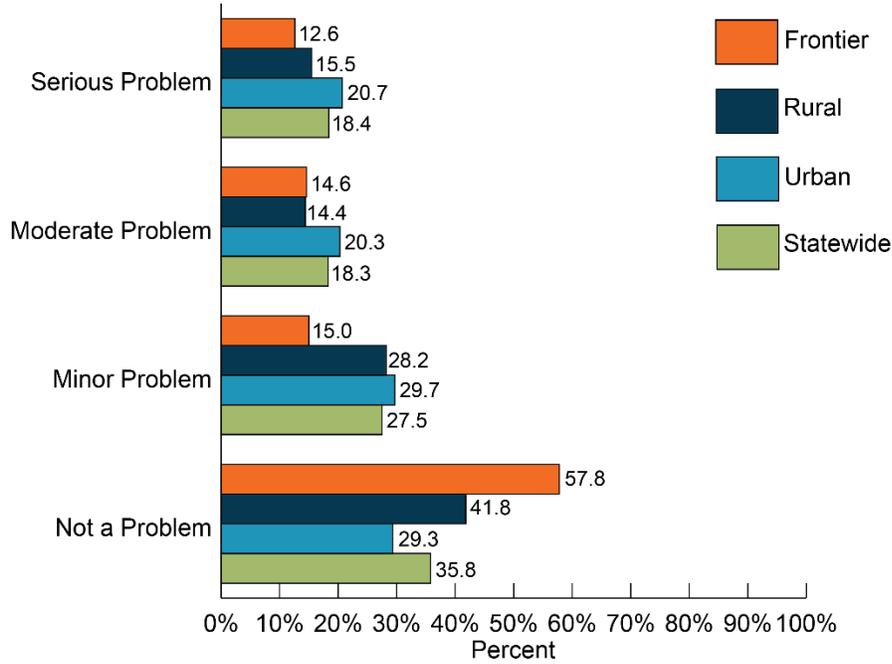
Table 3.1: Percentage of High School Students Who Ever Used Methamphetamine, Inhalants, or Heroin by Gender, Race / Ethnicity, Grade, ND vs. U.S., 2019

| Percentage by Gender | | | | | | |
|---|-----------------|-------|-----------|-------|--------|-------|
| | Methamphetamine | | Inhalants | | Heroin | |
| | ND | U.S. | ND | U.S. | ND | U.S. |
| Female | 1.5% | 1.5% | 5.6% | 6.9% | 0.9% | 1.0% |
| Male | 1.5% | 2.7% | 6.8% | 5.7% | 1.4% | 2.3% |
| Percentage by Race / Ethnicity | | | | | | |
| | Methamphetamine | | Inhalants | | Heroin | |
| | ND | U.S. | ND | U.S. | ND | U.S. |
| American Indian or Alaska Native | 3.4% | 14.1% | -- | 15.1% | 3.6% | 13.1% |
| Asian | -- | 1.3% | -- | 1.9% | -- | 0.5% |
| Black or African American | -- | 3.8% | -- | 7.2% | -- | 3.4% |
| Hispanic / Latino | 4.7% | 2.7% | 9.2% | 6.6% | 3.3% | 2.4% |
| Native Hawaiian / Other Pacific Islander | -- | -- | -- | -- | -- | -- |
| White, non-Hispanic | 0.7% | 1.2% | 5.1% | 6.3% | 0.6% | 0.9% |
| Multiple Races | -- | 2.7% | 5.8% | 7.2% | -- | 1.6% |
| Percentage by Grade | | | | | | |
| | Methamphetamine | | Inhalants | | Heroin | |
| | ND | U.S. | ND | U.S. | ND | U.S. |
| 9th | 1.6% | 1.4% | 4.7% | 6.0% | 0.8% | 1.3% |
| 10th | 2.4% | 1.7% | 7.9% | 7.0% | 1.5% | 1.8% |
| 11th | 0.8% | 2.5% | 7.3% | 7.0% | 1.3% | 1.8% |
| 12th | 1.1% | 2.6% | 5.6% | 5.1% | 1.0% | 1.7% |

Data Source: YRBS

Data Note: (--) Data is suppressed if underweighted sample is less than 100 respondents per subgroup.

Figure 3.11: Perception of Cocaine Use in Community a Problem among Youth by Location*, ND, 2019

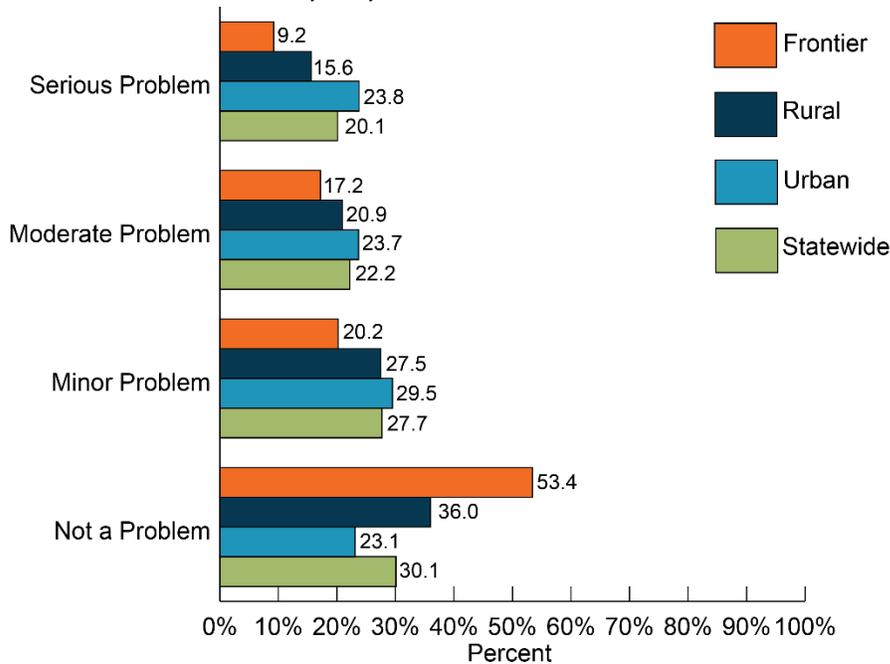


Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

- In 2019, the majority of North Dakota adults (53.4%) perceived adult cocaine use within their community as either not a problem or a minor problem regardless of urban or rural location (ND CRS, 2019; see Figure 3.12).

Figure 3.12: Perception of Cocaine Use in Community as a Problem among Adults, by Location*, ND, 2019

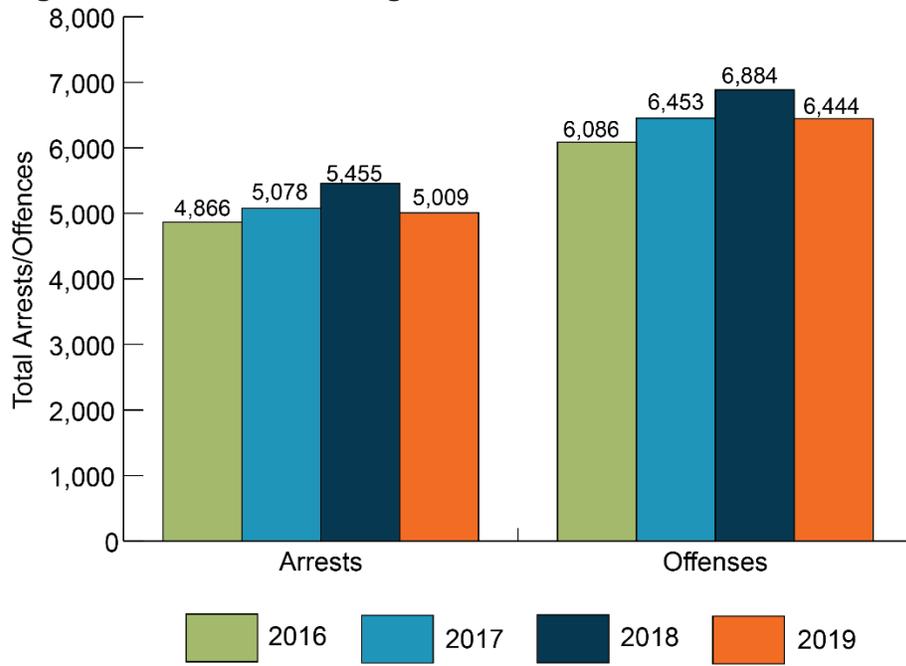


Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

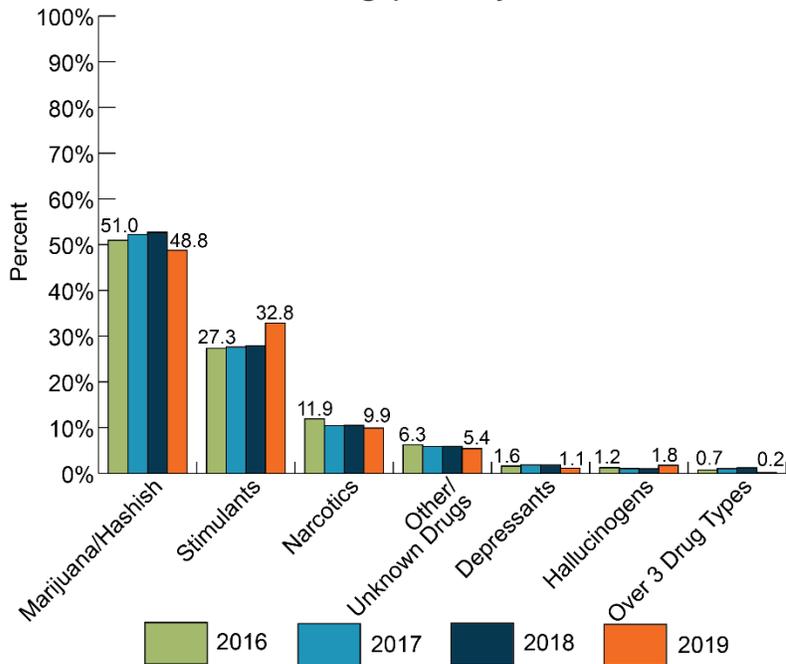
- Between the years 2016 and 2018, the number of North Dakota arrests for drugs and narcotics increased; however, the number decreased slightly from 2018 (5,455) to 2019 (5009; Crime in North Dakota, 2019; see Figure 3.13).
- From 2018 to 2019, North Dakota drug / narcotic arrests and offenses have decreased by 446 arrests and 440 offenses (Crime in North Dakota, 2019; see Figure 3.13).

Figure 3.13: Number of Drug and Narcotic Arrests and Offenses, Total, ND, by Year



Data Source: Crime in North Dakota

Figure 3.14: Percentage of Drug Types Seized in Drug and Narcotic Violations (for up to Three Drugs), ND, by Year



Data Source: Crime in North Dakota

Illicit Drugs in North Dakota: Consequences

Drug-Related Violations

About the Indicator

The North Dakota Attorney General reported in 2019 that the total number of crimes against society decreased by 4.0% from 2018. Included in the crimes against society category are drug / narcotic violation offenses, which decreased by 6.4% from 2018. When comparing Group A crime categories, crimes against persons, crimes against property, and crimes against society, crimes against persons reported the largest percent increase of 2.2% from 2018 to 2019 (Crime in North Dakota, 2019).

According to the North Dakota Century Code (2016), it is unlawful for any person to willfully manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense, a controlled substance except as authorized.

Section Summary

- From 2016 to 2019, the majority of drug / narcotic violation-related arrests involved males (Crime in North Dakota, 2019; see Table 3.2).
- The majority of drug / narcotic violation-related arrests involved individuals between the ages of 18 and 34. However, between 2017 and 2019, the average age of those arrested has shifted from 18-24 to 25-34 (Crime in North Dakota, 2019; see Table 3.2).

Table 3.2: Arrests for Drug and Narcotic Offenses, ND, by Year

| Total Arrests in ND | 2016 | 2017 | 2018 | 2019 |
|-------------------------------|-------------|-------------|-------------|-------------|
| Drug / Narcotic Arrests | 4,866 | 5,078 | 5,455 | 5009 |
| % Change (from previous year) | 11.0% | 4.4% | 7.4% | -8.2% |
| Gender | 2016 | 2017 | 2018 | 2019 |
| Female | 26.9% | 29.9% | 30.8% | 30.7% |
| Male | 73.1% | 70.1% | 69.2% | 69.3% |
| Age Groups | 2016 | 2017 | 2018 | 2019 |
| 10-17 | 8.7% | 8.6% | 7.9% | 6.6% |
| 18-24 | 33.0% | 30.3% | 31.5% | 27.6% |
| 25-34 | 32.4% | 34.9% | 32.7% | 34.6% |
| 35-44 | 15.3% | 15.1% | 17.0% | 18.4% |
| 45-54 | 7.3% | 7.3% | 7.8% | 8.4% |
| 55-64 | 3.1% | 3.4% | 2.9% | 3.9% |
| 65+ | 0.2% | 0.3% | 0.2% | 0.4% |

Data Source: Crime in North Dakota

Overdose Deaths

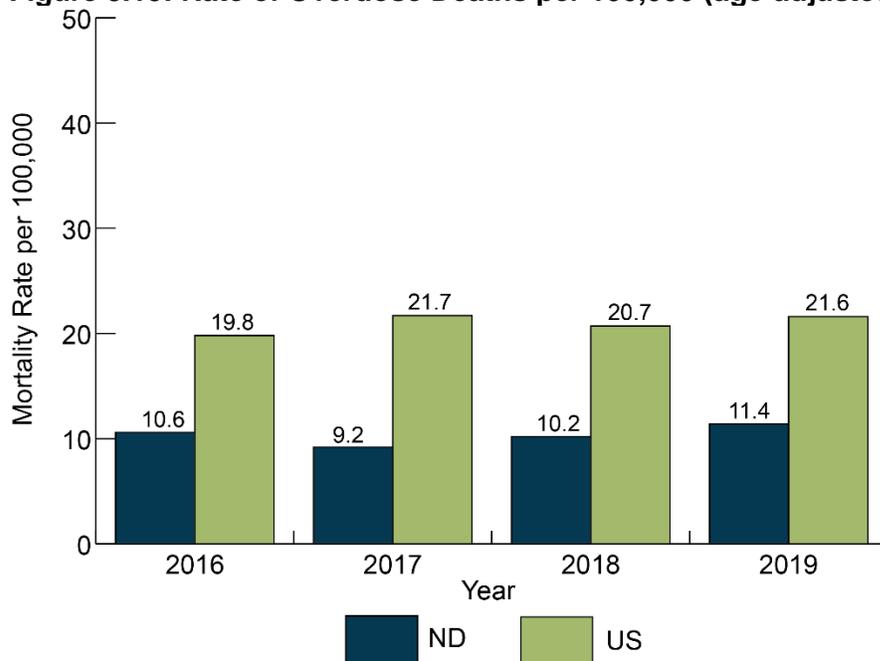
About the Indicator

Drug overdose refers to the absorption of a drug or other substance in quantities greater than the recommended amount and can lead to a toxic state or death. More than 70,000 drug overdose deaths occurred in 2017 and the rates of age-adjusted drug overdose deaths increased from 1999 (6.1 per 100,000) to 2017 (21.7 per 100,000) in the United States (CDC, NCHS Data Brief, 2018).

Section Summary

- The rate of overdose deaths per 100,000 persons in North Dakota remained below the rate of overdose deaths in the U.S. from 2016 to 2019 (NCHS, 2019; see Figure 3.15).

Figure 3.15: Rate of Overdose Deaths per 100,000 (age-adjusted), ND vs. U.S., by Year

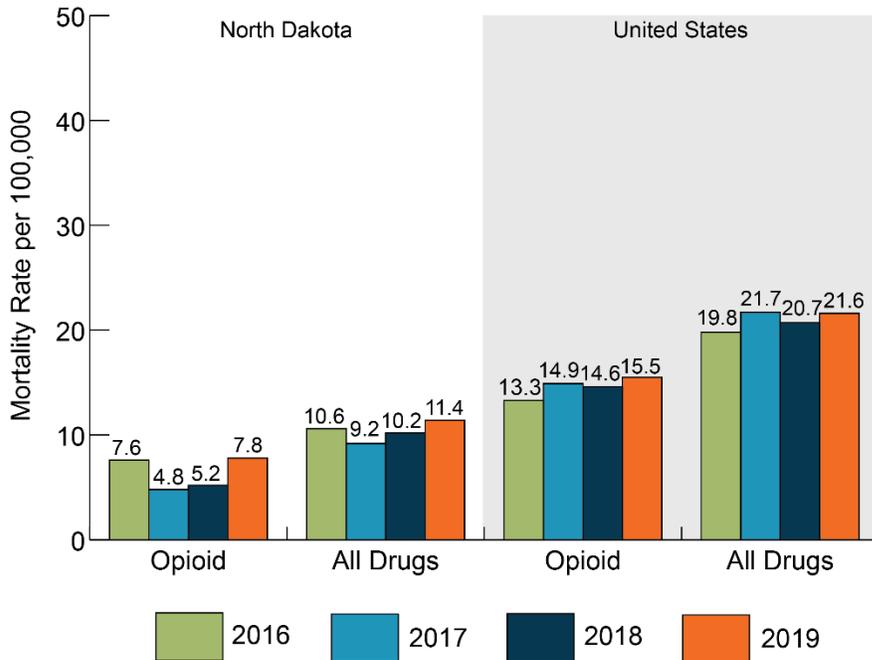


Data Source: NCHS, CDC Wonder

Data Note: ICD 10 Codes Used: Underlying cause X40 – X44, X60-X64, X85, Y10-Y14.

- National and North Dakota opioid and all drug overdose death rates increased from 2016 to 2019 (NCHS, 2018; see Figure 3.16).

Figure 3.16: Rate of Opioid and All Drug Overdose Death per 100,000 (age-adjusted), ND vs. U.S., by Year



Data Source: NCHS, CDC Wonder

ICD 10 Codes Used: Underlying cause X40 – X44, X60-X64, X85, Y10-Y14; contributing cause T40.0-T40.4, T40.6.

Substance Abuse Treatment Admissions

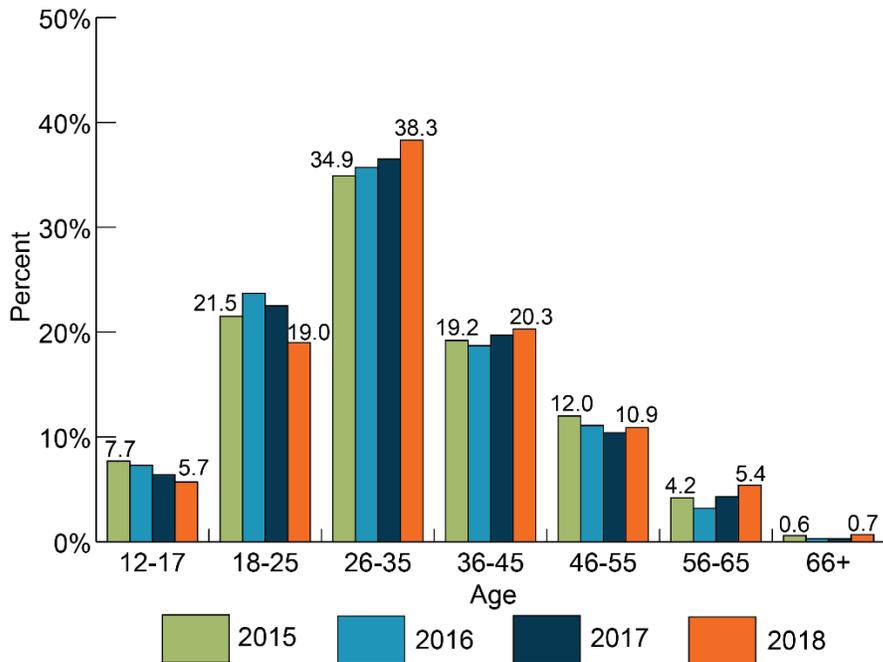
About the Indicator

Drug addiction is a chronic disease, and individuals with a substance use disorder may require long-term care to recover. Addiction is a complex, but treatable, disease that affects people’s behavior; however, it can be treated more efficiently if quick access to treatment is available. Nationally, there are more than 13,000 substance use treatment facilities, 75 of them are located in North Dakota (SAMHSA, 2020).

Section Summary

- The percentage of all substance abuse treatment admissions among North Dakota youth aged 12 to 17 decreased from 2015 to 2018, while those aged 26-35 increased over the same time period (TEDS, 2018; see Figure 3.17).

Figure 3.17: Percentage of Substance Abuse Treatment Admissions, ND, by Age, by Year

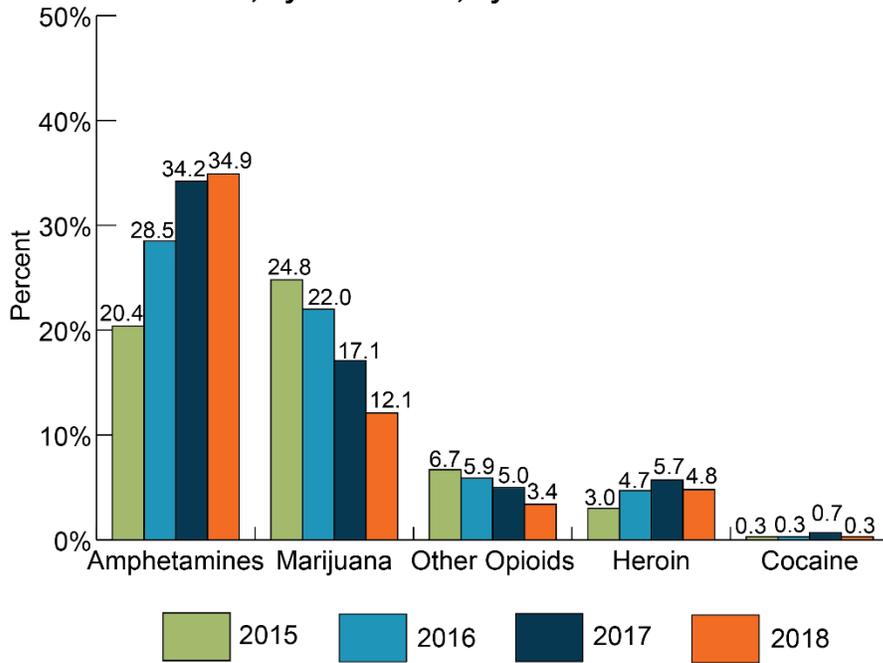


Data Source: TEDS

Data Note: 2018 is the most recent data available

- The percentage of substance abuse treatment admissions among the age group 12 and older in North Dakota for amphetamines increased from 20.4% to 34.9% (a 71.1% increase) between 2015 and 2018 (TEDS, 2018; see Figure 3.18).
- The percentage of substance abuse treatment admissions among the age group 12 and older in North Dakota for marijuana and opioids (not including heroin) decreased between 2015 and 2018 (TEDS, 2018; see Figure 3.18).

Figure 3.18: Percentage of Substance Abuse Treatment Admissions, ND, Age 12 and Older, by Substance, by Year



Data Source: TEDS
 Data Note: 2018 is the most recent data available

Illicit Drugs in North Dakota: Modifiable Risks

Access to Illicit Drugs and Services

About the Indicator

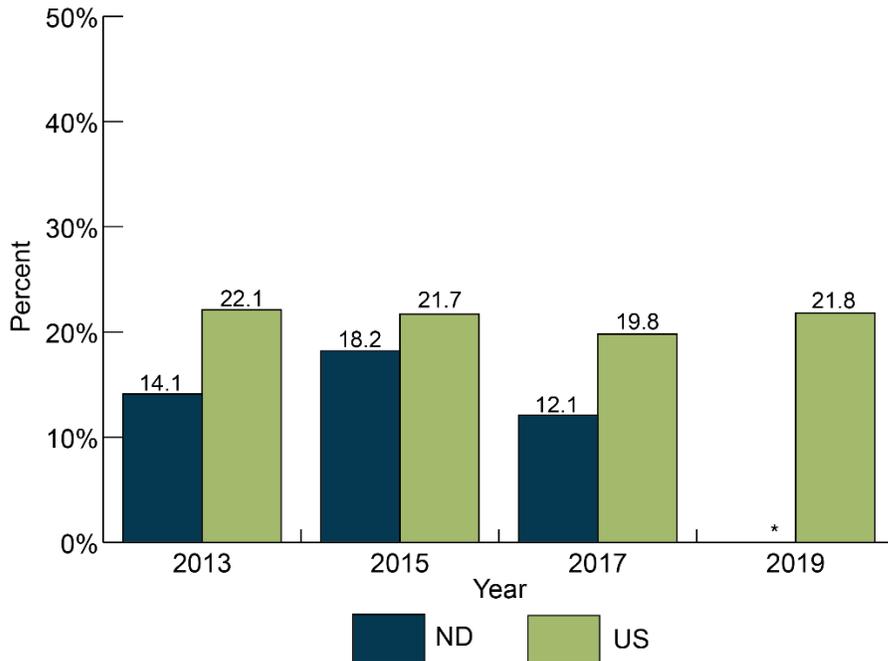
Youth spend a large part of their day in school. Schools oftentimes assume a primary role in of substance abuse education and prevention. Many schools are working with parents, healthcare providers, community agencies, and others to lower access and use of illicit drugs on a school premise (Pediatrics, 2007; SAMHSA, 2019).

While illicit drug access is an issue, providing accessible community-based prevention services is also important. Prevention services (e.g., syringe services programs) provide support for those struggling with substance abuse and can help reduce the impact of drug use on a community (CDC, 2019).

Section Summary

- The percentage of North Dakota high school students who were offered, sold, or given an illegal drug on school property decreased from 2013 to 2017. However, rates were highest in 2015 (18.2%; YRBS, 2019; see Figure 3.19). Nationally, rates have remained largely stable.

Figure 3.19: Percentage of Students who Were Offered, Sold, or Given an Illegal Drug on School Premises during the Last Year, High School Students, ND vs. U.S., by Year



Data Source: YRBS

*ND data only available up to 2017.

- higher percentage of male high school students (in both North Dakota and the United States) reported that they were offered, sold, or given an illegal drug on school property when compared to females (YRBS, 2019; see Table 3.3).

Table 3.3: Percentage of Students who Were Offered, Sold, or Given an Illegal Drug on School Premises during the Last Year, High School Students, ND vs. U.S., by Gender, by Year

| ND | 2013 | 2015 | 2017 | 2019* |
|---------|-------|-------|-------|-------|
| Females | 12.2% | 16.3% | 9.9% | -- |
| Males | 15.5% | 20.0% | 14.1% | -- |
| U.S. | 2013 | 2015 | 2017 | 2019 |
| Females | 19.7% | 19.1% | 18.7% | 20.8% |
| Males | 24.5% | 24.2% | 20.9% | 22.8% |

Data Source: YRBS

*ND data only available up to 2017.

Table 3.4: Percentage of Students who Were Offered, Sold, or Given an Illegal Drug on School Premises during the Last Year, High School Students, ND vs. U.S., by Grade, by Year

| ND | 2013 | 2015 | 2017 | 2019* |
|------------------|-------------|-------------|-------------|--------------|
| 9 th | 13.1% | 16.6% | 11.2% | -- |
| 10 th | 15.1% | 20.7% | 11.5% | -- |
| 11 th | 12.4% | 15.7% | 15.4% | -- |
| 12 th | 15.3% | 19.5% | 10.2% | -- |
| U.S. | 2013 | 2015 | 2017 | 2019 |
| 9 th | 22.4% | 21.6% | 18.9% | 21.6% |
| 10 th | 23.2% | 21.9% | 20.3% | 23.7% |
| 11 th | 23.2% | 22.7% | 20.0% | 22.0% |
| 12 th | 18.8% | 20.3% | 19.6% | 19.6% |

Data Source: YRBS

*ND data only available up to 2017.

- From 2013 to 2019, the percentage of high school students in both North Dakota and the United States who were offered, sold, or given an illegal drug on school property shows a general decreasing trend among all races, aside from national 2019 data which shows an increase among each demographic group aside from Asians (YRBS, 2019; see Table 3.5).

Table 3.5: Percentage of Students who Were Offered, Sold, or Given an Illegal Drug on School Premises during the Last Year, High School Students, ND vs. U.S. by Race, by Year

| ND | 2013 | 2015 | 2017 | 2019* |
|--|-------------|-------------|-------------|--------------|
| American Indian or Alaska Native | 16.2% | -- | -- | -- |
| Asian | 27.5% | 27.3% | 20.6% | -- |
| Black or African American | 13% | 16.8% | 11.4% | |
| Hispanic / Latino | -- | -- | -- | -- |
| Native Hawaiian / Other Pacific Islander | -- | -- | -- | -- |
| White | -- | -- | -- | -- |
| Multiple Races | -- | -- | -- | -- |
| U.S. | 2013 | 2015 | 2017 | 2019 |
| American Indian or Alaska Native | 25.5% | 19.8% | 18.9% | 24.2% |
| Asian | 27.4% | 27.2% | 20.3% | 14.5% |
| Black or African American | 20.4% | 19.8% | 20.0% | 21.5% |
| Hispanic / Latino | -- | -- | -- | 26.7% |
| Native Hawaiian / Other Pacific Islander | -- | -- | -- | 0% |
| White | -- | -- | -- | 19.8% |
| Multiple Races | -- | -- | -- | 27.8% |

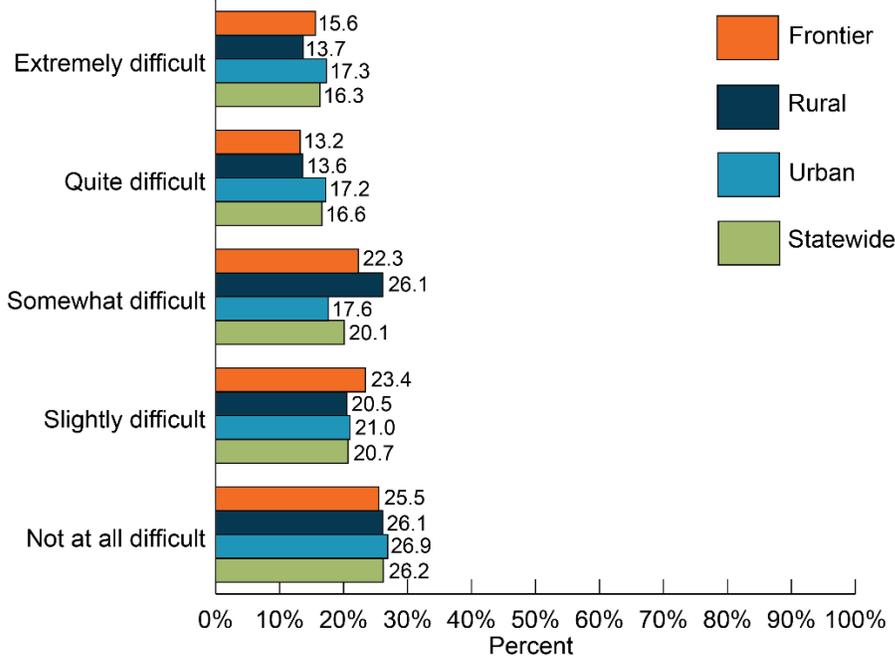
Data Source: YRBS

Data Note: (--) Data is suppressed if underweighted sample is less than 100 respondents per subgroup.

*ND data only available up to 2017. Data from 2013 to 2017 did not include Hispanic Latino, Native Hawaiian/Other Pacific Islander, White and Multiple Races. 2019 ND data is not available.

- About one-third (32.9%) of North Dakota adults perceived much difficulty (either extremely difficult or quite difficult) accessing marijuana for a medical purpose (ND CRS, 2019). However, two-thirds of North Dakota adults (65.6%) perceived little difficulty (slightly difficult or not at all difficult) obtaining marijuana for personal use within their community (ND CRS, 2019; see Figures 3.20 and 3.21).

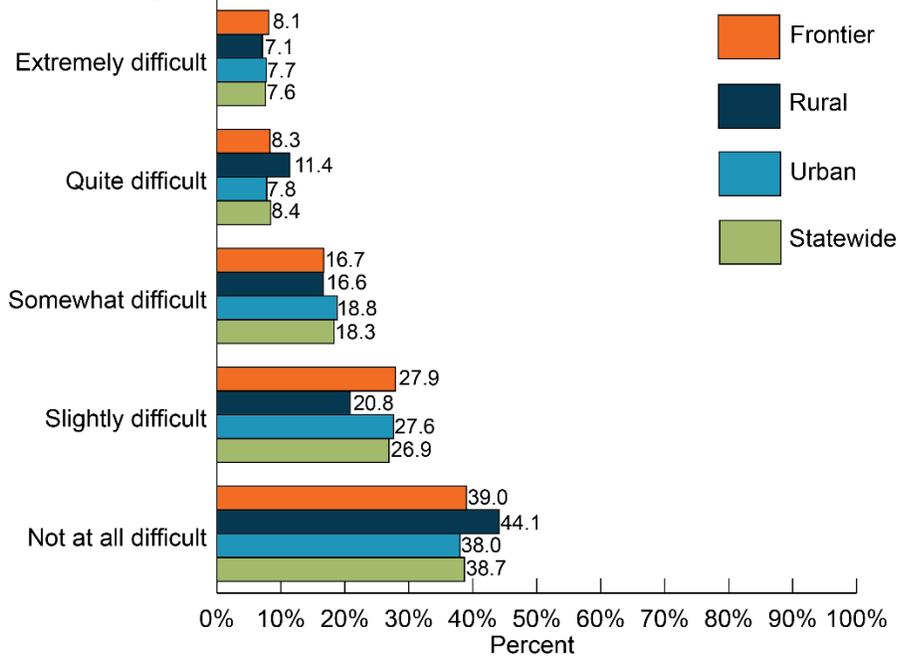
Figure 3.20: Perceived Difficulty of Accessing Marijuana for Medical Purpose in Community, ND, by Location*, 2019



Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

Figure 3.21: Perceived Difficulty of Accessing Marijuana for Illicit * Purpose in Community, ND, by Location, 2019**



Data Source: ND CRS

Data Note:

(*) Question wording from 2017 to 2019 changed from "illicit" to "personal" use.

(**) Geographic definitions can be found in the Appendix (p.177).

- Between June and December of 2019, Syringe Services in North Dakota increased by two programs and syringes distributed nearly doubled from 84,413 to 144,577. Collected syringes increased from 72,266 to 87,787 (January-Dec, 2019; NDDOH, Division of Disease Control, see Table 3.6).

Table 3.6: Syringe Services, ND

| | Jul-Dec 2018 | Jan-June 2019 | June-Dec 2019 |
|---|-----------------------|-----------------------|-----------------------|
| Number of Syringe Service Programs | 3 | 3 | 5 |
| Number Served | 350 | 418 | 628 |
| Syringes Distributed | 48,612 | 84,413 | 144,577 |
| Syringes Collected | 21,417 | 72,266 | 87,787 |
| Primary Substance Used | Methamphetamine (74%) | Methamphetamine (61%) | Methamphetamine (58%) |

Data Source: NDDOH, Division of Disease Control

Data Sources

American Academy of Pediatrics (Pediatrics). The Role of Schools in Combating Illicit Substance Abuse

Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS)

Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS), Data Brief: Drug Overdose Deaths in the United States, 1999-2017

Centers for Disease Control and Prevention (CDC). Summary of Information on the Safety and Effectiveness of Syringe Service Programs (SSPs)

Centers for Disease Control and Prevention (CDC). Youth Risk Behavior Survey (YRBS)

National Institute of Health (NIH). Drug Facts: What is Marijuana?

North Dakota Department of Corrections and Rehabilitation (DOCR)

North Dakota Department of Health (NDDOH). Division of Disease Control: North Dakota SSP Biannual Report

Office of Attorney General Bureau of Criminal Investigation. Crime in North Dakota, 2019

Substance Abuse and Mental Health Services Administration (SAMHSA). Guidance to State and School Systems on Addressing Mental Health and Substance Use Issue in Schools

Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH)

Substance Abuse and Mental Health Services Administration (SAMHSA). Service Locator

Substance Abuse and Mental Health Services Administration (SAMHSA). Treatment Episode Data Set (TEDS)

Wyoming Survey & Analysis Center (WYSAC). North Dakota Community Readiness Survey (ND CRS)

Substance Abuse and Mental Health in North Dakota

Section 4. Prescription Drugs: Use, Consequences, and Modifiable Risks

Prescription Drugs in North Dakota: Use

Nonmedical Use of Prescription Drugs

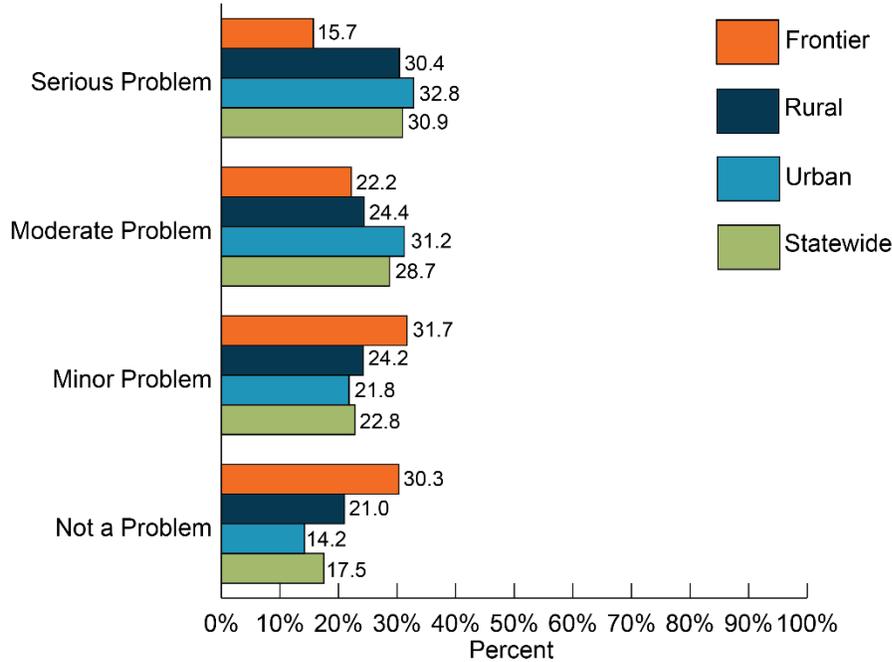
About the Indicator

In 2018, 695,000 (2.8%) youth aged 12-17, 1.9 million (5.5%) young adults aged 18-25, and 7.4 million (3.4%) adults aged 26 and older misused pain relievers in the United States in the past year (NSDUH Report, 2019). Misuse of medical pain relievers is defined as use in any way not directed by a doctor, use in greater amounts, more often, or longer than recommended. In 2018, the percentage of people who had misused prescription pain relievers in the past year was lower than those in 2015 to 2017 (NSDUH, 2018). The most commonly misused subtype of prescription pain relievers was hydrocodone products, which includes Vicodin®, Lortab®, Norco®, Zohydro® ER, and generic hydrocodone. Compared to other prescription medication misuse reported by the National Survey of Drug Use and Health (i.e. stimulants, tranquilizers / sedatives, and pain relievers), prescription pain relievers were the most commonly misused prescription by individuals 12 years of age or older (NSDUH Report, 2019).

Section Summary

- North Dakota adults who lived in rural and urban communities were much more likely to perceive youth prescription drug abuse as a serious problem when compared to their counterparts living in frontier communities (ND CRS, 2019; see Figure 4.1).

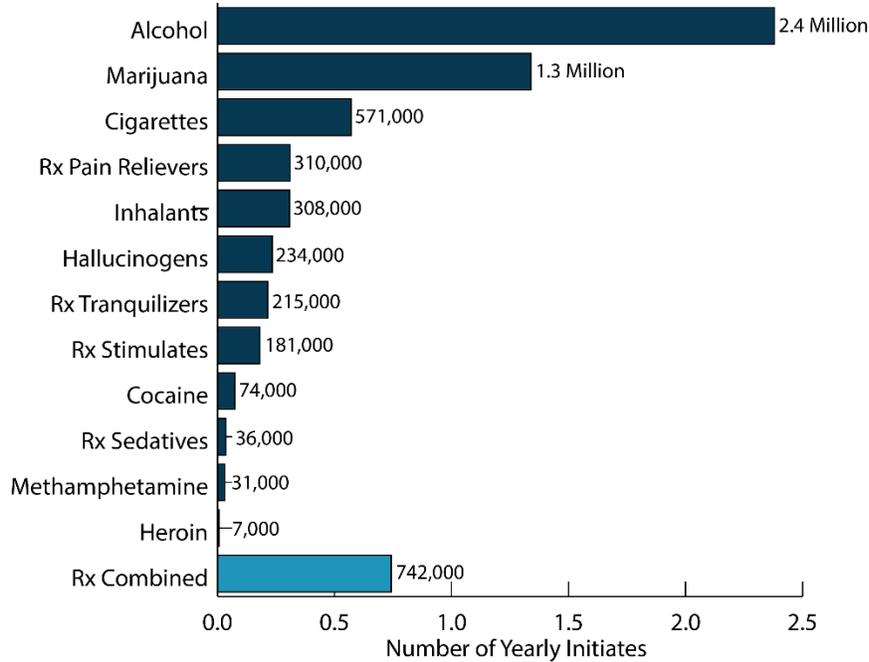
Figure 4.1: Perception of Youth Prescription Drug Use in the Community as a Problem by Location*, Youth, ND, 2019



Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

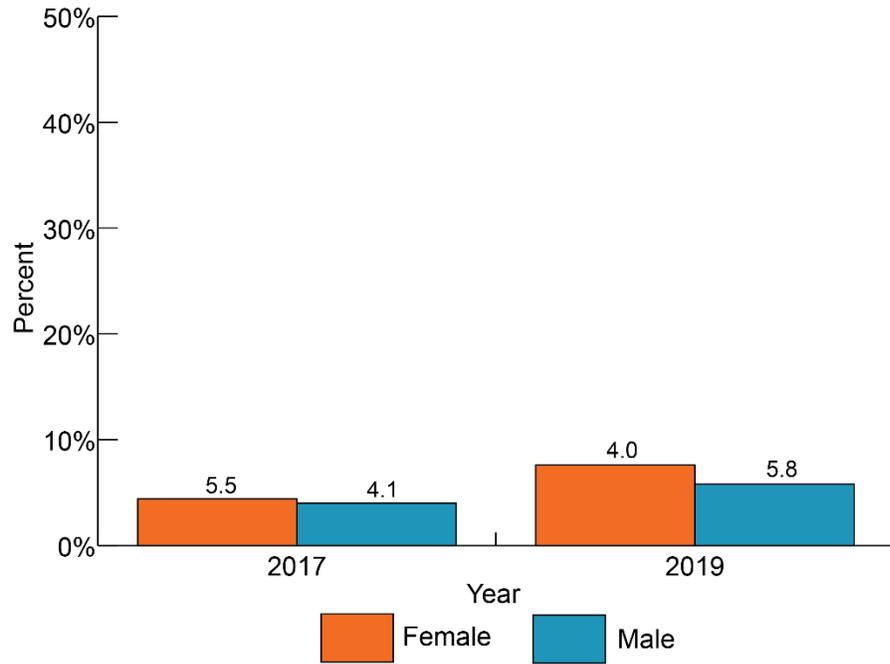
Figure 4.2: Initial Drug Use in the Past Year, U.S., Age 12-17, 2018



Data Source: NSDUH

Data Note: (*) Rx Combined includes totals from Rx Pain Relievers, Rx Tranquilizers, Rx Stimulates, and Rx Sedatives.

Figure 4.3: Percentage of Taken Prescription Pain Medicine Without a Doctor's Prescription or Differently Than How a Doctor Told Them to Use it in Lifetime, Middle School Students, ND, by Gender, by Year

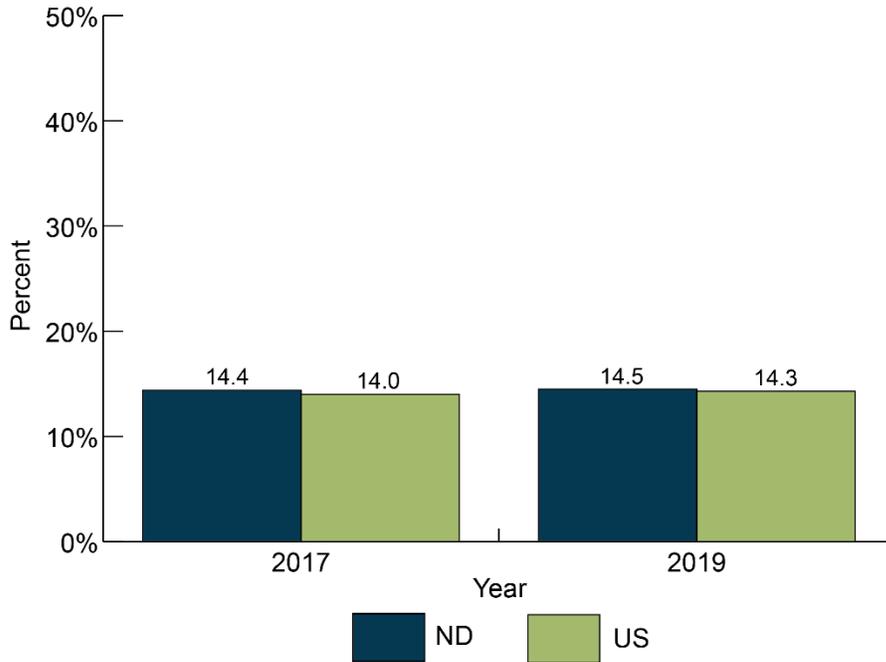


Data Source: YRBS

Data Note: 2017 and 2019 data may not be directly comparable to the previous years because the question wording changed.

- From 2017 to 2019, the percentage of North Dakota high school students who ever took prescription drugs without a doctor's prescription or differently than how a doctor told them to use it was slightly greater than the national average (YRBS, 2019; see Figure 4.4).

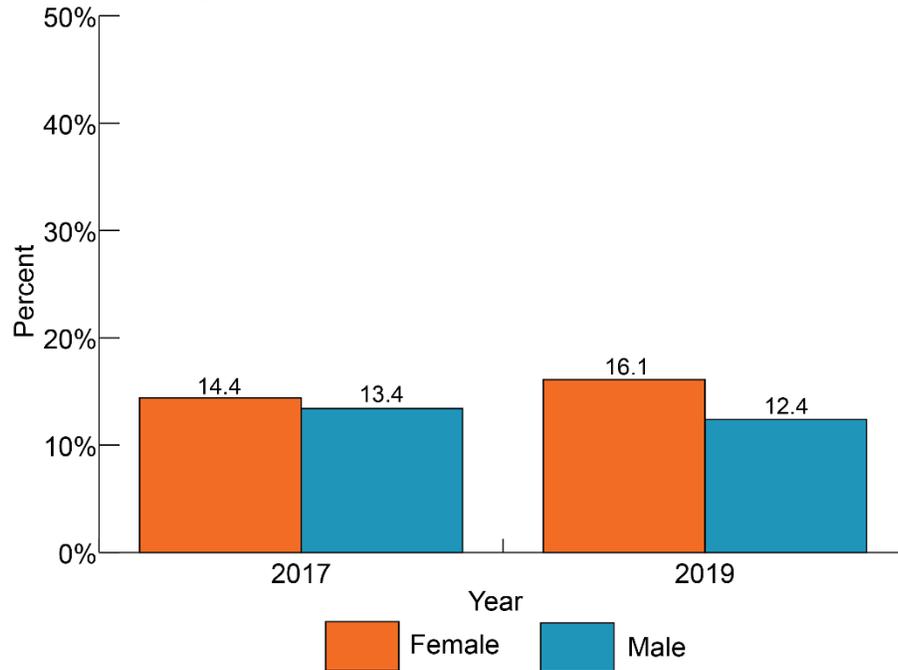
Figure 4.4: Percentage of Taken Prescription Pain Medicine Without a Doctor's Prescription or Differently Than How a Doctor Told Them to Use it in Lifetime, High School Students, ND vs. U.S., by Year



Data Source: YRBS

- In North Dakota, there was a slight reduction of male high school students who ever took prescription drugs without a doctor's prescription or differently than how a doctor told them to use it, from 2017 to 2019 (YRBS, 2019; see Figure 4.5).

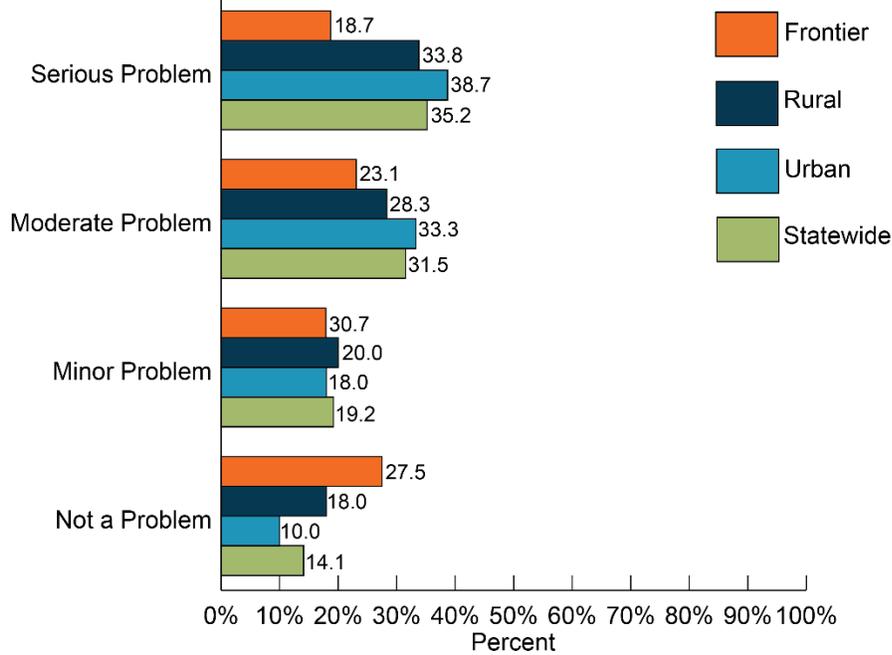
Figure 4.5: Percentage of Taken Prescription Pain Medicine Without a Doctor's Prescription or Differently Than How a Doctor Told Them to Use it in Lifetime, High School Students, ND, by Gender, by Year



Data Source: YRBS

- In 2019, North Dakotans who resided in urban, rural or statewide areas were more likely to perceive adult prescription drug use as a serious problem when compared to those located in frontier areas (ND CRS, 2019; see Figure 4.6).

Figure 4.6: Prescription Drug Use in the Community as a Problem by Location*, Adults, ND, 2019

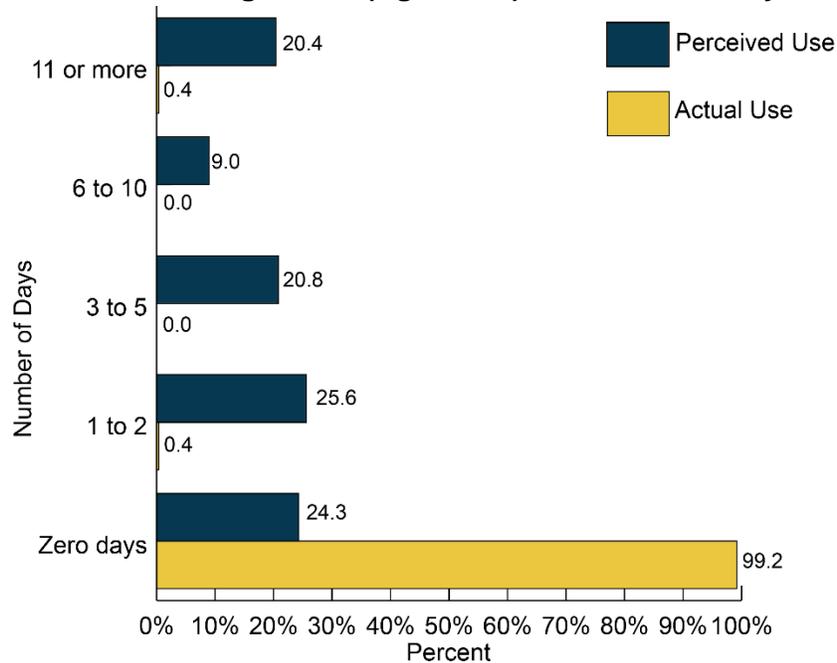


Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177).

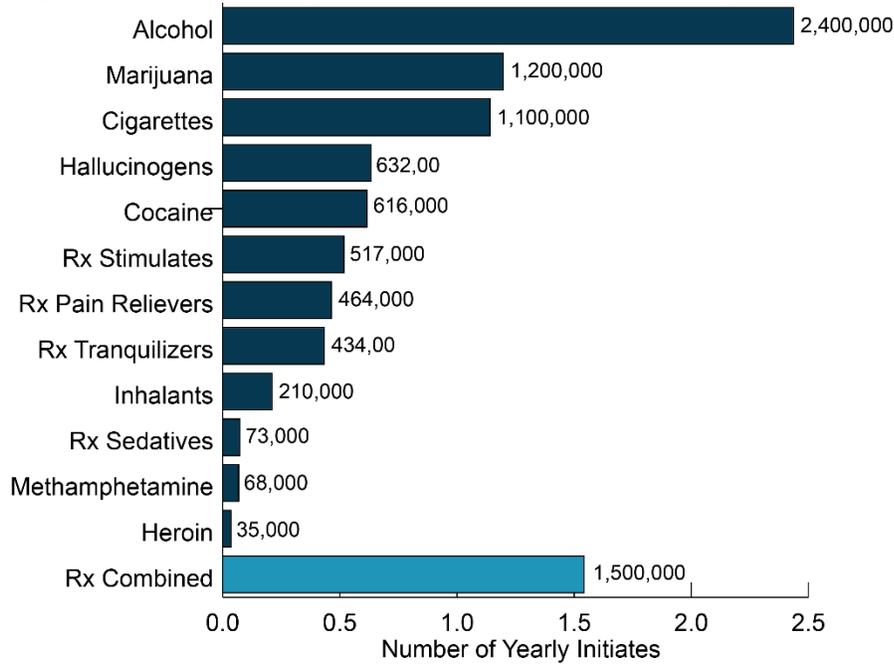
- Perceived prescription drug misuse (76% of peers used at least one day per month) was much greater than actual reported misuse (0.8% of peers used at least one day per month) among young adults, aged 18-29, in North Dakota in 2019 (NDSOYA, 2020; see Figure 4.7).
- When North Dakota young adults were asked about prescription drug misuse, 99.2% responded with zero days of prescription misuse in the past 30 days (NDSOYA, 2020; see Figure 4.7).

Figure 4.7: Percentage of Actual Versus Perceived Prescription Drug Misuse among Young Adults (Age 18-29) in the Past 30 Days, ND, 2020



Data Source: NDSOYA

Figure 4.8: Initial Drug Use in the Past Year, U.S., Age 18-25, 2018



Data Source: NSDUH

Data Note: (*) Rx Combined includes totals from Rx Pain Relievers, Rx Tranquilizers, Rx Stimulates, and Rx Sedatives.

Table 4.1: Percentage of Any Nonmedical Use of Prescription Drugs in Lifetime, Middle School Students, ND, by Race, by Year

| ND by race | 2013 | 2015 | 2017 | 2019 |
|----------------------------------|------|------|------|-------|
| American Indian or Alaska Native | 8.0% | 9.2% | 6.7% | 11.2% |
| Hispanic or Latino | 9.7% | 9.4% | 7.6% | 13.5% |
| White, non-Hispanic | 4.3% | 3.5% | 3.1% | 5.0% |

Data Source: YRBS

Data Note: 2017 and 2019 data may not be directly comparable to the previous years because the question wording changed.

Nonmedical Use of Pain Relievers

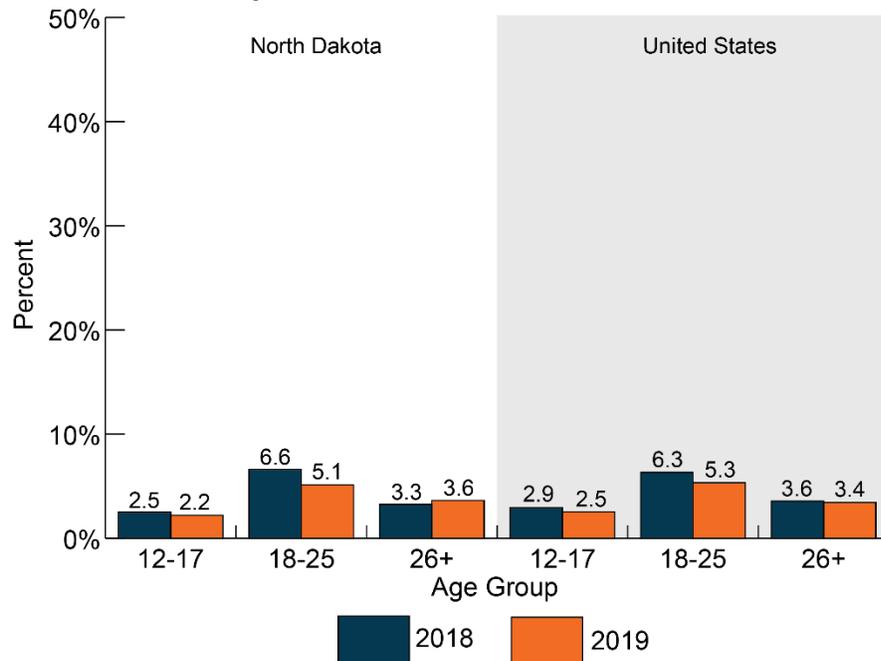
About the Indicator

The National Survey of Drug Use and Health Report (2019) stated that prescription pain relievers were the nation’s second most prevalent illicit drug misused after marijuana. Although a majority of the people who use prescription pain relievers do not misuse them, 9.9 million (3.6%) Americans aged 12 and older misused pain relievers in the last year. It is safe to use prescription pain relievers to reduce pain and suffering when used under medical supervision and with necessary instructions followed.

Section Summary

- Between 2018 and 2019, nonmedical use of pain relievers among all ages in North Dakota and nationally have decreased aside from North Dakotans 26 and older (NSDUH, 2019; see Figure 4.9).
- Past year nonmedical use of pain relievers is highest among North Dakotans age 18-25 (NSDUH, 2019; see Figure 4.9).

Figure 4.9: Percentage past Year Nonmedical Use of Pain Relievers, ND vs. U.S., by Age Group



Data Source: NSDUH

Prescription Drugs in North Dakota: Consequences

Opioid-Related Hospital Use

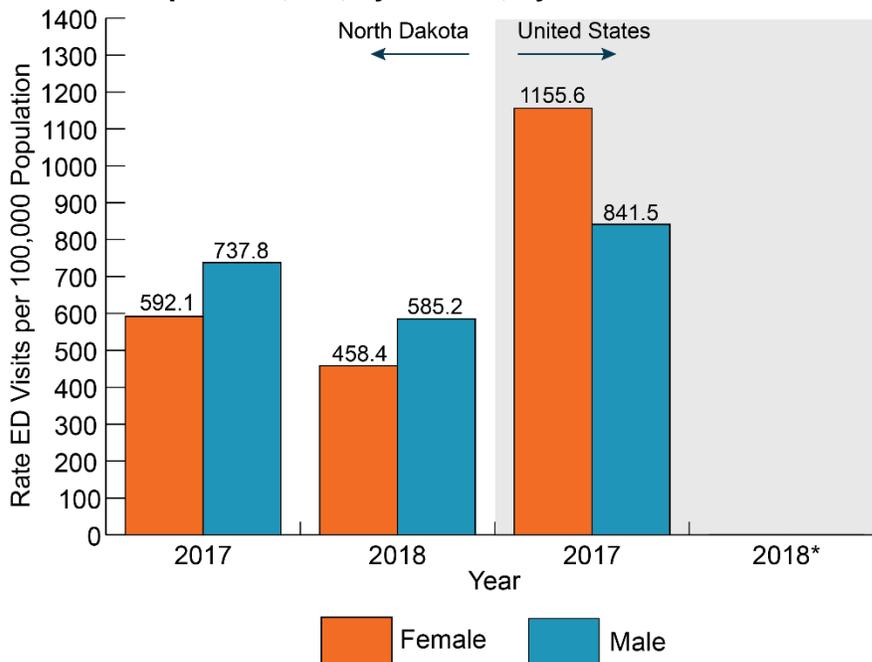
About the Indicator

Though opioid prescribing rates have decreased nationally, the number of opioid overdose deaths, opioid-related inpatient stays and emergency department (ED) visits have not (CDC, 2019). From 2014 to 2016, the rate of ED visits and inpatient stays per 100,000 increased by 37.2% (from 177.7 to 243.5) and 32.3% (from 224.6 to 296.9), respectively. However, in North Dakota, the number of opioid related inpatient stays (291.1 vs 283.8) and emergency room visits (177 vs 166) decreased between 2016 and 2017 (HCUP, 2019). A study from the Clinical Journal of Pain (2018) found that US regions with the highest percentage of individuals on chronic opioids did not have the most opioid-related ED visits or hospitalizations. This may suggest that the increased rate in opioid-related hospital stays and ED visits is likely related to illicit opioid use and less to long-term opioid prescription use.

Section Summary

- In North Dakota, both men and women reported decreased rates of opioid-related ED visits from 2017 to 2018 and both North Dakota male and female groups reported decreased rates compared to male and females throughout the United States in 2017 (HCUP, 2019; see Figure 4.10).

Figure 4.10: Rate of Opioid-Related Emergency Department Visits per 100,000 Population, ND, by Gender, by Year

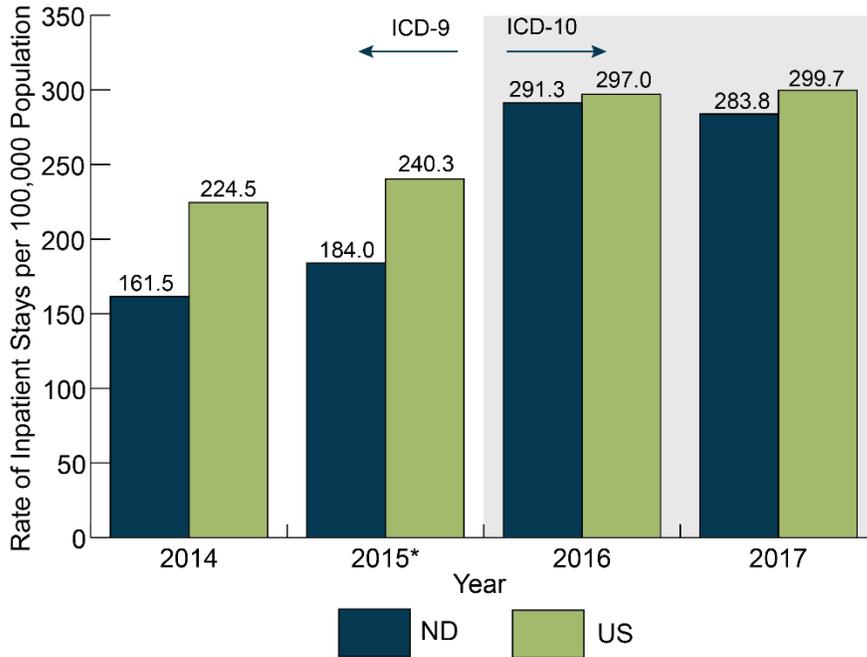


Data Source: AHRQ, HCUP

Data Note: *2018 National data not available

- Between 2014 and 2016, both North Dakota and the U.S. observed an increase in the opioid-related hospital inpatient stays per 100,000 (HCUP, 2019). From 2016 to 2017, North Dakota reported a 2.6% decrease in the rate of opioid-related hospital stays (HCUP, 2019; see Figure 4.11).

Figure 4.11: Rate of Opioid-Related Hospital Inpatient Stays per 100,000 Population, Totals, ND vs. U.S., by Year



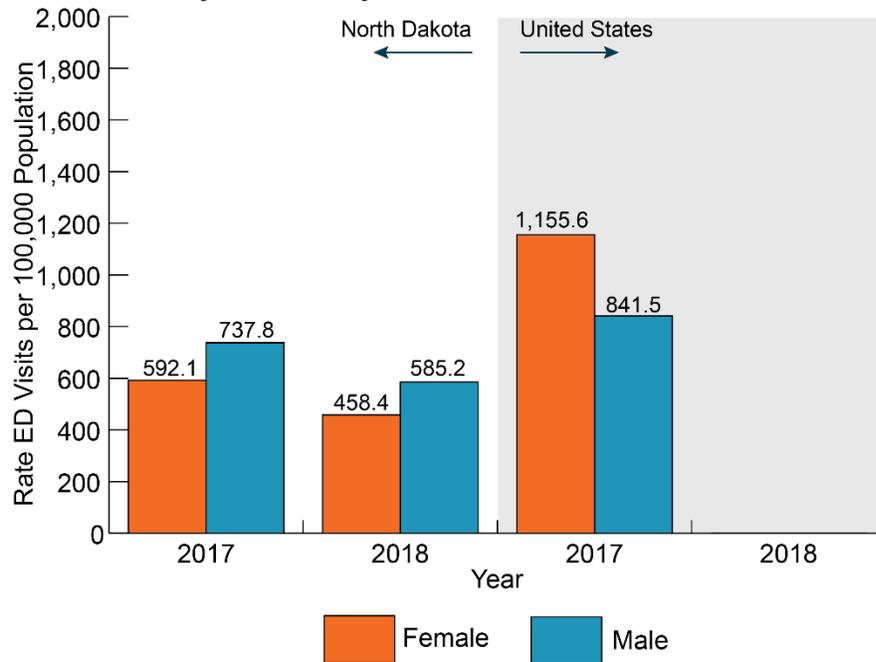
Data Source: AHRQ, HCUP

Data Note: *Transition from ICD-9-CM to ICD-10-CM definitions occurred on October 1, 2015.

Data Note: ICD10 codes used: F11 series, T40 series.

- In North Dakota, both men and women reported decreased rates of opioid-related inpatient hospital stays from 2017 to 2018. Although males have higher rates (HCUP, 2019; see Figure 4.12).

Figure 4.12: Rate of Opioid-Related Hospital Inpatient Stays per 100,000 Population, ND, by Gender, by Year



Data Source: AHRQ, HCUP
 Data Note: *2018 National data not available

Data Note: Drug Overdose and Related Deaths

About the Indicator

Prescription drugs such as hydrocodone (e.g., Vicodin), oxycodone (e.g., OxyContin), and fentanyl (e.g., Duragesic) can be medically beneficial in reducing pain and suffering. However, when used without a physician's guidance, there is great risk of negative consequences such as substance use disorder, overdose, or death. Overdoses of all types of pharmaceuticals have resulted in over 310,000 deaths nationally since 2008 (CDC Wonder, 2018).

Section Summary

- From 2018 through 2019, North Dakota reported a much lower mortality rate caused by either natural, semi-synthetic, or synthetic (including methadone) opioid overdose when compared to the United States (CDC Wonder, 2019; see Table 4.2).
- National and North Dakota age-adjusted natural, semi-synthetic, and synthetic opioid overdose mortality rates have increased from 2016 through 2019. North Dakota reported variable rates from 2016 through 2018 (CDC Wonder, 2019; see Table 4.2). Both North Dakota and the United States reported substantial increases in mortality from 2018 to 2019.

Table 4.2: Mortality Rate Related to Natural, Semi-synthetic, and Synthetic Opioids, Including Methadone per 100,000 Population, ND vs. U.S., by Year

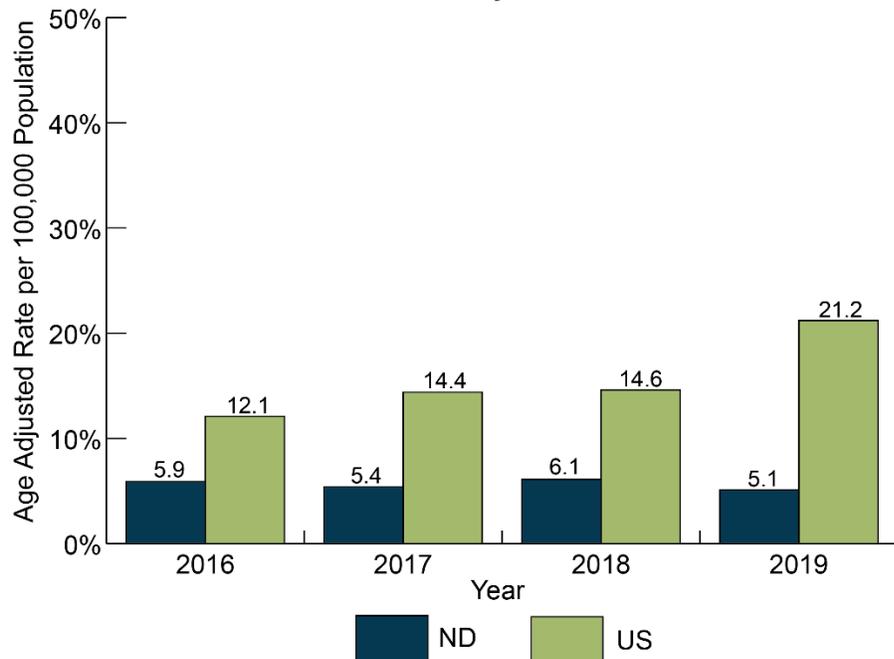
| Mortality rate per 100,000, 2016 - 2019 | | | | |
|---|------|------|------|------|
| ND | 2016 | 2017 | 2018 | 2019 |
| Crude rate per 100,000 | 4.7 | 3.4 | 3.8 | 11.2 |
| Age Adjusted Rate per 100,000 | 5.0 | 3.6 | 4.2 | 12.0 |
| U.S. | 2016 | 2017 | 2018 | 2019 |
| Crude rate per 100,000 | 10.0 | 12.3 | 12.5 | 22.2 |
| Age Adjusted Rate per 100,000 | 10.2 | 12.5 | 12.7 | 22.3 |

Data Source : CDC Wonder

ICD 10 Codes Used: Underlying cause X40 – X44, X60-X64, X85, Y10-Y14; contributing cause T40.2-T40.4.

- Pharmaceutical overdose death rates in North Dakota dropped by almost one percentage point between 2016 and 2019; unlike the national rate, which increased by 9.1% over the same time period (CDC Wonder, 2019; see Figure 4.13).

Figure 4.13: Age Adjusted Mortality Rate Related to Pharmaceutical Poisoning per 100,000, ND vs. U.S., by Year



Data Source: CDC Wonder

Data Note: "Pharmaceutical" includes a small number of codes include both prescription and over-the counter drugs.

ICD Codes Used: Underlying cause X40-X44, X60-X64, X85, Y10-Y14; contributing cause T36-T39, T40.2-T40.4, T41, T42, T43.3-T43.5, T43.8, T43.9, T44-T49, T50.0-T50.8.

Prescription Pain Relieving Drugs in North Dakota: Modifiable Risks

Availability of Prescription Drugs

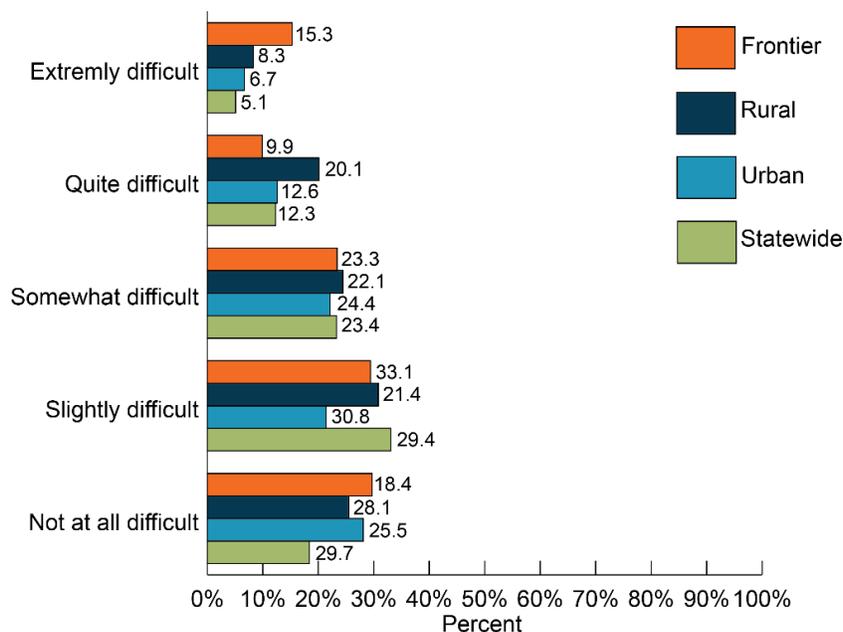
About the Indicator

The Centers for Disease Control and Prevention (CDC, 2017) states that the supply of prescription opioids remains high in the United States, with an estimated one out of five patients with non-cancer pain or pain-related diagnoses receiving opioids. An estimated 10.1 million Americans aged 12 and older reported misusing prescription pain relievers in the past year (NSDUH Report, 2019). As opioid prescribing rates decrease, it is hoped that prescription drug abuse and related consequences will also decrease.

Section Summary

- In 2019, over 25% of adults living in a frontier community in North Dakota felt that it was quite or extremely difficult for them to access prescription drugs compared to 19.3% of adults in urban communities (ND CRS, 2019; see Figure 4.14).

Figure 4.14: Perceived Difficulty of Accessing Prescription Drugs in Community, ND, 2019, by Location



Data Source: ND CRS

Data Note: (*) Geographic definitions can be found in the Appendix (p.177)

- From 2015 through 2018, North Dakota and United States opioid prescription rates among Medicare part D enrollees decreased, with North Dakota's rate consistently below the national rate (CMS, 2018; see Table 4.3).

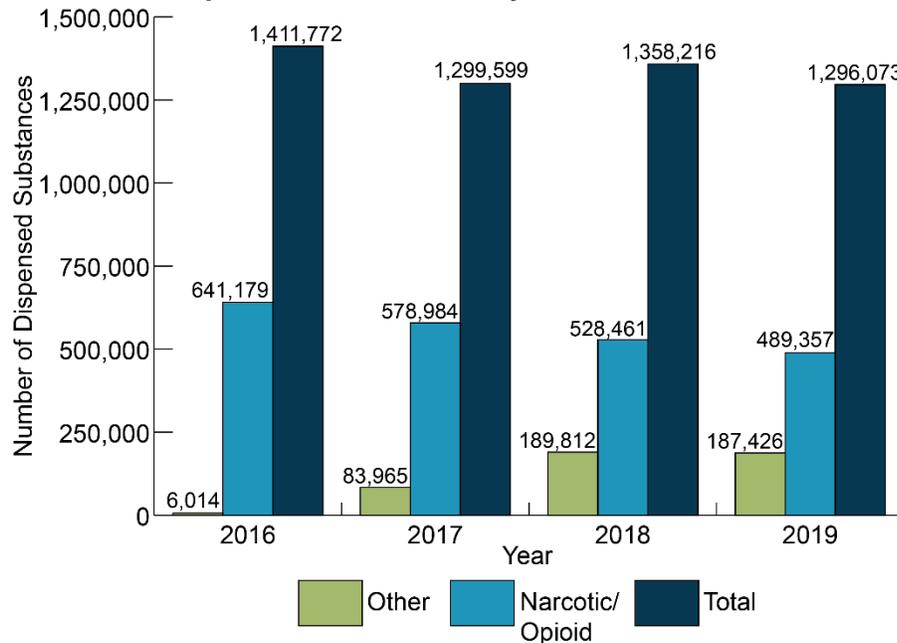
Table 4.3: Medicare Part D Opioid Prescription Rates, ND vs. U.S., by Year

| ND | 2015 | 2016 | 2017 | 2018 |
|---------------------------------------|---------------|---------------|---------------|---------------|
| Opioid Claims | 162,573 | 158,378 | 145,289 | 136,499 |
| Overall Claims | 3,568,506 | 3,808,769 | 3,786,087 | 3,817,466 |
| Opioid Prescribing Rate | 4.56 | 4.16 | 3.84 | 3.58 |
| Opioid Prescribing % Change from 2013 | -0.03 | -0.43 | -0.75 | -1.08 |
| U.S. | 2015 | 2016 | 2017 | 2018 |
| Opioid Claims | 78,051,171 | 77,363,124 | 74,104,230 | 70,196,574 |
| Overall Claims | 1,418,536,258 | 1,452,978,228 | 1,466,300,795 | 1,498,483,264 |
| Opioid Prescribing Rate | 5.50 | 5.32 | 5.05 | 4.68 |
| Opioid Prescribing % Change from 2013 | -0.3 | -0.48 | -0.75 | -1.14 |

Data Source: CMS

- The number of controlled substance prescriptions dispensed in North Dakota decreased between 2018 and 2019. “Other” drug prescriptions have increased from 2016 to 2019. However, since 2016, North Dakota reported decreasing numbers of narcotic / opioid prescriptions dispensed (North Dakota Board of Pharmacy; see Figure 4.15).

Figure 4.15: Number of Controlled Substance Prescriptions Dispensed, Narcotics / Opioids vs Other, ND, by Year

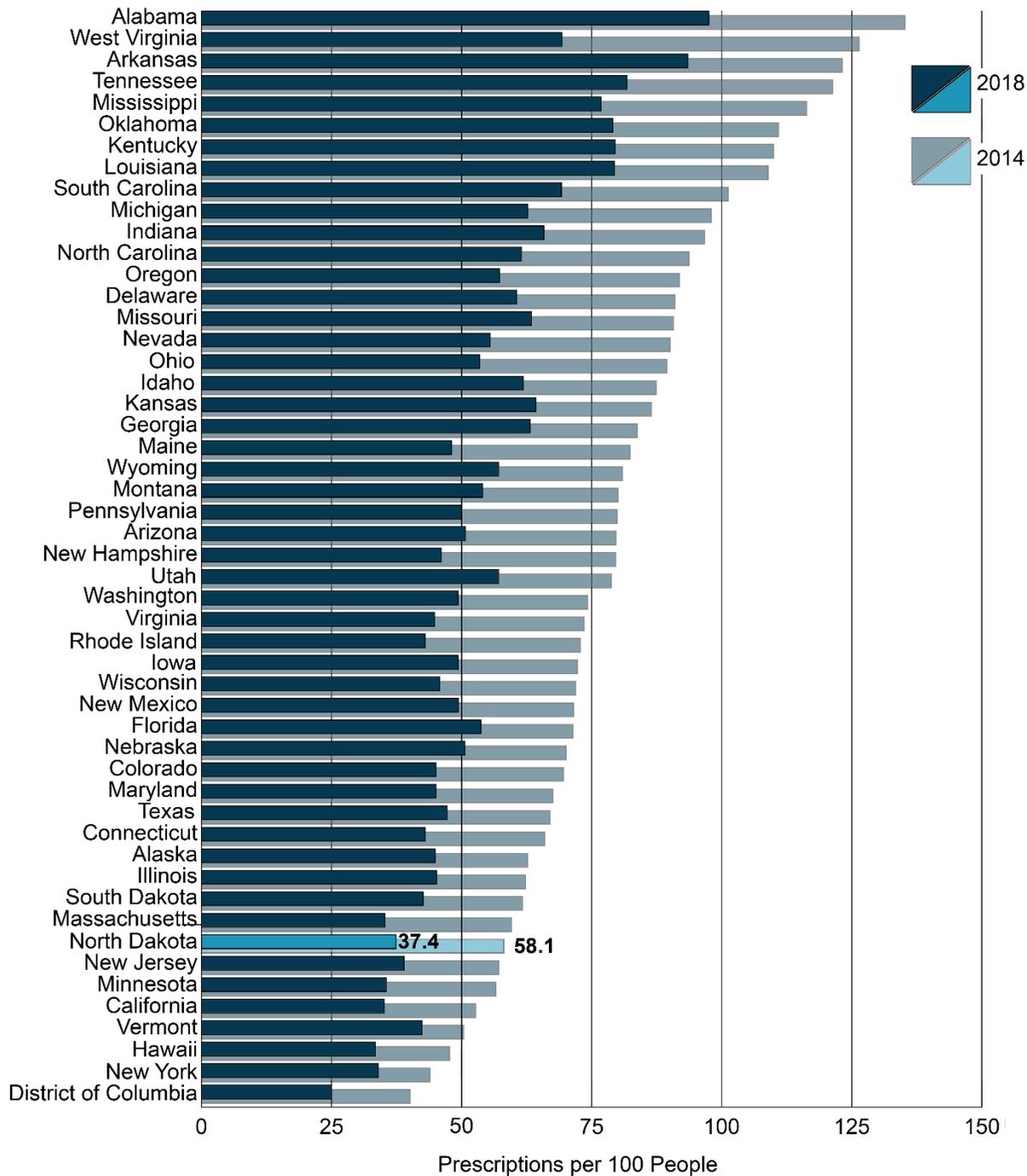


Data Source: ND PDMP

Data Note: “Other” included gabapentin reporting starting in August 2017.

- In 2018, health care providers in North Dakota prescribed 37.4 painkiller prescriptions per 100 people, a 20.7 percent decrease from 2014 (58.1). North Dakota placed in the bottom third of states for painkiller prescriptions per person ratios (NPA, 2019; see Figure 4.16).

Figure 4.16: Number of Prescription Painkillers per 100 People, U.S., by State, 2014-2018



Data Source: NPA

- From 2014 through 2018, the rate of opioid prescriptions dispensed per 100 persons in North Dakota remained lower than the national level (Annual Surveillance Report of Drug-Related Risks and Outcomes, 2019; see Table 4.4).

Table 4.4: Rate of Opioid Prescriptions Dispensed per 100 Persons, ND vs. U.S., by Dosage and Type, by Year

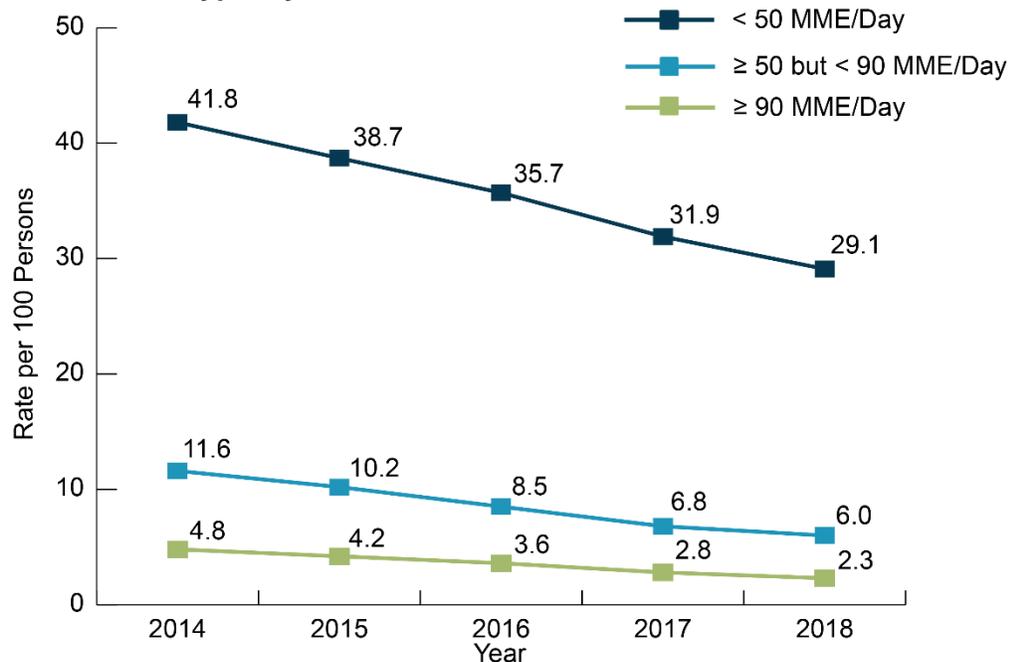
| ND | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|-------------|-------------|-------------|-------------|-------------|
| All Opioid Types | 58.1 | 53.0 | 47.8 | 41.5 | 37.4 |
| Long or Extended Acting | 6.8 | 6.4 | 5.7 | 4.7 | 3.9 |
| <i>Daily Dosage Per Prescription: (MME/Day)</i> | | | | | |
| <50 | 41.8 | 38.7 | 35.7 | 31.9 | 29.1 |
| >50 but <90 | 11.6 | 10.2 | 8.5 | 6.8 | 6.0 |
| ≥90 | 4.8 | 4.2 | 3.6 | 2.8 | 2.3 |
| US | 2014 | 2015 | 2016 | 2017 | 2018 |
| All Opioid Types | 75.6 | 70.6 | 66.5 | 58.5 | 51.4 |
| Long or Extended Acting | 6.9 | 6.7 | 6.3 | 5.3 | 4.5 |
| <i>Daily Dosage Per Prescription: (MME/Day)</i> | | | | | |
| <50 | 55.1 | 51.6 | 48.9 | 43.7 | 39.7 |
| >50 but <90 | 13.4 | 12.4 | 11.5 | 9.8 | 7.9 |
| ≥90 | 7.1 | 6.7 | 6.1 | 5.0 | 3.9 |

Data Source: Annual Surveillance Report of Drug-Related Risks and Outcomes

Data Note: Rate per 100 persons adjusted to the U.S. census population. MME = morphine milligram equivalents. LA / ER represents opioids that are long acting (LA) or extended release (ER).

- From 2014 through 2018, the most common / prevalent opioid prescriptions dispensed per 100 persons in North Dakota had a strength of less than 50 morphine milligram equivalents per day and the rate at which they were dispensed continued to decrease over the same period (Annual Surveillance Report of Drug-Related Risks and Outcomes, 2019; see Figure 4.17).

Figure 4.17: Rate of Opioid Prescriptions Dispensed per 100 Persons, ND, by Dosage and Type, by Year



Data Source: Annual Surveillance Report of Drug-Related Risks and Outcomes
 Data Note: Rate per 100 persons adjusted to the U.S. census population. MME = morphine milligram equivalents. LA / ER represents opioids that are long acting (LA) or extended release (ER).

Pharmacotherapy Drugs

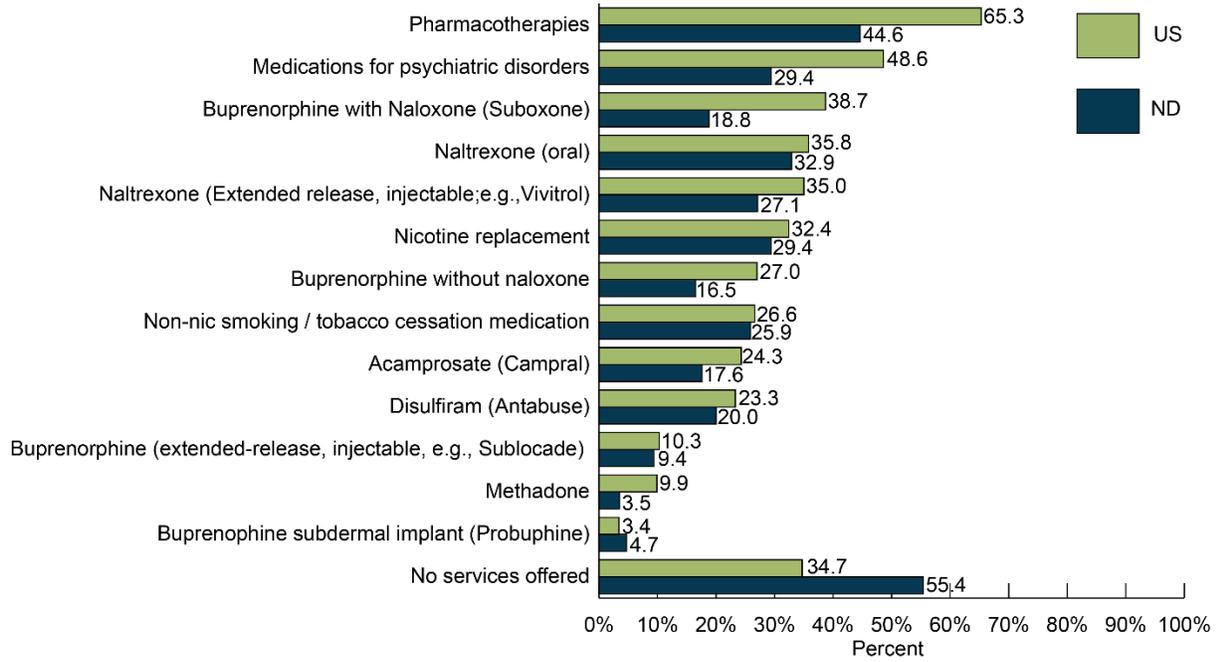
About the Indicator

Pharmacotherapy is a therapy or treatment procedure that uses pharmaceutical drugs (i.e. prescription or over the counter medications). The 2020 National Survey of Substance Abuse Treatment Services (N-SSATS) asserts that at least one type of pharmacotherapy was provided by 67% of all surveyed facilities in the United States. The same report observed that medications for psychiatric disorders were the most frequently available pharmacotherapies and were provided in 50% of all facilities. In 2020, 44.0% of treatment facilities offered Buprenorphine with naloxone (e.g., Suboxone) and / or Naltrexone, respectively (N-SSATS).

Section Summary

- A smaller percentage (44.6%) of substance abuse treatment facilities in North Dakota offered any type of pharmacotherapy when compared to the United States (65.3%) in 2020 (N-SSATS, 2020; see Figure 4.18).

Figure 4.18 Percentage of Pharmacotherapies Offered by Substance Abuse Treatment Facilities, ND vs. U.S., by Type, 2020



Data Source: N-SSATS

Data Sources

Agency for Healthcare Research and Quality (AHRQ). Healthcare Cost and Utilization Project (HCUP)

CDC National Center for Injury Prevention and Control (CDC). Annual Surveillance Report of Drug-Related Risks and Outcomes

Centers for Disease Control and Prevention (CDC). CDC Wonder

Centers for Disease Control and Prevention (CDC). National Prescription Audit (NPA)

Centers for Disease Control and Prevention (CDC). U.S. Opioid Prescribing Rate Maps

Centers for Disease Control and Prevention (CDC). Youth Risk Behavior Survey (YRBS)

Centers for Medicare and Medicaid Services (CMS)

North Dakota Board of Pharmacy

Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey of Substance Abuse Treatment Services (N-SSATS)

Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH)

The Clinic Journal of Pain (Clin J Pain.). Opioid-related Emergency Department Visits and Hospitalizations among Commercially Insured Individuals, 2009-2015

Wyoming Survey & Analysis Center (WYSAC). North Dakota Community Readiness Survey (ND CRS)

Wyoming Survey & Analysis Center (WYSAC). North Dakota Survey of Young Adults (NDSOYA)

Substance Abuse and Mental Health in North Dakota

Section 5. Mental Health: Indicators, Consequences, and Modifiable Factors

Mental Health: Indicators

Bullying

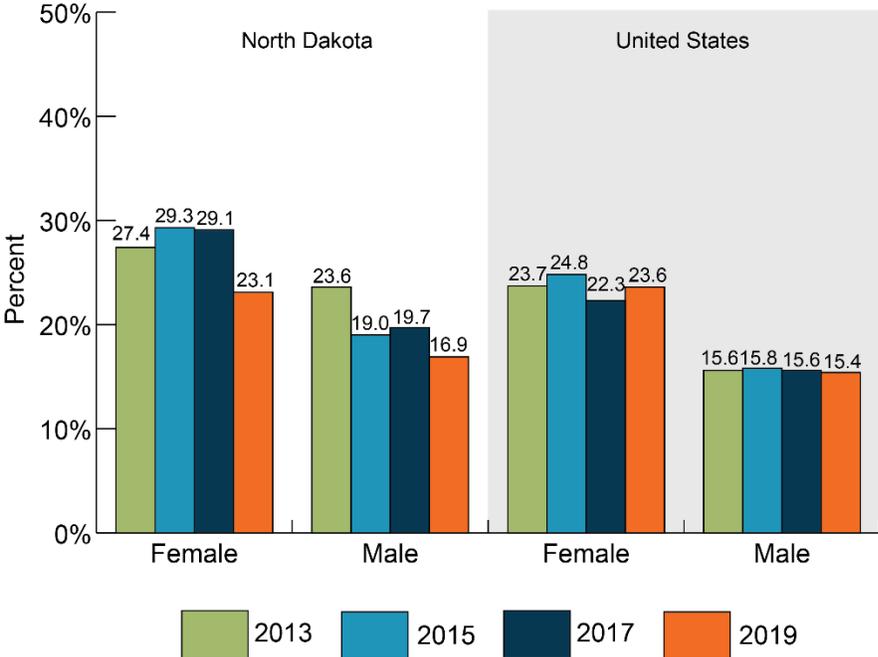
About the Indicator

The relationship between mental health and bullying has been well documented. Bullying or the interpersonal aggression best characterized by, “intentionality, repetition, and an imbalance of power” has been around for centuries and affects all people (American Psychologist, 2015). The internet has changed the bullying landscape. Cyberbullying allows for more anonymity, and due to the nature of social media, makes bullying harder to avoid.

Section Summary

- The percentage of North Dakota high school students who reported being bullied on school property in the last year was less than national rates among females and greater among males in 2019 (YRBS, 2019; see Figure 5.1).
- The percentage of North Dakota high school students who reported being bullied on school property in the last year was lower than previous years (YRBS, 2019; see Figure 5.1).

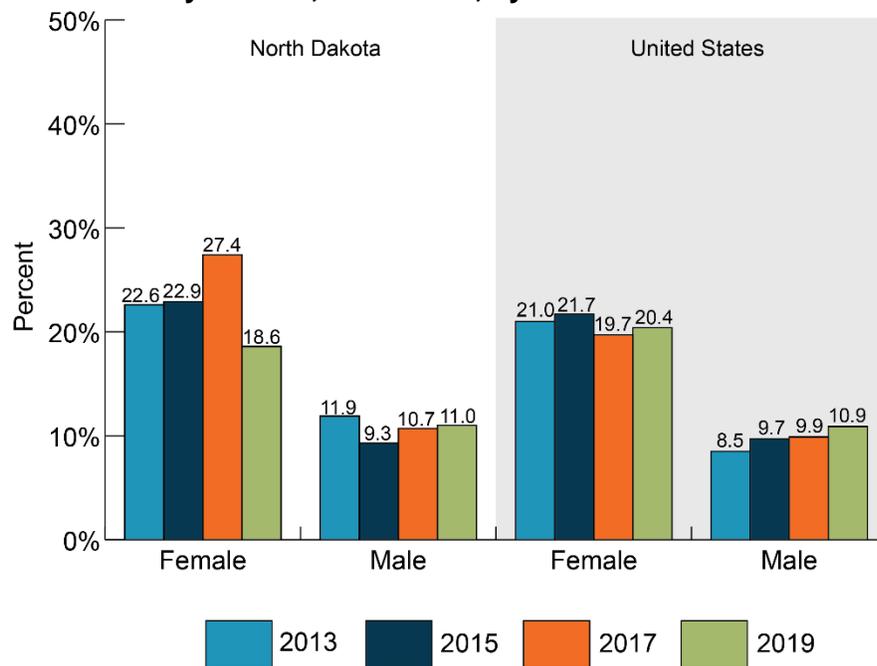
Figure 5.1: Percentage of Students Bullied in the Last Year, High School, by Gender, ND vs U.S., by Year



Data Source: YRBS

- The percentage of North Dakota high school students who reported being electronically bullied in the last year was less than national rates among females and similar among males between in 2019 (YRBS, 2019; see Figure 5.2).
- Among both North Dakota and U.S. high school students, rates of electronic bullying among females were greater than that of males between 2013 and 2019 (YRBS, 2019; see Figure 5.2).
- North Dakota high school females reported a decrease (27.4% to 18.6%) in electronic bullying rate from 2017 to 2019. However, there was a slight increase (0.3%) in reported electronic bullying rates for North Dakota high school males in 2019 (YRBS, 2019; see Figure 5.2).

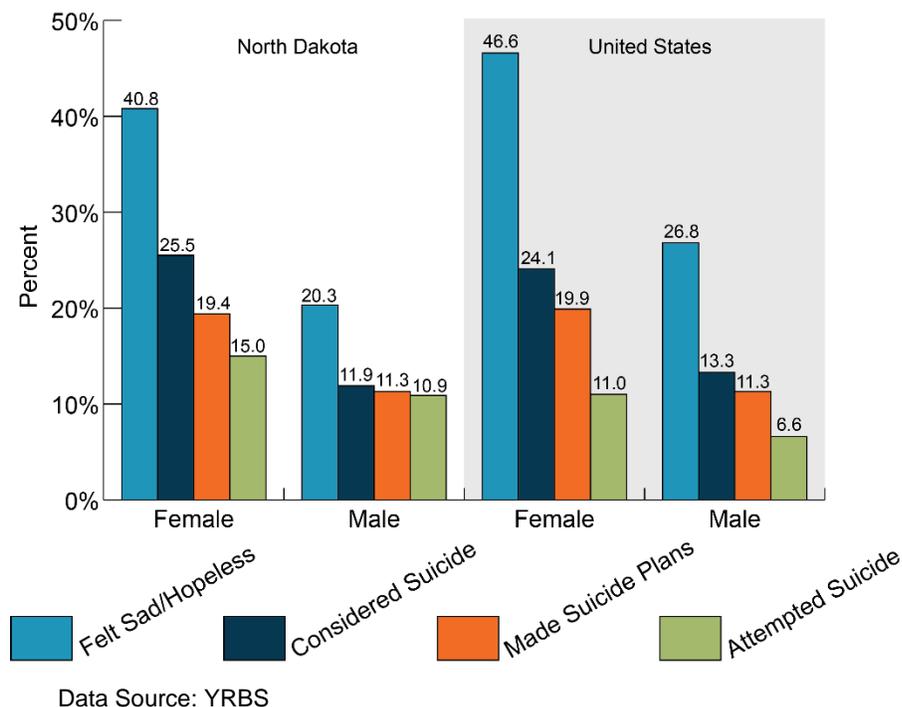
Figure 5.2: Percentage of Students Electronically Bullied in the Last Year, High School, by Gender, ND vs U.S., by Year



Data Source: YRBS

- The prevalence of sadness, thoughts of suicide, creation of a suicide plan, and attempting suicide was less among North Dakota males and females compared to the United States' males and females (YRBS, 2019; see Figure 5.3).

Figure 5.3: Percentage of Depressive or Suicidal thoughts and Actions, ND vs U.S., by Gender, 2019



Poor Mental Health Days

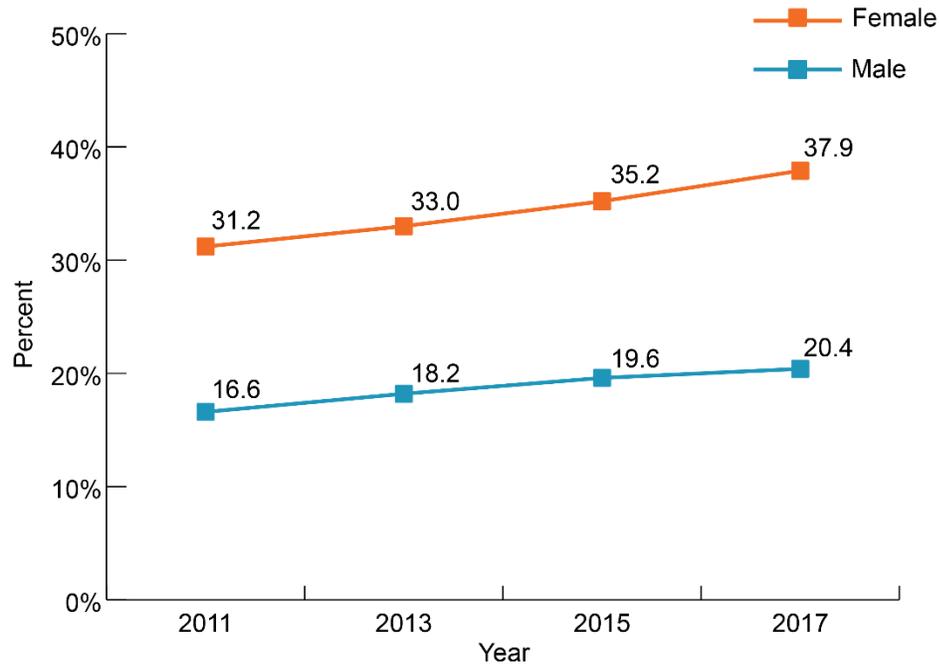
About the Indicator

Poor mental health can make carrying out daily activities difficult. Changes in one’s mood, behaviors, and thoughts can impair all aspects of life from managing tasks at school or work, to relationships with family and friends. Poor mental health days are a good indication of quality of life and overall wellness and can also serve as an indicator for future mental health concerns. Research has found that at a county level, increased presence of poor mental health days corresponded with increased prevalence of risk factors and chronic conditions (Population Health Metrics, 2017).

Section Summary

- Both male and female North Dakota high school students reported increased rates (females 31.2% to 37.9%, males 16.6% to 20.4%) of sadness or hopelessness for two weeks or more in the past year between 2011 to 2017 (YRBS, 2019; see Figure 5.4).

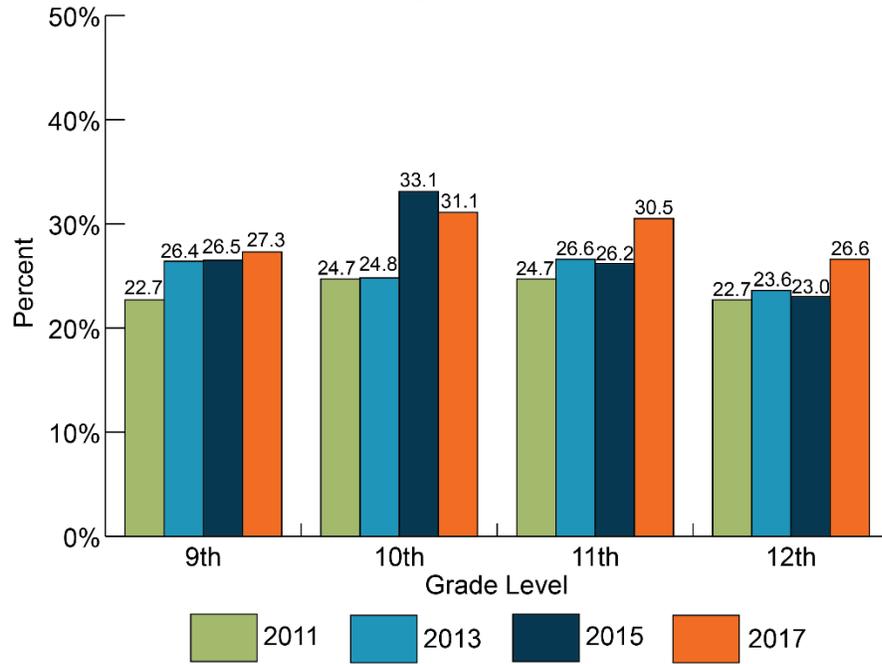
Figure 5.4: Percent of Students Who Felt Sad or Hopeless Consecutively for Two Weeks in Past Year by Gender, High School, ND, by Year



Data Source: YRBS

- The percentage of North Dakota high school students who reported feeling sad or hopeless consecutively for two weeks or more in the past year increased among 9th, 11th, and 12th graders in 2017 (YRBS, 2017; see Figure 5.5).

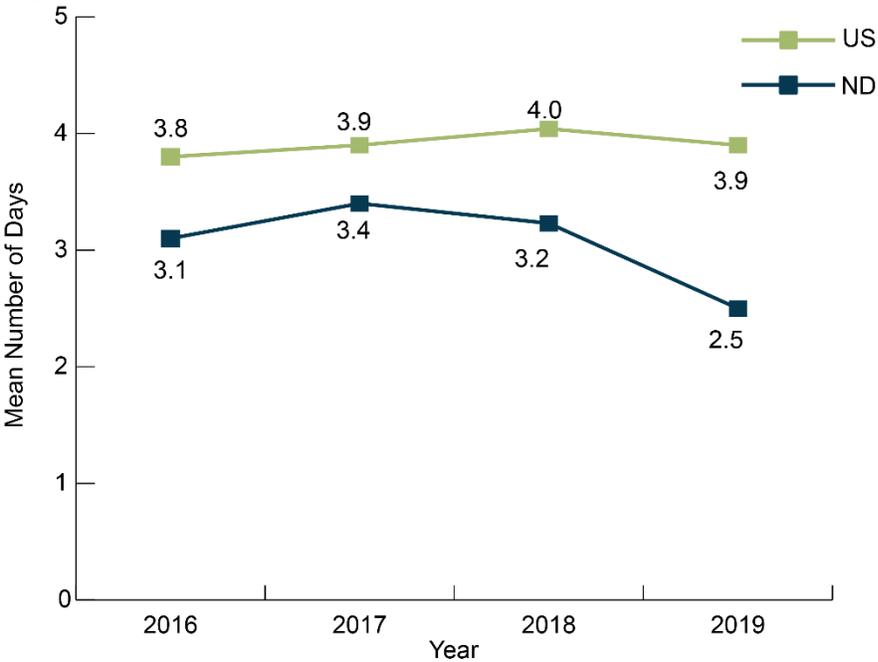
Figure 5.5: Percentage Who Felt Sad or Hopeless Consecutively for Two Weeks in Past Year by Grade, High School, ND, by Year



Data Source: YRBS

- The mean number of poor health days North Dakota and U.S. adults reported per month increased between 2016 and 2018 although it decreased from 2018 to 2019 (BRFSS, 2019; see Figure 5.6).

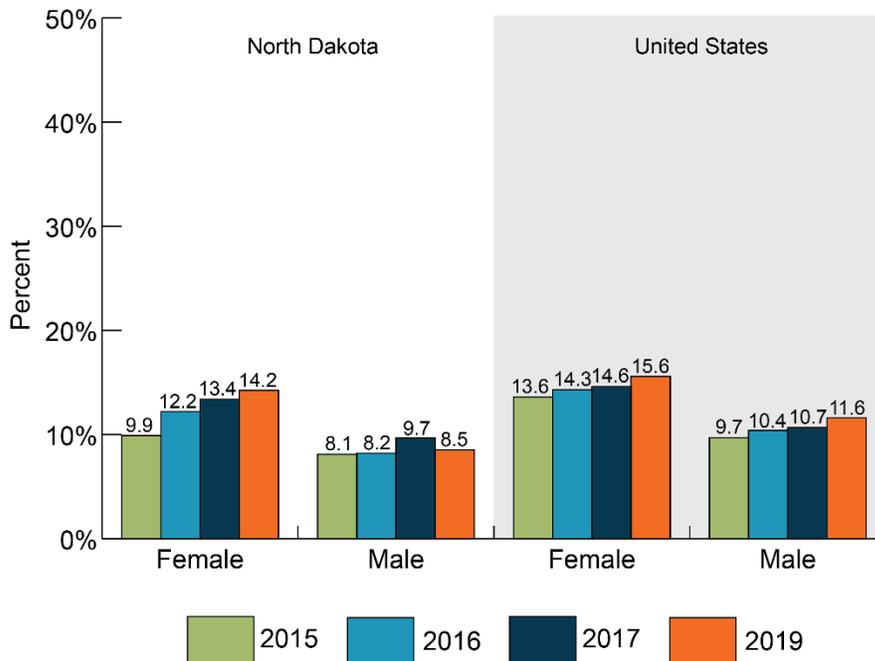
Figure 5.6: Mean Number of Poor Health Days in the Past 30 Days, ND vs. U.S., by Year



Data Source: BRFSS

- Females in North Dakota and nationally reported a greater percentage of 14 or more poor mental health days per month than males between 2015 and 2019 (BRFSS, 2019; see Figure 5.7).
- The percentage of United States adults, both females and males, who reported 14 or more poor mental health days per month was greater than North Dakota adults from 2015 to 2019 (BRFSS, 2019; see Figure 5.7).

Figure 5.7: Percentage Who Reported Mental Health Was Not Good For 14 or More Days in the Past Month by Gender, ND vs. U.S., by Year



Data Source: BRFSS

Domestic Abuse

About the Indicator

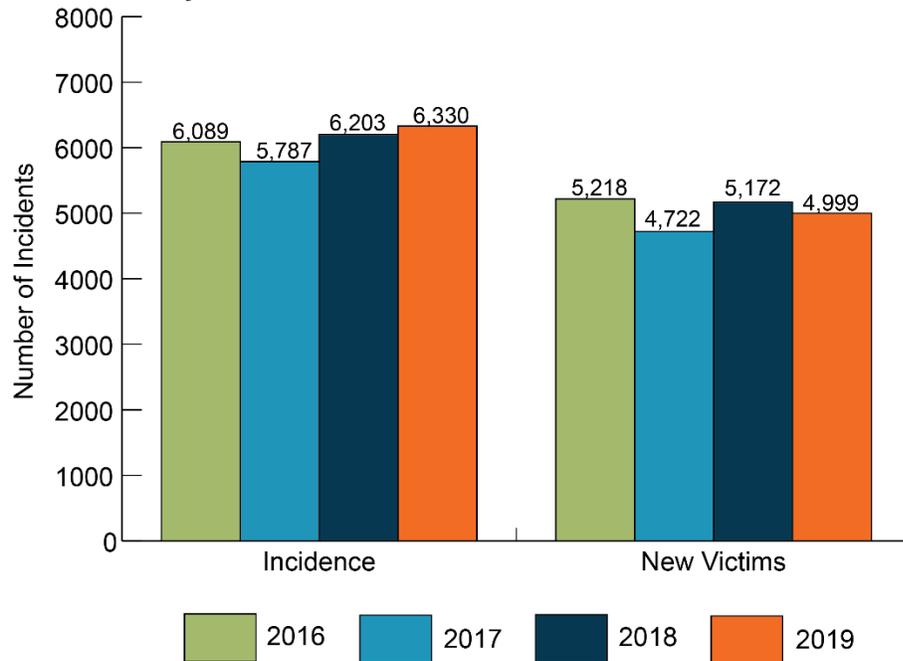
As defined by the Centers for Disease Control and Prevention (CDC), intimate partner violence includes sexual violence, stalking, physical violence, and psychological aggression. An intimate partner can be defined as a “romantic or sexual partner and includes spouses, boyfriends or girlfriends, people whom they dated, were seeing, or hooked up” (CDC, 2018).

Domestic violence can exist in any community and can affect all people regardless of socio-economic status, gender, race, or other demographic characteristics. In the U.S., about 1 in 4 women and 1 in 10 men experience intimate partner violence (IPV; CDC, 2018). A recent study found that women who had been exposed to IPV had double the risk of developing anxiety, and three times the risk of developing depression and other illnesses like schizophrenia and bipolar disorder (BMJPsych, 2019).

Section Summary

- The number of domestic violence incidents reported in North Dakota increased by 3.8% (6,089 to 6,330) from 2016 to 2019 (ND CAWS; see Figure 5.8).

Figure 5.8: Number of Domestic Violence Incidents, Total Incidents and New Victims, ND, by Year

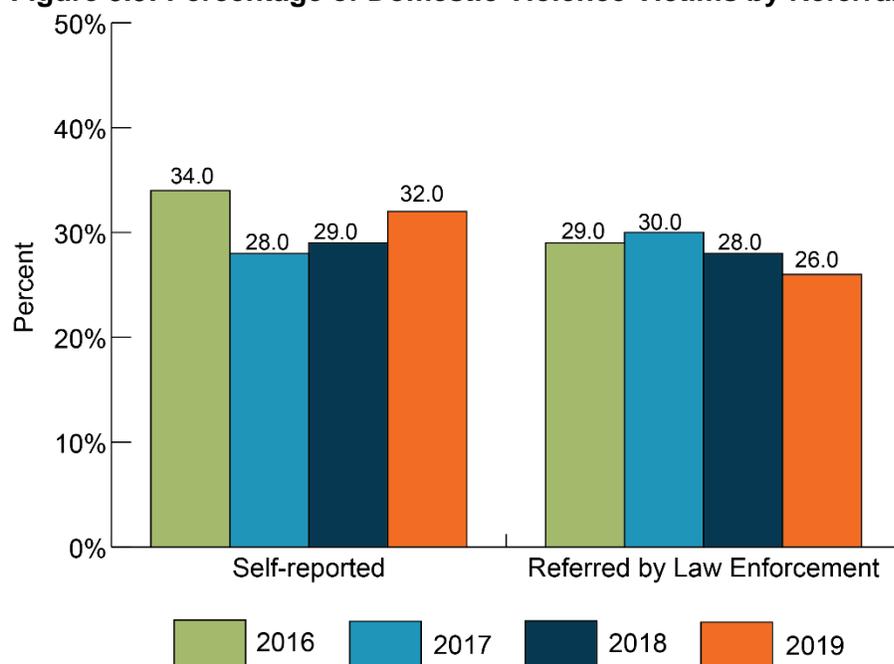


Data Source: ND CAWS

Data Note: (*) unduplicated for calendar year

- Both the percentage of self-reported victims, as well as law enforcement victims reported domestic violence incidents, decreased between 2016 and 2019 (ND CAWS; see Figure 5.9).

Figure 5.9: Percentage of Domestic Violence Victims by Referral Type, ND, by Year



Data Source: ND CAWS

Mental Health: Consequences

Mental Illness

About the Indicator

The National Survey on Drug Use and Health estimates national and state prevalence of any mental illness (AMI), major depressive episodes (MDE), and serious mental illness (SMI). With definitions that correspond to the diagnostic criteria put forth by the Diagnostic and Statistical Manual of Mental Disorders, 4th (DSM-4), SMI and AMI are not mutually exclusive. SMI are a more severe subset of AMI. However, adults can have AMI without SMI.

Any Mental Illness (AMI) Any mental illness is defined as, “a mental, behavioral, or emotional disorder.” AMI can vary in impact, ranging from no impairment to mild, moderate, and even severe impairment (DSM-4, NSDUH).

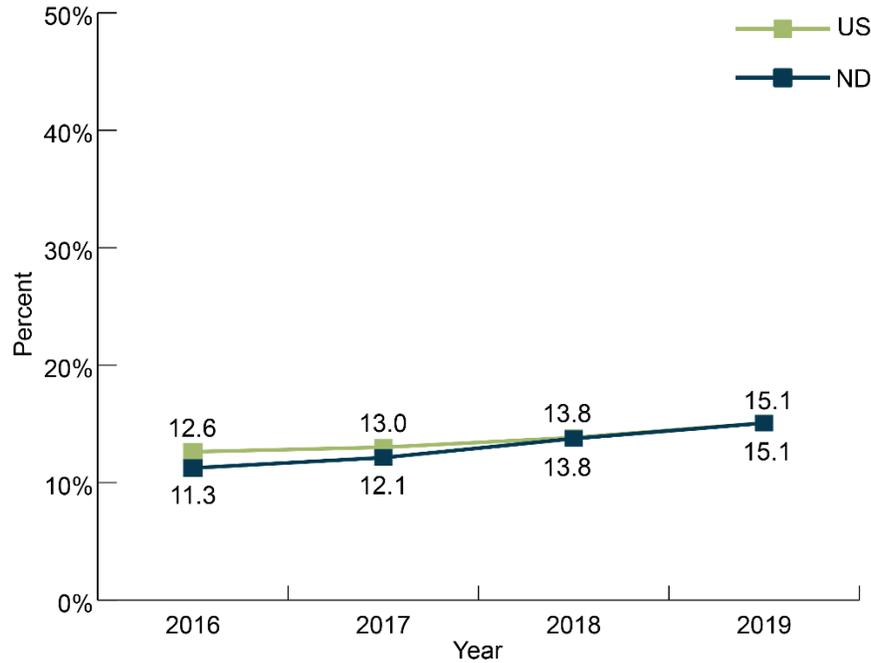
Serious mental illness (SMI) Serious mental illness is defined as, “a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities” (DSM-4, NSDUH).

Mental illnesses are very common in the United States. Nearly one in five (19.1% or 47.6 million) U.S. adults aged 18 and older had some form of mental illness (AMI) in 2018 (NSDUH, 2019). While the percent of adults who reported AMI remained relatively constant from 2016 to 2017, a substantial increase was reported from 2017 to 2019.

Section summary

- Both North Dakota and U.S. high school students reported increased rates of having a major depressive episode in the past year between 2016 to 2019 (NSDUH, 2018; see Figure 5.10).

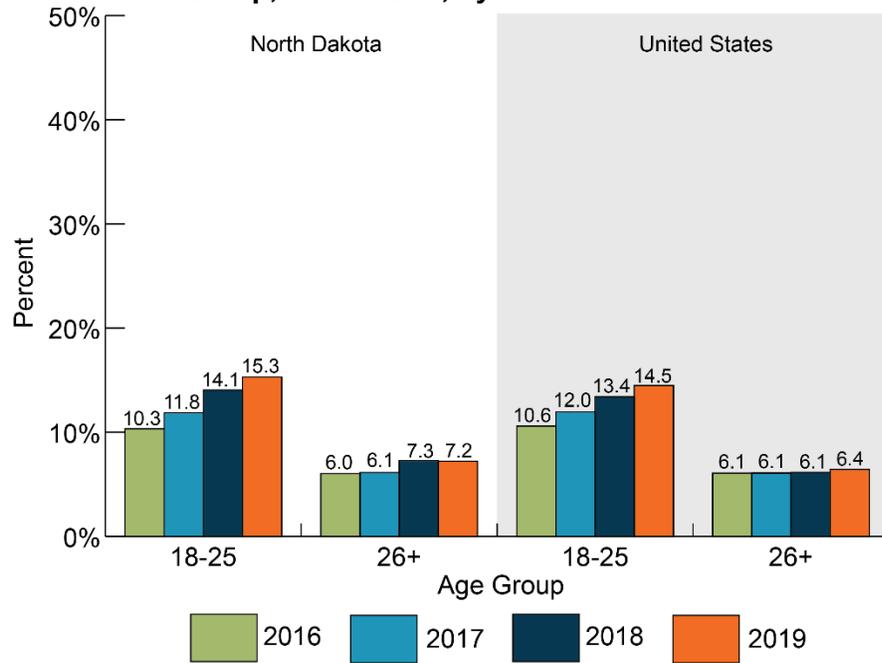
Figure 5.10: Percentage Who Had a Major Depressive Episode in Past 12 Months, Aged 12-17, ND vs. U.S., by Year



Data Source: NSDUH

- Both North Dakota and U.S. adults aged 18-25 reported increased rates (ND: 10.3% to 15.3%, U.S.: 10.6% to 14.5%) of having a major depressive episode in the past year between 2016 and 2019 (NSDUH, 2019; see Figure 5.11).

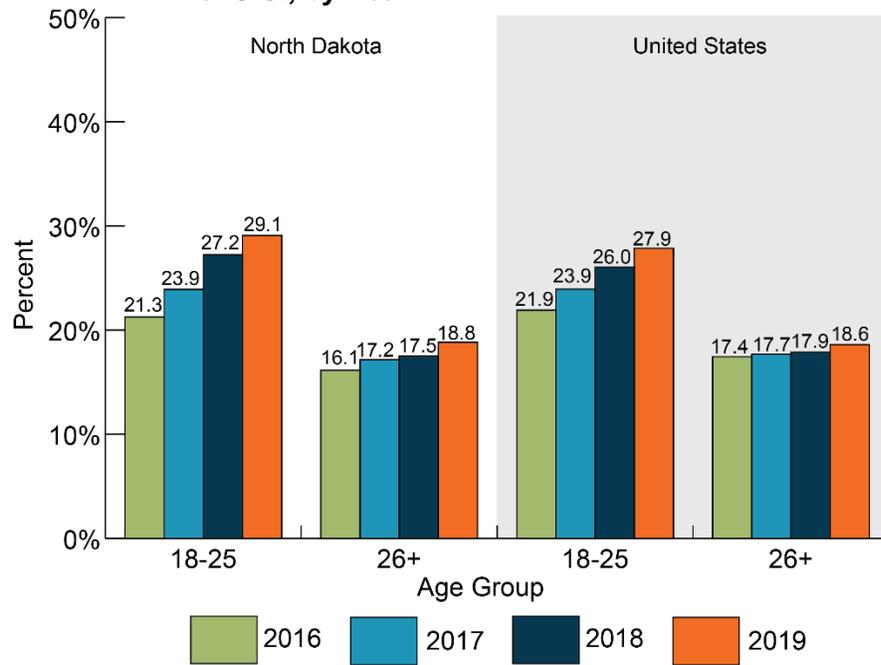
Figure 5.11: Percentage Who Had a Major Depressive Episode in Past 12 Months by Age Group, ND vs. U.S., by Year



Data Source: NSDUH

- The percentage of North Dakota adults who reported any mental illness in the past year increased consistently from 2016 to 2019, as did adults nationally over the same time period (NSDUH, 2019; see Figure 5.12).

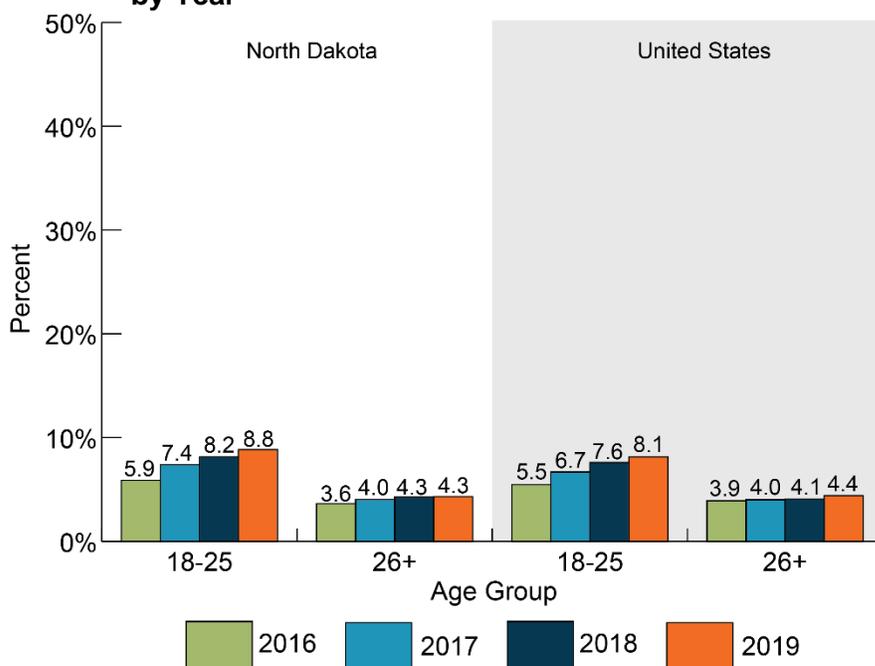
Figure 5.12: Percentage Who Reported Any Mental Illness in the Past Year, by Age, ND vs. U.S., by Year



Data Source: NSDUH

- The percentage of North Dakota and U.S. adults aged 18-25 who reported serious mental illness in the past year increased (ND: 5.9% to 8.8%, U.S.: 5.5% to 8.1%) from 2016 to 2019 (NSDUH, 2019; see Figure 5.13).
- From 2016 to 2019, North Dakota adults aged 18-26 and 26 and older reported slightly increased rates of serious mental illness. U.S. rates have also slightly increased over the same time period (NSDUH, 2019; see Figure 5.13).

Figure 5.13: Percentage of Serious Mental Illness in the Past Year, by Age, ND vs. U.S., by Year



Data Source: NSDUH

Suicide

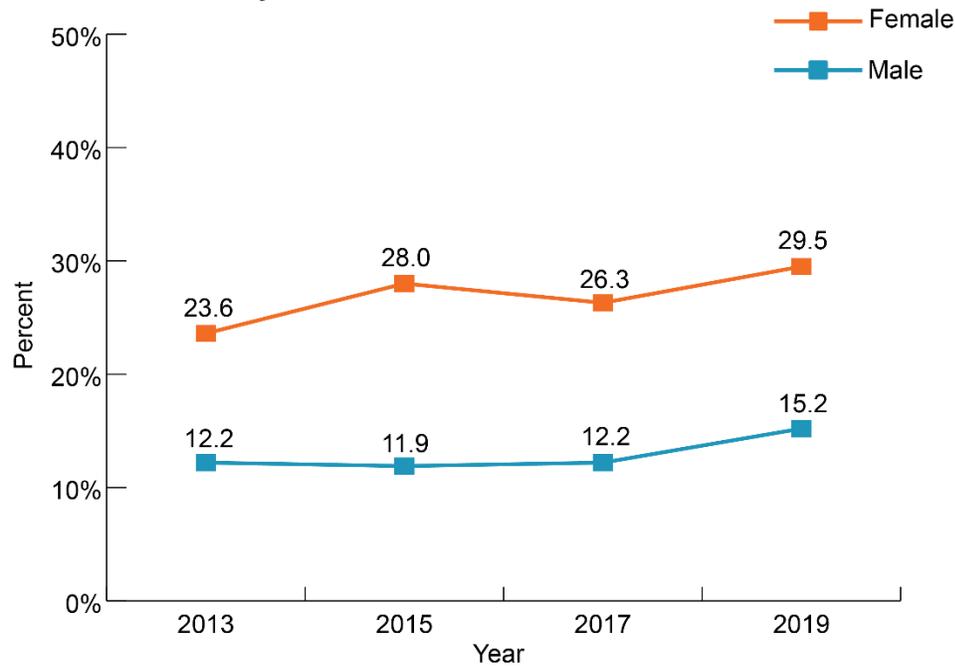
About the Indicator

Suicide is a serious public health concern. From 2000 to 2016, the American Psychological Association reported a 30% increase in the rate of death by suicide in the U.S. (NCHS, 2018). The National Survey of Drug Use and Health estimated that roughly 604,000 (1.8%) of U.S. young adults aged 18-25 attempted suicide in 2019. In the same year, roughly 579,000 (0.6%) adults aged 26 to 49, and 195,000 (0.2%) 50 years and older, reported suicide attempts. While increased suicide rates were reported among young adults from 2008 to 2017, the percentage of suicide attempts among adults aged 26 to 49, and 50 and over, remained stable over the same time period.

Section Summary

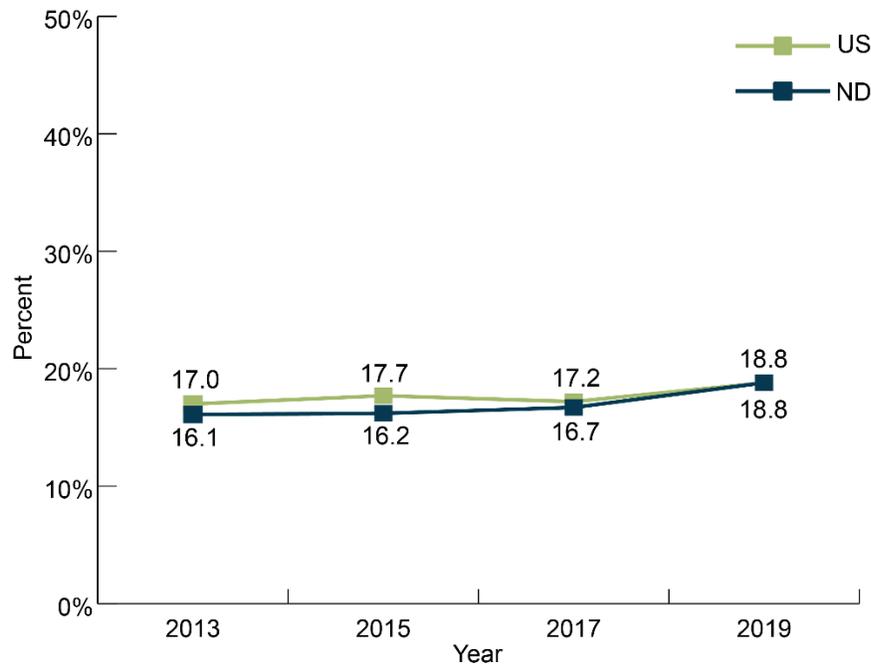
- The percentage of North Dakota middle school female students who reported seriously considering suicide was nearly double the rate of male students in 2019 (YRBS, 2019; see Figure 5.14).

Figure 5.14: Percentage Who Seriously Considered Suicide, Middle School, by Gender, ND, by Year



Data Source: YRBS

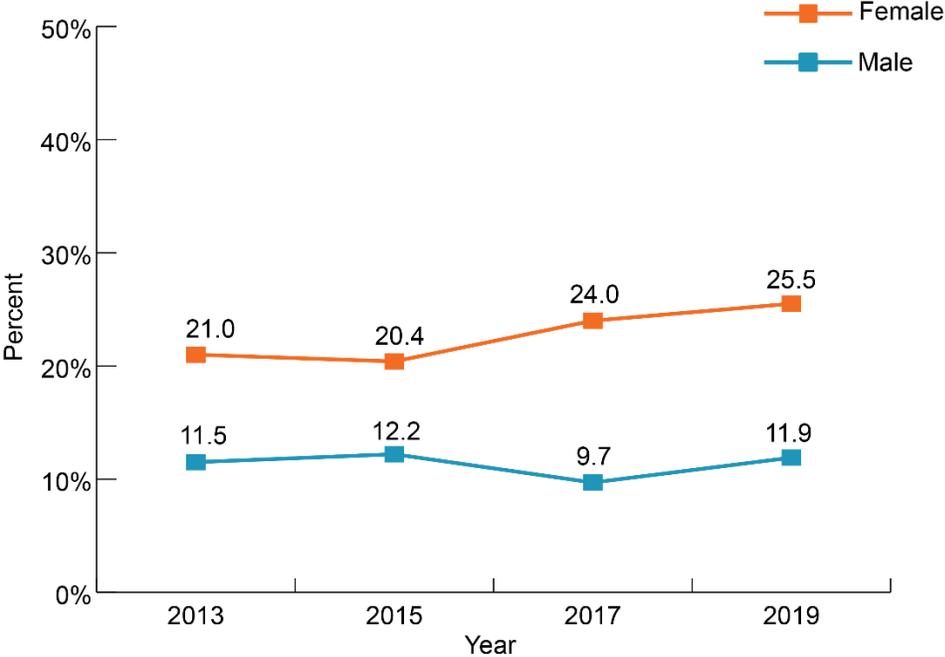
Figure 5.15: Percentage Who Seriously Considered Suicide, High School, ND vs. U.S., by Year



Data Source: YRBS

- The percentage of North Dakota high school male students who seriously considered suicide has slightly fluctuated between 2013 and 2017. That rate increased by 2.2 percentage points between 2017 and 2019 (YRBS, 2019; see Figure 5.16).
- Between 2013 and 2017 the percentage of North Dakota high school female students who seriously considered suicide increased. This trend continued between 2017 and 2019, with the rate increasing by 1.5 percentage points (YRBS, 2019; see Figure 5.16).

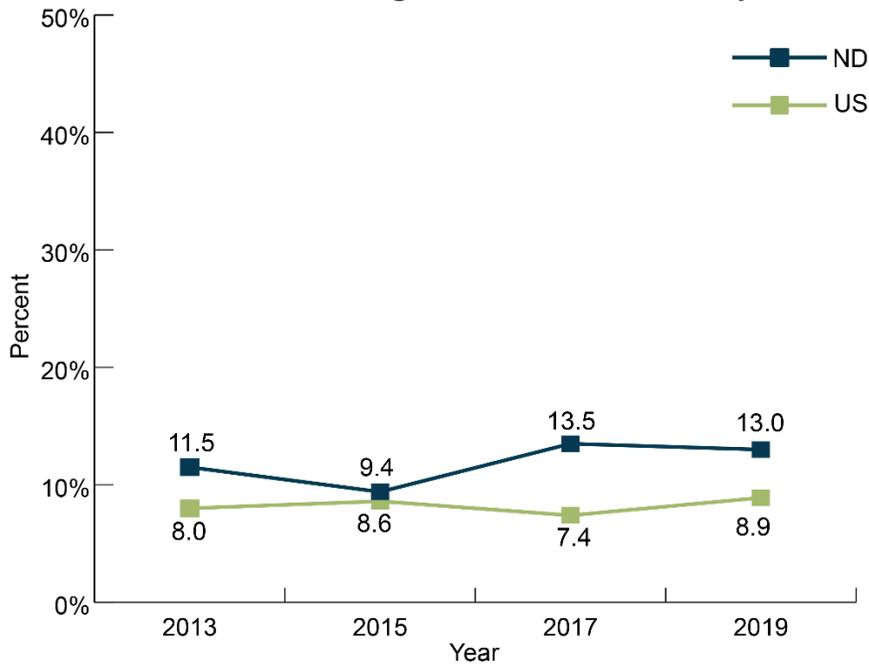
Figure 5.16: Percentage Who Seriously Considered Suicide, High School, by Gender, ND, by Year



Data Source: YRBS

- The percentage of North Dakota high school students who reported attempting suicide one or more times in the past 12 months (13.5%) was nearly double the national rate (7.4%) in 2017. The rate for North Dakota high school students slightly decreased from 2017 to 2019 by 0.5%, while the national rate increased by 1.5% (YRBS, 2019; see Figure 5.17).

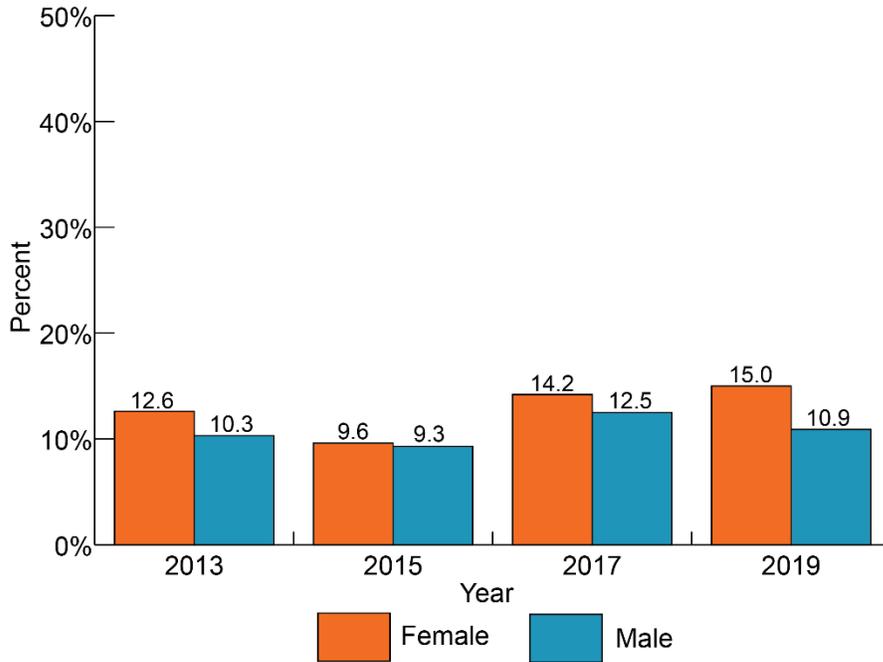
Figure 5.17: Percentage Who Reported Attempting Suicide One or More Times during Past 12 Months, High School, ND vs. U.S., by Year



Data Source: YRBS

- The percentage of North Dakota high school students, both females and males, who reported attempting suicide in the past 12 months sporadically increased between the years 2013 and 2017. This trend continued for females between 2017 and 2019; however, the rate for male students slightly decreased between 2017 and 2019 (YRBS, 2019; see Figure 5.18).

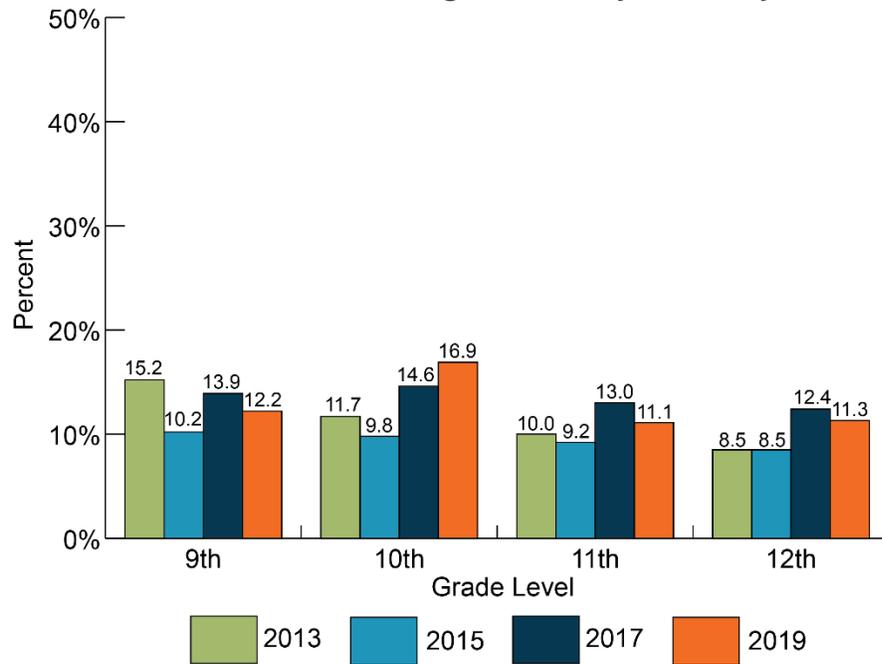
Figure 5.18: Percentage Who Reported Attempting Suicide One or More Times during Past 12 Months, High School, by Gender, by Year



Data Source: YRBS

- Except for high school students in 10th grade, all other grade levels reported a decreased percentage of students who attempted suicide one or more times in the past 12 months from 2017 to 2019 (YRBS, 2019; see Figure 5.19).

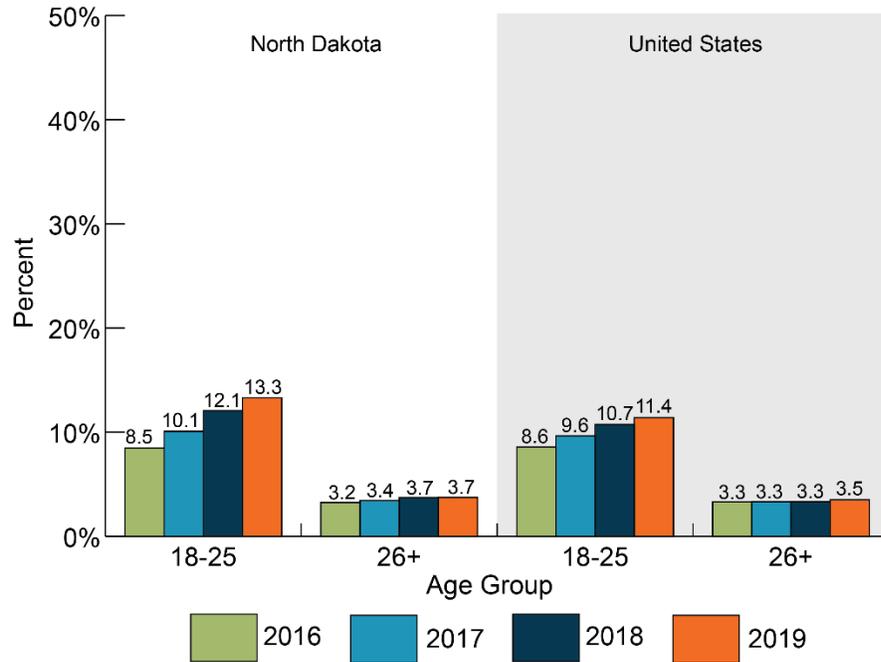
Figure 5.19: Percentage Who Reported Attempting Suicide One or More Times during Past 12 Months, High School, by Grade, by Year



Data Source: YRBS

- The percentage of North Dakota and U.S. adults aged 18-25 who reported serious thoughts of suicide in the past year increased from 2016 to 2019 (NSDUH, 2019; see Figure 5.20).
- From 2016 to 2019, the percentage of North Dakota adults aged 26 and older who reported serious thoughts of suicide in the past year increased slightly, while U.S. rates remained relatively constant over the same time period (NSDUH, 2019; see Figure 5.20).

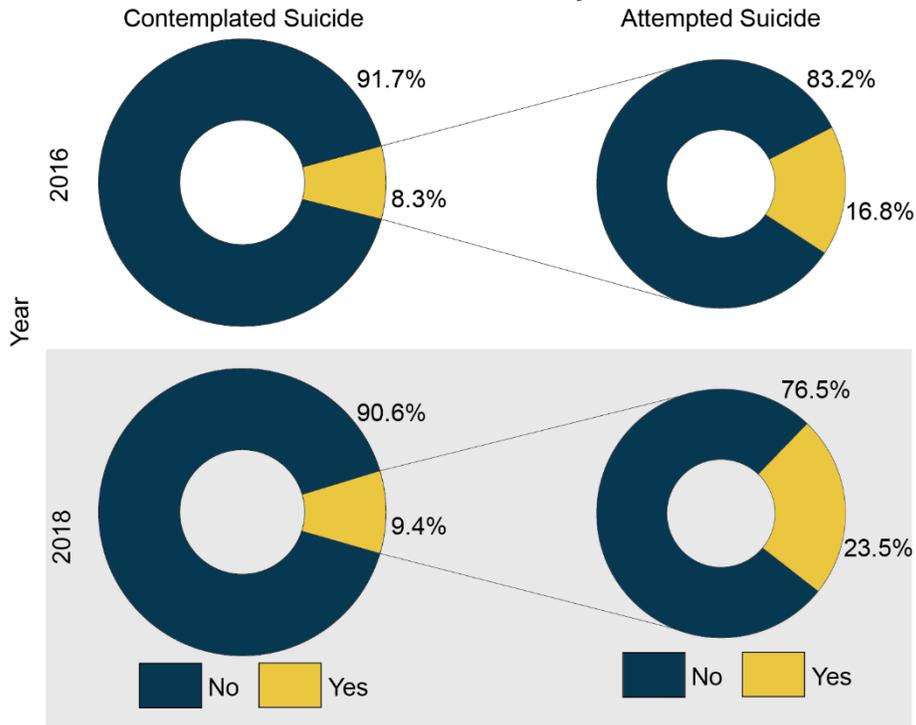
Figure 5.20: Percentage Who Had Serious Thoughts of Suicide in the Past Year, by Age, ND vs. U.S., by Year



Data Source: NSDUH

- Between 2016 and 2018, the percentage of young adults (age 18 to 29) who contemplated suicide increased. Of the percentage who contemplated suicide, a larger percentage reported attempting suicide in 2018 than 2016 (NDSOYA, 2018; see Figure 5.21).

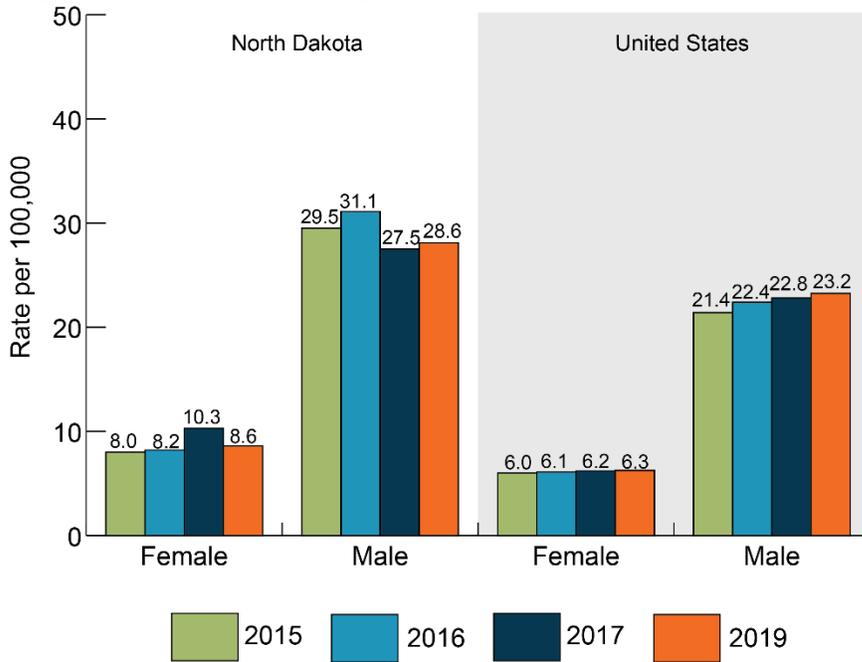
Figure 5.21: Percentage of North Dakotans, Ages 18 to 29, Who Had Serious Thoughts of Suicide in the Past Year, by Year



Data Source: NDSOYA

- Both North Dakota female and male adults reported higher rates of suicide than U.S. adults between 2015 and 2019 (CDC Wonder, 2019; see Figure 5.22).
- Rates of suicide among North Dakota and U.S. male adults (ND: 28.6%, U.S.: 23.2%) was roughly three times greater than their female counterparts (ND: 8.6%, U.S.: 6.3%) in 2019 (CDC Wonder, 2019; see Figure 5.22).

Figure 5.22: Suicide Rate per 100,000 by Gender, ND vs. U.S., by Year



Data Source: CDC Wonder

Mental Health: Modifiable Factors

Access to Mental Health Services

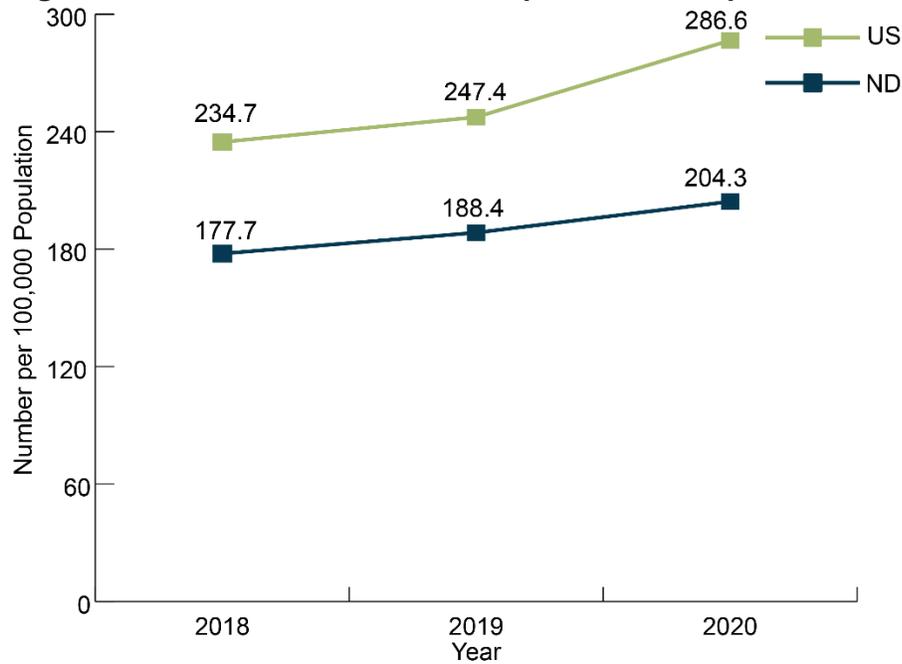
About the Indicator

Of the estimated 47.6 million U.S. adults living with any mental illness in 2018, less than half (20.6 million) reported receiving mental health services within that year (NSDUH, 2019). The National Survey on Drug Use and Health also estimated that 11.2 million adults with any mental illness (18 and older) perceived an unmet need for mental health care. Among those with any mental illness, the most commonly identified barrier to receiving mental health services was the cost of treatment (NSDUH, 2019).

Section Summary

- The rate of mental health providers per 100,000 population increased from 2018 to 2020 in North Dakota and the U.S. (AHR, 2020; see Figure 5.23).

Figure 5.23: Mental Health Providers per 100,000 Population, ND vs. U.S., by Year

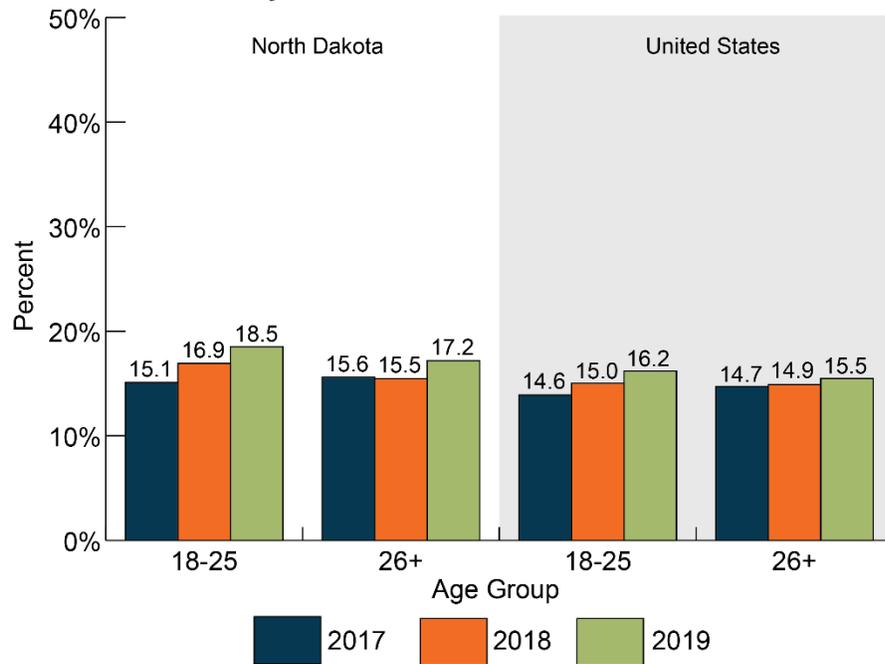


Data Source: AHR

Data Note: (*) Providers included psychiatrists, psychologist, licensed clinical social workers, counselors, marriage and family therapists, substance use providers, and mental health advance practice nurses.

- The percentage of U.S. and North Dakota adults between the ages of 18 and 25 who reported receiving mental health services steadily increased between 2017 and 2019 (NSDUH, 2019; see Figure 5.24).

Figure 5.24: Percentage who Received Mental Health Services in the Past Year, ND vs. U.S., by Year



Data Source: NSDUH

- The number of FirstLink phone connections increased overall (49,353 to 60,148) between 2016 and 2019 (FirstLink, 2019; see Table 5.1).

Table 5.1 FirstLink Phone Connections, by Gender, by Age, by Year

| Total Calls | 2016 | 2017 | 2018 | 2019 |
|-------------|--------|--------|--------|--------|
| | 49,353 | 51,351 | 55,340 | 60,148 |
| Gender | 2016 | 2017 | 2018 | 2019 |
| Females | 57.0% | 62.0% | 53.0% | 49.0% |
| Males | 43.0% | 38.0% | 36.0% | 40.0% |
| Non-Binary | - | - | 0.0% | 0.0% |
| Age | 2016 | 2017 | 2018 | 2019 |
| 0-5 | 0.0% | 0.0% | 0.0% | 0.0% |
| 6-18 | 1.0% | 2.0% | 2.0% | 5.0% |
| 19-35 | 23.0% | 22.0% | 25.0% | 24.0% |
| 36-65 | 65.0% | 55.0% | 55.0% | 48.0% |
| 66+ | 11.0% | 9.0% | 7.0% | 13.0% |

Data Source: FirstLink

Data Note: (-) Data was not available for 2016 & 2017

- The number of suicide related calls reported by the FirstLink suicide program has increased substantially each year from 2016 to 2019 (FirstLink, 2019; see Table 5.2).

Table 5.2: FirstLink Suicide Related Calls, by Year

| | 2016 | 2017 | 2018 | 2019 |
|--------------------|-------|-------|--------|--------|
| Calls | 2,512 | 6,533 | 10,160 | 13,446 |
| Initiate Rescue | 62 | 45 | 91 | 102 |
| Rescue / Call Rate | 0.02 | 0.01 | 0.01 | 0.01 |

Data Source: FirstLink

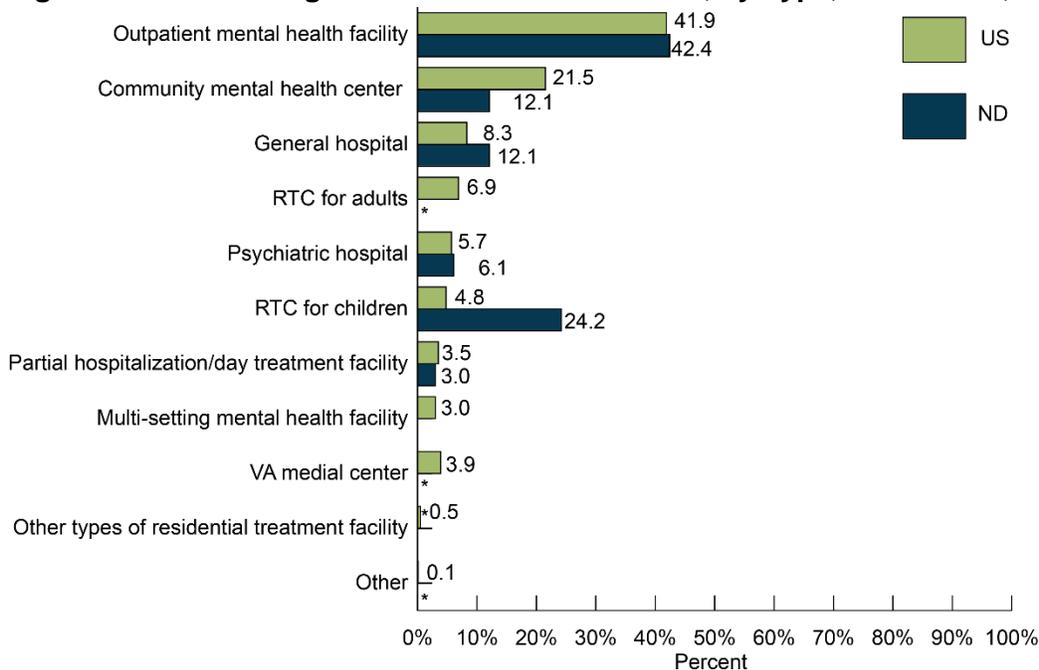
- The number of referrals, calls, successful contacts, and caring cards increased every year as a part of the FirstLink suicide follow-up program (FirstLink, 2019; see Table 5.3).

Table 5.3: FirstLink Suicide Follow-Up Program, by Type, by Year

| | 2016 | 2017 | 2018 | 2019 |
|---------------------|-------|-------|-------|--------|
| Referrals | 188 | 1,052 | 1,535 | 2,375 |
| Calls | 1,150 | 4,810 | 8,226 | 11,232 |
| Successful Contacts | 313 | 1,265 | 2,353 | 3,489 |
| Caring Cards | 316 | 895 | 1,266 | 1,694 |

Data Source: FirstLink

Figure 5.25: Percentage of Mental Health Facilities, by Type, ND vs. U.S., in 2018

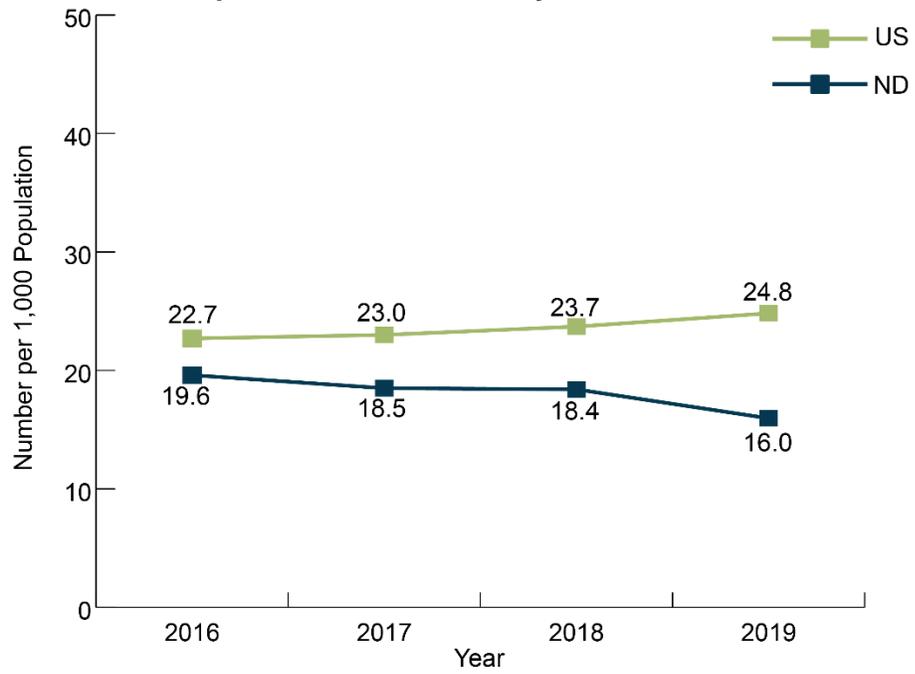


Data Source: N-MHSS

Data Note: (*) Quantity is zero or less than 0.05 percent.

- The number of clients served (per 1,000 people) by the North Dakota State Mental Health Authority System decreased from 2015 to 2018, while national rates increased over the same time period (ND URS, 2018; see Figure 5.26).

Figure 5.26 Total clients served by State Mental Health Authority System per 1,000 Population, ND vs. U.S., by Year



Data Source: ND URS

Data Sources

American Psychologist. Four Decades of Research on School Bullying

America's Health Rankings: Annual Report 2018 (AHR). Mental Health Providers (MHP)

British Medical Journal of Psychology (BMJPsych). Female Survivors of Intimate Partner Violence and Risk of Depression, Anxiety and Serious Mental Illness

Centers for Disease Control and Prevention (CDC): Behavioral Risk Factor Surveillance System (BRFSS)

Centers for Disease Control and Prevention (CDC). CDC Wonder

Centers for Disease Control and Prevention (CDC). National Intimate Partner and Sexual Violence Survey: 2015 Data Brief – Updated Release

Centers for Disease Control and Prevention (CDC). Youth Risk Behavior Survey (YRBS)

Diagnostic and Statistical Manual, 4th Edition (DSM-4)

FirstLink Annual Report: 2016-2018

National Center for Health Statistics (NCHS). Suicide Rate in the United States Continue to Increase

North Dakota CAWS (ND CAWS). Domestic Violence Facts

Population Health Metrics. Self-reported General Health, Physical Distress, Mental Distress, and Activity Limited by US County, 1995-2012

Substance Abuse and Mental Health Services Administration (SAMHSA). National Mental Health Services Survey (N-MHSS)

Substance Abuse and Mental Health Services Administration (SAMHSA). Uniform Reporting System (URS)

U.S. Health and Human Services (U.S. HHS). Centers for Medicare & Medicaid Services, National Plan and Provider Enumeration System, United Health Foundation

Wyoming Survey and Analysis Center (WYSAC). Survey of North Dakota Young Adults, 2019

Substance Abuse and Mental Health in North Dakota

Appendix

Definition of Terms

Current use is defined as persons who reported using a product at the time they participated in the survey.

Any Mental Illness (AMI) “a mental, behavioral, or emotional disorder.” “AMI can vary in impact, ranging from no impairment to mild, moderate, and even severe impairment.” (DSM-4, NSDUH).

Frontier refers to a county with a population density less than six people per square mile (WYSAC).

Last 30 days (a month) refers to those who used a product on 1 or more of the 30 days previous to the survey.

Rural is defined as a county with a population density greater than six people per square mile, with a higher density except for Minot, Grand Forks City, Fargo, West Fargo, Jamestown, Bismarck, Mandan, Dickinson, and Williston (WYSAC).

Serious mental illness (SMI) “a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities.” (DSM-4, NSDUH).

Suburban refers to a smaller community adjacent to or within the commuting distance of a city. It is also the residential area on the outskirts of a city or a large town or an outlying part of a city or town (Suburban, 2017: Merriam Webster Online).

Urban refers to a county with a population density greater than six people per square mile with a population of at least 15,000 people, which includes Minot, Grand Forks City, Fargo, West Fargo, Jamestown, Bismarck, Mandan, Dickinson, and Williston (WYSAC).

Data Sources

Centers for Disease Control and Prevention (CDC): Alcohol-Related Disease Impact (ARDI)

The ARDI is an online application that provides national and state information on alcohol-related health issues, including deaths and years of potential life lost (YPLL). Available at https://nccd.cdc.gov/DPH_ARDI/Default/Default.aspx

Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System (BRFSS)

BRFSS is the largest confidential health survey system in the world. It was established in 1984 and it has been conducted continuously. It is a telephone survey interview that collects data from adults regarding health-related risk behaviors, chronic health conditions, and use of

preventive services in all 50 states as well as the District of Columbia and three U.S. territories. BRRSS data can be accessed at <http://www.cdc.gov/brfss>

Centers for Disease Control and Prevention (CDC) WONDER

The CDC Wide-Ranging Online Data for Epidemiologic Research (WONDER) provides information resources of the Center for Disease Control and Prevention (CDC) available to health professionals and the public at large. It provides access to a wide array of public health information, and can be accessed at <https://wonder.cdc.gov/>.

Centers for Disease Control and Prevention (CDC). Youth Risk Behavior Survey (YRBS)

This survey is conducted nationally, state-wide, and locally every two years among middle and high school students throughout the United States. These surveys gather information on health risk behaviors such as, violence, tobacco, alcohol, and other drug use. More than 15,000 high school students from 39 states and 21 large urban school districts participated in the 2017 National YRBS. This present report included data from other years to show trends. Data can be assessed at <https://www.cdc.gov/healthyyouth/data/yrbs/results.htm>

*Data from the 2019 North Dakota YRBS was included in this document. Data for the North Dakota report can be assessed at <https://www.nd.gov/dpi/SchoolStaff/SafeHealthy/YRBS/>

Centers for Medicare and Medicaid Services (CMS)

The Centers for Medicare & Medicaid Services, CMS, is part of the Department of Health and Human Services (HHS). This program works in partnership with state governments to administer Medicaid, the State Children's Health Insurance Program (SCHIP), and health insurance portability standards. CMS can be accessed at <https://www.cms.gov/>.

Crime in North Dakota

The crime data in North Dakota is managed by the Bureau of Criminal Investigation under the Uniform Crime Reporting (UCR) program. It carries out the collection and analysis of crime data provided by the North Dakota law enforcement agencies. The crime statistics data of all criminal offenses is in the Crime Statistics Online (CSO) program. The Themed Orientated Public Site (TOPS) program contains specific public interest data like Violent, Property and Drug/DUI crimes. The Crime in North Dakota can be accessed at <https://attorneygeneral.nd.gov/public-safety/crime-data>.

Federation of Tax Administrators (FTA)

The FTA provides services to state tax authorities and administrators to all 50 states. The FTA monitors the activities of state tax agencies to serve as a resource for data and information to administrators and the general public. The FTA can be accessed at <https://www.taxadmin.org/>.

FirstLink

FirstLink's mission is to assist people by identifying issues and making effective use of community and volunteer resources 24 hours a day. Accredited by the American Association of Suicidology (AAS) and Alliance of Information and Referral Systems (AIRS), FirstLink works with 16 agencies to answer phone calls, screen calls for potential intervention, and provide

support and information according to individual contracts. In 2018, FirstLink handled 55,340 total contacts. FirstLink information can be accessed at <https://myfirstlink.org/>.

Healthcare Cost and Utilization Project (HCUP)

The HCUP is a collection of health care databases and related resources (tools and products) sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP includes the largest collection of longitudinal hospital care data collected in the U.S. Data related to state emergency departments were used in this report and are available at <https://www.hcup-us.ahrq.gov/>.

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) is sponsored by the National Institutes of Health (NIH). NIAAA gathers data on the impact of alcohol use on human health and well-being. Data is available at <https://pubs.niaaa.nih.gov/publications/surveillance.htm>

National Survey of Substance Abuse Treatment Services (N-SSATS)

N-SSATS is a survey consisting of all the private and public substance abuse treatment facilities in the United States. It is a part of the Behavioral Health Services Information System (BHSIS) and is managed by the Center for Behavioral Health Statistics and Quality (CBHSQ), Substance Abuse and Mental Health Services Administration (SAMHSA). The surveys collect the information about the facilities, such as characteristics of the treatment facilities, client count census, and general information like certification or accreditation. The survey can be accessed at <https://www.samhsa.gov/data/substance-abuse-facilities-data-nssats>.

National Highway Traffic Safety Administration (NHTSA): Fatality Analysis Reporting System (FARS)

FARS collects and reports annual data on fatal traffic crashes within the 50 states in the US, District of Columbia, and Puerto Rico. It is sponsored by the National Center for Statistics and Analysis (NCSA) of the National Highway Traffic Safety Administration (NHTSA). This information can be accessed at <https://www.nhtsa.gov/research-data>.

ND Vital Records

The North Dakota Division of Vital Records provides registration and certification of the vital events that occur in North Dakota. These events include births, deaths, fetal deaths, marriages and divorces. They also provide statistical information on a wide range of categories relating to these events. ND Vital Records can be accessed at <http://ndhealth.gov/vital/>.

North Dakota Board of Pharmacy

The North Dakota Board of Pharmacy is a program that provides guides for North Dakota pharmacies on how to offer drugs. In this program, participating pharmacies are provided with the best way to dispense controlled substances to their patients. North Dakota Board of Pharmacy's information is available at <https://www.nodakpharmacy.com/>.

North Dakota Office of State Tax Commissioner

The North Dakota Office of State Tax Commissioner is the government agency responsible for administering the tax laws of North Dakota. It has been in existence as an independent state agency since 1912. The Office administers more than 30 different tax types and collects more than 90 percent of all state general fund revenue. The Office of State Tax Commissioner can be accessed at <http://www.nd.gov/tax/>.

North Dakota CAWS

CAWS North Dakota is the statewide sexual and domestic violence coalition. The coalition supports 20 crisis intervention centers across the state. Information gathered by the programs are compiled, reported, and can be accessed at <http://www.cawsnorthdakota.org/index.php/resources/factsandstats/>

North Dakota Courts

North Dakota Courts are made up of North Dakota Supreme Court, District Court and Municipal Court. North Dakota Supreme Court being the highest court in the state consists of one chief justice and four justices with a ten-year term. District courts are the state trial courts of general jurisdiction and all 53 counties provide district court services. District court consists of eight judicial districts and 51 judges with six-year terms. Municipal Courts consists of 73 judges with four-year terms. The North Dakota Courts can be accessed at <https://www.ndcourts.gov/court/Courts.htm>.

North Dakota Department of Corrections and Rehabilitation (DOCR)

DOCR is an integral part of the criminal justice system. It was established in 1989 and it is made up of the Adult Services Division and the Juvenile Services Division. Its main responsibility is to carry out general administrative supervision, provide guidance, and to plan adult and juvenile correctional facilities and programs with North Dakota. Reports and statistics from ND DOCR can be accessed at <https://www.docr.nd.gov/reports-and-statistics>

North Dakota Department of Public Instruction (NDDPI)

The NDDPI provides specific North Dakota youth behavioral data and other school-related information. Available at <https://www.nd.gov/dpi/data/>.

North Dakota Department of Transportation (NDDOT): North Dakota Crash Summary (NDCS)

The NDCS is prepared yearly by the NDDOT to provide data about motor vehicle crashes, deaths, and injuries in North Dakota. Data for this document is collected by North Dakota law enforcement officers who complete a crash report when an accident occurs on a public road involving death, injury, or at least \$1,000 in property damage. Crashes that occur off of a public road (for example, on private property or parking lots) are not included. Available at <https://www.dot.nd.gov/divisions/safety/docs/crash-summary.pdf>

North Dakota Department of Health (NDDOH) Adult Tobacco Survey

The NDDOH Adult Tobacco Survey has been conducted every three years since 2015. The survey is conducted using the telephone interview mode of data collection. Over 1,600 interviews with adults aged 18 and older are collected during each iteration of the survey.

North Dakota Department of Health, Tobacco Prevention and Control

The North Dakota Department of Health Tobacco Prevention and Control program provides information related to tobacco use in North Dakota. The program aims to improve and protect the health of North Dakotans by reducing the negative health and economic consequences of tobacco use. It can be accessed at <https://www.ndhealth.gov/tobacco/>.

North Dakota Survey of Young Adults (NDSOYA). Wyoming Survey & Analysis Center

The North Dakota Survey of Young Adults (NDSOYA) was developed using similar surveys led in Wyoming and Oregon as part of their Strategic Prevention Framework State Incentive Grants and their State Epidemiological Outcome Workgroup (SEOW) data collection efforts. The Wyoming Survey & Analysis Center (WYSAC) was involved by the North Dakota Department of Human Services to conduct a telephone survey among North Dakota young adults between the ages of 18 and 29 to assess substance abuse and other health related behaviors, awareness, and attitudes. A double sampling frame was used to include both landline and cell phone numbers and the survey was conducted in the spring of 2018, with 1,009 participants completing the surveys.

North Dakota Youth Tobacco Survey (YTS)

The YTS has been conducted in the spring of odd years since 2003. It is designed to measure a variety of factors related to tobacco products among high school students and to assess how these factors change over time. Questions are asked in a variety of categories, including prevalence and established habits of cigarette, spit-tobacco and other tobacco use, age of initiation, access to tobacco, information learned in school, cessation beliefs and attempts, knowledge and attitudes, community influence, media influence, and exposure to and beliefs about secondhand smoke.

SAMHSA Uniform Reporting System (URS)

The Uniform Reporting System (URS) is a reporting mechanism used by the State Mental Health Agencies (SMHA) for SAMHSA's Community Mental Health Block Grant. The spreadsheets were developed by the federal government and SMHA to report and inform decision making and planning for mental health programming. The annual and state reports can be accessed at <https://www.samhsa.gov/data/data-we-collect/urs-uniform-reporting-system>.

Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)

The Smoking-Attributable Mortality, Morbidity, and Economic Costs data is published by the Centers for Disease Control and Prevention. It provides information regarding smoking-attributable expenditures (SAEs), which are excess health care expenditures attributable to cigarette smoking, by type of service, among adults aged 19 years of age and older. It can be accessed at <https://chronicdata.cdc.gov/Health-Consequences-and-Costs/Smoking-Attributable-Mortality-Morbidity-and-Econo/ezab-8sq5?>

Substance Abuse and Mental Health Services Administration (SAMHSA). National Mental Health Services Survey (N-MHSS)

The National Mental Health Services Survey (N-MHSS), conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), surveys facilities that provide mental health treatment services. Mental Health facilities in every state, the District of Columbia, and U.S. territories are surveyed each year. N-MHSS information, data, and reports can be accessed at <https://www.dasis.samhsa.gov/dasis2/nmhss.htm>.

Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH)

NSDUH nationwide survey interviews approximately 70,000 randomly selected individuals that are at least 12 years of age and data are presented as two-year averages. This survey provides national and state-level data on the use of tobacco, alcohol, illicit drugs and mental health. NSDUH is supported by the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency in the U.S. Department of Health and Human Services (DHHS). Data can be retrieved at <https://nsduhweb.rti.org/respweb/homepage.cfm>

Substance Abuse and Mental Health Services Administration (SAMHSA): Treatment Episode Data Set (TEDS)

TEDS contains information regarding the number of treatment admissions for substance abuse in the United States. This information is collected from states on an annual basis and is maintained by the Substance Abuse Mental Health Services Administration (SAMHSA). TEDS can be accessed at <https://www.dasis.samhsa.gov/dasis2/teds.htm>.

Wyoming Survey & Analysis Center: North Dakota Community Readiness Survey (ND CRS)

The 2017 North Dakota Community Readiness Survey (ND CRS) was first developed in 2008. Under contract with North Dakota State University, the Wyoming Survey & Analysis Center at the University of Wyoming (WYSAC) accepted this project as part of the North Dakota Department of Human Services Strategic Prevention Framework State Incentive Grant. In developing this survey, the North Dakota Department of Human Services (DHS) modified the Minnesota survey to account for North Dakota specific needs. The selection for participation in this survey required a North Dakota Household with a mailing address. The 2017 data collection took the form of a mixed mode in which possible participants were given the option to complete the survey online or use the paper copy mailed to them. Data was collected from early May until August 2017 and by the close of data collection a total of 2,104 adults completed the surveys. Data can be assessed at <https://prevention.nd.gov/sites/default/files/North%20Dakota%20Community%20Readiness%20Report%202017.pdf>